



Highlander Environmental Corp.

Midland, Texas

October 10, 2005

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

RE: Assessment Report and Remediation Plan for the COG Operating, LLC, Valhalla 4 Federal Com #1, Unit Letter D, Section 4, Township 19 South, Range 32 East, Lea County, New Mexico

Dear Mr. Johnson:

Highlander Environmental Corp. (Highlander) was contacted by COG Operating, LLC (COG) to assess a spill on the access road of the Valhalla 4 Federal Com #1 located in Unit letter D, Section 4, Township 19 South, Range 32 East, Lea County, New Mexico (Site).

Background

According to the State of New Mexico C-141 report, a brine water spill or dumping occurred on approximately 1900' of access road on or before 08/09/2005. The spill was discovered by Mr. Paul Evans of the Carlsbad, New Mexico office of the BLM. It is not known when the incident occurred, who was responsible for the incident, or what volume of brine water was dumped on the road. Mr. Evans contacted COG representatives and samples of the road base and native soils below the road were taken by Highlander personnel on 8/31/2005.

After review of the sample results, the BLM issued a Notice of Written Order (Order) for the site on 9/13/2005. The order stated that COG was to excavate the chloride contaminated material from the 1900' of access road, remove it for disposal and test the soils under the road. The Order stated that COG must also have approval from the NMOCD. A request for a 30 day extension was filed with the BLM on 9/13/2005 in order to complete the drilling of the well and move the rig off location before removal of the access road. A work plan was prepared and submitted to the NMOCD on September 14, 2005 and approved on September 16, 2005.

Groundwater and Regulatory

The Site is located on the western edge of Lea County near the Lea/Eddy County line. No water well information was found in the immediate vicinity of the Site. The State of New Mexico Well Reports did not show any water wells in Section 4. However, water wells were shown in Sections 19 and 20 with an average groundwater depth of 102' to 345', respectively. In addition,

API # 30025 31210 0000

incident - NPACOB 13848666

1910 N. Big Spring

Midland, Texas 79705

(432) 682-4559

Fax (432) 682-3946

application - pPACOB

published data, from the Geology and Groundwater Conditions in Southern New Mexico, showed a well approximately 1 mile southwest in Section 8 (Location #19.32.8.200) with a depth to groundwater of 365' below ground surface.

Assessment Results

On September 28, 2005, additional soil samples were collected from the site using a stainless steel, bucket type hand auger. A total of nine (9) auger holes were installed at 200' intervals along the 1900' section of access road. Soil samples were collected at one foot increments to a depth of 4.5' below ground surface (bgs). The samples were delivered to Environmental Labs of Texas for chloride analysis by EPA method 300.0. The results of the sampling are summarized in Table 1. The laboratory reports and the chain of custody documentation are included in Appendix A. The Site location is shown on Figures 1 and 2, and the sample locations are shown on Figure 3.

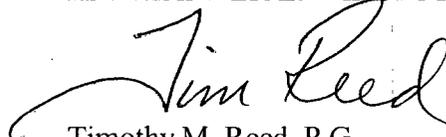
Referring to table 1, chloride impact above 1,000 mg/kg is shown to be confined to the road surface material from 0-1.0'. At 1.0'-1.5' chloride levels decrease dramatically with depth to concentrations approaching background levels. There was a slight rise in chloride concentrations at 4.0'-4.5' in auger holes AH-6, AH-8 and AH-9, however, the concentrations remained below 1,000 mg/kg.

Work Plan

Based upon the significant reduction in chloride concentration immediately below the road base, the depth to groundwater and limited potential salt loading, removal of the surficial layer of road (0-1.0' from the 1900' segment) would alleviate future potential impact to groundwater. COG proposes to remove the 0-1.0' layer of road base material in the 1900' segment and hauled off site for proper disposal. Clean caliche will be brought in to rebuild the access road. Upon completion of these activities, COG will submit a closure report for your approval.

If you require any additional information or have any questions or comments concerning the assessment report or work plan, please call (432) 682-4559.

