1R - 257

REPORTS

DATE:

1999

Highlander Environmental Corp.

Midland, Texas

June 3, 1999

Mr. Chris Williams
District 1 Supervisor
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

Re: Pit Closure Investigation Report, Texaco Exploration and Production, Inc., D. F. Fergason Lease (J. C. Turner Property), Former Emergency Pit, Northeast Quarter, Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Dear Mr. Williams:

The following are the results of a pit closure investigation at the D. F. Fergason Lease near Hobbs, New Mexico. The investigation was conducted for Texaco Exploration and Production, Inc. (Texaco) on April 26-28, 1999.

1.0 Background

Prior to 1969, Texaco operated the D. F. Fergason Lease. From aerial photographs there appear to have been several small pits (the pits) associated with the D. F. Fergason Lease. Texaco sold its interest in the D. F. Fergason Lease in 1969, and aerial photographs indicated that the pits may have been closed at that time. There is an area on Mr. J. C. Turner's property that measures approximately 200 x 300 feet that is mainly covered by caliche (the Site). The pits were located within the Site.

In response to correspondence from the New Mexico Oil Conservation Division (OCD) on August 25, 1998, Texaco requested Highlander to prepare a work plan to investigate the former pit. The work plan was submitted to the OCD on September 28, 1998, and approved on February 4, 1999. As a condition to its approval, the OCD specified analysis of soil samples for total petroleum hydrocarbons (TPH) by method 418.1. The OCD also requested submittal of an investigation report by May 3, 1999. During a telephone conversation with the OCD on April 29, 1999, it was agreed that method 8015 modified was acceptable for TPH analysis, and the reporting deadline was extended to June 4, 1999. Highlander submitted a letter to the OCD on April 29, 1999, confirming the telephone conversation. Appendix A presents correspondence from the OCD to Texaco dated February 4, 1999. Appendix B presents correspondence from Highlander to the OCD dated April 29, 1999.

2.0 Site Setting

The Site is located in east central Lea County, approximately two mile east of Hobbs, New Mexico. The legal description for the Site is the northeast quarter (NE/4), Section 30, Township 18 South, Range 39 East. Figure 1 presents a Site location and topographic map. Soil native to the Site is the Arvana loamy fine sand. The Arvana loamy fine sand resembles the Arvana fine sandy loam; however, it has been extensively eroded by wind, which has removed the surface layer. The Arvana loamy fine sand has two subsoil units, ranging in thickness from about 10 to 12 inches, and composed of reddish-brown to dark red, light to heavy sandy clay loam. The subsoil extends to a depth of about 28 inches below ground surface (BGS). Indurated caliche underlies the subsoil.

Wind blown sand of recent age covers most of eastern Lea County, New Mexico. The wind blown sand is underlain by the Teriary-age Ogallala formation. Groundwater occurs in the saturated portion of the Ogallala formation (commonly referred to as Ogallala aquifer). Regional published reports indicate that groundwater flow in the vicinity of the Site is from northwest to southeast. A static depth-to-groundwater measurement was obtained on May 26, 1999, from a water well located on the Ms. Idolina Rodriguez property, approximately 300 feet west of the Site. The depth-to-groundwater was 93.50 feet BGS.

3.0 Previous Investigations

On April 10, 1997, Highlander personnel conducted an investigation at the Site, at Texaco's request. The investigation was conducted to evaluate an area void of vegetation. The investigation consisted of installing six (6) shallow hand augered soil borings and collection of soil samples from three horizons (0 to 1.0', 1.0' to 1.5' and 2.0 to 2.3'). Sampling was discontinued at approximately 2.5 feet BGS, due to dense caliche, which precluded advancement of the auger. Figure 2 presents a Site drawing and boring locations.

The soil samples from each horizon were composited into a single sample, resulting in three samples. Background samples were collected at depths of 0 to 1' and 1.0 to 1.5', from a vegetated area north of the Site. The samples were submitted to Texas A & M University System - Soil Testing Laboratory, College Station, Texas, for routine and detailed salinity analysis.

The soil electrical conductivity (EC) values indicated that the soils were not considered saline, since all were below 4 millimhos per centimeter (mmhos/cm). The laboratory reports also showed that the sodium adsorption ratio (SAR) was low, and calcium was very high, indicating high calcium carbonate soil. The high calcium levels are likely the result of soil containing limestone or high calcium content, and not associated with oil and gas operations. The high calcium carbonate levels in the soil is suspected of causing chlorosis, a condition that occurs when plants cannot utilize iron or zinc from the soil. The background sample from 1.0 to 1.5' also contained high calcium carbonate, but the shallow interval from 0 to 1.0' contained a much lower concentration, which

allowed crop production. The investigation results were submitted to Texaco in a letter dated May 9, 1997, and provided to a representative of the property owner. Appendix C presents a copy of the report.

4.0 Current Subsurface Investigation

The current investigation consisted of installing eleven (11) rotary-drilled borings and collection of soil samples for laboratory testing. Scarborough Drilling, Inc., Lamesa, Texas installed the borings, using a truck-mounted air rotary drilling rig. The borings (BH-1 through BH-11) were drilled from 20 to 53 feet BGS, and soil samples were collected using a 2-foot long split-spoon sampler. Caliche was encountered approximately 2 feet BGD at nearly every location, which precluded further sampling with the split-spoon sampler; therefore, a 1-foot long core sampler was substituted. A lithologic log was made for each boring based on visual examination of the soil samples and drill cuttings.

Each soil sample was placed in a clean plastic sample bag, thoroughly mixed, and transferred to a laboratory-prepared glass sample container. Each sample was split with a environmental representative retained by the landowner, Mr. J. C. Turner. A representative of the OCD was also present during the investigation. A portion of each sample was retained in the sample bag and field screened using the Ambient Temperature Headspace (ATH) method. A Thermo Environmental Instruments, Model 580B, Organic Vapor Meter (OVM), calibrated with isobutylene, was used to screen each sample. Each sample bag was sealed following collection of samples for laboratory testing, leaving a vacant headspace in the top of the bag. The concentration of organic vapors in the sample bag headspace was measured using the OVM after approximately fifteen minutes at ambient temperature storage. The headspace gas measurements were recorded on the boring logs, presented in Appendix D. The headspace gas measurements are also presented in Table 1.

According to OCD guidelines ("Guidelines for Unlined Surface Impoundment Closure, February 1993"), a soil headspace gas measurement of 100 parts per million (ppm) may be substituted for laboratory analysis of benzene and total BTEX (sum of benzene, toluene, ethylbenzene and xylene). The highest headspace gas measurement recorded in the soil samples was13.5 ppm, recorded in boring BH-8, 0 to 1.6', therefore, BTEX analysis was not performed on soil samples. The soil sample from each boring that exhibited the highest OVM reading was analyzed for TPH. The OCD, as a condition of its approval of the work plan, also required that BTEX, TPH and chloride analysis be performed on the bottom sample from each boring. The samples were submitted under chain-of-custody control to Trace Analysis, Inc., Lubbock, Texas. Table 2 presents a summary of the laboratory analysis. Appendix E presents the laboratory reports.

All down-hole equipment (i.e., drilling rods, bit, etc.) was thoroughly decontaminated between each location using a high-pressure hot water washer and rinsed. All soil sampling

equipment (i.e., split-spoon sampler, core sampler, etc.) was thoroughly washed between events using potable water and laboratory-grade detergent, and rinsed. Decontamination fluids were captured, contained in a 55 - gallon drum, and stored at the Site until disposal is arranged. A sample of clean decontamination water was collected and analyzed for BTEX and chloride. No BTEX was detected in the water sample, and chloride was 300 milligrams per liter (mg/L). Appendix E presents the laboratory report. Following the investigation, each boring was filled to ground surface with cement and bentonite grout. The boring locations were surveyed for elevation by Basin Surveys, Hobbs, New Mexico, which were referenced to mean sea level (AMSL). The boring and pipeline locations were also referenced to the southeast and southwest corners of the property.

5.0 Investigation Results

The Recommended Remediation Action Levels (RRAL) for this Site, based on OCD guidelines 's ("Guidelines for Unlined Surface Impoundment Closure, February 1993"), are 10 ppm (benzene), 50 ppm (total BTEX) and 1,000 ppm (TPH). There is no RRAL for chloride; however, the OCD usually applies the New Mexico Water Quality Control Commission standard (250 milligrams per liter) to an allowable soil concentration. The laboratory test results did not report BTEX above the test method detection limits. Three samples did report TPH concentrations above the test method detection limits. The samples (BH-7, 0 to 2', BH-8, 0 to 1.6' and BH-9, 0 to 2') contained TPH concentrations of 2,310 milligrams per kilogram (mg/kg), 1,781.1 mg/kg and 1,530 mg/kg, respectively. All TPH, except sample BH-8, 0 to 1.6', was reported as diesel range hydrocarbons (DRO). Gasoline range hydrocarbon (GRO) was reported at 31.1 mg/kg in sample BH-8, 0 to 1.6'. Soil samples from BH-7, BH-8 and BH-9 (10 to 11 feet BGS) were analyzed to determine the vertical extent of the TPH at these locations. The TPH results were all below the test method detection limits. The distribution and depth of TPH reported in the soil samples does not suggest that the impact originated from the pits. The highest chloride value (280 mg/kg) was reported in soil sample BH-10, 40 to 41', collected near the south boundary of the Site. The remaining chloride values ranged from 14 mg/kg to 210 mg/kg. There is no RRAL for chloride; however, the OCD usually applies the New Mexico Water Quality Control Commission standard (250 milligrams per liter) to an allowable soil concentration. The distribution of chloride in the soil samples does not suggest that an impact has occurred from the pits.

6.0 Conclusions

The following conclusions are based on the previous and current investigations conducted at the Site.

1. On May 26, 1999, static groundwater was measured at 93.50 feet BGS, in a water well located approximately 300 feet west of the Site.

2. Soil samples collected from the Site on April 10, 1997, revealed low EC and sodium

adsorption ratio (SAR), and very high calcium levels, indicating a high calcium carbonate soil. The high calcium levels are likely the result of soil containing limestone or high calcium content, and not associated with oil and gas operations. The high calcium carbonate level is suspected of causing chlorosis, a condition that occurs when plants cannot utilize iron or zinc from the soil.

3. The OCD Recommended Remediation Action Levels for the Site are 10 ppm (benzene), 50 ppm (total BTEX) and 1,000 ppm (TPH). No BTEX was reported in the soil samples. Three samples (BH-7, 0 to 2', BH-8, 0 to 1.6' and BH-9, 0 to 2') reported TPH from 1,530 mg/kg to 2,310 mg/kg. The TPH, except sample BH-8, 0 to 1.6', was reported as DRO. The GRO reported in sample BH-8, 0 to 1.6', was 31.1 mg/kg. Soil samples from approximately 10 to 11 feet BGS at locations BH-7, BH-8 and BH-9 did not report TPH above the test method detection limits. The distribution and depth of TPH reported in the soil samples does not suggest that the impact originated from the pits.

4. The highest chloride value (280 mg/kg) was reported in soil sample BH-10, 40 to 41', collected near the south property boundary. The remaining chloride values ranged from 14 mg/kg to 210 mg/kg. There is no RRAL for chloride; however, the OCD usually applies the New Mexico Water Quality Control Commission standard (250 milligrams per liter) to an allowable soil concentration. The distribution of chloride in the soil samples does not suggest that an impact has occurred from the pits.

The laboratory results suggest that no impacts to soil and groundwater have occurred from the pits, and, therefore, no further investigation is necessary. Please call if you have questions.

Respectfully yours,
Highlander Environmental Corp.

