

## Highlander Environmental Corp.

Midland, Texas

October 15, 2002

Mr. Larry Johnson Environmental Engineer Specialist Oil Conservation Division- District I 1625 N. French Drive P. O. Box 1980 Hobbs, New Mexico 88240

RE: Assessment and Closure Report for the Spill from the Pogo Producing Company, E.C. Hill #C-3 Well Location, Section 27, T-23-S, R-37-E, 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 <u>Pogo Hill #C-3</u> well location in Lea County, New Mexico (Site). The Site is located in Section 27, Township 23 South, Range 37 East. The Site is shown in Figure 1. The State of New Mexico C-141 (Initial) is included in Appendix A.

According to published data, groundwater in the area is greater than 50 feet below surface. The State of New Mexico Well Reports are included in Appendix B. In addition, the New Mexico State Engineers Office has been contacted to confirm the groundwater depth at the Site.

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 recommended remedial action level (RRAL) for TPH is 1,000 mg/kg.

**Background** 

At the time of the spill, the E.C. Hill #C-3 well was being drilled. Pogo was supplying produced water to the drilling rig through a 3" poly line. On August 28, 2002, a spill occurred when a leak formed in the 3" poly line. Produced water flowed from the leak point down the edge?

Wrch - 962 Lucident - nPACO603748047 application - PACO603748259 910 N. Big Spring P. Midland, Texas 79705

(915) 682-4559

Fax (915) 682-3946

of the caliche road (east) for a distance of about 500'. At that point, the water began to pool off the north edge of the road near the shut-in Hill B-3 well location. The overall dimensions of the pooled area measured approximately 150' x 50'. An unknown volume of produced water was released and none was recovered. The spill area is shown in Figure 2.

#### **Corrective Action**

On August 30, 2002, Highlander personnel collected soil samples from the spill area using a stainless steel, bucket type hand auger. A total of eight (8) auger holes (AH) were installed to define the extent of the impact. Five of the auger holes (AH-1 through AH-5) were placed in the pooled area, while and the other three (AH-6 through AH-8) were placed in the edge of the caliche road. The spill areas and auger hole locations are shown in Figure 2. No evidence of hydrocarbon staining was observed, however, soil samples were collected from the spill areas for evaluation of Total Petroleum Hydrocarbon (TPH) by method 8015M and chloride by method SW846-9252. The soil samples results are shown in Table 1. The laboratory reports and the chain of custody documentation are included in Appendix C.

Table 1

(Concentrations in mg/kg)								
Sample ID	Date	Depth	TPH	Chloride				
	Sampled	(ft)						
AH-1	08/29/02	0-0.5'	<10	5390				
AH-1	08/29/02	1.0'-1.5'	_	3620				
AH-2	08/29/02	0-0.5'	_	4960				
AH-2	08/29/02	1.0'-1.5'	_	5320				
AH-3	08/29/02	0-0.5'	<10	5670				
AH-3	08/29/02	1.0'-1.5'	<u> </u>	5320				
AH-4	08/29/02	0-0.5'	<u>-</u>	6030				
AH-4	08/29/02	1.0'-1.5'	_	6470				
AH-5	08/29/02	0-0.5'	<10	4520				
AH-5	08/29/02	1.0'-1.5'	<u>-</u> .	5230				
AH-6	08/29/02	0-0.5	-	5140				
AH-6	08/29/02	1.0'-1.5'	-	5140				
AH-7	08/29/02	0-0.5'	-	4960				
AH-7	08/29/02	1.0'-1.5'	-	5050				
AH-8	08/29/02	0-0.5'	<10	5320				
AH-8	08/29/02	1.0'-1.5'	_	5230				

(-) Not Analyzed

Based upon the results of the sampling, it was decided to begin excavation of the chlorides impacted soils. On September 19, 2002, Key Energy Services began excavating the location and hauling the excavated soils to Sundance Disposal Facility in Eunice, New Mexico. The initial excavation involved stripping off the first 1.5'to 2.0' of topsoil in the area where the produced water had pooled. At approximately 1.5 to 2.0' below ground surface, the root line ended and a gravelly caliche layer started. Three backhoe trenches were installed in the excavation for

2

18 30 31

evaluate chloride impact to deeper soils. The trench locations are shown on Figure 3.

Table 2

	(Conc	entrations in mg/k	g)	
Sample ID	Date	Depth	Actual Depth	Chloride
	Sampled	(ft)	BGS (ft)*	
Trench 1	09/20/02	1.0'	2.5'	2760
Trench 1	09/20/02	2.0'	3.5'	2260
Trench 1	09/24/02	3.0'-3.5'	4.0'-4.5'	2020 2
Trench 2	09/20/02	1.0'	2.5'	5320
Trench 2	09/20/02	2.0'	3.5'	5670
Trench 2	09/24/02	3.0'-3.5'	4.0'-4.5'	3120
Trench 3	09/20/02	1.0'	2.5'	6030
Trench 3	09/20/02	2.0'	3.5'	6470
Trench 3	09/24/02	3.0'-3.5'	4.0'-4.5'	1770
Trench 4	10/01/02	1.0'	5.0'	4790
Trench 4	10/01/02	2.0'	6.0'	2840
Trench 4	10/01/02	3.0'	7.0'	2270
Trench 4	10/15/02	4.0'	8.0'	1740
Trench 4	10/15/02	5.0'	9.0'	744
Trench 4	10/15/02	6.0'	10.0'	106
Trench 5	10/01/02	1.0'	5.0'	514
5 Trench 5	10/01/02	2.0'	6.0'	<20
Trench 5	10/01/02	3.0'	7.0'	<20
Trench 6	10/01/02	1.0'	5.0'	2690
N Trench 6	10/01/02	2.0'	6.0'	177
Trench 6	10/01/02	3.0'	7.0'	<20

<sup>(-)</sup> Not Analyzed

Based upon the results of the initial trench samples, it was decided that an additional 2.0 feet should be removed from the excavation. On September 24, 2002, deeper soil samples (3.0'-3.5') were taken from the three trenches and submitted to the laboratory for analysis of chloride. On September 24-25, 2002, Key Energy Services, Inc. excavated the site to an approximate depth of 4.0 feet below ground surface. To further investigate the vertical chloride impact, fresh trenches were installed near the original trench locations to extract new samples for confirmation. Trenches 4,5 and 6 are shown on Figure 3.

Trenches 5 and 6 in the center and northern portions of the excavation showed chloride levels decreasing to acceptable levels, while the samples from Trench 4 remained elevated with depth. On October 15, 2002, deeper samples were extracted from trench 4 and showed levels decreasing to background levels within 6' of the bottom of the excavation.

Approximately 1000 cubic yards of impacted soil was removed and disposed at Sundance

<sup>(\*)</sup> BGS – Below Ground Surface

Services, Inc. located in Eunice, New Mexico. Considering the fact that the area has been excavated well below the root zone and since chloride levels decrease to background levels within a few feet of the bottom of the excavation, this site should be backfilled with clean fill material and closed.

#### **Conclusions**

- 1. According to published data, groundwater in the area is greater than 50 feet below surface. In addition, the New Mexico State Engineers Office has been contacted to confirm the groundwater depth at the Site.
- 2. 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 1,000 mg/kg. No detectable levels of TPH were observed.
- 3. The chloride impacted soil was excavated to an approximate depth of 4.0' below surface. Approximately 1000 cubic yards of impacted soil was removed and disposed at Sundance Services, Inc. located in Eunice, New Mexico.

#### Recommendation

1. Based on the fact that the area has been excavated well below the root zone and since chloride levels decrease to background levels within a few feet of the bottom of the excavation, Pogo Producing Company proposes backfilling and closure of the spill area. The State of New Mexico C-141 (Final) is shown in Appendix A.