HIGHLANDER ENVIRONMENTAL CORP,

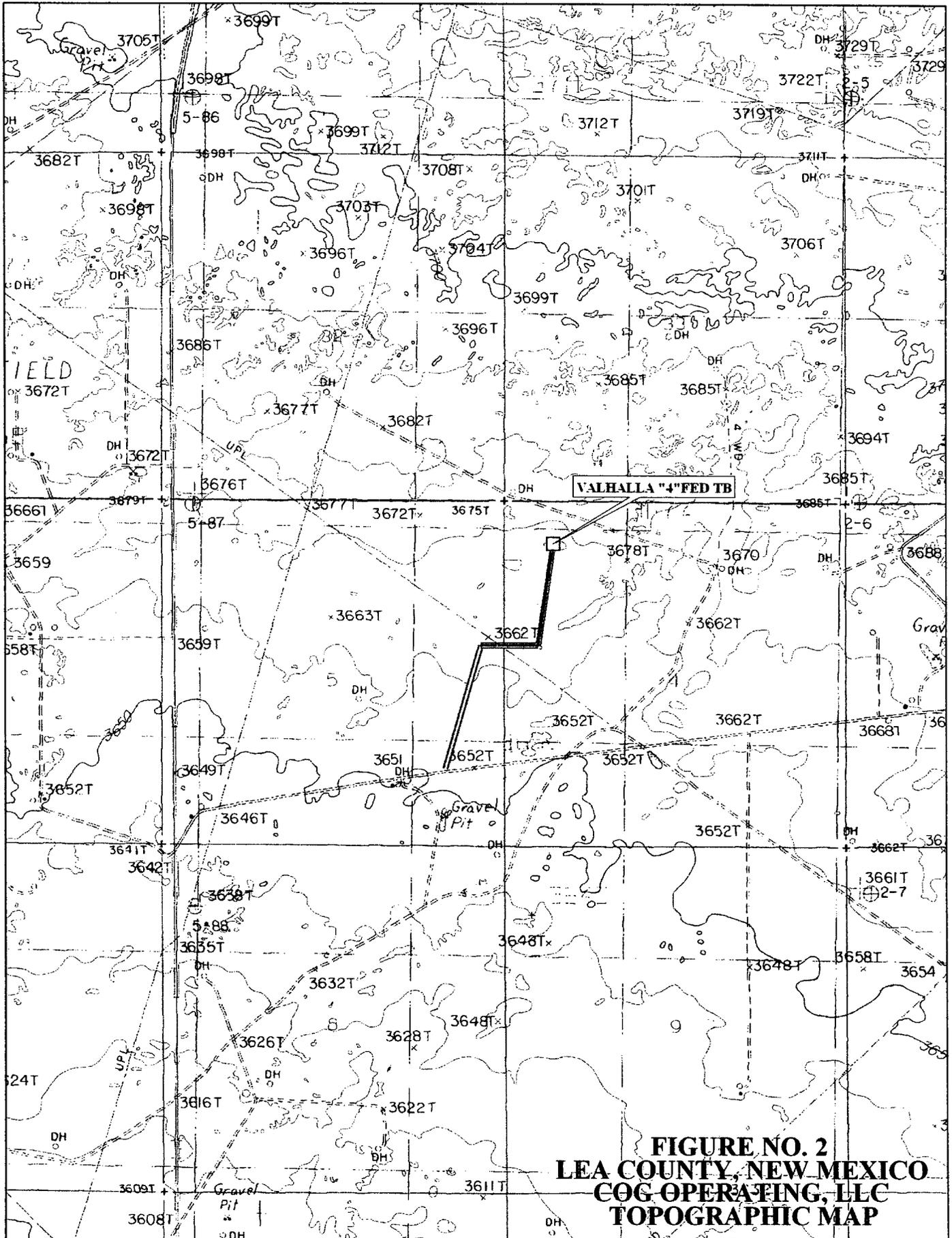


Timothy M. Reed, P.G.
Vice President

cc: Paul Evans, Carlsbad BLM
Mr. Erick Nelson, COG Operating, LLC



FIGURES

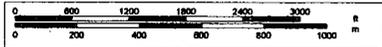


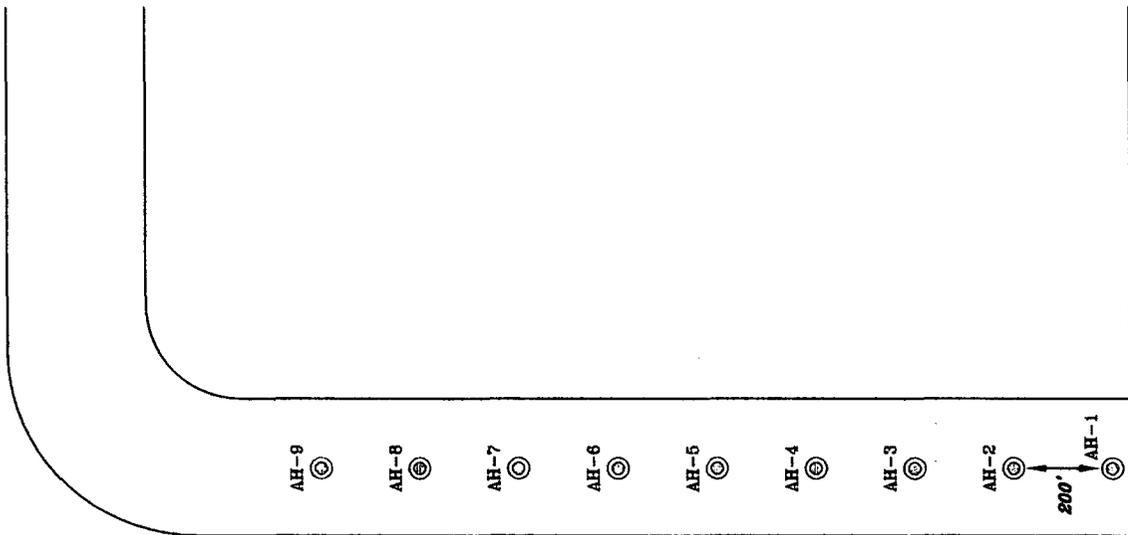
**FIGURE NO. 2
LEA COUNTY, NEW MEXICO
COG OPERATING, LLC
TOPOGRAPHIC MAP**



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www.delorme.com

Scale 1 : 24,000
1" = 2000 ft





AH-9

AH-8

AH-7

AH-6

AH-5

AH-4

AH-3

AH-2

200' AH-1

LEASE RD.

FIGURE NO. 3

LEA COUNTY, NEW MEXICO

COG OPERATING, LLC
VALHALLA

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

DATE: 10/11/05

DWN. BY: JJ

FILE: 63-000047
SOURCER

© AUGER HOLE LOCATIONS (200' INTERVALS)

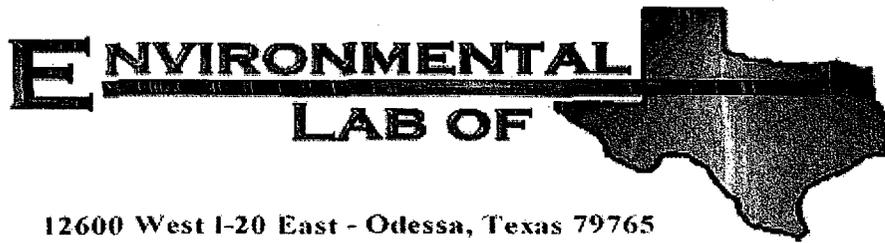
NOT TO SCALE

TABLE

Table1
 COG Operating LLC
 Valhalla 4 Federal Com. #1
 Lea County, New Mexico

Sample ID	Sample Interval	Date Sampled	Chloride (mg/kg)
AH-1	0-1'	9/28/2005	3080