Mark J. Larson
Senior Project Manager

Encl.

cc: Mr. Rodney Bailey, Texaco
Mr. Larry Hall, Texaco
Mr. Wayne Price, NMOCD - Santa Fe

TABLES

Table 1: **Summary of Headspace Gas Readings of Soil Samples**
Texaco Exploration and Production, Inc.
J. C. Turner Property
Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Borehole Number	Sample Date	Sample Interval ft. BGS	OVM ppm	Comments
BH-1	4/26/99	0-1.81	1.6	Background:
		10-10.6	2.8	Air: 0.1-0.3
		20-20.6	2.2	Soil: 0.1-0.3
BH-2	4/26/99	0-1.7	4.6	
		10-10.7	3.1	
		20-20.6	2.5	
BH-3	4/26/99	0-2	0.7	
		10-10.6	1.3	
		20-20.5	1.1	
		30-30.5	1.4	
BH-4	4/26/99	0-2	2.2	
		10-11.7	11.7	
		20-20.5	4.3	
		30-31	5.4	
BH-5	4/26/99	0-1	2.8	
		10-11	1.3	
		20-20.5	3.7	
		30-30.5	3.4	
BH-6	4/27/99	0-0.6	0.4	
		10-11	1.6	
		20-21	6.1	
		30-31	7.2	
		40-41	2.8	
BH-7	4/27/99	0-2	6	
		10-11	7.1	
		20-21	2.2	
		30-31	12.1	
		40-41	3	
BH-8	4/27/99	0-1.6	13.5	
		10-11	5.2	
		20-21	5.4	
		30-31	4.0	

Notes:

1. BGS: Denotes sample depth in feet below ground surface
2. ppm: Parts per million

Table 1 (Cont.): **Summary of Headspace Gas Readings of Soil Samples**
Texaco Exploration and Production, Inc.
J. C. Turner Property
Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Borehole Number	Sample Date	Sample Interval ft. BGS	OVM ppm	Comments
BH-8 (Cont.)	4/27/99	41-42	1.3	Background:
		52-53	0.7	Air: 0.1-0.3
BH-9	4/27/99	0-2	2.2	Soil: 0.1-0.3
		10-11	3.4	
		20-21	4.3	
		30-31	4.3	
		42-43	3.1	
BH-10	4/28/99	0-1.2	1.1	
		10-12	1.6	
		20-21	3.4	
		30-31	1.1	
		40-41	0.4	
BH-11	4/28/99	0-1.3	1.1	
		10-11	2.2	
		20-21	2.2	
		30-31	2.2	

Notes:

1. BGS: Denotes sample depth in feet below ground surface
2. ppm: Parts per million

Table 2: Summary of Chloride, BTEX and TPH Analysis of Soil Samples
Texaco Exploration and Production, Inc.
J. C. Turner Property - Pit Investigation
Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Boring Number	Sample Depth, feet BGL	Sample Date	Chloride mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylene mg/kg	Total BTEX mg/kg	GRO mg/kg	DRO mg/kg	TPH mg/kg
BH-1	0-1.81	4/26/99	--	--	--	--	--	--	--	--	--
	10-10.6	4/26/99	--	--	--	--	--	--	<5	<50	<55
	20-20.6	4/26/99	21	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
BH-2	0-1.7	4/26/99	--	--	--	--	--	--	<5	<50	<55
	10-10.7	4/26/99	--	--	--	--	--	--	--	--	--
	20-20.6	4/26/99	21	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
BH-3	0-2	4/26/99	--	--	--	--	--	--	--	--	--
	10-10.6	4/26/99	--	--	--	--	--	--	<5	<50	<55
	20-20.5	4/26/99	--	--	--	--	--	--	--	--	--
	30-30.5	4/26/99	14	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
BH-4	0-2	4/26/99	--	--	--	--	--	--	--	--	--
	10-11.7	4/26/99	--	--	--	--	--	--	<5	<50	<55
	20-20.5	4/26/99	--	--	--	--	--	--	--	--	--
	30-31	4/26/99	23	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55

Notes:

1. BGL: Denotes depth in feet below ground level
2. mg/kg: Denotes concentration in milligrams per kilogram
3. <: Denotes concentration below test method detection limit
4. -: No data available
5. *: Sample outside holding time

Table 2 (Cont.): Summary of Chloride, BTEX and TPH Analysis of Soil Samples
Texaco Exploration and Production, Inc.
J. C. Turner Property - Pit Investigation
Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Boring Number	Sample Depth, feet BGL	Sample Date	Chloride mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylene mg/kg	Total BTEX mg/kg	GRO mg/kg	DRO mg/kg	TPH mg/kg
BH-5	0-1	4/26/99	--	--	--	--	--	--	--	--	--
	10-11	4/26/99	--	--	--	--	--	--	--	--	--
	20-20.5	4/26/99	--	--	--	--	--	--	<5	<50	<55
	30-30.5	4/26/99	130	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
BH-6	0-0.6	4/27/99	--	--	--	--	--	--	--	--	--
	10-11	4/27/99	--	--	--	--	--	--	--	--	--
	20-21	4/27/99	--	--	--	--	--	--	<5	<50	<55
Duplicate	20-21	4/27/99	--	--	--	--	--	--	<5	<50	<55
	30-31	4/27/99	--	--	--	--	--	--	<5	<50	<55
	40-41	4/27/99	210	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
BH-7	0-2	4/27/99	--	--	--	--	--	--	<5	2310	2310
	10-11	4/27/99	--	--	--	--	--	--	--	*<50	*<50
	20-21	4/27/99	--	--	--	--	--	--	--	--	--
	30-31	4/27/99	--	--	--	--	--	--	<5	<50	<55
	40-41	4/27/99	120	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55

Notes:

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Table 2 (cont.): Summary of Chloride, BTEX and TPH Analysis of Soil Samples
Texaco Exploration and Production, Inc.
J. C. Turner Property - Pit Investigation
Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Boring Number	Sample Depth, feet BGL	Sample Date	Chloride mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylene mg/kg	Total BTEX mg/kg	GRO mg/kg	DRO mgkg	TPH mg/kg
BH-8	0-1.6	4/27/99	--	--	--	--	--	--	31.1	1750	1781.1
	10-11	4/27/99	--	--	--	--	--	--	<5	*<50	*<55
	20-21	4/27/99	--	--	--	--	--	--	--	--	--
	30-31	4/27/99	--	--	--	--	--	--	--	--	--
	41-42	4/27/99	--	--	--	--	--	--	--	--	--
	52-53	4/27/99	140	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
BH-9	0-2	4/27/99	--	--	--	--	--	--	<5	1530	1530
	10-11	4/27/99	--	--	--	--	--	--	--	*<50	*<50
	20-21	4/27/99	--	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
	30-31	4/27/99	--	--	--	--	--	--	<5	<50	<55
	42-43	4/27/99	130	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
BH-10	0-1.2	4/28/99	--	--	--	--	--	--	--	--	--
	10-12	4/28/99	--	--	--	--	--	--	--	--	--
	20-21	4/28/99	--	--	--	--	--	--	<5	<50	<55
	30-31	4/28/99	--	--	--	--	--	--	--	--	--

Notes:

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3. <: Denotes concentration below test method detection limit
4. -: No data available
5. *: Sample ouside holding time

Table 2 (cont.): **Summary of Chloride, BTEX and TPH Analysis of Soil Samples**
Texaco Exploration and Production, Inc.
J. C. Turner Property - Pit Investigation
Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Boring Number	Sample Depth, feet BGL	Sample Date	Chloride mg/kg	Benzene mg/kg	Toluene mg/kg	Ethyl-benzene mg/kg	Xylene mg/kg	Total BTEX mg/kg	GRO mg/kg	DRO mgkg	TPH mg/kg
BH-10 (Cont.)	40-41	4/28/99	280	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
BH-11	0-1.3	4/28/99	--	--	--	--	--	--	--	--	--
	10-11	4/28/99	--	--	--	--	--	--	<5	<50	<55
	20-21	4/28/99	--	--	--	--	--	--	--	--	--
	30-31	4/28/99	56	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55
Duplicate	30-31	4/28/99	68	<0.05	<0.05	<0.05	<0.05	<0.2	<5	<50	<55

Notes:

1. BGL: Denotes depth in feet below ground level
2. mg/kg: Denotes concentration in milligrams per kilogram
3. <: Denotes concentration below test method detection limit
4. -: No data available
5. *: Sample outside holding time

FIGURES

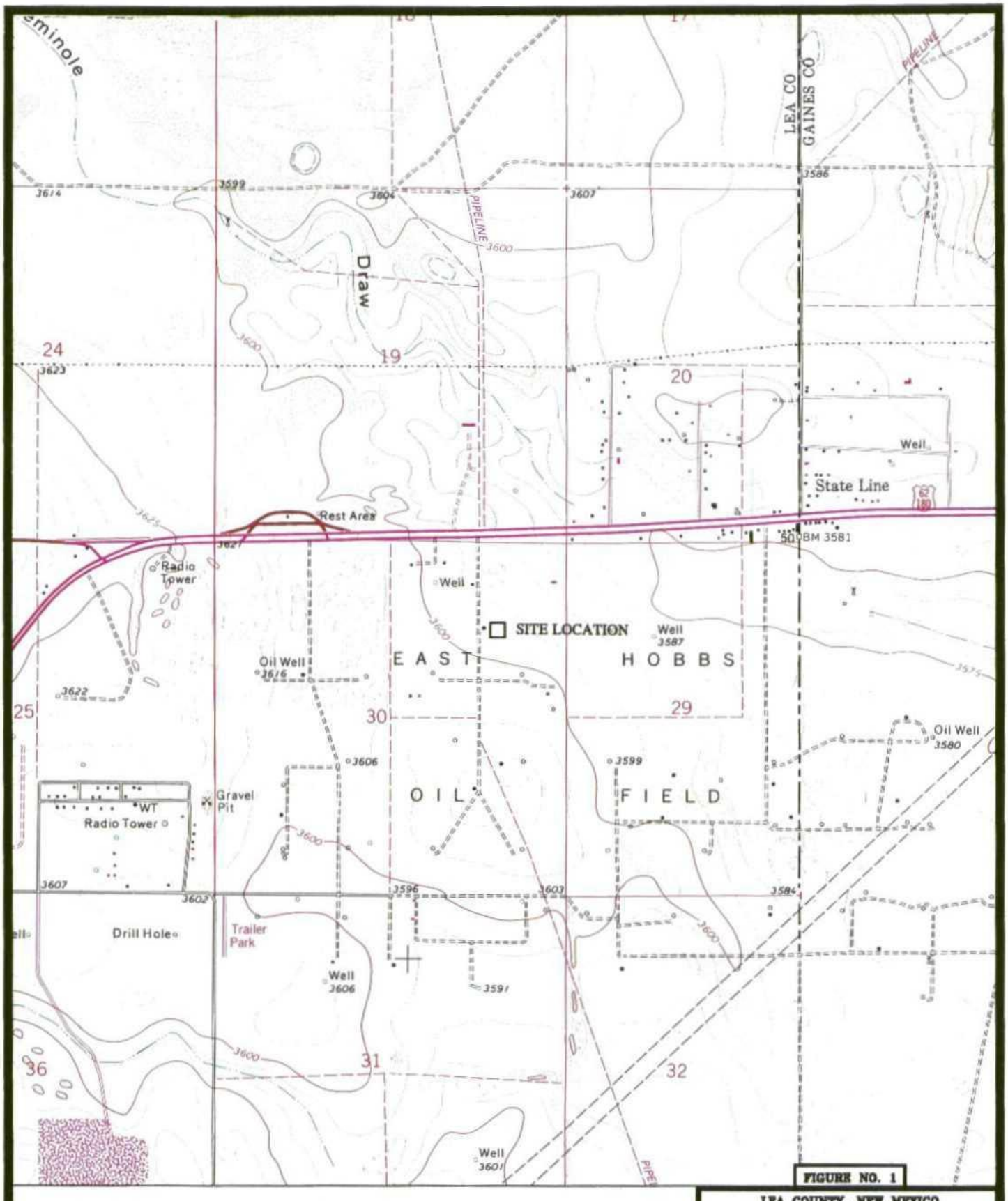


FIGURE NO. 1

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION & PRODUCTION, INC.