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

Very truly yours,

Timothy M. Reed, REM

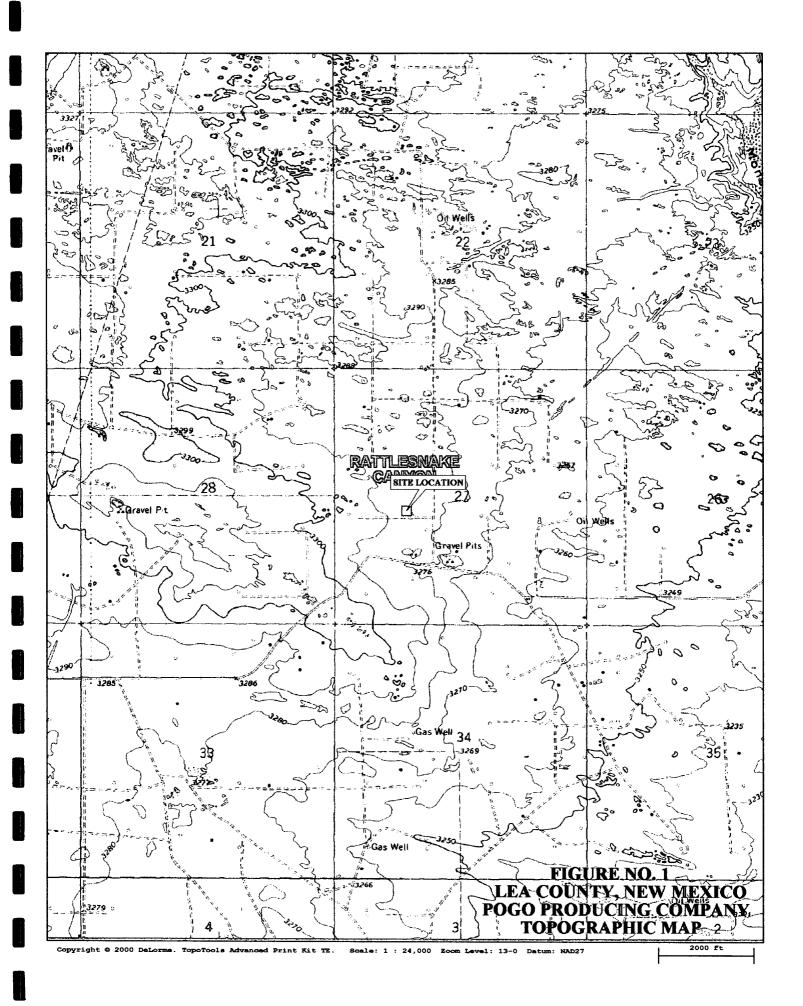
Vice President

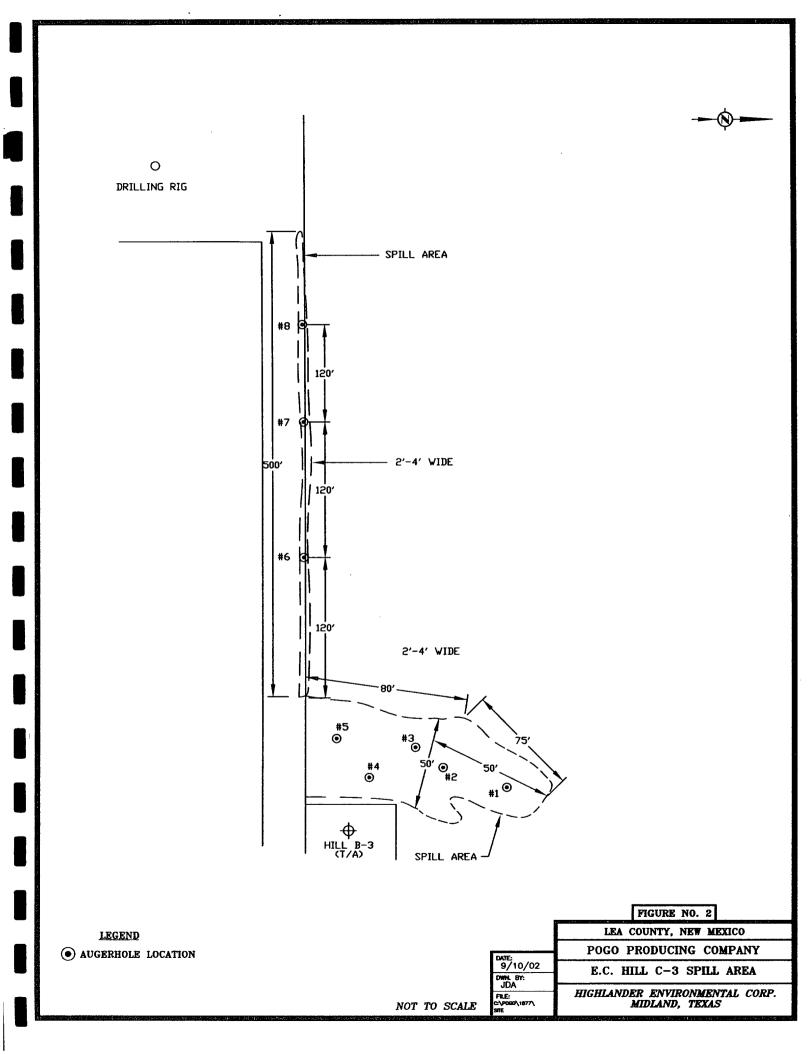
cc: Don Riggs – Pogo Producing Co. Rex Jasper – Pogo Producing Co.

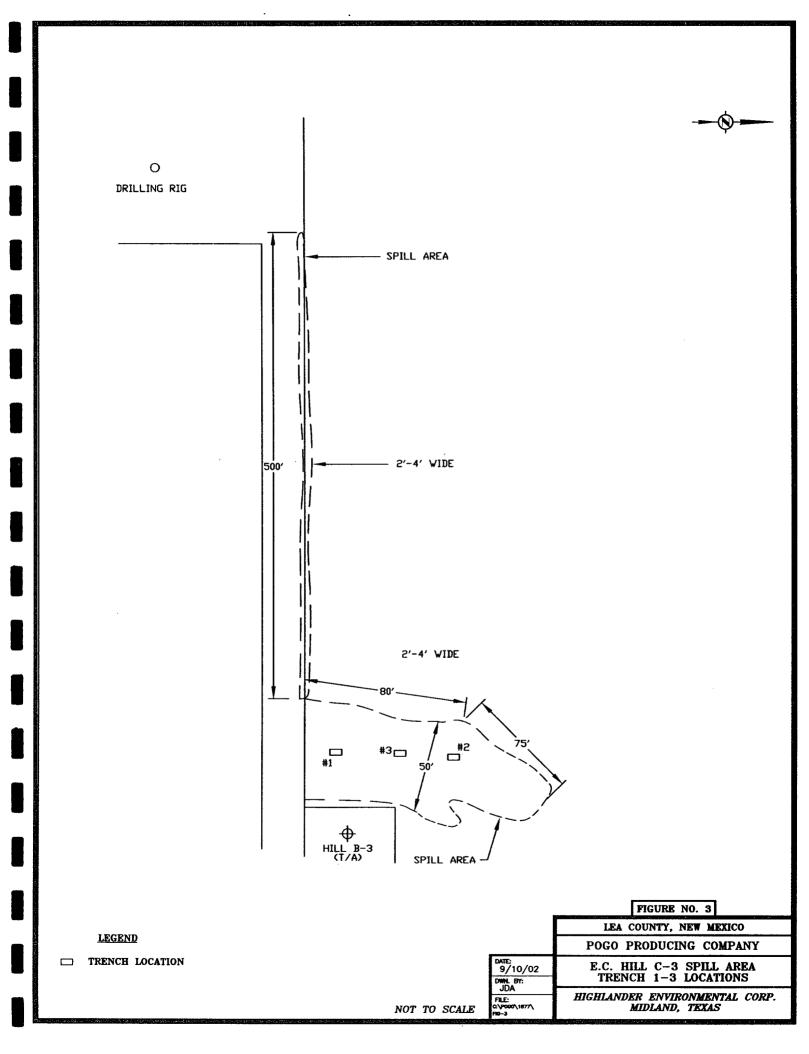


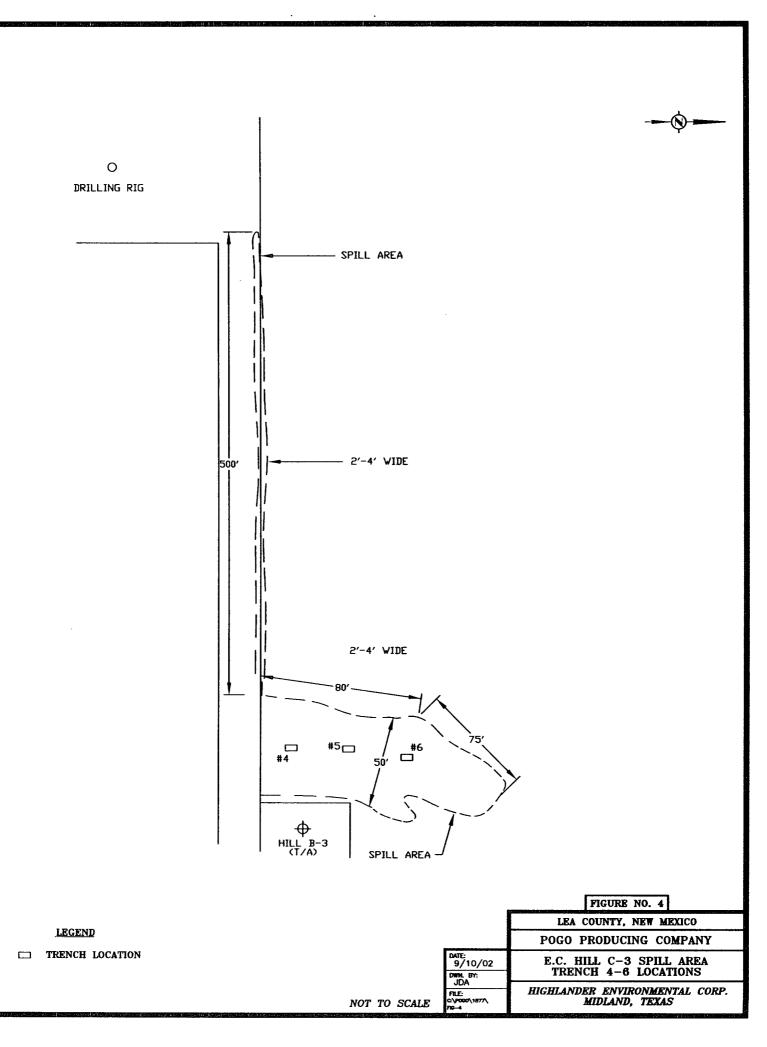
4

### **FIGURES**









### APPENDIX A

District I - (505) 393-6161 P O Box 1980 Hobbs, NM 88241-1930 District II - (505) 748-1283 31. South First Artesia, NM 88210 District III - (505) 334-6178 1000 Rio Bratos Road Artee, NM 874-0