	1-1.5'	9/28/2005	779
	2-2.5'	9/28/2005	404
	3-3.5'	9/28/2005	233
	4-4.5'	9/28/2005	53.4
AH-2	0-1'	9/28/2005	733
	1-1.5'	9/28/2005	282
	2-2.5'	9/28/2005	718
	3-3.5'	9/28/2005	287
	4-4.5'	9/28/2005	127
AH-3	0-1'	9/28/2005	1970
	1-1.5'	9/28/2005	649
	2-2.5'	9/28/2005	369
	3-3.5'	9/28/2005	298
	4-4.5'	9/28/2005	283
AH-4	0-1'	9/28/2005	4070
	1-1.5'	9/28/2005	264
	2-2.5'	9/28/2005	164
	3-3.5'	9/28/2005	179
	4-4.5'	9/28/2005	381
AH-5	0-1'	9/28/2005	3850
	1-1.5'	9/28/2005	325
	2-2.5'	9/28/2005	181
	3-3.5'	9/28/2005	260
	4-4.5'	9/28/2005	449
AH-6	0-1'	9/28/2005	4100
	1-1.5'	9/28/2005	376
	2-2.5'	9/28/2005	232
	3-3.5'	9/28/2005	590
	4-4.5'	9/28/2005	720
AH-7	0-1'	9/28/2005	6850
	1-1.5'	9/28/2005	457
	2-2.5'	9/28/2005	267
	3-3.5'	9/28/2005	250
	4-4.5'	9/28/2005	259
AH-8	0-1'	9/28/2005	4540
	1-1.5'	9/28/2005	376
	2-2.5'	9/28/2005	251
	3-3.5'	9/28/2005	203
	4-4.5'	9/28/2005	758
AH-9	0-1'	9/28/2005	7770
	2-2.5'	9/28/2005	147
	3-3.5'	9/28/2005	471
	4-4.5'	9/28/2005	625