TOPOGRAPHIC MAP

HIGHLANDER ENVIRONMENTAL CORP.
MIDLAND, TEXAS

TAKEN FROM U.S.G.S.
HOBBS EAST, TEX.–N. MEX.
7.5' QUADRANGLES

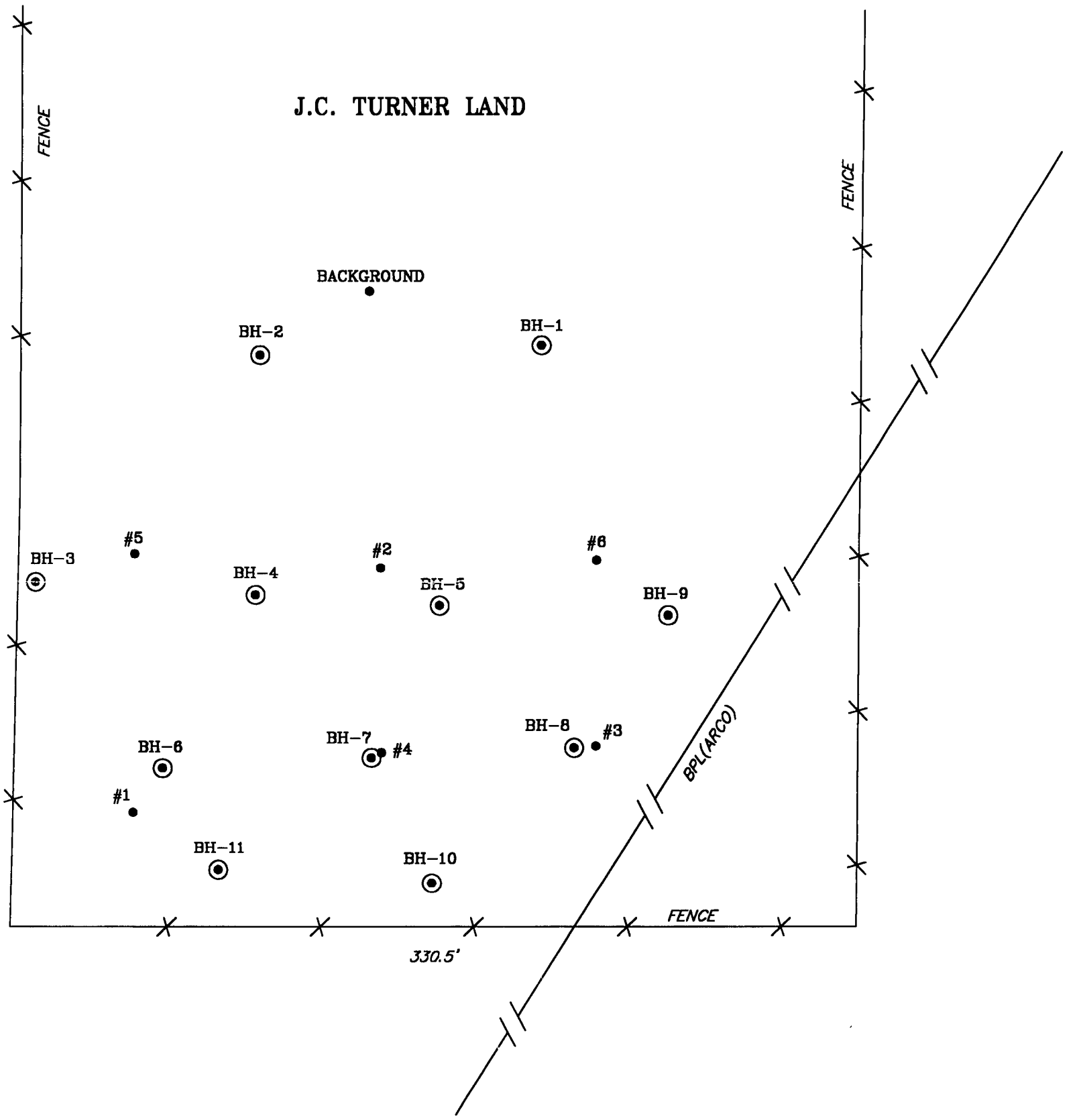
LEGEND

☐ SITE LOCATION

SCALE: 1"=2,000'

BOREHOLE DATA

BOREHOLE NUMBER	GROUND ELEVATION FEET AMSL
BH-1	3593.1
BH-2	3593.9
BH-3	3594.7
BH-4	3594.7
BH-5	3594.3
BH-6	3595.1
BH-7	3594.7
BH-8	3594.8
BH-9	3594.0
BH-10	3595.3
BH-11	3595.6



SCALE (FEET)

50 0 50 100

LEGEND

- #1 ● HAND AUGER BOREHOLE LOCATION (4/10/97)
- BH-1 ◉ ROTARY DRILLED BOREHOLE LOCATION (4/26-28/99)
- —x— FENCE
- —//— PIPELINE

FIGURE NO. 2

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION & PRODUCTION, INC.

SITE DRAWING

HIGHLANDER ENVIRONMENTAL
MIDLAND, TEXAS

DATE: 5/17/99
DWN. BY: JDA
FILE: C:\TEXACO\1161 SITE

APPENDIX A

OCD CORRESPONDENCE
February 4, 1999

NEW MEXICO ENERGY, MINERALS
& NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
DISTRICT I HOBBS
PO BOX 1980, Hobbs, NM 88241
(505) 393-6161
FAX (505) 393-0720

Jennifer A. Salisbury
CABINET SECRETARY

February 4, 1999

Rodney Bailey
Texaco E&P
205 E. Bender Blvd.
Hobbs, NM 88240

Re: Pit Closure Investigation Work Plan
D.F. Fergason Lease
NE/4 Sec 30-Ts18s-R39e

Dear Mr. Bailey:

New Mexico Oil Conservation Division (NMOCD) is in receipt of the investigation work plan dated September 28, 1998 for the above referenced facility submitted by Highlander Environmental Corp. **NMOCD hereby approves of the plan with the following conditions:**

1. NMOCD will allow field screening techniques as mentioned in the plan to delineate the migration of oilfield contaminants, except all bottom hole samples shall be collected and analyzed pursuant to EPA approved laboratory methods. Each bottom hole soil sample shall be analyzed at a minimum for BTEX (method 8020), TPH (418.1) and Chlorides.

2. Texaco shall notify the NMOCD Hobbs District office at least 48 hours in advance of all scheduled activities such that the NMOCD has the opportunity to witness the events and/or split samples.

3. Upon discovery of groundwater contamination Texaco shall notify NMOCD pursuant to Rule 116.

4. NMOCD approves of Texaco's initial groundwater sampling plan as contained in Appendix B, except metals shall be those listed in the New Mexico Water Quality Control Commission (WQCC) regulation standards, not RCRA metals as proposed.

Texaco shall submit a comprehensive investigation report to the NMOCD by May 3, 1999. The report shall be submitted to the NMOCD Hobbs District Office with a copy to the NMOCD Environmental Bureau.

Please be advised that NMOCD approval of this plan does not relieve Texaco of liability should their operations fail to adequately investigate contamination that poses a threat to ground water, surface water, human health or the environment. In addition, NMOCD approval does not relieve Texaco of responsibility for compliance with any other federal, state, or local laws and/or regulations.

If you require any further information or assistance please do not hesitate to write or call me at (505-393-6161).

Sincerely,

Donna L. Williams

Donna Williams
Environmental Engineer
Cc: Wayne Price; Chris Williams;

APPENDIX B

Highlander Environmental Corp. Correspondence
April 29, 1999

Highlander Environmental Corp.

Midland, Texas

April 29, 1999

Mr. Wayne Price
Environmental Engineer
New Mexico Oil Conservation Division
2040 South Pacheco
Santa Fe, New Mexico 87505

Re: Request for Extension and Use of EPA Method 8015 (Modified) D. F. Fergason Lease (J. C. Turner Property), Section 30, Township 18 South, Range 39 East, Lea County, New Mexico

Dear Mr. Price:

Highlander Environmental Corp. (Highlander) has been retained by Texaco Exploration and Production, Inc. (Texaco) to investigate alleged environmental impacts from a suspect oilfield pit(s) at the above-referenced location (Site). The purpose of this letter is to confirm our telephone conversation today pertaining to an extension for submittal of a report, and use of EPA test method 8015 (Modified) for total petroleum hydrocarbons (TPH), in connection with the above-referenced matter.

On April 26 - 28, 1999, Highlander personnel conducted an investigation at the Site. The investigation was conducted in accordance with a work plan approved by the New Mexico Oil Conservation Division (NMOCD) on February 4, 1999. In its approval letter, the NMOCD requested submittal of a comprehensive investigation report by May 3, 1999. Highlander personnel discussed an extension with Ms. Donna L. Williams of the NMOCD on April 28, 1999, which was followed up by our telephone call today. Based on our telephone call, a comprehensive investigation report will be submitted to the NMOCD on or before June 4, 1999. Also, you approved the use of EPA method 8015 modified (GRO and DRO) for TPH, rather than method 418.1, as presented in your February 4, 1999 approval letter.

Please call me at (9915) 682-4559 if you have any questions.

Sincerely,
Highlander Environmental Corp.

Mark J. Larson
Senior Project Manager

cc: Rodney Bailey - Texaco
Robert Patterson - Texaco
Donna Williams - NMOCD Hobbs

APPENDIX C

Highlander Environmental Corp. Correspondence
May 9, 1997

Highlander Environmental Corp.
Midland, Texas

May 9, 1997

Rodney Bailey
Texaco Exploration and Production, Inc.
205 East Bender
Hobbs, New Mexico 88240

Re: Soil Sampling Results of the Turner's property located in Hobbs, New Mexico.

Dear Mr. Bailey,

This letter is written to summarize the results of soil sampling from the Turner property in Hobbs, New Mexico. On April 10, 1997 Highlander Environmental installed six shallow hand auger holes in an area of distressed vegetation which measured approximately 210' x 330'. The location of the auger hole locations are shown in Figure 1. Soil samples were collected from three horizons (0-1.0', 1.0'-1.5', and 2.0'- 2.3') from each of the six auger holes. The samples were composited into the three horizons (samples from 0-1.0' from all six holes were blended) to form a composite sample of that horizon. Deeper soil samples could not be collected due to dense caliche layer encountered from approximately 2.3' to 2.5' below surface. One background auger hole sample was installed in a vegetated area north of the distressed area. The background soil samples were collected at 0-1.0' and 1.0'-1.5'. Deeper soil samples could not be collected due to a dense caliche layer. Soil has reportedly been brought in and blended with the soil in the area sampled.

The soil samples were shipped to the Texas Agriculture Extension Service - The Texas A & M University System - Soil, Testing Laboratory located in College Station, Texas. The soil samples were analyzed for Routine and Detailed Salinity analysis. The soil sample results are summarized in Table 1 and 2.

Based upon the electrical conductivities (EC), which were all less than 4 mmhos/cm, the soil in the tested portion of Mr. Turner's land is not considered a saline soil (Scofield, 1942). The low EC and sodium adsorption ratio (SAR) levels, coupled with a very high calcium level would correlate to a high calcium carbonate content. Since soil was reportedly brought in and blended with existing soil in this area of Mr. Turner's property, it would appear that limestone or soil with a very high calcium carbonate content was added. High concentrations of Calcium Carbonate can cause chlorosis in plants. Chlorosis is a condition which occurs when plants cannot utilize iron or zinc from the soil. As shown in the attached tables, the deeper background

sample also had a very high calcium level (27,112 ppm), however, the shallow sample had a much lower level of calcium (1950 ppm). This lower level in the shallow soils allowed for crop production and with the crop production, possibly promotes crop uptake of calcium and downward leaching of the calcium carbonate below the shallow root zone.

A way to treat for chlorosis in plants is to lower the pH of the soil sufficiently to allow for the utilization of iron and zinc. If you have any questions or require any additional information, please advise.

Very truly yours,

Tim Reed

Timothy M. Reed, REM
Vice President

Table 1:

Texaco Exploration and Production, Inc.
Turner - Soil Investigation

Soil Sample Results
(concentrations ppm)

Soil Analysis	Sample #1 Depth (0-1')	Sample #2 Depth (1'-1.5')	Sample #3 Depth (2.0'-2.3')	Sample #4 Depth (0-1') Background	Sample #5 Depth (1.0'-1.5') Background
pH	7.6	7.8	7.7	7.7	7.8
Nitrate	1	1	1	1	2
Phosphorus	13	8	16	10	81
Potassium	162	146	183	156	161
Calcium	13,443	18,203	33,773	1,950	27,112
Magnesium	166	183	323	149	278
Salinity	520	585	650	325	390
Zinc	0.33	0.23	0.24	0.11	0.08
Iron	8.60	22.19	26.41	4.73	5.09
Manganese	1.44	2.03	1.99	1.62	1.56
Copper	0.12	0.15	0.34	0.17	0.20
Sodium	40	60	117	59	76
Sulpher	300	487	829	50	305

Table 2:

Texaco Exploration and Production, Inc.
Turner - Soil Investigation

Soil Salinity Results
(concentrations in mg/kg)

Soil Analysis	Sample #1 Depth (0-1')	Sample #2 Depth (1'-1.5')	Sample #3 Depth (2.0'-2.3')	Sample #4 Depth (0-1') Background	Sample #5 Depth (1.0-1.5') Background
pH	7.1	7.5	7.0	7.8	7.8
Salt ECx10^3	2.67	3.11	3.06	1.158	1.67
Sodium	38	58	121	50	57
Potassium	47	44	34	19	35
Calcium	510	646	569	131	179
Magnesium	41	34	59	11	14
SAR	0.435356	0.602871	1.29238	1.13021	1.10268
SSP	5	6	13	21	18