## 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

Dismet IV - (525) 827-7131	Vac Vince of the Control of the Cont
	and Corrective Action  RATOR Initial Report Final Report
Part ARCH PET INC.	CONTRACT WELLS
EUNICE N.M.	Telephone No. 915 - 631-0134
Facility Name ECHIII C-3	Facility Type Propucing well
Surface Owner D. K. BOYD Mineral Owner	Lease No.
	OF RELEASE
17 23.5 37.6 1950 S	990 W LEA
NATUREC	OF RELEASE
PRODUCED WATER	Volume of Research Volume Recovered  UN KNOWN - 0
Lowre of Rolesk 3" POPILING	B/28/02 Date and Hour of Occurrence B/28/02 6. Am
Was Institute & Notice Civens Yes Who Not Required	UYES, To Whom?
By Whom?	Date and Hour 8/20/02 12:45 Am
Was a Watercourse Reached? Yes No	If YES, Volume Impacting the Watercourse.
Wastercourse was Impacted, Describe bully, (Attach Additional Sheets If Necessary	()
Specific Cause of Problem and Remedial Action Taken, (Actach Additional Sheets If No. 1991) R. 311 LINE	leccasary;
	a Pia Fara Landina Sunally
SPLITTU3" FOLY LINE RUNNING ?	ary)
ROW DOWN GIDE OF MAIN ROAD AND IN	to pretuke. TURNED INTO OR
ENVIRONMENTALIST WAITING ON-TUST	RUITINS FORCHANUP
Thereby construction the information given above is true and complète to the best of my known required to report and/or file contain release notifications and perform corrective and/or file contain release notifications and perform corrective and/or file in the report so the NMOCD market as "Final Report" does not relieve the operation of contamination that pow a threat of ground water, surface water, human health or the environment of responsibility given gongliance with any other federal, state, or local laws and	if or releases which may endanger point released by the contribution of the building should their operations have failled by adequately investigate and remediate comment. In addition, NMOCD acceptance of a Criss report does not relieve the
Some Layhelle	OIL CONSERVATION DIVISION
MACHINE GARY WOTIS	Approved by District Supernsor:
FIGID SUP-RUISION	Approva: Date: Expiration Date:  Congluent of Approval: Arached
8/28/02 moneg15-631.034	

### APPENDIX B

## New Mexico Office of the State Engineer Well Reports and Downloads

Township: 23S	Range: 37E	Sections:		
NAD27 X:	Y:	Zone:	Search Radiu	s:
County:	Basin:		Number:	Suffix:
Owner Name: (First)		(Last)	C Non-Dome	estic C Domestic C All
Well / Surfa	ce"Data Rep	oost . Jaco	Avg Depth to Wa	ter Report
		Water Column F	Report	
	: Clear Fo	orm. WATER	S Menu Help	

#### AVERAGE DEPTH OF WATER REPORT 11/05/2002

								(Depth	Water	in Feet)
Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	Min	Max	Avg
CP	23S	37E	09				1	100	100	100
CP	238	37E	16				1	115	115	115
CP	23S	37E	32				1	106	106	106

Record Count: 3

## New Mexico Office of the State Engineer Well Reports and Downloads

Township: 23S	Range: 37E	Sections:		and the second second	
NAD27 X:	Y:	Zone:	Search	Radius:	
County:	Basin:		Number:	Suffix:	
Owner Name: (First)		(Last)	r Non-	-Domestic C Domestic Al	1
Well / Surfa	ice Data Rep	ort	Avg Depth t	o Water Report	
	ħ	Vater Column 1	Report		
	Clear Fo	orm WATER	S Menu Help		

#### WATER COLUMN REPORT 11/05/2002

#### (quarters are 1=NW 2=NE 3=SW 4=SE)

	(	quarters	are	bigg	gest	to	smallest)			Depth	Depth	Water	(in fe
Wel:	l Number	Tws	Rng	Sec	q q	q	Zone	Х	Y	Well	Water	Column	
CP	00762	23S	37E	09	1 1					185	100	85	
CP	00423	23S	37E	16	4 3					175	115	60	
CP	00037 SRW1	23S	37E	32	3 4					180	106	74	

Record Count: 3

#### APPENDIX C

## ANALYTICAL REPORT

## **Prepared for:**

TIM REED HIGHLANDER ENVIRONMENTAL CORP. 1910 N. BIG SPRING STREET MIDLAND, TX 79705

**Project:** 

Pogo/ E.C. Hill C-3 Area

**PO#:** 

Order#:

G0204410

Report Date:

09/04/2002

**Certificates** 

**US EPA Laboratory Code TX00158** 

### SAMPLE WORK LIST

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

915-682-3946

Order#:

G0204410

Project:

1877

Date / Time

Project Name: Pogo/ E.C. Hill C-3 Area

Location:

Lea Co., NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Date / Time

Lab ID:	Sample:	Matrix:		Collected		Received	Container	Preservative
0204410-01	AH-1 (0-0.5')	SOIL		8/29/02		8/30/02	4 oz glass	Ice
				12:30		14:50		
Lai	b Testing:	Rejected:	No	T	emp:	5.0 C		
	8015M							
	Chloride							
0204410-02	AH-1 (1.0'-1.5')	SOIL		8/29/02 12:40		8/30/02 14:50	4 oz glass	Ice
Lai	b Testing:	Rejected:	No	T	emp:	5.0 C		
	Chloride							
0204410-03	AH-2 (0-0.5')	SOIL		8/29/02 12:45		8/30/02 14:50	4 oz glass	Ice
Lal	b Testing:	Rejected:	No		emp:	5.0 C		
	Chloride							
0204410-04	AH-2 (1.0'-1.5')	SOIL		8/29/02 12:50		8/30/02 14:50	4 oz glass	Ice
<u>Lat</u>	b Testing:	Rejected:	No	T	emp:	5.0 C		
	Chloride							
0204410-05	AH-3 (0-0.5')	SOIL		8/29/02 13:00		8/30/02 14:50	4 oz glass	Ice
Lai	b Testing:	Rejected:	No		emp:	5.0 C		
	8015M							
	Chloride							
0204410-06	AH-3 (1.0'-1.5')	SOIL		8/29/02 13:05		8/30/02 14:50	4 oz glass	Ice
Lai	b Testing:	Rejected:	No	T	emp:	5.0 C		
	Chloride							
0204410-07	AH-4 (0-0.5')	SOIL		8/29/02 13:10		8/30/02 14:50	4 oz glass	Ice
Lai	b Testing:	Rejected:	No	T	emp:	5.0 C		
	Chloride							
0204410-08	AH-4 (1.0'-1.5')	SOIL		8/29/02 13:15		8/30/02 14:50	4 oz glass	Ice
Lai	b Testing:	Rejected:	No	T	emp:	5.0 C		

#### SAMPLE WORK LIST

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

915-682-3946

Order#:

G0204410

Project:

1877

Date / Time

Project Name: Pogo/ E.C. Hill C-3 Area

Location:

Lea Co., NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Date / Time

Lab ID:	Sample : Chloride	Matrix:		Collecte	<u>d</u>	Received	Container	Preservative
0204410-09	AH-5 (0-0.5')	SOIL		8/29/02 13:25		8/30/02 14:50	4 oz glass	Ice
La	b Testing:	Rejected:	No		Temp:	5.0 C		
	8015M							
	Chloride							
0204410-10	AH-5 (1.0'-1.5')	SOIL		8/29/02		8/30/02	4 oz glass	Ice
7	l Tandiana	Rejected:	No	13:30	Т	14:50		
La	b Testing:	Rejecteu.	140		Temp:	5.0 C		
	Chloride							
0204410-11	AH-6 (0-0.5')	SOIL		8/29/02		8/30/02	4 oz glass	Ice
0204410-11	, ,			14:20		14:50		
La	<u>b Testing:</u>	Rejected:	No		Temp:	5.0 C		
	Chloride							
0204410-12	AH-6 (1.0'-1.5')	SOIL		8/29/02		8/30/02	4 oz glass	Ice
				14:25		14:50		
<u>La</u>	<u>b Testing:</u>	Rejected:	No		Temp:	5.0 C		
	Chloride							
0204410-13	AH-7 (0-0.5')	SOIL		8/29/02		8/30/02	4 oz glass	Ice
				14:05		14:50		
La	b Testing:	Rejected:	No		Temp:	5.0 C		
	Chloride							
0204410-14	AH-7 (1.0'-1.5')	SOIL		8/29/02		8/30/02	4 oz glass	Ice
				14:10		14:50		
La	b Testing:	Rejected:	No		Temp:	5.0 C		
	Chloride							
0204410-15	AH-8 (0-0.5')	SOIL		8/29/02 13:45		8/30/02 14:50	4 oz glass	Ice
La	b Testing:	Rejected:	No		Temp:	5.0 C		
	8015M							
	Chloride							

#### SAMPLE WORK LIST

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

915-682-3946

Order#:

G0204410

Project:

1877

Project Name: Pogo/ E.C. Hill C-3 Area

Location:

Lea Co., NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

			Date / Time	Date / Time		
Lab ID:	Sample:	Matrix:	Collected	Received	Container	Preservative
0204410-16	AH-8 (1.0-1.5'	SOIL	8/29/02	8/30/02	4 oz glass	Ice
			13:50	14:50		
La	b Testing:	Rejected: No	Ten	ip: 5.0 C		
J	Chloride					

#### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204410

Project:

1877

Project Name:

Pogo/ E.C. Hill C-3 Area

Analyst

CK

Location:

Lea Co., NM

Lab ID:

0204410-01

Sample ID:

AH-1 (0-0.5')

8015M

Method Blank

Date Prepared

Date Analyzed 9/3/02

Sample **Amount** 

1

Dilution **Factor** 

1

Method 8015M

Result RLParameter mg/kg GRO, C6-C12 <10.0 10.0 DRO, >C12-C35 10.0 <10.0 TOTAL, C6-C35 <10.0 10.0

Lab ID:

0204410-05

Sample ID:

AH-3 (0-0.5')