APPENDIX A



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: COG/ Valhalla 4 Fed. Com. #1

Project Number: 2447

Location: Lea County, NM

Lab Order Number: 5J03002

Report Date: 10/07/05

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

Project: COG/ Valhalla 4 Fed. Com. #1
Project Number: 2447
Project Manager: Ike Tavarez

Fax: (432) 682-3946
Reported:
10/07/05 16:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-1 0-1'	SJ03002-01	Soil	09/28/05 00:00	09/30/05 17:00
AH-1 1-1.5'	SJ03002-02	Soil	09/28/05 00:00	09/30/05 17:00
AH-1 2-2.5'	SJ03002-03	Soil	09/28/05 00:00	09/30/05 17:00
AH-1 3-3.5'	SJ03002-04	Soil	09/28/05 00:00	09/30/05 17:00
AH-1 4-4.5'	SJ03002-05	Soil	09/28/05 00:00	09/30/05 17:00
AH-2 0-1'	SJ03002-06	Soil	09/28/05 00:00	09/30/05 17:00
AH-2 1-1.5'	SJ03002-07	Soil	09/28/05 00:00	09/30/05 17:00
AH-2 2-2.5'	SJ03002-08	Soil	09/28/05 00:00	09/30/05 17:00
AH-2 3-3.5'	SJ03002-09	Soil	09/28/05 00:00	09/30/05 17:00
AH-2 4-4.5'	SJ03002-10	Soil	09/28/05 00:00	09/30/05 17:00
AH-3 0-1'	SJ03002-11	Soil	09/28/05 00:00	09/30/05 17:00
AH-3 1-1.5'	SJ03002-12	Soil	09/28/05 00:00	09/30/05 17:00
AH-3 2-2.5'	SJ03002-13	Soil	09/28/05 00:00	09/30/05 17:00
AH-3 3-3.5'	SJ03002-14	Soil	09/28/05 00:00	09/30/05 17:00
AH-3 4-4.5'	SJ03002-15	Soil	09/28/05 00:00	09/30/05 17:00
AH-4 0-1'	SJ03002-16	Soil	09/28/05 00:00	09/30/05 17:00
AH-4 1-1.5'	SJ03002-17	Soil	09/28/05 00:00	09/30/05 17:00
AH-4 2-2.5'	SJ03002-18	Soil	09/28/05 00:00	09/30/05 17:00
AH-4 3-3.5'	SJ03002-19	Soil	09/28/05 00:00	09/30/05 17:00
AH-4 4-4.5'	SJ03002-20	Soil	09/28/05 00:00	09/30/05 17:00
AH-5 0-1'	SJ03002-21	Soil	09/28/05 00:00	09/30/05 17:00
AH-5 1-1.5'	SJ03002-22	Soil	09/28/05 00:00	09/30/05 17:00
AH-5 2-2.5'	SJ03002-23	Soil	09/28/05 00:00	09/30/05 17:00
AH-5 3-3.5'	SJ03002-24	Soil	09/28/05 00:00	09/30/05 17:00
AH-5 4-4.5'	SJ03002-25	Soil	09/28/05 00:00	09/30/05 17:00
AH-6 0-1'	SJ03002-26	Soil	09/28/05 00:00	09/30/05 17:00
AH-6 1-1.5'	SJ03002-27	Soil	09/28/05 00:00	09/30/05 17:00
AH-6 2-2.5'	SJ03002-28	Soil	09/28/05 00:00	09/30/05 17:00
AH-6 3-3.5'	SJ03002-29	Soil	09/28/05 00:00	09/30/05 17:00
AH-6 4-4.5'	SJ03002-30	Soil	09/28/05 00:00	09/30/05 17:00
AH-7 0-1'	SJ03002-31	Soil	09/28/05 00:00	09/30/05 17:00
AH-7 1-1.5'	SJ03002-32	Soil	09/28/05 00:00	09/30/05 17:00
AH-7 2-2.5'	SJ03002-33	Soil	09/28/05 00:00	09/30/05 17:00
AH-7 3-3.5'	SJ03002-34	Soil	09/28/05 00:00	09/30/05 17:00

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

Project: COG/ Valhalla 4 Fed. Com. #1
Project Number: 2447
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
10/07/05 16:43