SAR - Sodium Absorption Ratio
SSP - Soluble Sodium Percentage

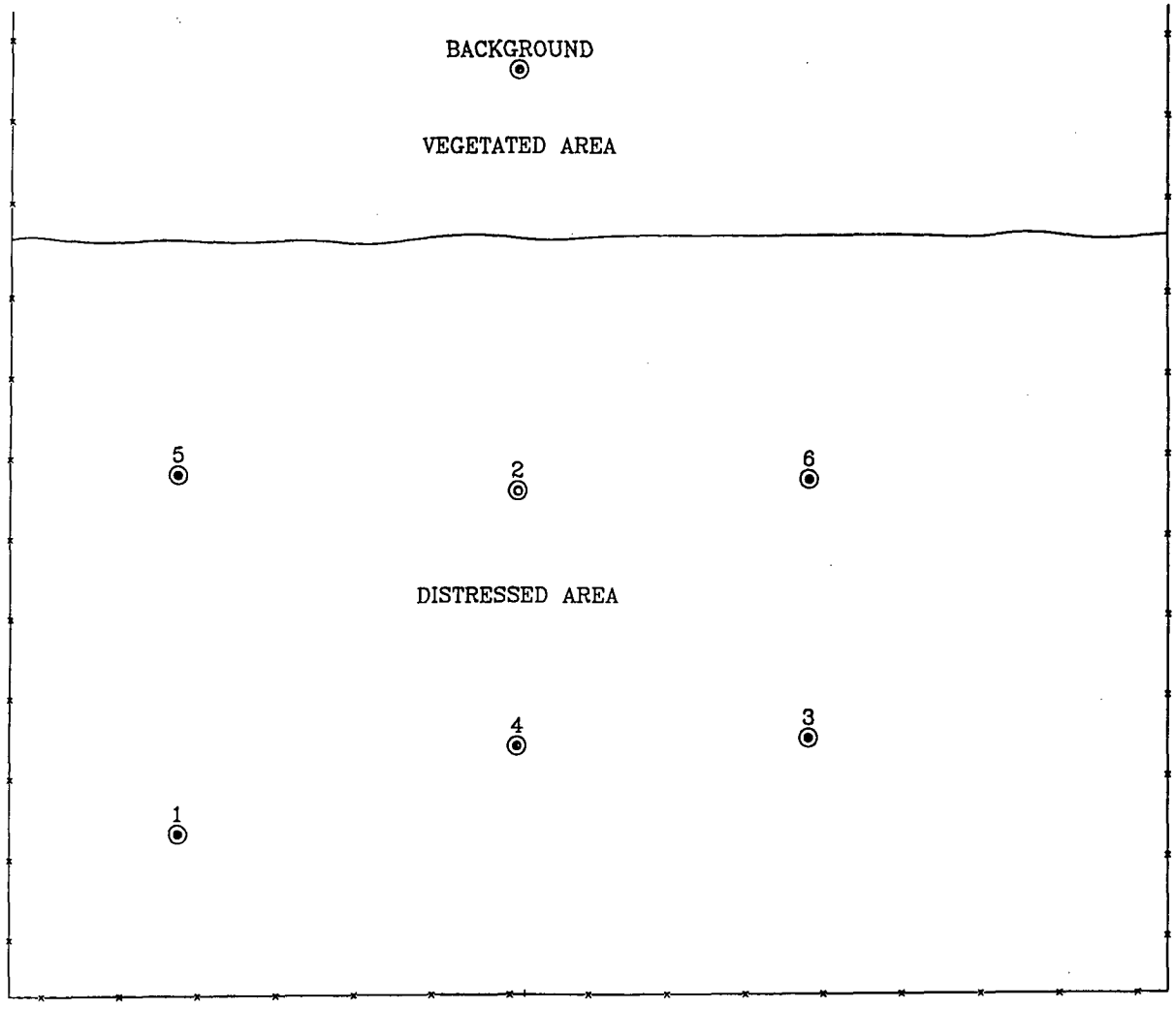


FIGURE NO. 1

LEA COUNTY, NEW MEXICO

TEXACO EXPLORATION & PRODUCTION

TURNER PROPERTY SAMPLE LOCATION MAP

HIGHLANDER ENVIRONMENTAL MIDLAND, TEXAS

DATE: 5/2/97
DWN. BY: R.C.P.
FILE: TURNER

LEGEND

1 SAMPLE LOCATION

SCALE (FEET)

10 0 25 50

TEXAS AGRICULTURAL EXTENSION SERVICE -- THE TEXAS A & M UNIVERSITY SYSTEM
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

INV# 044873
FOR: HIGHLANDER ENV CORP
1910 N BIG SPRING
MIDLAND, TX
79705
FEE : $40.00

DATE RECEIVED : 4/18/97
DATE PROCESSED: 04/23/97
COUNTY : MIDLAND
COUNTY#: 329
LAB # : 20167

SAMPLE ID# 1

SOIL ANALYSIS

SOIL TEST RATINGS - PPM ELEMENT (AVAILABLE FORM)

PH ACIDITY	NITRATE-N	PHOSPHORUS	POTASSIUM	CALCIUM	MAGNESIUM	SALINITY	ZINC	IRON	MANGANESE	COPPER	SODIUM	SULPHUR	BORON
7.6 MILDLY ALKALINE	1. VERY LOW	13. MODERATE	162. MODERATE	13443 VERY HIGH	166. HIGH	520. NONE	0.33 HIGH	8.60 HIGH	1.44 HIGH	0.12 MEDIUM	40. VERY LOW	300 HIGH	0.34 MEDIUM

(PPM X 2 = LBS/ACRE 6 INCHES DEEP)

CROP AND YIELD RANGE: NO CROP GIVEN

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :
EARNEST KIKER
BOX 1070 MIDLAND TX. 79702

Limestone Requirement ____ lbs./1000 sq. ft.
0 tons/A
Based on Exchangeable Aluminum

[redacted] TEXAS AGRICULTURAL EXTENSION SERVICE -- THE TEXAS A & M UNIVERSITY SYSTEM
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

BY DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

FOR: IKE TAVAREZ
1910 N BIG SPRING
MIDLAND, TX
79705
FEE : 15.

DATE RECEIVED : 4/18/97
DATE PROCESSED: 4/29/97
COUNTY : MIDLAND
COUNTY#:
LAB # : 20167

SAMPLE ID# 1

Post-it® Fax Note 7671 | Date 5/2 | # of pages ▶ 6
To Ike Tavarez | From Soil Testing
Co./Dept. Highlander | Co.
Phone # | Phone #
Fax # 915-682-3446 | Fax #

PH	SALT ECx10 3	SODIUM	POTASSIUM	CALCIUM	[illegible]					NITRATE	BORON	SAR	SSP
7.1	2.67	38 PPM	47 PPM	510 PPM	41 PPM	PPM	PPM	PPM	PPM	PPM	PPM	.435356	5
		1.65 MEQ/L	1.2 MEQ/L	25.5 MEQ/L	3.36 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L				

INTERPRETATION

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :

TEXAS AGRICULTURAL EXTENSION SERVICE -- THE TEXAS A & M UNIVERSITY SYSTEM
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

INV# 044873
FOR: HIGHLANDER ENV CORP
1910 N BIG SPRING
MIDLAND, TX
79705
FEE : $40.00

DATE RECEIVED : 4/18/97
DATE PROCESSED: 04/23/97
COUNTY : MIDLAND
COUNTY#: 329
LAB # : 20168

SAMPLE ID# 2

SOIL ANALYSIS

	SOIL TEST RATINGS - PPM ELEMENT (AVAILABLE FORM)												
PH ACIDITY	NITRATE-N	PHOSPHORUS	POTASSIUM	CALCIUM	MAGNESIUM	SALINITY	ZINC	IRON	MANGANESE	COPPER	SODIUM	SULPHUR	BORON
7.8 MILDLY ALKALINE	1. VERY LOW	8. LOW	146. MODERATE	18203 VERY HIGH	183. HIGH	585. NONE	0.23 MEDIUM	22.19 HIGH	2.03 HIGH	0.15 MEDIUM	60. VERY LOW	487 HIGH	0.43 HIGH

(PPM X 2 = LBS/ACRE 6 INCHES DEEP)

CROP AND YIELD RANGE: NO CROP GIVEN

Limestone Requirement 0 lbs /1000 sq. ft.
Based on Exchangeable Aluminum

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :
EARNEST KIKER
BOX 1070 MIDLAND TX. 79702

[redacted]XAS [redacted]ICUL[redacted]L EX[redacted]NSION SERVICE -- THE TEXAS A & M UNIVERSITY SYSTEM
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

BY DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

FOR: IKE TAVAREZ
1910 N BIG SPRING
MIDLAND, TX
79705
FEE : 15.

DATE RECEIVED : 4/18/97
DATE PROCESSED: 4/29/97
COUNTY : MIDLAND
COUNTY#:
LAB # : 20168

SAMPLE ID# 2

SOIL SALINITY ANALYSIS

PH	SALT ECx10 3	SODIUM	POTASSIUM	CALCIUM	MAGNESIUM	CHLORIDE	SULFATE	BICARBONATE	CARBONATE	NITRATE	BORON	SAR	SSP
7.5	3.11	58 PPM	44 PPM	646 PPM	34 PPM	PPM	PPM	PPM	PPM	PPM	PPM	.602971	6
		2.52 MEQ/L	1.12 MEQ/L	32.3 MEQ/L	2.78 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L				

INTERPRETATION

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :

TEXAS AGRICULTURAL EXTENSION SERVICE -- THE TEXAS A & M UNIVERSITY SYSTEM
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

INV# 044873
FOR: HIGHLANDER ENV CORP
1910 N BIG SPRING
MIDLAND, TX
79705
FEE : $40.00

DATE RECEIVED : 4/18/97
DATE PROCESSED: 04/23/97
COUNTY : MIDLAND
COUNTY#: 329
LAB # : 20169

SAMPLE ID# 3

SOIL ANALYSIS

SOIL TEST RATINGS - PPM ELEMENT (AVAILABLE FORM)

PH ACIDITY	NITRATE-N	PHOSPHORUS	POTASSIUM	CALCIUM	MAGNESIUM	SALINITY	ZINC	IRON	MANGANESE	COPPER	SODIUM	SULPHUR	BORON
7.7 MILDLY ALKALINE	1. VERY LOW	16. MODERATE	183. HIGH	33773 VERY HIGH	323. HIGH	650. SLIGHT	0.24 MEDIUM	26.41 HIGH	1.99 HIGH	0.34 HIGH	117. LOW	829 HIGH	0.64 HIGH

(PPM X 2 = LBS/ACRE 6 INCHES DEEP)

CROP AND YIELD RANGE: NO CROP GIVEN

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :
EARNEST KIKER
BOX 1070 MIDLAND TX. 79702

Limestone Requirement _____ lbs./1000 sq. ft.
0 tons/A
Based on Exchangeable Aluminum

[redacted]KAS [redacted]CUL[redacted]L E[redacted]SION[redacted]VIC[redacted] THE[redacted]AS [redacted]M UN[redacted]SIT[redacted]STE[redacted]

SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

BY DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

FOR: IKE TAVAREZ
1910 N BIG SPRING
MIDLAND, TX
79705
FEE : 15.

DATE RECEIVED : 4/18/97
DATE PROCESSED: 4/29/97
COUNTY : MIDLAND
COUNTY#:
LAB # : 20169

SAMPLE ID# 3

SOIL SALINITY ANALYSIS

PH	SALT ECx10 3	SODIUM	POTASSIUM	CALCIUM	MAGNESIUM	CHLORIDE	SULFATE	BICARBONATE	CARBONATE	NITRATE	BORON	SAR	SSP
7.0	3.06	121 PPM	34 PPM	569 PPM	59 PPM	PPM	PPM	PPM	PPM	PPM	PPM	1.29238	13
		5.26 MEQ/L	.87 MEQ/L	28.45 MEQ/L	4.83 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L				

INTERPRETATION

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :

TEXAS AGRICULTURAL EXTENSION SERVICE -- THE TEXAS A & M UNIVERSITY SYSTEM
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

INV# 044873
FOR: HIGHLANDER ENV CORP
1910 N BIG SPRING
MIDLAND, TX
79705
FEE : $20.00

DATE RECEIVED : 4/18/97
DATE PROCESSED: 04/23/97
COUNTY : MIDLAND
COUNTY#: 329
LAB # : 20170

SAMPLE ID# 4

SOIL ANALYSIS

SOIL TEST RATINGS - PPM ELEMENT (AVAILABLE FORM)

PH ACIDITY	NITRATE-N	PHOSPHORUS	POTASSIUM	CALCIUM	MAGNESIUM	SALINITY	ZINC	IRON	MANGANESE	COPPER	SODIUM	SULPHUR	BORON
7.7 MILDLY ALKALINE	1. VERY LOW	10. LOW	156. MODERATE	1950 HIGH	149. MEDIUM	325. NONE	0.11 LOW	4.73 HIGH	1.62 HIGH	0.17 HIGH	59. VERY LOW	50 HIGH	0.25 MEDIUM

(PPM X 2 = LBS/ACRE 6 INCHES DEEP)

CROP AND YIELD RANGE: NO CROP GIVEN

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :
EARNEST KIKER
BOX 1070 MIDLAND TX. 79702

Limestone Requirement 0 lbs./1000 sq. ft.
Based on Exchangeable Aluminum

[redacted]TEX[redacted]SRIC[redacted]RAL[redacted]ENSI[redacted]ERV[redacted]-- T[redacted]TEXA[redacted]& M [redacted]VERS[redacted]SYST[redacted]
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

BY DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

FOR: IKE TAVAREZ
1910 N BIG SPRING
MIDLAND, TX
79705
FEB : 15.