8015M

Method Blank

Date Prepared

Date Analyzed 9/3/02

Sample **Amount** 1

Dilution **Factor** 1

**Analyst** CK

Method 8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

#### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204410

Project:

1877

**Project Name:** 

Pogo/ E.C. Hill C-3 Area

CK

Location:

Lea Co., NM

Lab ID:

0204410-09

Sample ID:

AH-5 (0-0.5')

8015M

Method Blank

Date **Prepared** 

Date **Analyzed** 9/3/02

Sample Amount 1

<u>Factor</u>

Dilution

Method **Analyst** 

8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Lab ID:

0204410-15

Sample ID:

AH-8 (0-0.5')

8015M

Method Blank

Date Prepared

Date Analyzed 9/3/02

Sample Amount 1

Dilution **Factor** 1

**Analyst** CK

Method 8015M

Parameter	Result mg/kg	RL
GRO, C6-C12	<10.0	10.0
DRO, >C12-C35	<10.0	10.0
TOTAL, C6-C35	<10.0	10.0

Approval:

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

Jeanne McMurrey, Inorg. Tech. Director

Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

#### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204410

Project:

Project Name:

Pogo/ E.C. Hill C-3 Area

Location:

Lea Co., NM

RL

20

Lab ID:

0204410-01

Sample ID:

AH-1 (0-0.5')

Test	<b>Parameters</b>
------	-------------------

Parameter Chloride

Result 5390

Units mg/kg Dilution **Factor** 1

Method

9253

Date Analyzed 9/4/02

Analyst SB

Lab ID:

0204410-02

Sample ID:

Chloride

AH-1 (1.0'-1.5')

**Test Parameters** Parameter

Result 3620

Units mg/kg Dilution **Factor** 1

<u>RL</u> 20

Date Method 9253

**Analyst** Analyzed 9/4/02 SB

Lab ID:

0204410-03

Sample ID:

AH-2 (0-0.5')

**Test Parameters** 

Parameter Chloride

Result 4960

Units mg/kg Dilution **Factor** 1

Dilution

Factor

ı

Dilution

1

RL20

RL

20

Method 9253

Method

9253

Analyzed Analyst 9/4/02 SB

Date

Date

Analyzed

9/4/02

Lab ID:

0204410-04

Sample ID:

AH-2 (1.0'-1.5')

**Test Parameters** <u>Parameter</u>

Chloride

Lab ID:

0204410-05

Sample ID:

AH-3 (0-0.5')

**Test Parameters** 

Parameter Chloride

Result 5670

Result

5320

Units mg/kg

Units

mg/kg

**Factor** 

RL20

Method 9253

Analyzed 9/4/02

Date

Analyst SB

Analyst

SB

Lab ID:

0204410-06

Sample ID:

AH-3 (1.0'-1.5')

**Test Parameters** 

Parameter Chloride

Result 5320

Units mg/kg Dilution **Factor** 1

RL 20

Method 9253

Analyzed 9/4/02

Date

**Analyst** SB

RL = Reporting Limit

N/A = Not Applicable

Page 1 of 3

#### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204410

Project:

Project Name:

Pogo/ E.C. Hill C-3 Area

Location:

Lea Co., NM

Lab ID:

0204410-07

Sample ID:

AH-4 (0-0.5')

**Test Parameters** 

Parameter Chloride

Result 6030

Units mg/kg Dilution **Factor** 1

RL 20

Method 9253

Date Analyzed 9/4/02

Analyst SB

Lab ID:

0204410-08

Sample ID:

AH-4 (1.0'-1.5')

**Test Parameters** 

Parameter Chloride

Result 6470

Units mg/kg

Dilution **Factor** 1

<u>RL</u> 20

Method 9253

Date Analyzed 9/4/02

**Analyst** SB

Lab ID:

0204410-09

Sample ID:

AH-5 (0-0.5')

**Test Parameters** 

Parameter Chloride

Result 4520

Result

5230

Result

5140

Units mg/kg

Units

mg/kg

Units

mg/kg

Dilution **Factor** 1

Dilution

**Factor** 

1

Dilution

**Factor** 

1

1

<u>RL</u> 20

RL

20

<u>RL</u>

20

Method 9253

Method

9253

Method

9253

Date Analyzed 9/4/02

Date

Analyzed

9/4/02

Date

Analyzed

9/4/02

**Analyst** SB

Analyst

SB

Analyst

SB

Lab ID:

0204410-10

Sample ID:

AH-5 (1.0'-1.5')

Test Parameters Parameter

Chloride

0204410-11

Sample ID:

Lab ID:

AH-6 (0-0.5')

**Test Parameters** Parameter

Chloride

Lab ID:

0204410-12

Sample ID:

AH-6 (1.0'-1.5')

**Test Parameters** 

Parameter Chloride

Result 5140

Units mg/kg

Dilution **Factor** 

<u>RL</u> 20

Method 9253

Date Analyzed 9/4/02

**Analyst** SB

RL = Reporting Limit

N/A = Not Applicable

Page 2 of 3

#### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204410

Project:

Project Name:

Pogo/ E.C. Hill C-3 Area

Location:

Lea Co., NM

Lab ID:

0204410-13

Sample ID:

Chloride

AH-7 (0-0.5')

**Test Parameters** 

Parameter

Result 4960

Units mg/kg

Dilution **Factor** 1

RL20

Method 9253

Analyzed 9/4/02

Date

Analyst SB

Lab ID:

0204410-14

Sample ID:

AH-7 (1.0'-1.5')

Test Parameters

Parameter |

Result 5050

Units mg/kg

Dilution **Factor** 1

RL 20

Method 9253

Analyzed 9/4/02

Date

**Analyst** SB

Lab ID:

0204410-15

Sample ID:

Chloride

AH-8 (0-0.5')

**Test Parameters** 

Parameter Chloride

Result 5320

Units mg/kg

Dilution **Factor** 1

<u>RL</u> 20

Method 9253

Date Analyzed 9/4/02

**Analyst** SB

Lab ID:

0204410-16

Sample ID:

AH-8 (1.0-1.5'

**Test Parameters** 

Parameter Chloride

Result 5230

Units mg/kg

Dilution **Factor** 1

RL 20

Method 9253

Date Analyzed 9/4/02

UNI

**Analyst** SB

Approval:

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

Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

Page 3 of 3

## QUALITY CONTROL REPORT

8015M

Ordor#.	C0204410

BLANK SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003048-02			<10.0		
CONTROL SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003048-03		952	1003	105.4%	
CONTROL DUP SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003048-04		952	992	104.2%	1.1%
SRM SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
TOTAL, C6-C35-mg/kg	0003048-05		1000	1040	104.%	

## QUALITY CONTROL REPORT

#### **Test Parameters**

Order#: G0204410

BLANK	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003049-01			<20.0		
Chloride-mg/kg		0003050-01			<20.0		
MS	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204401-01	94.5	667	756	99.2%	
Chloride-mg/kg		0204410-15	5320	5000	10300	99.6%	
MSD	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204401-01	94.5	667	744	97.4%	1.6%
Chloride-mg/kg		0204410-15	5320	5000	10200	97.6%	1.%
SRM	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003049-04		5000	4960	99.2%	
Chloride-mg/kg		0003050-04		5000	4960	99.2%	

Analysis Red	uest and Cha	ain of Custo	ly	Re	CO	rd	L				4.5		GE:				OF.	:	2
<b>_</b>							$\dashv$			(Circ		ALYS r Sp				d No	o.)		
HIGHLAN (915) 682-4559	DER ENVIRO 1910 N. Big Sp Midland, Texas	oring St.				946		1 2	170006	Cr Pb Hg Se				10		9			
CLIENT NAME: \$06	O SITE MANAG.	ER: Tim Reed	NERS	F	RESEI MET	RVATIVE HOD			BOIS MOD.	Be Cd			80/054	8270/625		Chlaride			
	ROJECT NAME: E.C. H 29 (0.NM )	fill C-3 pill area	OF CONTAINERS				808/	1 - 13	Υ.	s Ag As Be	188	Valatiles	8240/82		908	pH, TDS.	(ALT)	tos)	ride
LAB I.D. NUMBER DATE TIME	GEAB GRAB SWADE ID	DENTIFICATION	NUMBER OF		HNOS	NONE	BTEX 8020/802	100	1PH 418.1 PAH 8270	RCRA Metals Ag	TCLP Volatiles	TCLP Semi	GC.MS Vol. 8240/8280/624	GC.MS Semi. Vol. PCB's 8080/808	Pest. 808/608	BOD, TSS, p.H.	Alpha Beta	PLM (Asbestos)	C 110
416-01 8/29/02 12:30 5	x AH-1 (	0-0.5')	IN					1	X										X
62 1/2:40 5	X AH-1 (	1.0'-1.5'1	1 10																X
03 12.45 8	K AH-2 (C	0-0.51	1 10	_		$\Box$										$\bot$			X
04 12:505	X AH-2 (1.	.0' -1.5']	11/	<u>'</u>			_					_				$\vdash$	-		<u> X </u>
05 13.00 5	X AH-3 (0	7 - 0.5'1			/		_								$\perp \downarrow$	$\perp$	-		<u>                                     </u>
06 3.05 5	X AH-3 (1.	0'-1.5')	1 1		(							_			$\perp \downarrow$	-	_		X
67   13.10   5	XAH-4 10	- 0.5' ]	<u>                                     </u>				_		-						- -		-		X
(%) (3.15)	NAH-4 (1.	0-1.5)	1 /	<u> </u>	)		-					_			+	-	_	-	1
09 /3.25 5	NAH-5 10	- <i>U.</i> 5 ' ]	1 N	+-	(		$\bot$		4	-				$\perp$	+	+	-	$\vdash$	4
RELINQUISHED BY: (Signature)	Date: 8-30-02	RECEIVED PY: (Signature)	<u>                                     </u>	Da	te:	3/3/2		SA	MPLE	D BY	Prin	y & :	Sign			Pat	e: _	8/3	0/02
Feyl Fight RELINQUISHED BY: (Signature)	Time:  Date: Time:	RECEIVED BY: (Signature)	L(	Tin Da Tin	te:	14:>		SA	IMPLE EDEX	SHIP	ED E	ny: (C	irale, BU			ATRBII		<u> </u>	20
RELINQUISHED BY: (Signature)	Date:	RECEIVED BY: (Signature)		Da: Tin				-		VDER (		ACT P	UP: ERSO			OTHE		ta by:	
ADDRESS: 1260W J-2 CITY: MISSO STATE	79 ZIP: 797U S	GECEIVED BY: (Signature)  DATE:	TDÆ:	······································			<u> </u>		_			, _		_	ycs/ c	έΖ		Chargorized:	
sample condition when received: 5.0 °C		ater A-Air SD-Solid		R	HUI	. 1 .	= {	tra	1 5	Ree	r fi s	Fo	)[	po	9551	ble	2 4	dd	i ticnal