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
AH-7 4-4.5'	5J03002-35	Soil	09/28/05 00:00	09/30/05 17:00
AH-8 0-1'	5J03002-36	Soil	09/28/05 00:00	09/30/05 17:00
AH-8 1-1.5'	5J03002-37	Soil	09/28/05 00:00	09/30/05 17:00
AH-8 2-2.5'	5J03002-38	Soil	09/28/05 00:00	09/30/05 17:00
AH-8 3-3.5'	5J03002-39	Soil	09/28/05 00:00	09/30/05 17:00
AH-8 4-4.5'	5J03002-40	Soil	09/28/05 00:00	09/30/05 17:00
AH-9 0-1'	5J03002-41	Soil	09/28/05 00:00	09/30/05 17:00
AH-9 2-2.5'	5J03002-42	Soil	09/28/05 00:00	09/30/05 17:00
AH-9 3-3.5'	5J03002-43	Soil	09/28/05 00:00	09/30/05 17:00
AH-9 4-4.5'	5J03002-44	Soil	09/28/05 00:00	09/30/05 17:00

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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
AH-1 0-1' (5J03002-01) Soil									
Chloride	3080	50.0	mg/kg	100	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-1 1-1.5' (5J03002-02) Soil									
Chloride	779	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-1 2-2.5' (5J03002-03) Soil									
Chloride	404	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-1 3-3.5' (5J03002-04) Soil									
Chloride	233	5.00	mg/kg	10	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-1 4-4.5' (5J03002-05) Soil									
Chloride	53.4	5.00	mg/kg	10	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-2 0-1' (5J03002-06) Soil									
Chloride	733	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-2 1-1.5' (5J03002-07) Soil									
Chloride	282	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-2 2-2.5' (5J03002-08) Soil									
Chloride	718	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-2 3-3.5' (5J03002-09) Soil									
Chloride	287	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-2 4-4.5' (5J03002-10) Soil									
Chloride	127	5.00	mg/kg	10	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-3 0-1' (5J03002-11) Soil									
Chloride	1970	25.0	mg/kg	50	EJ50603	10/04/05	10/06/05	EPA 300.0	

Environmental Lab of Texas

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Page 3 of 9

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1910 N. Big Spring St.
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Project: COG/ Valhalla 4 Fed. Com. #1
Project Number: 2447
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Fax: (432) 682-3946

Reported:
10/07/05 16:43

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-3 1-1.5' (5J03002-12) Soil									
Chloride	649	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-3 2-2.5' (5J03002-13) Soil									
Chloride	369	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-3 3-3.5' (5J03002-14) Soil									
Chloride	298	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-3 4-4.5' (5J03002-15) Soil									
Chloride	283	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-4 0-1' (5J03002-16) Soil									
Chloride	4070	50.0	mg/kg	100	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-4 1-1.5' (5J03002-17) Soil									
Chloride	264	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-4 2-2.5' (5J03002-18) Soil									
Chloride	164	5.00	mg/kg	10	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-4 3-3.5' (5J03002-19) Soil									
Chloride	179	5.00	mg/kg	10	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-4 4-4.5' (5J03002-20) Soil									
Chloride	381	10.0	mg/kg	20	EJ50603	10/04/05	10/06/05	EPA 300.0	
AH-5 0-1' (5J03002-21) Soil									
Chloride	3850	50.0	mg/kg	100	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-5 1-1.5' (5J03002-22) Soil									
Chloride	325	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	

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Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-5 2-2.5' (5J03002-23) Soil									
Chloride	181	5.00	mg/kg	10	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-5 3-3.5' (5J03002-24) Soil									
Chloride	260	5.00	mg/kg	10	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-5 4-4.5' (5J03002-25) Soil									
Chloride	449	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-6 0-1' (5J03002-26) Soil									
Chloride	4100	50.0	mg/kg	100	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-6 1-1.5' (5J03002-27) Soil									
Chloride	376	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-6 2-2.5' (5J03002-28) Soil									
Chloride	232	5.00	mg/kg	10	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-6 3-3.5' (5J03002-29) Soil									
Chloride	590	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-6 4-4.5' (5J03002-30) Soil									
Chloride	720	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-7 0-1' (5J03002-31) Soil									
Chloride	6850	100	mg/kg	200	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-7 1-1.5' (5J03002-32) Soil									
Chloride	457	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-7 2-2.5' (5J03002-33) Soil									
Chloride	267	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	

Environmental Lab of Texas

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Page 5 of 9

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1910 N. Big Spring St.
Midland TX, 79705

Project: COG/ Valhalla 4 Fed. Com. #1
Project Number: 2447
Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
10/07/05 16:43