DATE RECEIVED : 4/18/97
DATE PROCESSED: 4/29/97
COUNTY : MIDLAND
COUNTY#:
LAB # : 20170

|SAMPLE ID# 4

SOIL SALINITY ANALYSIS

PH	SALT ECx10 3	SODIUM	POTASSIUM	CALCIUM	MAGNESIUM	CHLORIDE	SULFATE	BICARBONATE	CARBONATE	NITRATE	BORON	SAR	SSP
7.8	1.158	50 PPM	19 PPM	131 PPM	11 PPM	PPM	PPM	PPM	PPM	PPM	PPM	1.13021	21
		2.17 MEQ/L	.48 MEQ/L	6.55 MEQ/L	.9 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L				

INTERPRETATION

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :

TAEX SOIL TESTING LAB

[redacted] FAX 409 845 0503

[redacted] TEXAS AGRICULTURAL EXTENSION SERVICE -- THE TEXAS A & M UNIVERSITY SYSTEM [redacted]
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

INV# 044873
FOR: HIGHLANDER ENV CORP
1910 N BIG SPRING
MIDLAND, TX
79705
FEE : $40.00

DATE RECEIVED : 4/18/97
DATE PROCESSED: 04/23/97
COUNTY : MIDLAND
COUNTY#: 329
LAB # : 20171

SAMPLE ID# 5

SOIL ANALYSIS

SOIL TEST RATINGS - PPM ELEMENT (AVAILABLE FORM)

PH ACIDITY	NITRATE-N	PHOSPHORUS	POTASSIUM	CALCIUM	MAGNESIUM	SALINITY	ZINC	IRON	MANGANESE	COPPER	SODIUM	SULPHUR	BORON
7.8 MILDLY ALKALINE	2. VERY LOW	81. VERY HIGH	161. MODERATE	27112 VERY HIGH	278. HIGH	390. NONE	0.08 LOW	5.09 HIGH	1.56 HIGH	0.20 HIGH	76. VERY LOW	305 HIGH	0.24 MEDIUM

(PPM X 2 = LBS/ACRE 6 INCHES DEEP)

CROP AND YIELD RANGE: NO CROP GIVEN

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :
EARNEST KIKER
BOX 1070 MIDLAND TX. 79702

Limestone Requirement ____ lbs./1000 sq. ft.
0 tons/A
Based on Exchangeable Aluminum

TEXAS AGRICULTURAL EXTENSION SERVICE - THE TEXAS A & M [redacted] SYSTEM
SOIL TESTING LABORATORY, COLLEGE STATION TX. 77843

BY DR. TONY PROVIN
LAB DIRECTOR (409)845-4816

FOR: IKE TAVAREZ
1910 N BIG SPRING
MIDLAND, TX
79705
PBE : 15.

DATE RECEIVED : 4/18/97
DATE PROCESSED: 4/29/97
COUNTY : MIDLAND
COUNTY#:
LAB # : 20171

SAMPLE ID# 5

SOIL SALINITY ANALYSIS

PH	SALT ECx10 3	SODIUM	POTASSIUM	CALCIUM	MAGNESIUM	CHLORIDE	SULFATE	BICARBONATE	CARBONATE	NITRATE	BORON	SAR	SSP
7.8	1.67	57 PPM	35 PPM	179 PPM	14 PPM	PPM	PPM	PPM	PPM	PPM	PPM	1.10268	18
		2.47 MEQ/L	.89 MEQ/L	8.95 MEQ/L	1.14 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L	0 MEQ/L				

INTERPRETATION

FURTHER INFORMATION AND ASSISTANCE CAN BE OBTAINED FROM YOUR COUNTY EXTENSION AGENT :

Highlander Services Corp.

306 W. Wall • Suite 320 • Midland, TX 79701 • (915)682-4559

Analysis Request and Chain of Custody Record

Project No. 922 | Client/Project TEXACO / Hobbs, Lea County, New Mexico

Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Type(Liquid Sludge,Ect.)	Preservative	ANALYSIS REQUESTED
Sample #1 (0-1') (Composite)	4/10/97		X	Soil		Routine Analysis.
						Detailed Salinity
						Aluminum Lime Requirement
						Routine Analysis
Sample #2 (1.0'-1.5') (Composite)	4/10/97		X	Soil		Detail Salinity
						Aluminum Lime Requirement

Samplers: (Print) IKE Tavarez	Relinquished by: (Signature)	Date: 4/11/97 Time: 10:30	Recieved by: (Signature) / Date: / Time:
	Relinquished by: (Signature)	Date: Time:	Recieved by: (Signature) / Date: / Time:
	Relinquished by: (Signature)	Date: Time:	Data Results To 1. IKE Tavarez
Results by:	Delivered To:		2.
Rush Charges Authorized Yes ___ No ___	REMARKS:		

Please Fill out all copies – Deliverer retains White copy for file – Lab retains Yellow copy & Return Pink copy to Highlander Services Corp. at above address

Highlander Services Corp.

306 W. Wall • Suite 320 • Midland, TX 79701 • (915)682-4559

Analysis Request and Chain of Custody Record

Project No. 922 | Client/~~Project~~ Texaco / Hobbs, Lea County, New Mexico.

Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Type(Liquid Sludge,Ect.)	Preser-vative	ANALYSIS REQUESTED
Sample #3 (2-2.3') composite	4/10/97		X	Soil		Routine Analysis Detail Solubility Aluminum Limit Requirement
Sample #4 (0-1') background	4/10/97		X	Soil		Routine Analysis Detail Solubility Aluminum Limit Requirement

Samplers: (Print) Ike Chavez

Relinquished by: (Signature) Ike Chavez — Date: 4/15/97 Time: 10:30

Relinquished by: (Signature) — Date: Time:

Relinquished by: (Signature) — Date: Time:

Recieved by: (Signature) — Date: Time:

Recieved by: (Signature) — Date: Time:

Data Results ~~To:~~
1. IKE Tavarez
2.

Results by:

Rush Charges Authorized

Yes ___ No ___

Delivered To:

REMARKS:

Please Fill out all copies – Deliverer retains White copy for file – Lab retains Yellow copy & Return Pink copy to Highlander Services Corp. at above address

Highlander Services Corp.

306 W. Wall • Suite 320 • Midland, TX 79701 • (915)682-4559

Analysis Request and Chain of Custody Record

Project No. 922 | Client/Project TEXACO / Hobbs, Lea County, New Mexico.

Field Sample No./ Identification	Date and Time	Grab	Comp	Sample Type(Liquid Sludge,Ect.)	Preservative	ANALYSIS REQUESTED
Sample #5 (1.0-1.3') background	4/14/97		X	Soil		Routine Analysis Detail Sensitivity Aluminum Limit Requirement

Samplers: (Print) Ike Tavarez

Relinquished by: (Signature) Ike Tavarez — Date: 4/15/97 Time: 10:30

Relinquished by: (Signature) — Date: Time:

Relinquished by: (Signature) — Date: Time:

Delivered To:

REMARKS:

Recieved by: (Signature) — Date: Time:

Recieved by: (Signature) — Date: Time:

Data Results To:
1. Ike Tavarez
2.

Results by:

Rush Charges Authorized

Yes ___ No ___

Please Fill out all copies – Deliverer retains White copy for file – Lab retains Yellow copy & Return Pink copy to Highlander Services Corp. at above address

APPENDIX D

Soil Boring Logs

Project No: 1181

Project: J. C. Turner - Pit Investigation

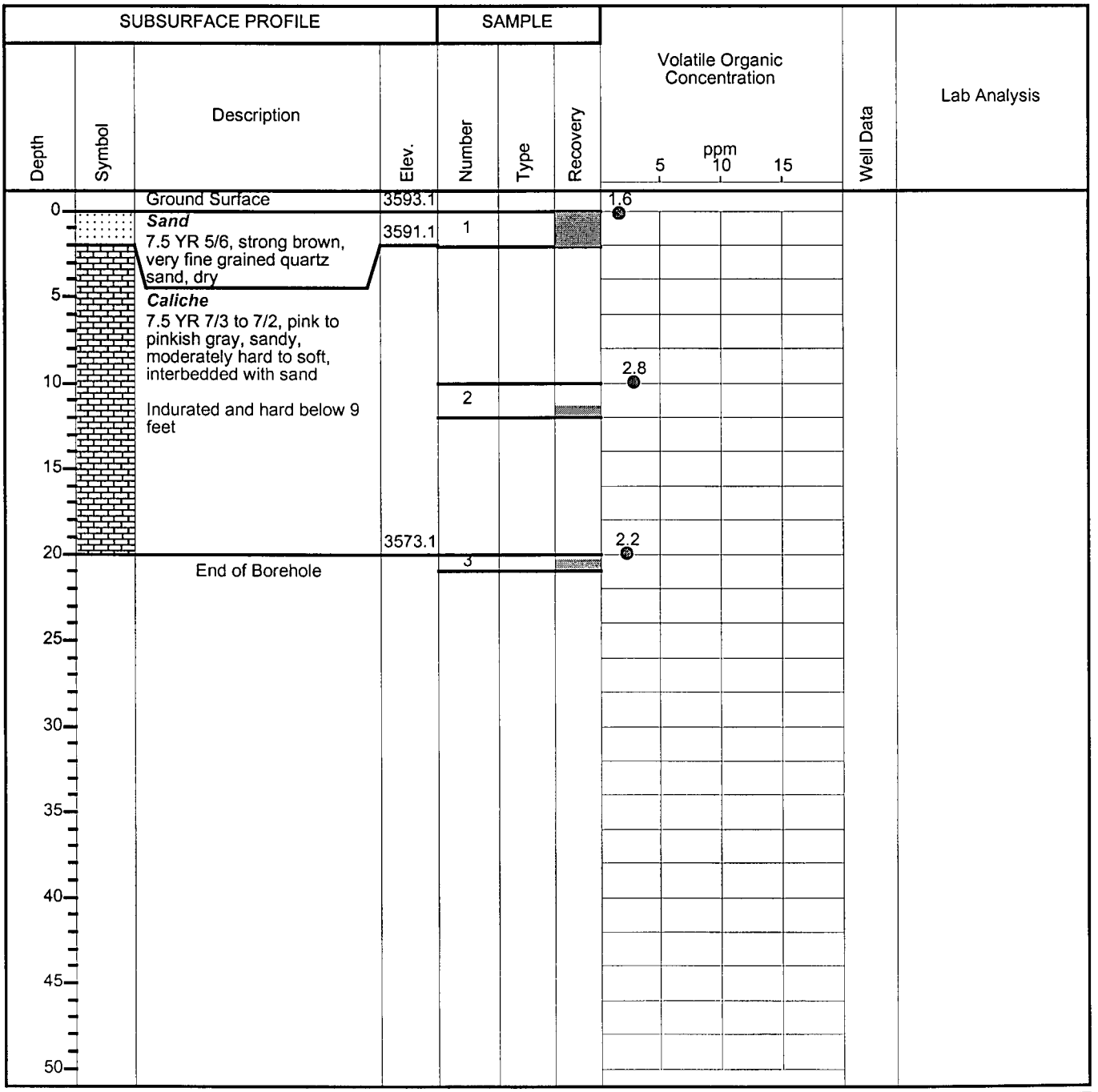
Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-1