Ar	al	vsi	s Re	eai	ue	st a	nd	Cha	ain	of	Cus	stoc	lv	F	Re	cc	r	d	L							PAG		<u> 2</u>			OF	<u>':</u>	<u> </u>	
										<del></del>			<u> </u>										(Circ				S RE			d No	o.)			
	$H_{\mathcal{A}}$	lGI	HLA	N		ER						$\mathbf{L}$	$\boldsymbol{C}$	<i>U</i>	$R_{I}$	Υ.			F			Т	8 8	T	$\bar{\Box}$		Ť	Ť	T	$\prod$	Ť	$\Box$		$\prod$
					18	910 N	l. Big	g Sp	ring	z St	•										900		Hg S											
]					M	lidlar	ad, T	exas	s 79	705											TX 006		2 2	:						.				
(91	5) 6	382-	4559							··		Fax (	91	5)	68	2-3	394	6			٧		ප් ප්				- ×	2		ğ				
CLIENT		•	06	0				MANAG			Reed		INERS		P		ERV. STH	ATTV. OD	E		BOIS MOD		2 2 2 2 2 2		8		8280/624 8270/625	15.13		Chloride				
PROJEC	T NO.	: 18	71	PR	OJE Lu	CT NAME.	M	E.C.	Pill	ill C	- }		CONTAINERS	(X)					000		1 180	<b>/</b>	Ag As		Volatile		Vol. 6		90	H, TDS,	(Afr.)	) (gg	10	ا
LAB I.D NUMBER		ATE	TIME	ايدا	GRAB					ICATION			NUMBER OF	FILTERED (Y/N)	HCL	HNO3	ICE	NONE	ove/ your Ame		TPH 418.1	PAH 6270	RCRA Metals Ag As Ba TCLP Metals Ag As Ba	TCLP Volatiles	TCLP Semi	RCI	GC.MS Vol. 8240/8280/624 GC.MS Semi. Vol. 8270/624	PCB's 8080/608	Pest. 808/608	BOD, 158, pH.	Gamma Spec. Alpha Beta (Air)	PLM (Asbestos)	( h lo C , ll P.	1 1
4410-1	, 8/2	9102	14.20	5	X	AH-	6	10	7 - C	7.51	1		1	N			χ							<u> </u>									ý	
12	2		14.25	5	X	Ait -	6	[1.	0'-1	1.51	1		1	W			X																X	T = T
13	<b>&gt;</b>		14.05	5	X	AH-	7	10	- D.	. 5'	1		1	N			X																X	
14			14:10	5	X	AH-	7	(1.0	0'-1	1.5	)		1	N			X																X	· ].
15			13:45	5		AH-8	,	10	-0	), 5	)		Ī	$\mathscr{N}$			X				X												X	
+ 110		/	13.50	5	χ	AH-8	7	[1.6	0'-1	1.5'	)		1	N			X								1								χ	
										•																								
																													Ш					
						1100110011																												
							(x ) (2										a	/_	$\perp$															
RELINQUIS	Lefty					Time:	(-)0-0 2:50			<del></del>	Leine				Dat	10:	1	130 175	0		Tiv	n 1	: ۲۹ نع ص	<u>u /</u>		in	u K	Q	'LA	(Tin	te: _ ne: _	8/	20/	102
RELINQUIS						Date: Time: Date:			<u> </u>		(Signatur				Dai Tim Dai	10: <u> </u>					FEDI	EX.	SHIP!		BI:		CIE) BUS UPS			AIRBI OTHE	ILL #			
RECEIVING				37.5	VA B	Time: [	/abof	- 11./0	1		(Signature				Tin					_ F					FACT	PE	RSON			$\Box$	Rosul	ita by	<del>.</del>	
ADDRESS: CITY:		126	00 K	IATE:	-20 		<b>ZIP:</b> 7	9745	)	<i>₩</i> 81: (	congrature	<del></del>									1	· (	Res	ed i	11	te	e T	- au	4/6	2	RUSE	H Char orised	rges i:	
CONTACT: _ SAMPLE CO				PHO VED:	NE: _		MATRIX:	W-Wa	DATE:	A 44-	ete.		TME	<u>:</u> =	R	EMAR	RKS:																	TPH
[		00						#-Wa		A-Air SL-Sluc		υ−Soμα Other				4,	11	ם	4	(is	4	(1 m	ز نداره	fi	-1/	01	,,,	141	12	ů c	ddi	tio	19/	IPH

226

## ANALYTICAL REPORT

## **Prepared for:**

TIM REED
HIGHLANDER ENVIRONMENTAL CORP.
1910 N. BIG SPRING STREET
MIDLAND, TX 79705

**Project:** 

Pogo E.C. Hill #C-3

PO#:

Order#:

G0204569

Report Date:

09/21/2002

**Certificates** 

US EPA Laboratory Code TX00158

# SAMPLE WORK LIST

HIGHLANDER ENVIRONMENTAL CORP.

G0204569

1910 N. BIG SPRING STREET

Order#: Project:

1877

Date / Time

MIDLAND, TX 79705

Project Name: Pogo E.C. Hill #C-3

915-682-3946

Location:

Lea County, New Mexico

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Date / Time

				Dute / Time	Date, IIII		
Lab ID:	Sample:	Matrix:		Collected	Received	Container	Preservative
0204569-01	Trench 1 1.0'	SOIL		9/20/02	9/20/02	4 oz glass	None
				10:10	14:10		
Lai	<u>b Testing:</u>	Rejected:	No	Ten	ip: 24.0 C		
	Chloride						
0204569-02	Trench 1 2.0'	SOIL		9/20/02	9/20/02	4 oz glass	None
				10:15	14:10		
<u>Lai</u>	<u>b Testing:</u>	Rejected:	No	Tem	ip: 24.0 C		
	Chloride						
0204569-03	Trench 2 1.0'	SOIL		9/20/02	9/20/02	4 oz glass	None
0201005 00				10:20	14:10		
<u>Lai</u>	b Testing:	Rejected:	No	Ten	ip: 24.0 C		
	Chloride						
0204569-04	Trench 2 2.0'	SOIL		9/20/02	9/20/02	4 oz glass	None
				10:22	14:10		
Lai	<u>b Testing:</u>	Rejected:	No	Tem	ip: 24.0 C		
	Chloride						
0204569-05	Trench 3 1.0'	SOIL		9/20/02	9/20/02	4 oz glass	None
				10:27	14:10		
Lai	<u>b Testing:</u>	Rejected:	No	Ten	ip: 24.0 C		
	Chloride						
0204569-06	Trench 3 2.0'	SOIL		9/20/02	9/20/02	4 oz glass	None
				10:30	14:10		
Lai	<u>b Testing:</u>	Rejected:	No	Tem	ip: 24.0 C		
	Chloride						
			_				

#### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204569

RL

20.0

Project:

1877

Project Name: Location:

Units

mg/kg

**Dilution** 

**Factor** 

1

Dilution

Dilution

Dilution

Pogo E.C. Hill #C-3 Lea County, New Mexico

Method

9253

Date

Analyzed

9/20/02

Date

Date

Date

Date

**Analyst** 

CK

Lab ID:

0204569-01

Sample ID:

Trench 1 1.0'

1	est	P	ar	an	nei	ers	

Parameter

Lab ID:

0204569-02

Sample ID:

Chloride

Trench 1 2.0'

#### Test Parameters

Date Dilution Parameter Result Units **Factor** <u>RL</u> Method Analyzed Analyst 2260 mg/kg 1 20.0 9253 9/20/02 CK Chloride

Result

2760

Lab ID:

0204569-03

Sample ID:

Trench 2 1.0'

#### Test Parameters

Parameter <u>RL</u> Analyzed Result Units **Factor** Method **Analyst** 20.0 Chloride 2530 mg/kg 1 9253 9/20/02 CK

Lab ID:

0204569-04

Sample ID:

Trench 2 2.0'

#### Test Parameters

Units Parameter Result **Factor** <u>RL</u> Method Analyzed **Analyst** 20.0 3100 1 9253 9/20/02 CK Chloride mg/kg

Lab ID:

0204569-05

Sample ID:

Trench 3 1.0'

#### Test Parameters

Dilution Parameter Result Units **Factor** RL Method Analyzed **Analyst** 2820 1 20.0 9253 9/20/02 mg/kg CK Chloride

Lab ID:

0204569-06

Sample ID:

Trench 3 2.0'