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
AH-7 3-3.5' (5J03002-34) Soil									
Chloride	250	5.00	mg/kg	10	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-7 4-4.5' (5J03002-35) Soil									
Chloride	259	5.00	mg/kg	10	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-8 0-1' (5J03002-36) Soil									
Chloride	4540	100	mg/kg	200	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-8 1-1.5' (5J03002-37) Soil									
Chloride	376	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-8 2-2.5' (5J03002-38) Soil									
Chloride	251	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-8 3-3.5' (5J03002-39) Soil									
Chloride	203	5.00	mg/kg	10	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-8 4-4.5' (5J03002-40) Soil									
Chloride	758	10.0	mg/kg	20	EJ50604	10/05/05	10/06/05	EPA 300.0	
AH-9 0-1' (5J03002-41) Soil									
Chloride	7770	100	mg/kg	200	EJ50605	10/05/05	10/06/05	EPA 300.0	
AH-9 2-2.5' (5J03002-42) Soil									
Chloride	147	5.00	mg/kg	10	EJ50605	10/05/05	10/06/05	EPA 300.0	
AH-9 3-3.5' (5J03002-43) Soil									
Chloride	471	10.0	mg/kg	20	EJ50605	10/05/05	10/06/05	EPA 300.0	
AH-9 4-4.5' (5J03002-44) Soil									
Chloride	625	10.0	mg/kg	20	EJ50605	10/05/05	10/06/05	EPA 300.0	

Environmental Lab of Texas

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Page 6 of 9

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

Project: COG/ Valhalla 4 Fed. Com. #1
 Project Number: 2447
 Project Manager: Ike Tavarez

Fax: (432) 682-3946

Reported:
 10/07/05 16:43

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC %REC	Limits	RPD	RPD Limit	Notes
Batch EJ50603 - Water Extraction										
Blank (EJ50603-BLK1)					Prepared: 10/04/05 Analyzed: 10/06/05					
Chloride	ND	0.500	mg/kg							
LCS (EJ50603-BS1)					Prepared: 10/04/05 Analyzed: 10/06/05					
Chloride	8.55		mg/L	10.0		85.5	80-120			
Calibration Check (EJ50603-CCV1)					Prepared: 10/04/05 Analyzed: 10/06/05					
Chloride	8.89		mg/L	10.0		88.9	80-120			
Duplicate (EJ50603-DUP1)					Source: 5J03002-11 Prepared: 10/04/05 Analyzed: 10/06/05					
Chloride	1990	25.0	mg/kg		1970			1.01	20	
Batch EJ50604 - Water Extraction										
Blank (EJ50604-BLK1)					Prepared: 10/05/05 Analyzed: 10/06/05					
Chloride	ND	0.500	mg/kg							
LCS (EJ50604-BS1)					Prepared: 10/05/05 Analyzed: 10/06/05					
Chloride	9.99		mg/L	10.0		99.9	80-120			
Calibration Check (EJ50604-CCV1)					Prepared: 10/05/05 Analyzed: 10/06/05					
Chloride	9.36		mg/L	10.0		93.6	80-120			
Duplicate (EJ50604-DUP1)					Source: 5J03002-21 Prepared: 10/05/05 Analyzed: 10/06/05					
Chloride	3830	50.0	mg/kg		3850			0.521	20	
Batch EJ50605 - Water Extraction										
Blank (EJ50605-BLK1)					Prepared: 10/05/05 Analyzed: 10/06/05					
Chloride	ND	0.500	mg/kg							

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EJ50605 - Water Extraction										
LCS (EJ50605-BS1)					Prepared: 10/05/05 Analyzed: 10/06/05					
Chloride	8.93		mg/L	10.0		89.3	80-120			
Calibration Check (EJ50605-CCV1)					Prepared: 10/05/05 Analyzed: 10/06/05					
Chloride	9.42		mg/L	10.0		94.2	80-120			
Duplicate (EJ50605-DUP1)		Source: SJ03013-01			Prepared: 10/05/05 Analyzed: 10/06/05					
Chloride	301	25.0	mg/kg		315			4.55	20	

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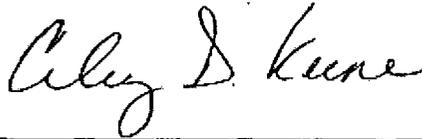
Fax: (432) 682-3946

Reported:
10/07/05 16:43

Notes and Definitions

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

Report Approved By:



Date:

10/7/2005

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

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

This material is intended only for the use of the individual (s) or entity to whom it is addressed, and may contain information that is privileged and confidential.