Enclosure: 1 of 1

Engineer: MJL



Drill Method: Rotary - Air

Drill Date: 26-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

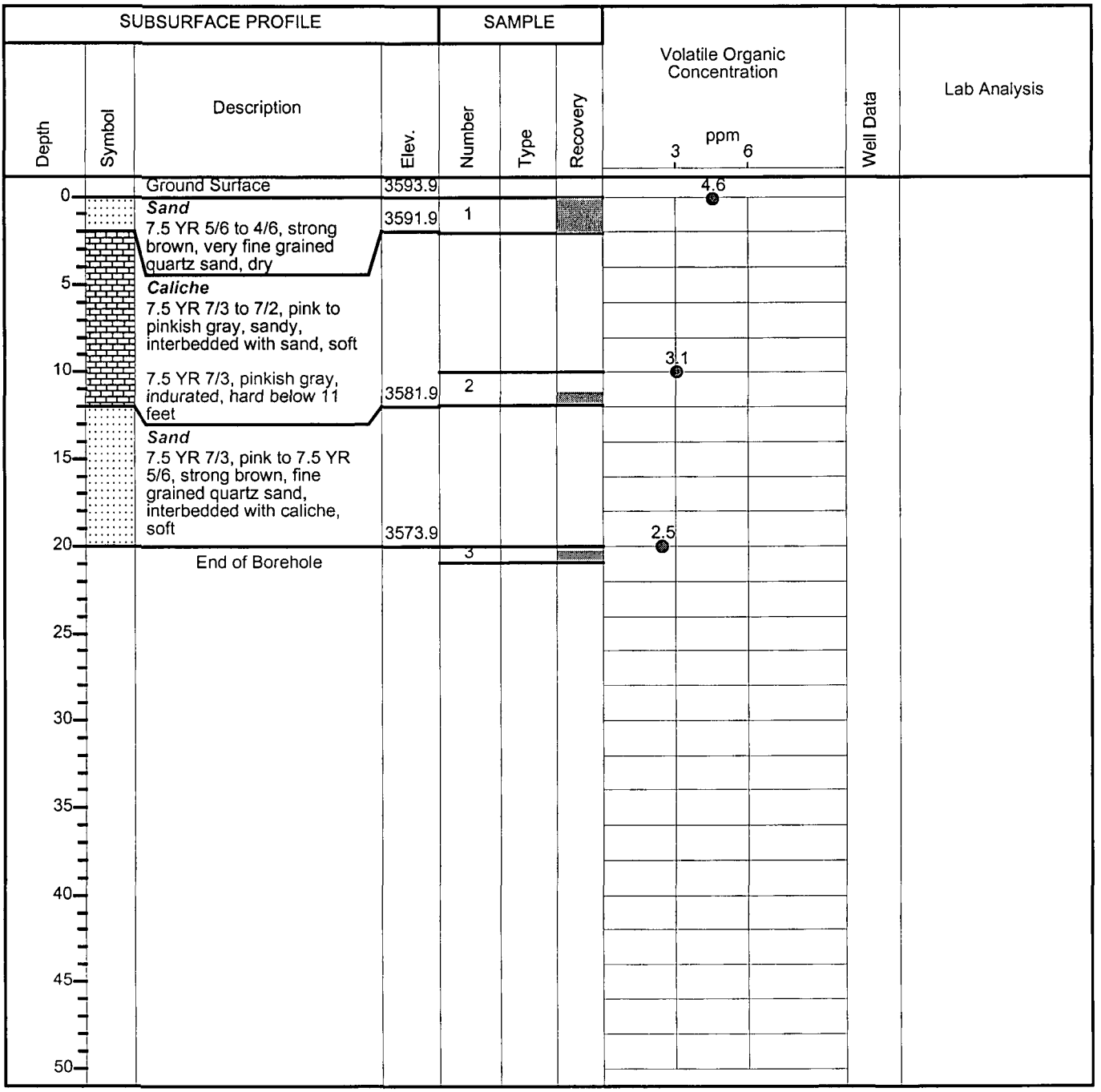
Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-2

Enclosure: 1 of 1

Engineer: MJL



Drill Method: Rotary - Air

Drill Date: 26-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-3

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE				SAMPLE			Volatile Organic Concentration ppm 3 6	Well Data	Lab Analysis
Depth	Symbol	Description	Elev.	Number	Type	Recovery			
0		Ground Surface	3594.7				0.7		
		Sand 7.5 YR 5/4 to 5/6, brown to strong brown, very fine grained quartz sand	3592.7	1					
5		***Caliche*** 7.5 YR 7/2 to 7/3, pink to grayish pink, interbedded with sand							
10		7.5 YR 6/1, gray, indurated, hard below 10 feet		2			1.3		
15		7.5 YR 7/2 to 6/1, pinkish gray to gray, interbedded with sand, moderately hard below 20 feet							
20				3			1.1		
25									
30			3564.7				1.4		
		End of Borehole		4					
35									
40									
45									
50									

Drill Method: Rotary - Air

Drill Date: 26-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-4

Enclosure: 1 of 1

Engineer: MJL

Depth	Description	Elev.	Number	Type	Recovery	Volatile Organic Concentration (ppm)	Well Data	Lab Analysis
0	Ground Surface	3594.7				2.2		
0	***Sand*** 7.5 YR 5/4 to 5/6, brown to strong brown, very fine grained quartz sand mixed with 7.5 YR 3/4, dark brown sand	3592.7	1					
10	***Caliche*** 7.5 YR 7/2 to 7/3, pink to pinkish gray, interbedded with sand, soft 7.5 YR 6/1, gray, indurated, hard below 20 feet		2			11.7		
20		3573.2	3			4.3		
25	***Sand*** 5 YR 6/4 to 6/6, light reddish brown to reddish yellow, very fine grained quartz sand, dry, interbedded with thin caliche beds							
30		3564.7				5.4		
30	End of Borehole		4					

Drill Method: Rotary - Air

Drill Date: 26-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

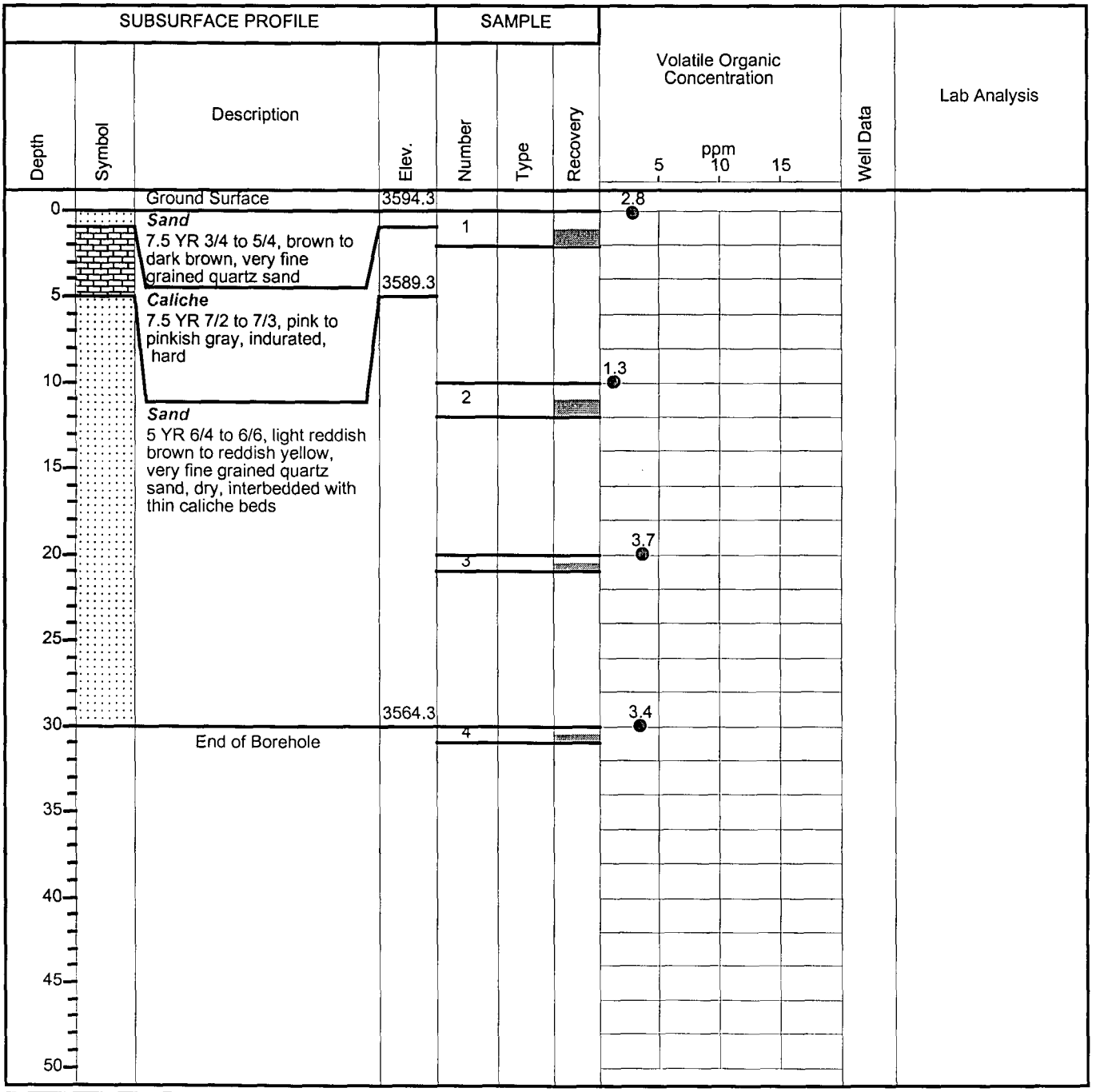
Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-5

Enclosure: 1 of 1

Engineer: MJL



Drill Method: Rotary - Air

Drill Date: 26-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

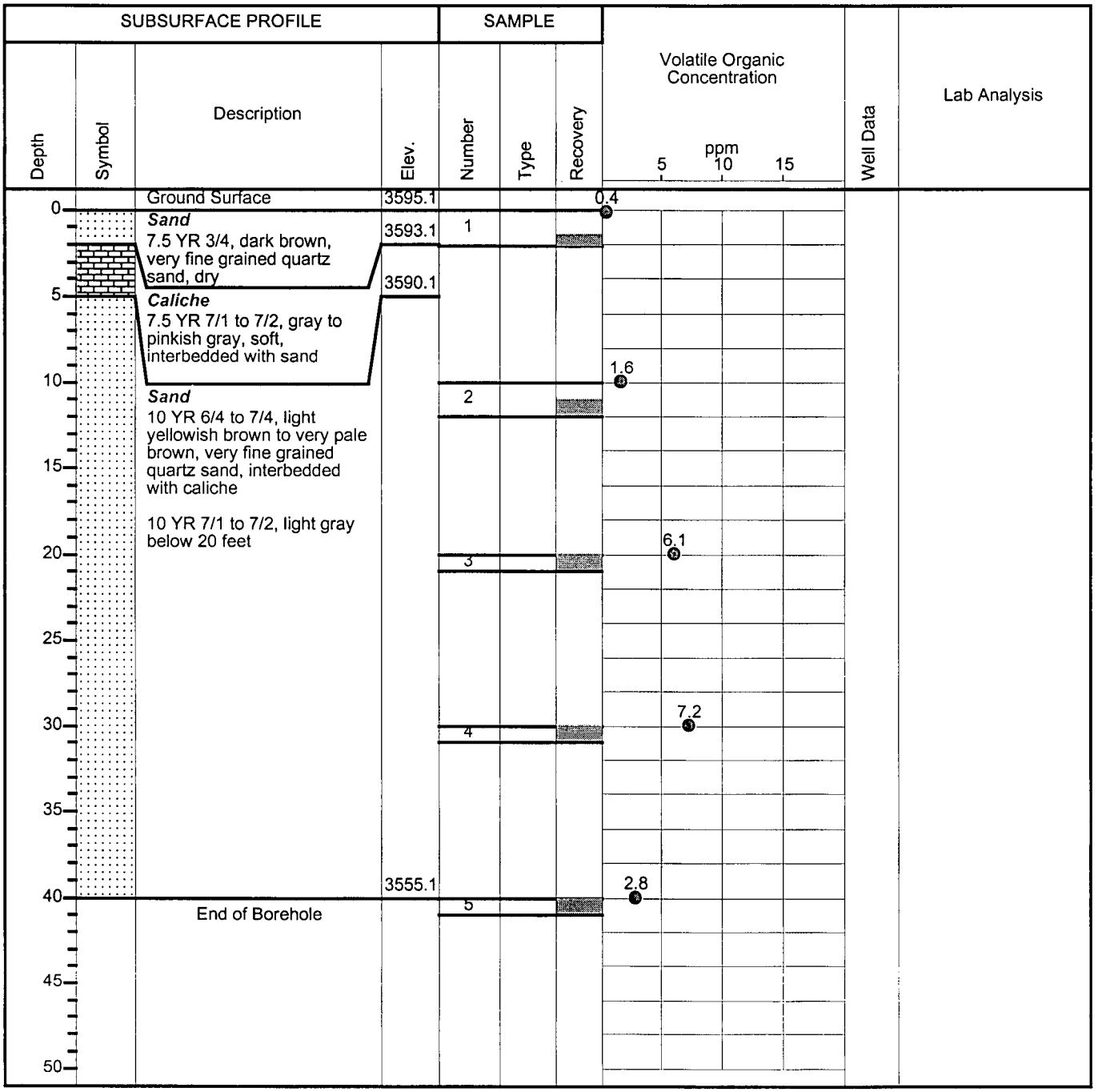
Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-6