#### Test Parameters

Parameter Result Units **Factor** RL Method **Analyzed Analyst** 3230 20.0 9253 9/20/02 CK mg/kg i Chloride

RL = Reporting Limit

N/A = Not Applicable

Page 1 of 2

#### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204569

Project:

1877

Project Name:

Pogo E.C. Hill #C-3

Location:

Lea County, New Mexico

Approval: Kaland K. J. Raland K. Tuttle, Lab Director, QA Officer

Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director

Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

## QUALITY CONTROL REPORT

#### **Test Parameters**

Order#: G0204569

BLANK	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003189-01			<20.0		
MS	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204538-01	19500	10000	28000	85.%	
MSD	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204538-01	19500	10000	28500	90.%	1.8%
SRM	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003189-04		5000	4960	99.2%	

Environn	nental Lab	ot lexa	IS I, L	.ta.																						
12600 West I-20 Eas Odessa, Texas 7976	t Pho	ne: 915-563-1800 x: 915-563-171:	)									CHA											QUES			
Odessa, Texas 7570	, ra	- /	1														7	7		ر سر	_	//.	11	# /	1	7
Project M		n Keed	<u></u>									-	Pr	oject	Nan	ne:	PO	gi	)	EC	<u> (</u>	HI	1	# (	<u>-</u> -	_
Compan	y Name High	imder N. By	Envil	on Me	ental	<u>C</u>	77	P				-		Pr	oject	#:_	0		18	77	2_	<del>,</del>	<del></del>			
Company A	ddress: <u>/9/0</u>	N. By	Sp	line								-	1	Proje	ct L	oc:	<u> [</u>	a	Co	un	My	<u>, /</u>	<u>We</u>	en/	Me	<u> </u>
City/St	ate/Zip: Mid/a	and 4	//	9700								•			РО	#:_										
Teleph	one No: <u>682-</u> 4	4559	,		Fax No:	4	18	Z - 3	94	6																
Sampler Sig	مسم	To Do			•				-//	<del>/</del>		-														
Sampler Sig	mature:	m $re$										-						Ar	nalyz	For:	_				i	
			<del>-</del>											Ĺ		TOTA	_			4					l	
						ļ		Prese	rvative		Т	Mat	rix	╅╴		1012	+	┼─	$\vdash$	$\dashv$					ĺ	
							П					T		100			Se								<u></u>	
											ı			1005		503	8 H	İ					İ		hed	
						હ								5	ē,	8	ပ် ဗ						4		် လို	
(Cb <sup>Q</sup> )				pled	peld	aine				Ę		ll	ļ,	8015M	N B N	2, 12	Ba			2030			Thlorid		اق	Υ
Jours				Sam	Sam	Con				Spec			SDeci	- 1	<u>S</u>	S S	As Ag		atiles	0218	_	E .	0		Z	E DE
0204569				Date Sampled	Time Sampled	No. of Containers		HCI HCI	500	None Other (Specify)	ater	ndge	Soil Other (specify)	TPH: 418.1	Cations (Ca, Mg. Na,	Anions (Cl. SO4, CO3, HCO3)	Metals: As Ag Ba Cd Cr Pb Hg	Volatiles	Semivolatiles	BTEX 8021B/5030 RCI	N.O.R.M.	Total Gamma	3		RUSH TAT (Pre-Schedule)	Standard TAT
LAB # (iab use only)	FIELD	CODE		7 /		Z	2  :	<u> </u>	Ž	ž		No.	<u>, o</u>	₽	ت	₹ 8	ž	3	8		+ <del>ž</del>	۴	╁	┼┼		<u></u>
٥١	Trench 1	1.0'	9/	20/02	1010	4	H			X _	1	1-1	X	╂-	$\square$	$\dashv$		╄	$\vdash$	+	┼-	₩	4	╌┤	X	
02	Trench 1	2.0'		<u> </u>	1015	1	$\Box$		$\perp \! \! \perp \! \! \mid$	$X \mid$	4	$\sqcup$	Ϋ́	1	-	_			$\vdash$	_	-	$\vdash$	XI.	-	A	
03	Trench Z	1.0	·		1020				_	X	$\perp$	$\perp \downarrow$	$\checkmark$	_		_	_	╄	Ш	_	_	$\sqcup$	4	44	싀	_
ou	Trench Z	2.0			1022	1				X		Ш	1	_		$\bot$			Ц	_	$\downarrow$	$\sqcup$	X	$\perp \downarrow$	X	<u> </u>
<b>0</b> 5	Trunch 3	1.0			1027	1				$\chi$			Ϋ́								$\perp$	Ш	ح	$oldsymbol{\perp}$	$\boxtimes$	<u></u>
de -	Trench 3	2.0	V	7	1030	1				X			Χ										λL	╧	X	<u></u>
<b>4</b>																										<u></u>
							П							T					П		T	П	Т		П	 
											T			1			T	1	П			П	$\Box$		П	
							H			$\top$	1	$\Box$	T	1	П				П			П		$\Box$	П	
Special Instructions	<u> </u>		l			I	·													Intact		7	Υ)	N		
	1																			Recei						
Relinquished by:	// /	Date Tir	ne Recei	ived by:							C	ate	$\top$	Tim	е											
/im x	Leed 9	1/20/02 14															N	ec	ຸ ໃ	24,	oʻ	C				
Relinquished by:	7	Date Tir	10 a 10 a 10 a	ived by ELC	12 A. Y. 48, 77 (1974) 1874 1874 1875	$\mathcal{J}$					rations.	ate		Tim	A 2.7				iliya Ngjari					y Till Similar		i, vi
			1/00	la.	CF /W						7/	0/0	2/	41	0				r fek	3776	(10) e (7) (10) e (7)	<u> </u>				33

## ANALYTICAL REPORT

## **Prepared for:**

TIM REED
HIGHLANDER ENVIRONMENTAL CORP.
1910 N. BIG SPRING STREET
MIDLAND, TX 79705

**Project:** 

Pogo Producing Company/ Hill C-3

Spill

PO#:

Order#:

G0204619

**Report Date:** 

09/30/2002

**Certificates** 

**US EPA Laboratory Code TX00158** 

#### SAMPLE WORK LIST

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

915-682-3946

Order#:

G0204619

Project:

1877

Project Name: Pogo Producing Company/ Hill C-3 Spill

Location:

Lea County

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

				Date / Time	Date / Time		
Lab ID:	Sample:	Matrix:		Collected	Received	Container	Preservative
0204619-01	Trench 1 3.0'-3.5'	SOIL		9/24/02	9/25/02	plastic bag	Ice
0201017 01				9:20	16:40		
La	<u>b Testing:</u>	Rejected:	No	Ter	mp: 6.5 C		
<del> </del>	Chloride				J.v		,
0204619-02	Trench 2 3.0'-3.5'	SOIL		9/24/02	9/25/02	plastic bag	Ice
-				9:10	16:40		
<u>La</u>	b Testing:	Rejected:	No	Ter	mp: 6.5 C		
ļ	Chloride						
0204619-03	Trench 3 3.0'-3.5'	SOIL		9/24/02	9/25/02	plastic bag	Ice
0204017 03				9:15	16:40		
<u>La</u>	<u>b Testing:</u>	Rejected:	No	Ter	mp: 6.5 C		
	Chloride						

#### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204619

Project:

1877

Project Name:

Pogo Producing Company/Hill C-3 Spill

Location:

Lea County

Lab ID:

0204619-01

Sample ID:

Trench 1 3.0'-3.5'

Test Parameters

Parameter Chloride Result 2020 Units mg/kg Dilution Factor

<u>RL</u> 20 Method 9253 Date
Analyzed
9/27/02

Analyst SB

Lab ID:

0204619-02

Sample ID:

Trench 2 3.0'-3.5'

Test Parameters

Parameter\_

rs

**Result** 3120

Units mg/kg Dilution Factor

<u>RL</u> 20 Method 9253 Date
Analyzed
9/27/02

Analyst SB

Lab ID:

0204619-03

Sample ID:

Chloride

Trench 3 3.0'-3.5'

Test Parameters

Parameter Chloride Result

Units mg/kg Dilution Factor

<u>RL</u> 20

Method 9253 Date Analyzed 9/27/02

Analyst SB

Date

Approval: Ralandt Ju

Raland K. Tuttle, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech.

Sara Molina, Lab Tech.