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

CLIENT NAME: COG Operating SITE MARKER: 1/16 Tower 2

PROJECT NO.: 2447 PROJECT NAME: COG - Valhalla 4 Fed. Com #1

MATRIX: _____ COMP. _____ GRAB _____

DATE: _____ TIME: _____

LAB I.D. NUMBER: 5J03062

SAMPLE IDENTIFICATION: Loc. Conty. NW

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS				PRESERVATIVE METHOD	
							HCL	HNO3	ICE	NONE		
-01	9/28/05		S			AH-1 0-1						
-02			S			AH-1 1-1.5'						
-03			S			AH-1 2-2.5'						
-04			S			AH-1 3-3.5'						
-05			S			AH-1 4-4.5'						
-06			S			AH-2 0-1						
-07			S			AH-2 1-1.5'						
-08			S			AH-2 2-2.5'						
-09			S			AH-2 3-3.5'						
-10			S			AH-2 4-4.5'						

RELINQUISHED BY: (Signature) _____ DATE: 9/28/05 TIME: 12:00

RECEIVED BY: (Signature) _____ DATE: _____ TIME: _____

RELINQUISHED BY: (Signature) _____ DATE: _____ TIME: _____

RECEIVED BY: (Signature) _____ DATE: _____ TIME: _____

RELINQUISHED BY: (Signature) _____ DATE: _____ TIME: _____

RECEIVED BY: (Signature) _____ DATE: 9/30/05 TIME: 5:00

RECEIVING LABORATORY: COG STATE: _____ ZIP: _____

CITY: _____ PHONE: _____

MATRIX: W-Water A-Air SD-SO4
S-Sed SL-Sludge O-Other

SAMPLE CONDITION WHEN RECEIVED: 4.0 labels

REMARKS: _____

PAGE: 1 OF: 5

ANALYSIS REQUEST (Circle or Specify Method No.)

HTX 8020/802	
HTX 481 8016 MOD. TX1008	
PAH 8070	
BCRA Metals Ag As Ba Cd Cr Pb Hg Se	
TCF Metals Ag As Ba Cd Cr Pd Hg Sb	
TCF Volatiles	
TCF Semi Volatiles	
RCI	
GCMS Vol. 8240/8280/824	
GCMS Semi Vol. 8270/825	
PCB's 8080/808	
Peel. 808/808	
BOD, TSS, pH, TDS Chloride	<u>X</u>
Gamma Spec.	<u>X</u>
Alpha Beta (Air)	<u>X</u>
PYM (Asbestos)	<u>X</u>

DATE: _____ TIME: _____

SAMPLED BY: (Print & Sign) 1/16 Tower 2

DATE: _____ TIME: _____

SAMPLE SHIPPED BY: (Circle) FUS

DATE: _____ TIME: _____

FEDEX UPS

HAND DELIVERED

DATE: _____ TIME: _____

RECEIVED BY: _____

HIGHLANDER CONTACT PERSON: 1/16 Tower

RUBI Changes Authenticated: Yes No

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

CLIENT NAME: COG Operating SITE MANAGER: KE Walker

PROJECT NO.: 2447 PROJECT NAME: COG/Victrolle 4 Fed Con #1
Lee County, TX

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD					
									HCL	H2O2	ICE	NONE		
5303002	-31	9/28/05	S			AH-7 0-1	1							
	-32		S			AH-7 1-1.5	1							
	-33		S			AH-7 2-2.5	1							
	-34		S			AH-7 3-3.5	1							
	-35		S			AH-7 4-4.5	1							
	-36		S			AH-8 0-1	1							
	-37		S			AH-8 1-1.5	1							
	-38		S			AH-8 2-2.5	1							
	-39		S			AH-8 3-3.5	1							
	-40		S			AH-8 4-4.5	1							

DATE: 9/28/05 TIME: 5:00
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker

RECEIVING LABORATORY: EEC STATE: TX ZIP: 79705
 ADDRESS: 40 labels PHONE: 739-05
 CONTACT: 40 labels

PAGE: 5 OF: 5
 ANALYSIS REQUEST (Circle or Specify Method No.)
 PCB's 8080/808
 GCLMS Vol. 8240/8230/824
 GCLMS Semi Vol. 8270/825
 PCB's 8080/808
 BOT. 188, PH. 178 Chloride
 Gamma Spec.
 Alpha Beta (Air)
 PM (Asbestos)

DATE: 9/28/05 TIME: 5:00
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker

RECEIVING LABORATORY: EEC STATE: TX ZIP: 79705
 ADDRESS: 40 labels PHONE: 739-05
 CONTACT: 40 labels

DATE: 9/28/05 TIME: 5:00
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker
 RECEIVED BY: (Signature) KE Walker

REMARKS:
 SAMPLE CONDITION WHEN RECEIVED: 40 labels
 MATRIX: W-Water A-Air SD-Solid
S-Soil SI-Sludge O-Other
 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

CLIENT NAME: COG Operating SITE MANAGER: 1KE Tower

PROJECT NO.: 2447 PROJECT NAME: COG/Vol/Kolla & Fed Com. #1

LAB I.D. NUMBER: 503002 DATE: 9/28/05 TIME: 5 MATRIX: S COMP: GRAB SAMPLE IDENTIFICATION: COG Co. m.m.