Enclosure: 1 of 1

Engineer: MJL



Drill Method: Rotary - Air

Drill Date: 27-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

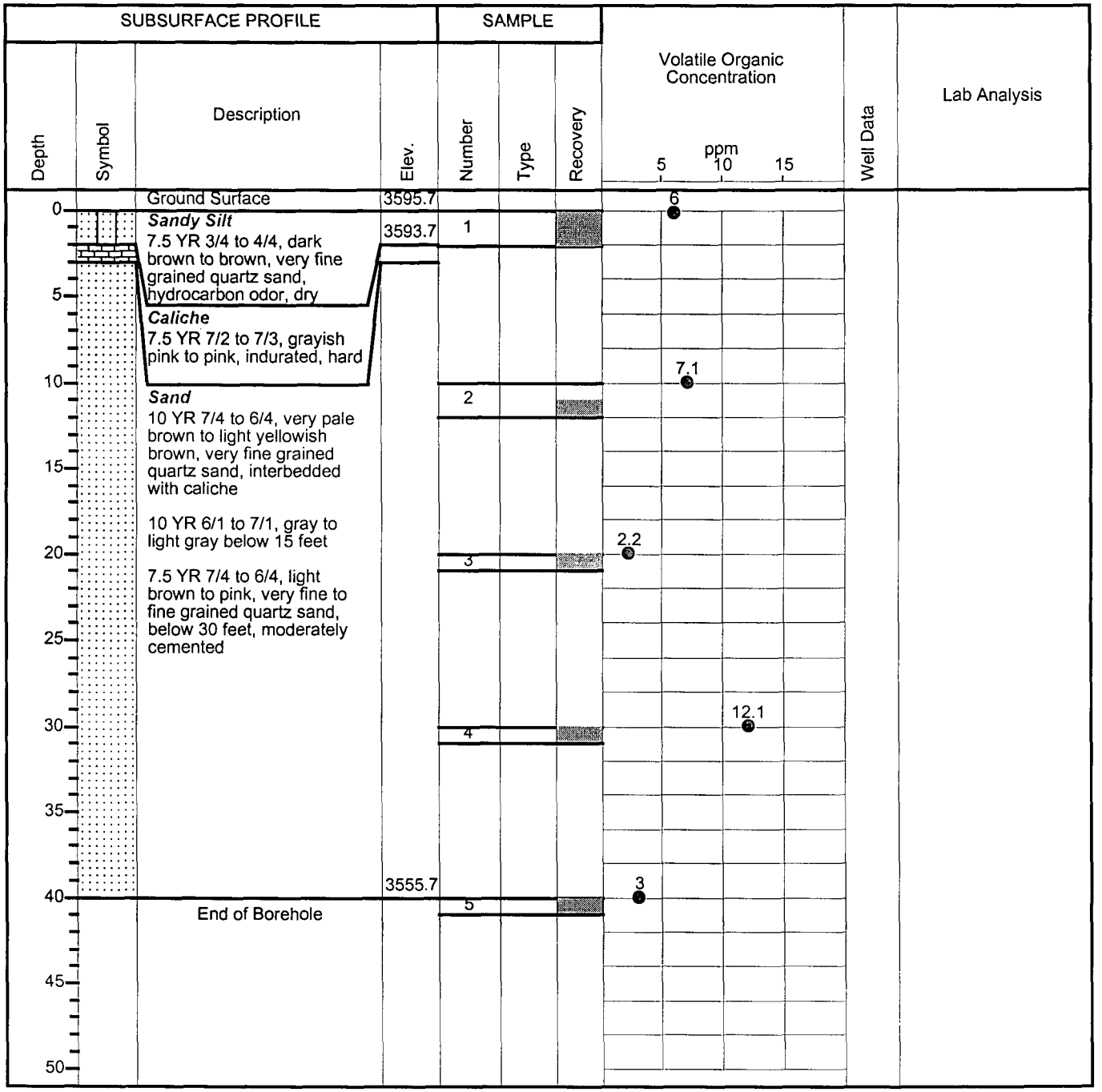
Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-7

Enclosure: 1 of 1

Engineer: MJL



Drill Method: Rotary - Air

Drill Date: 27-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

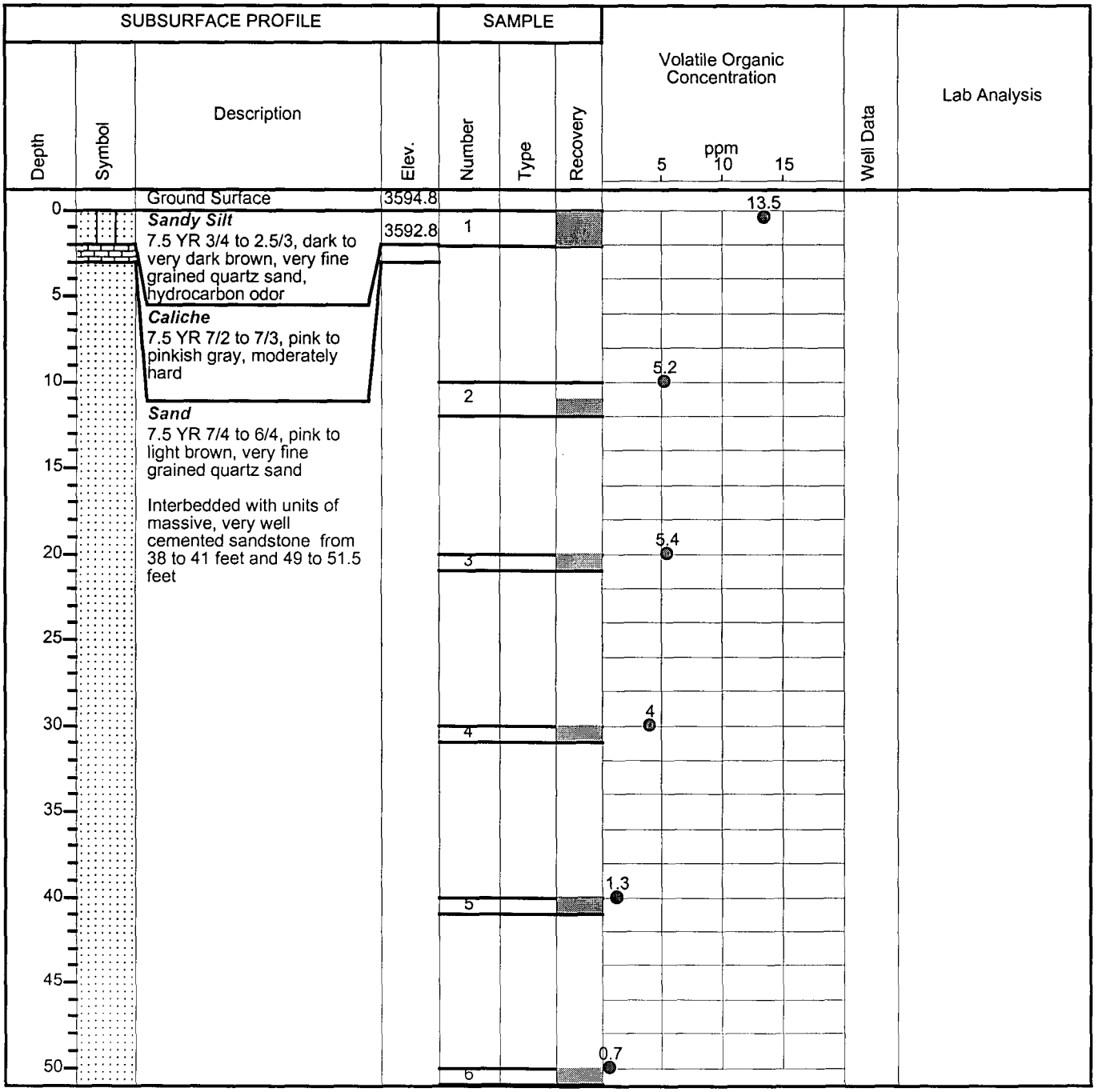
Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-8

Enclosure: 1 of 1

Engineer: MJL



Drill Method: Rotary - Air

Drill Date: 27-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 2

Project No: 1181

Project: J. C. Turner - Pit Investigation

Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-8

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE				SAMPLE			Volatile Organic Concentration					
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm 5	10	15		Well Data	Lab Analysis
			3541.8									
		End of Borehole										
55												
60												
65												
70												
75												
80												
85												
90												
95												
100												

Drill Method: Rotary - Air

Drill Date: 27-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 2 of 2

Project No: 1181

Project: J. C. Turner - Pit Investigation

Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-9

Enclosure: 1 of 1

Engineer: MJL

Depth	Description	Elev.	Sample Number	Sample Type	Recovery	Volatile Organic Concentration (ppm)	Well Data	Lab Analysis
0	Ground Surface	3594				2.2 (7)		
	Sand 7.5 YR 4/4 to 3/4, brown to dark brown, very fine grained quartz sand, dry, hydrocarbon odor	3592	1					
5	***Caliche*** 7.5 YR 7/2 to 7/3, pinkish gray to pink, moderately hard							
10			2			3.4 (2)		
	Sand 7.5 YR 5/4 to 5/6, brown to strong brown, very fine grained quartz sand, dry Interbedded with massive, very well cemented sandstone from 39 to 42 feet							
15								
20			3			4.3 (5)		
25								
30			4			4.3 (8)		
35								
40			5			3.1 (3)		
		3552						
	End of Borehole							
45								
50								

Drill Method: Rotary - Air

Drill Date: 27-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-10

Enclosure: 1 of 1

Engineer: MJL

SUBSURFACE PROFILE				SAMPLE			Volatile Organic Concentration		
Depth	Symbol	Description	Elev.	Number	Type	Recovery	ppm 5 10 15	Well Data	Lab Analysis
0		Ground Surface	3595.6				1.1		
		Silty Sand 7.5 YR 4/4 to 3/4, brown to dark brown, very fine grained quartz sand, dry, hydrocarbon odor		1					
5		7.5 YR 6/4 to 5/6, light to strong brown below 5 feet							
10		Interbedded with caliche below 10 feet, 7.5 YR 7/2 to 7/3, pinkisg gray to pink, moderately hard		2			1.6		
15		Moderately well cemented below 27 feet							
20				3			3.4		
25									
30				4			1.1		
35									
40			3555.6	5			0.4		
		End of Borehole							
45									
50									

Drill Method: Rotary - Air

Drill Date: 28-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

Project No: 1181

Project: J. C. Turner - Pit Investigation

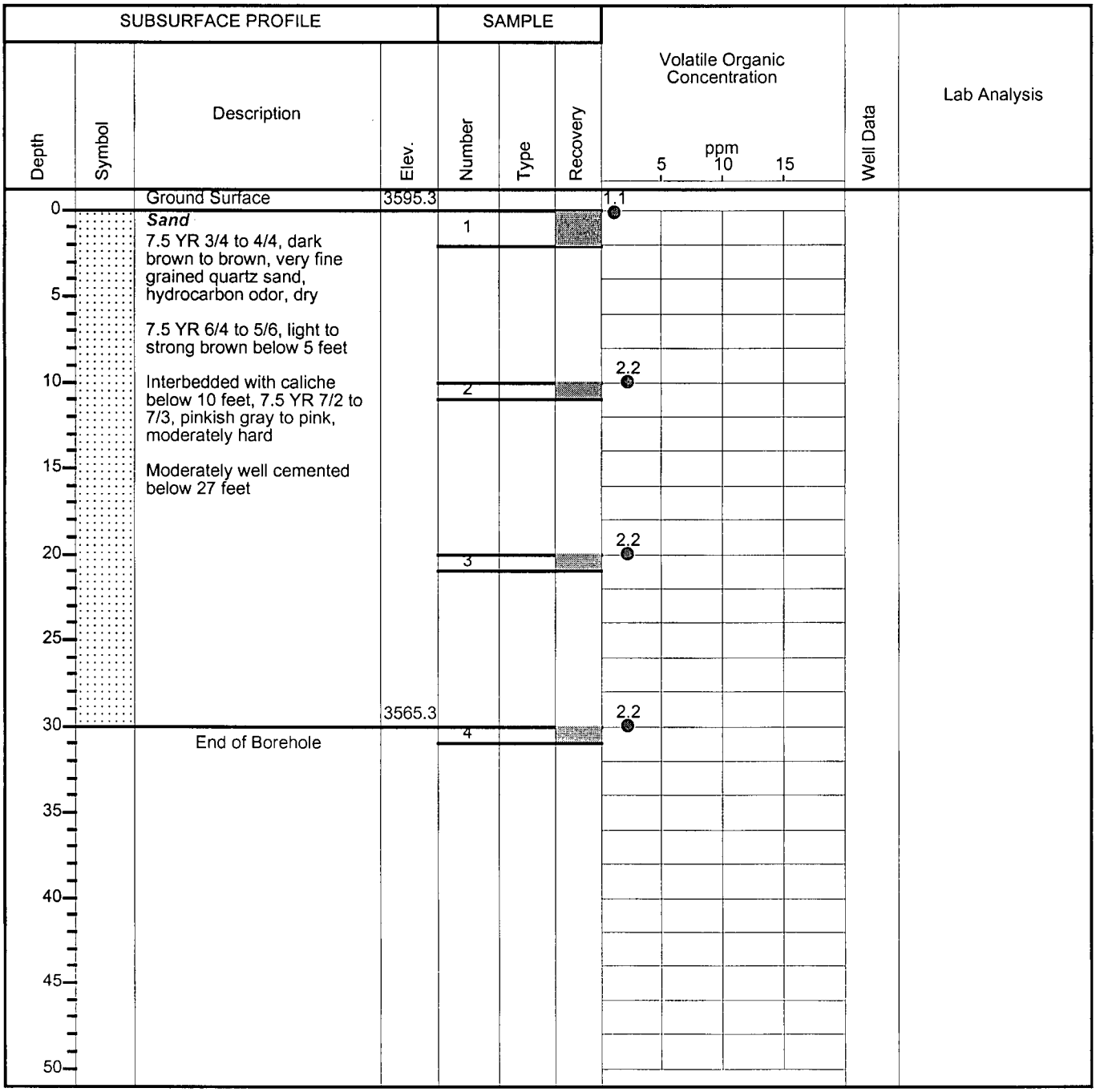
Client: Texaco Exploration and Production, Inc.