Page 1 of 1

# QUALITY CONTROL REPORT

### **Test Parameters**

Order#: G0204619

BLANK	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003244-01			<20.0		
MS	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204605-01	1350	1000	2340	99.%	
MSD	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204605-01	1350	1000	2320	97.%	0.9%
SRM	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003244-04		5000	4960	99.2%	

An	lvei	s R	90	110	st a	nd	Ch	ain		f	$C_{116}$	zt o c	1 77	Ţ	20	00	\r/	i	T				4			PAG	<b>c</b> :		T		(	OF:	Z		
<b></b>																			$\neg \lceil$				I (Cir.					EQUI			va )	1	,		
	HIG.			-19	ER 1 910 N Midlan	Bi	g Si Cexa	prin s 7	ıg ≅ 970	St. )5		LFax	**				394	6			. TX1006	7	Cr Ph Hg Se												
CLIENT N 10GA PROJECT	NO.:	ueine	PI	<b>ROJE</b> X	CT NAME:	· /	MANAG	GER: M	le e	el		<i>i/</i>	CONTAINERS		PI		ERV.	ATIVE	-	00	8015 KOD		g As Ba Cd		atiles	oo, ood, o	0/0550/624	- 1		TDS, Chloride		E.	,	0	
LAB I.D. NUMBER	DATE	TIME		GRAB GRAB	Coun	/	Ht/ OPLE I	Z C	==== FICATI	) ION	Syr	//	NUMBER OF C	FILTERED (Y/N)	нст	HNOS	ICE	NONE	BTEX 8020/602	MTBE 8020/802	TPH 418.1	PAH 8270	RCRA Metals Ag	TCIP Voletiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8840/8880/884	GC.MS Semi. Vo. PCB's 8080/808	Pest. 808/608	BOD, 758, pH,	Свтта Ярес.	Alpha Beta (Air)	PLW (Asbestos)	Chare	
	9/24/	20920		/	Tres	nch	1	3,	8	-3	3,5	7 5	L	10				x																X	
	1/1/	0910	8	/		end					3.5	1	VP	1	2			X									T	T		П				4	
)	1/	095	5	1	Tro	1201	7 3				3.5							X		<del>                                     </del>	$  \  $						T	T	$\prod$			$\top$	1	4	1
	V -	1			170	7.3.7																$\neg$					1	1			<del></del> -		T		1
			$\dagger \dagger$	1			4		50	-Jh	·							_				1					1	1						T	
			T				5		ni.	1.4	0	1,															T	T	П			T	1	$\prod$	
							6		110	Al		/																				1			
																											1								
A						-/-	./																					,		,			4/	1	7
RELINQUISHE RELINQUISHE	/	gnature)			Date:	1281					Signatu	•			Date	e:					SAM	/M	BY	P		å Si	P	in 1	lee	Ti	ate: ime:	7	7 E	168	=
RELINQUISHE					Date: Time: Date:						Signatu Signatu				Date Time	e:				╝.	FEDE	7	LIVE	5	) )		oie) BUS UPS	3		AIRB OTHI		#			_
RECEIVING L	ABORATOR	4: EN	M	6	Time:						gnature		<i></i>	·····	Time			?		-[	HIGH	ILAN.	DER	CON	TAC	' PEF	1501	₹: 1			<u> </u>	aulta ISH C		8.0	
CITY: CONTACT:				ONE: _		ZIP:		DATE:		1/2:	5/0	2	TOME:		14	, '(	10	?				1,	m			200	<u>/</u>	<i>/</i>			Au	thorn		No	
BAMPLE CON Plas-1: C		EN RECE	OF C			MATRIX:	17-11 S-S	ater	AA SL	tir Sludge		D-Solid -Other			RE	MAR	ucs:																		

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.

# ANALYTICAL REPORT

# **Prepared for:**

TIM REED HIGHLANDER ENVIRONMENTAL CORP. 1910 N. BIG SPRING STREET MIDLAND, TX 79705

**Project:** 

Pogo Producing/E.C. Hill #C-3 Spill

**PO#:** 

Order#:

G0204683

**Report Date:** 

10/04/2002

**Certificates** 

**US EPA Laboratory Code TX00158** 

### SAMPLE WORK LIST

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

915-682-3946

Order#:

G0204683

Project:

1877

Date / Time

Project Name: Pogo Producing/E.C. Hill #C-3 Spill

Location:

Lea County

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Date / Time

						-	att, Time		
Lab ID:	Sampl	e :	Matrix:		Collected		Received	Container	Preservative
0204683-01	Trench 4	1.0'	SOIL		10/1/02		10/1/02	Plastic Bag	None
0204005-01					9:30		14:15	_	
La	b Testing:		Rejected:	No	T	Cemp:	32.5 C		
	Chloride								
						-10			
0204683-02	Trench 4	2.0'	SOIL		10/1/02		10/1/02	Plastic Bag	None
					9:35		14:15		
La	<u>b Testing:</u>		Rejected:	No	7	Гетр:	32.5 C		
	Chloride				***				*****
0204683-03	Trench 4	3.0'	SOIL		10/1/02		10/1/02	Plastic Bag	None
0204003-03					9:40		14:15	<b></b>	,
La	b Testing:		Rejected:	No	7	Temp:	32.5 C		
	Chloride		-			•			
	Cilioride								<u> </u>
0204683-04	Trench 5	1.0'	SOIL		10/1/02		10/1/02	Plastic Bag	None
V2U1U03-U1					9:50		14:15	J	
La	b Testing:		Rejected:	No	7	Гетр:	32.5 C		
	Chloride								
									<u> </u>
0204683-05	Trench 5	2.0'	SOIL		10/1/02		10/1/02	Plastic Bag	None
	•				9:55		14:15		
La	<u>b Testing:</u>		Rejected:	No	7	Temp:	32.5 C		
	Chloride								
0204602.06	Trench 5	3 0'	SOIL		10/1/02		10/1/02	Plastic Bag	None
0204683-06	Tronon 5	5.0	JOIL		10:00		14:15	Tiustio Dug	110110
La	b Testing:		Rejected:	No		emp:	32.5 C		
Lui	Chloride				•				
	Cinoride								
0204683-07	Trench 6	1.0'	SOIL		10/1/02		10/1/02	Plastic Bag	None
0207005-0/					10:05		14:15	-	
La	b Testing:		Rejected:	No	7	Temp:	32.5 C		
	Chloride								
0204683-08	Trench 6	2.0'	SOIL		10/1/02		10/1/02	Plastic Bag	None
			<b></b>	N-	10:10	_	14:15		
In	b Testing:		Rejected:	140	7	Temp:	32.5 C		
Lui	Chloride								

### SAMPLE WORK LIST

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

915-682-3946

Order#:

G0204683

Project:

1877

Data / Time

Project Name: Pogo Producing/E.C. Hill #C-3 Spill

Location:

Lea County

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

			Date / Time	Date / Time		
Lab ID:	Sample:	Matrix:	Collected	Received	Container	<b>Preservative</b>
0204683-09	Trench 6 3.0'	SOIL	10/1/02	10/1/02	Plastic Bag	None
1201000 0	1		10:15	14:15		
<u>La</u>	<u>b Testing:</u>	Rejected: No	Tem	p: 32.5 C		
	Chloride					

Data / Time

### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204683

Project:

1877

Project Name:

Pogo Producing/E.C. Hill #C-3 Spill

Location:

Lea County

Lab ID:

0204683-01

Sample ID:

Trench 4 1.0'

**Test Parameters** 

Parameter Chloride

Result 4790

Units mg/kg

Dilution **Factor** 1

RL 20

Method 9253

Analyzed <u>Analyst</u> 10/4/02

Date

SB

Lab ID:

0204683-02

Sample ID:

Trench 4 2.0'

Test Parameters

Parameter

Result 2840

Units mg/kg

Dilution **Factor** 1

<u>RL</u> 20

Date Method Analyzed 10/4/02 9253

**Analyst** SB

Lab ID:

0204683-03

Sample ID:

Chloride

Trench 4 3.0'

Test Parameters

Parameter Chloride

Result 2270

Units mg/kg

Dilution **Factor** 1

RL 20

Method 9253

Date Analyzed **Analyst** 10/4/02 SB

Lab ID:

0204683-04

Sample ID:

Trench 5 1.0'

Test Parameters

Parameter Chloride

Result 514

Units mg/kg

Dilution **Factor** 1

**RL** 20

Method 9253

Analyzed **Analyst** 10/4/02 SB

Date

Date

Lab ID:

0204683-05

Sample ID:

Trench 5 2.0'

Test Parameters

Parameter Chloride

Result <20.0

Units mg/kg

Dilution Factor 1

RL 20

Method 9253

Analyzed **Analyst** 10/4/02 SB

Lab ID:

0204683-06

Sample ID:

Trench 5 3.0'

Test Parameters

Parameter Chloride

Result <20.0

Units mg/kg

Dilution **Factor** 1

RL20

Method 9253

Date Analyzed 10/4/02

**Analyst** SB

RL = Reporting Limit

N/A = Not Applicable

Page 1 of 2

### ANALYTICAL REPORT

TIM REED

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204683

**Project:** 

1877

Project Name:

Pogo Producing/E.C. Hill #C-3 Spill

Location:

Lea County

Lab ID:

0204683-07

Sample ID:

Chloride

Trench 6 1.0'

Test Parameters

Parameter

Result 2690

Units mg/kg

Dilution **Factor** ı

RL 20

Method 9253

Date Analyzed **Analyst** 10/4/02

SB

Lab ID:

0204683-08

Sample ID:

Trench 6 2.0'

Test Parameters

Parameter Chloride

Result 177

Units mg/kg

Dilution **Factor** 1

<u>RL</u> 20

Method 9253

Date Analyzed 10/4/02

**Analyst** SB

Lab ID:

0204683-09

Sample ID:

Trench 6 3.0'

Test Parameters

Parameter Chloride

Result <20.0

Units mg/kg

Dilution **Factor** 1

 $\mathbf{RL}$ 20

Method 9253

Date Analyzed **Analyst** 10/4/02 SB

10-07-02 manure Date

Approval: Canal MCMu Raland K. Tottle, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech. Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS I, LTD.

## QUALITY CONTROL REPORT

### **Test Parameters**

Order#: G0204683

BLANK	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003347-01			<20.0		
MS	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204661-01	354	1000	1350	99.6%	
MSD	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204661-01	354	1000	1330	97.6%	1.5%
SRM	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003347-04		5000	4960	99.2%	

# ANALYTICAL REPORT

## Prepared for:

**IKE TAVAREZ** HIGHLANDER ENVIRONMENTAL CORP. 1910 N. BIG SPRING STREET MIDLAND, TX 79705

Project:

Pogo / E.C. Hill #C-3 Spill

PO#:

Order#:

G0204771

**Report Date:** 10/16/2002

Certificates

US EPA Laboratory Code TX00158

### SAMPLE WORK LIST

HIGHLANDER ENVIRONMENTAL CORP.