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP	GRAB	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD					
								HCL	HNO3	ICE	NONE		
-41	9/28/05		S			1							
-42	9/28/05		S			1							
-43	9/28/05		S			1							
-44	9/28/05		S			1							

PAGE: 5 OF: 5

ANALYSIS REQUEST (Circle or Specify Method No.)

BTX 800/808	
MTH 800/808	
THE 4181 8018 MOD. 131006	
PAH 8070	
RCRA Metals Ag As Ba Cd Cr Pb Hg Be	
TCF Metals Ag As Ba Cd Cr Pd Hg Se	
TCF Volatiles	
TCF Semi Volatiles	
KCI	
GC MS Vol 6840/6860/684	
GC MS Semi Vol 6870/685	
PCB's 8080/808	
Post. 808/808	
BOD, TSS, pH, TDS, Chloride	X
Gamma Spec	
Alpha Beta (Air)	
PM (Asbestos)	

RECEIVED BY: (Signature) [Signature] DATE: 9/28/05 TIME: 5:00

RELINQUISHED BY: (Signature) [Signature] DATE: 9/28/05 TIME: 5:00

RECEIVED BY: (Signature) [Signature] DATE: 9/28/05 TIME: 5:00

RELINQUISHED BY: (Signature) [Signature] DATE: 9/28/05 TIME: 5:00

RECEIVING LABORATORY: EEA STATE: TX ZIP: 79705

ADDRESS: 1910 N. Big Spring St. CITY: Midland PHONE: (432) 682-4559

SAMPLE CONDITION WHEN RECEIVED: 40 labels MATRIX: W-Water A-Air S-Sed G-Other

REMARKS: Labels

SAMPLED BY: (Print, Sign) 1KE Tower DATE: 9/28/05 TIME: 5:00

SAMPLES SHIPPED BY: (Circle) PCS

PROZ PCS AIRBILL #

HAND DELIVERED UPS OTHER:

HIGHLANDER CONTACT PERSON: 1KE Tower Results by:

RUSH Charges Authorized: Yes No

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

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

Client: Highlander Env.

Date/Time: 09-30-05 @ 1700

Order #: 5J03002

Initials: JMM

Sample Receipt Checklist

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

hand delivered
by sampler

Other observations:

Variance Documentation:

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

Corrective Action Taken:

SITE INFORMATION

General Site Information:

Site:	Valhalla 4 Federal Com #1
Company:	COG Operating Company
Section, Township and Range	Section 4, T19S, R32 E
Unit Letter:	D
Lease Number:	NM 22643
County:	Lea
GPS:	32° 41' 41.31", 103° 46' 38.05"
Surface Owner:	BLM
Mineral Owner:	
Directions:	From intersection of Highways 62/180 and 176, at Halfway, NM., go north and west on 176 to Highway 126 and turn N. Go N. 8 miles to lease road and cattle guard on right. Turn right (east) and go 1 mile to lease road on left. This is the start of the 1900' of lease road shown on Figures 2 & 3.

Release Data:

Date Released:	8/9/2005
Type Release:	Brine water
Source of Contamination:	Unknown
Fluid Released:	Unknown
Fluids Recovered:	Surface - None

Official Communication:

Name:	Diane Kuykendall	Tim Reed, P.G.
Company:	COG Operating, LLC	Highlander Environmental Corp.
Address:	550 W. Texas Ave. Ste. 1300	1910 N. Big Spring
P.O. Box		
City:	Midland Texas, 79701	Midland, Texas
Phone number:	(432) 683-7443	(432) 692-4559
Fax:	(432) 683-7441	
Email:	dkuykendall@conchoresources.com	treed@hec-enviro.com

Ranking Criteria

Depth to Groundwater:	Ranking Score	Site Data
<50 ft	20	
50-99 ft	10	0
>100 ft.	0	Average Depth >300 BS
WellHead Protection:	Ranking Score	Site Data
Water Source <1,000 ft., Private <200 ft.	20	
Water Source >1,000 ft., Private >200 ft.	0	0
Surface Body of Water:	Ranking Score	Site Data
<200 ft.	20	
200 ft - 1,000 ft.	10	
>1,000 ft.	0	0
Total Ranking Score:	0	

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