Order#:

G0204771

1910 N. BIG SPRING STREET

1877 Project:

MIDLAND, TX 79705

Project Name: Pogo / E.C. Hill #C-3 Spill

68243946

Location:

Lea County, NM

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

Lab ID: 0204771-01	<u>Sample:</u> Trench #4 (4.0°)	Matrix:	Collected 10/15/02	Pate / Time Received 10/15/02 14:50	Container 4 cz Glass	Preservative Ice
<u>La</u>	<u>b Testing:</u> Chloride	Rejected: No	Tem	p: 3 C		
0204771-02	Trench #4 (5.0')	SOIL	10/15/02	10/15/02 14:50	4 oz Glass	lee
<u>La</u>	b Testing: Chloride	Rejected: No	Tem	p: 3 C		
0204771-03	Trench #4 (6.0')	SOIL	10/15/02	10/15/02 14:50	4 oz Giass	tee
<u>Lac</u>	b Testing: Chloride	Rejected: No	Tem	p: 3 C		

#### ANALYTICAL REPORT

IKE TAVAREZ

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. BIG SPRING STREET

MIDLAND, TX 79705

Order#:

G0204771

Project: 1877

Project Name:

Pogo / E.C. Hill #C-3 Spill

Location:

Lea County, NM

Lab iD:

0204771-01

Sample ID: Trench #4 (4.0')

Test Parameters

Parameter Chloride

Result 1740

Units mg/kg

Dilution Factor

RL 20 Method 9253

Date Analyzed Analyst 10/16/02

SB

Lab ID:

0204771-02

Sample ID: Trench #4 (5.0')

**Test Parameters** Parameter

Result 744

Units mg/kg

Dilution Factor

RL 20 Method 9253

Date Analyzed Analyst 10/16/02

Lab ID:

Chloride

Chloride

6204771-03

Sample:1D: Trench #4 (6.0')

Test Parameters Parameter

Result 106

Upits mg/kg

Dilution Factor l

RL

Sara Molina, Lab Tech.

Method 9253

Date Analyzed 10/16/02

Analyst

10 16 02 Date

Approval: (Canal ) MCMuser, Ralanc K. Tutio, Lab Director, QA Officer Celey D. Keene, Org. Tech. Director Jeanne McMurrey, Inorg. Tech. Director Sandra Biezugbe, Lab Tech.

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS I, LTD.

# QUALITY CONTROL REPORT

### **Test Parameters**

Order#: G0204771

BLANK	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003445-01			<20.0		
MS	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr,	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204771-01	1740	1000	2730	99.%	
MSD	\$OIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0204771-01	1740	1000	2710	97.3%	0.7%
SRM	SOIL	LAB-ID#	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/kg		0003445-04		5000	4960	99.2%	

o . 5

Analysis Request and Chain of Custody Record															PAG		Z			OF:			
							-	ANALYSIS REQUEST (Circle or Specify Method Na.)															
t e e e e e e e e e e e e e e e e e e e	ENVIRONMENTAL N. Big Spring St.	L	U.	KI	•					88		2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				T		$\prod$					
Midlar	nd, Texas 79705									2000XT		2 2											
(915) 682-4559	Fax	(91	5)	88	2-3	1946	3					B			Ι,	.   22			e de				
CLIENT NAME: 7 090	SITE MANAGER:	DAERES		P		THOI				BOTS MOD.	á	3 8	4 :		00/00	8870/885			0				
PROJECT NO.: 77 PROJECT NAME	Te. Hill # C-3 Soul.	CONTADMERS	(26/20)					306	. 1			2 2 7 2	,	Volatiles	Boan Aboah Aboah	Zel B		1 _ 6	7. 2.	. ( <del>)</del>	·	\$	77
LAB LD. DATE TIME ELECTIONS OF TOME OF	Ca Cornly . Wor.	NUMBER OF	FILTERED (Y,	HCL	HNOS	£21	NONE	BTEX BORD/BOR	<b>65</b> )	TPH CUB.1		TCIP Metals	TOLP Voletile	P Semi	RCI		8080	906	Bob, 188, pH. Germma Spec	Alpha Bota (Air)	PLW (Asbest	Alma	Pill
01 10/15/02 3 XTren	ch #4 (4.0')	1				-																X	W
02/10/15/02 5 ×1/10	nd 4 (5.0')	1				1																X	Y.
03 W/15/02 5 M/1e	-ch 4 (6.0')	1	L			1			_		$\perp$											X	M
		_	L		_				$\perp$		_			1				$\perp$					
		$\perp$			_	.	1	_	_	_	1				$\perp$			$\downarrow$					
		_			4		- -	$\perp$	4	_	_	-		_	_			$\perp$	$\perp$				$\perp \! \! \perp \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$
		╁	_			_		$\dashv$	-	-	$\downarrow$	-		4	1			4			1	4-1	
					-	-		+	+	+	1	-		+		-		$\downarrow$				44	
				$\vdash$		-   -	+			-	+	H		+	+	$\ \cdot\ $	$\left  \cdot \right $	+	+	+	+	+-	$\dashv$
RELEGIES BY: (Sanature) Date:	10/15/0 2 ROYSTOND BY: (Staplayur)		2/			Vis	10-		8	U/Z		BY	(17)	هم دو	Sig	 p)			Date				4
RECINGUISHED BY: (Signature)  Date: Time:	BROWNED BY: (Signature)	يني	<u> </u>	Date Tim	D:	17.	-0	<u> </u>	S		2 3			BY: (	(Citro			 1A	Time RBIL				$=$ $\downarrow$
RECEIVING LABORATORY: CHUNG LABORATORY:	RECEIVED BY: (Signature)			Date				- -	H	AND	DEI	IVER		ACT	ď	P9			THER	_ , .	by:		=
RECEIVING LABORATORY: 0.15  ADDRESS: STATE: CONTACT: PHONE:	ZIP:	TIME:						-	1										A	Tou	Charg rised:	Ko	
SAMPLE CONDITION WHEN RECEIVED:	MATRIX: W- Water A-Air SD-Salid S-Sali SL-Sludge O-Other	- 100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		RI	MAR	CS3:	3	(	11		<u>'</u>		4	0 3	6	_ رئين	5					, 40	

Please Fill out all copies - Laboratory retains yellow copy - Roturn original copy to Highlander Environmental Corp. - Project Manager retains pink copy - Accounting receives Gold copy.

District J
1625 N. French Dr., Hobbs, NM 88240
District IJ
811 South First, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
2040 South Pacheco, Santa Fe, NM 87505

#### State of New Mexico Energy Minerals and Natural Resources

Oil Conservation Division 2040 South Pacheco Santa Fe, NM 87505 Revised March 17, 1999 Submit 2 Copies to appropriate

Form C-141

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

### **Release Notification and Corrective Action**

					<b>OPER</b>	ATOR		Initia	al Repo	rt 🕱 Fin	al Report					
	mpany :	Arch/Pogo F				Contact:	Rex Ja									
Address:			<del></del>	. Midland, Tx		Telephone		685-8100								
Facility Nar	ne:	E.C. Hill C-	3			Facility T	ype: Produ	cing Well								
Surface Ow	ner: D.K.	Boyd		Minera	l Owner	•	. <u></u>	<u> </u>	Lease							
	***************************************			LOCAT	rion (	OF RELI	TACE	·	API	30025	35365					
Unit Letter	Section	Township	Range	Feet from the		South Line	Feet from the	East/West	Line	County	1					
K	27	238	37E	1950	S	South Eme	990	W	1	Lea County						
			· · · · ·	NATI	IRE O	F RELEA	ASE									
Type of Rele	ase: Produc	ced Water		·			Release: Unkno		Volume	Recovered: 0	bbls					
Source of Re	lease: 3'' F	Poly Line				Date and H	lour of Occurrence	ce:	Date and	Hour of Disco	overy:					
						8/28/02				6:00 A.M.	-					
Was Immediate Notice Given? ☐ Yes 🔀 No ☐ Not Require						If YES, To Whom? NMOCD –										
By Whom?						Date and Hour: 8/28/02 12:45 A.M.										
Was a Water	course Rea	ched?	Yes 🄀	No		If YES, Vo	olume Impacting	the Watercou	ırse.							
	ırse was lm	pacted, Descri	ibe Fully.*			1										
NA																
				n Taken.*ı A spl	lit in a 3'	' poly line oc	curred while sup	plying water	to a dril	lling rig. Produ	ced water					
		oad and into a and Cleanup A		en *												
he affected	area is des	cribed in the a	ssessment	and closure repo	ort. The in	npacted mate	erial was excavat	ed and haule	ed to a p	roper disposal	facility					
na sampies	were laken	to conjirm pre	oper cieun	up levels were o	огатеа.											
							knowledge and u									
							ns and perform co									
maanger put of liability sh	ould their	or the environm	nent. The e failed to	acceptance of a (	141 rep	ort by the N	MOCD marked a contamination that	s "Final Rep	ort" doe	s not relieve th	e operator					
							report does not re									
ompliance v	vith any oth	ner federal, stat	te, or local	laws and/or regu	lations.		op on does not re	me re une op		responsionity	101					
	1.	Pul	1	1100	•		OIL CONS	ERVATI	ON D	IVISION						
Signature:	Vm	rea	(Hgo	nt tol 10	90)	Approved	by District Super	visor:								
Printed Name		m Ree	11 >	/ 1 /	<i></i>											
Title: Vic	e ries	ndent.	0	hlander 8				Ex	piration							
Date: [1]							of Approval:			Attached	<u> </u>					
Attach Ad	ditional S	heets If Nece	ssary		•											