Location: Lea County, New Mexico

Log of Borehole: BH-11

Enclosure: 1 of 1

Engineer: MJL



Drill Method: Rotary - Air

Drill Date: 28-April-99

Hole Size: 5"

Highlander Environmental
1910 N. Big Spring
Midland, Texas
(915) 682-4559

Datum: MSL

Checked by: MJL

Sheet: 1 of 1

APPENDIX E

Trace Analysis, Inc. Reports

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Highlander Environmental Servic
1910 N. Big Spirng St.
Midland, TX 79705

Report Date: 5/7/99

Project Number: 1181
Project Name: J.C. Turner Property
Project Location: N/A

Order ID Number: 99042914

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
123739	BH-1 10-10.6'	Soil	4/26/99	8:50	4/29/99
123740	BH-1 20-20.6'	Soil	4/26/99	9:05	4/29/99
123741	BH-2 0-1.7'	Soil	4/26/99	9:37	4/29/99
123743	BH- 20-20.6'	Soil	4/26/99	9:50	4/29/99
123745	BH-3 10-10.6'	Soil	4/26/99	10:35	4/29/99
123747	BH-3 30-30.5'	Soil	4/26/99	10:50	4/29/99
123749	BH-4 10-11.7'	Soil	4/26/99	12:50	4/29/99
123751	BH-4 30-31'	Soil	4/26/99	13:10	4/29/99
123754	BH-5 20-20.5'	Soil	4/26/99	13:55	4/29/99
123755	BH-5 30-30.5'	Soil	4/26/99	14:05	4/29/99
123758	BH-6 20-21'	Soil	4/27/99	8:02	4/29/99
123759	BH-6 30-31'	Soil	4/27/99	8:10	4/29/99
123760	BH-6 40-41'	Soil	4/27/99	8:27	4/29/99
123761	BH-7 0-2'	Soil	4/27/99	9:00	4/29/99
123764	BH-7 30-31'	Soil	4/27/99	9:22	4/29/99
123765	BH-7 40-41'	Soil	4/27/99	9:38	4/29/99
123766	Duplicate	Soil	4/27/99	-	4/29/99
123767	BH-8 0-1.6'	Soil	4/27/99	10:07	4/29/99
123772	BH-8 52-53'	Soil	4/27/99	11:13	4/29/99
123773	BH-9 0-2'	Soil	4/27/99	13:10	4/29/99
123775	BH-9 20-21'	Soil	4/27/99	13:20	4/29/99
123776	BH-9 30-31'	Soil	4/27/99	13:30	4/29/99
123777	BH-9 42-43'	Soil	4/27/99	13:48	4/29/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 14 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 123739
Description: BH-1 10-10.6'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00653	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00722	0.1

Sample Number: 123740
Description: BH-1 20-20.6'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00722	0.1

Sample Number: 123741
Description: BH-2 0-1.7'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00722	0.1

Sample Number: 123743
Description: BH- 20-20.6'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00720	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00722	0.1

Sample Number: 123745
Description: BH-3 10-10.6'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50

GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123747
Description: BH-3 30-30.5'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123749
Description: BH-4 10-11.7'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123751
Description: BH-4 30-31'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123754
Description: BH-5 20-20.5'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123755
Description: BH-5 30-30.5'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001

M,P,O-Xylene	<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
Total BTEX	<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00597	QC00721	0.001
DRO	<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO	<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123758
Description: BH-6 20-21'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00654	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123759
Description: BH-6 30-31'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00655	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123760
Description: BH-6 40-41'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/7/99	5/4/99	RC	PB00637	QC00721	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/7/99	5/4/99	RC	PB00637	QC00721	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/7/99	5/4/99	RC	PB00637	QC00721	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/7/99	5/4/99	RC	PB00637	QC00721	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/7/99	5/4/99	RC	PB00637	QC00721	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00655	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123761
Description: BH-7 0-2'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		2310	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00546	QC00656	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00598	QC00723	0.1

Sample Number: 123764
Description: BH-7 30-31'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00655	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Sample Number: 123765
Description: BH-7 40-41'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00655	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Sample Number: 123766
Description: Duplicate

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00655	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Sample Number: 123767
Description: BH-8 0-1.6'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		1750	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00546	QC00656	50
GRO		31.1	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Sample Number: 123772
Description: BH-8 52-53'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00655	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Sample Number: 123773
Description: BH-9 0-2'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		1530	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00546	QC00656	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Sample Number: 123775
Description: BH-9 20-21'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00655	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Sample Number: 123776
Description: BH-9 30-31'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/29/99	MF	PB00546	QC00655	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Sample Number: 123777
Description: BH-9 42-43'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/4/99	5/4/99	RC	PB00611	QC00738	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00546	QC00656	50
GRO		<5	mg/Kg	1	Mod. 8015B	5/4/99	5/4/99	RC	PB00613	QC00740	0.1

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
MTBE		<0.04	mg/Kg	0.05	5/4/99	PB00597	QC00720
Benzene		<0.04	mg/Kg	0.05	5/4/99	PB00597	QC00720
Toluene		<0.04	mg/Kg	0.05	5/4/99	PB00597	QC00720
Ethylbenzene		<0.04	mg/Kg	0.05	5/4/99	PB00597	QC00720
M,P,O-Xylene		<0.04	mg/Kg	0.05	5/4/99	PB00597	QC00720
Total BTEX		<0.04	mg/Kg	0.05	5/4/99	PB00597	QC00720
MTBE		<0.050	mg/Kg	0.05	5/4/99	PB00637	QC00721
MTBE		<0.050	mg/Kg	0.05	5/4/99	PB00597	QC00721
Benzene		<0.050	mg/Kg	0.05	5/4/99	PB00597	QC00721
Benzene		<0.050	mg/Kg	0.05	5/4/99	PB00637	QC00721
Toluene		<0.050	mg/Kg	0.05	5/4/99	PB00637	QC00721
Toluene		<0.050	mg/Kg	0.05	5/4/99	PB00597	QC00721
Ethylbenzene		<0.050	mg/Kg	0.05	5/4/99	PB00597	QC00721
Ethylbenzene		<0.050	mg/Kg	0.05	5/4/99	PB00637	QC00721
M,P,O-Xylene		<0.050	mg/Kg	0.05	5/4/99	PB00637	QC00721
M,P,O-Xylene		<0.050	mg/Kg	0.05	5/4/99	PB00597	QC00721
Total BTEX		<0.050	mg/Kg	0.05	5/4/99	PB00597	QC00721
Total BTEX		<0.050	mg/Kg	0.05	5/4/99	PB00637	QC00721
MTBE		<0.050	mg/Kg	0.05	5/4/99	PB00611	QC00738
Benzene		<0.050	mg/Kg	0.05	5/4/99	PB00611	QC00738
Toluene		<0.050	mg/Kg	0.05	5/4/99	PB00611	QC00738
Ethylbenzene		<0.050	mg/Kg	0.05	5/4/99	PB00611	QC00738
M,P,O-Xylene		<0.050	mg/Kg	0.05	5/4/99	PB00611	QC00738
Total BTEX		<0.050	mg/Kg	0.05	5/4/99	PB00611	QC00738

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
C6-C10		<50	mg/Kg	50	4/29/99	PB00546	QC00653
>C10-C28		<50	mg/Kg	50	4/29/99	PB00546	QC00653
C6-C28		<50	mg/Kg	50	4/29/99	PB00546	QC00653
DRO		<50	mg/Kg	50	4/29/99	PB00546	QC00654
DRO		<50	mg/Kg	50	4/29/99	PB00546	QC00655
DRO		<50	mg/Kg	50	4/30/99	PB00546	QC00656

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Standard	Param	Units	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	DRO	mg/Kg	<50	1	250	185	74		80-120	0 - 20	QC00654
MSD	DRO	mg/Kg	<50	1	250	175	70	6	80-120	0 - 20	QC00654

Standard	Param	Units	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	DRO	mg/Kg	<50	1	250	237	95		80-120	0 - 20	QC00655
MSD	DRO	mg/Kg	<50	1	250	210	84	12	80-120	0 - 20	QC00655

Standard	Param	Units	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	DRO	mg/Kg	<50	1	250	220	88		80-120	0 - 20	QC00656
MSD	DRO	mg/Kg	<50	1	250	212	85	4	80-120	0 - 20	QC00656

Quality Control Report
Lab Control Spikes and Duplicate Spike

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	MTBE	mg/Kg	<0.04	50	5	5.43	109		80-120	0 - 20	QC00720
LCS	Benzene	mg/Kg	<0.04	50	5	5.30	106		80-120	0 - 20	QC00720
LCS	Toluene	mg/Kg	<0.04	50	5	5.22	104		80-120	0 - 20	QC00720
LCS	Ethylbenzene	mg/Kg	<0.04	50	5	4.97	99		80-120	0 - 20	QC00720
LCS	M,P,O-Xylene	mg/Kg	<0.04	50	15	14.96	100		80-120	0 - 20	QC00720
LCSD	MTBE	mg/Kg	<0.04	50	5	5.55	111	2	80-120	0 - 20	QC00720
LCSD	Benzene	mg/Kg	<0.04	50	5	5.35	107	200	80-120	0 - 20	QC00720
LCSD	Toluene	mg/Kg	<0.04	50	5	5.27	105	200	80-120	0 - 20	QC00720
LCSD	Ethylbenzene	mg/Kg	<0.04	50	5	5.08	102	200	80-120	0 - 20	QC00720
LCSD	M,P,O-Xylene	mg/Kg	<0.04	50	15	15.4	103	200	80-120	0 - 20	QC00720

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	MTBE	mg/Kg	<0.050	1	5	5.43	109		80-120	0 - 20	QC00721
LCS	MTBE	mg/Kg	<0.050	1	5	5.43	109		80-120	0 - 20	QC00721
LCS	Benzene	mg/Kg	<0.050	1	5	5.30	106		80-120	0 - 20	QC00721
LCS	Benzene	mg/Kg	<0.050	1	5	5.30	106		80-120	0 - 20	QC00721
LCS	Toluene	mg/Kg	<0.050	1	5	5.22	104		80-120	0 - 20	QC00721
LCS	Toluene	mg/Kg	<0.050	1	5	5.22	104		80-120	0 - 20	QC00721
LCS	Ethylbenzene	mg/Kg	<0.050	1	5	4.97	99		80-120	0 - 20	QC00721
LCS	Ethylbenzene	mg/Kg	<0.050	1	5	4.97	99		80-120	0 - 20	QC00721
LCS	M,P,O-Xylene	mg/Kg	<0.050	1	15	15.0	100		80-120	0 - 20	QC00721
LCS	M,P,O-Xylene	mg/Kg	<0.050	1	15	15.0	100		80-120	0 - 20	QC00721
LCSD	MTBE	mg/Kg	<0.050	1	5	5.55	111	2	80-120	0 - 20	QC00721
LCSD	MTBE	mg/Kg	<0.050	1	5	5.55	111	2	80-120	0 - 20	QC00721
LCSD	Benzene	mg/Kg	<0.050	1	5	5.35	107	1	80-120	0 - 20	QC00721
LCSD	Benzene	mg/Kg	<0.050	1	5	5.35	107	1	80-120	0 - 20	QC00721
LCSD	Toluene	mg/Kg	<0.050	1	5	5.27	105	1	80-120	0 - 20	QC00721
LCSD	Toluene	mg/Kg	<0.050	1	5	5.27	105	1	80-120	0 - 20	QC00721
LCSD	Ethylbenzene	mg/Kg	<0.050	1	5	5.08	102	2	80-120	0 - 20	QC00721
LCSD	Ethylbenzene	mg/Kg	<0.050	1	5	5.08	102	2	80-120	0 - 20	QC00721
LCSD	M,P,O-Xylene	mg/Kg	<0.050	1	15	15.4	103	3	80-120	0 - 20	QC00721
LCSD	M,P,O-Xylene	mg/Kg	<0.050	1	15	15.4	103	3	80-120	0 - 20	QC00721

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	MTBE	mg/Kg	<0.050	50	5	4.96	99		80-120	0 - 20	QC00738
LCS	Benzene	mg/Kg	<0.050	50	5	5.05	101		80-120	0 - 20	QC00738

LCS	Toluene	mg/Kg	<0.050	50	5	4.99	100		80-120	0 - 20	QC00738
LCS	Ethylbenzene	mg/Kg	<0.050	50	5	4.81	96		80-120	0 - 20	QC00738
LCS	M,P,O-Xylene	mg/Kg	<0.050	50	15	14.4	96		80-120	0 - 20	QC00738
LCSD	MTBE	mg/Kg	<0.050	50	5	4.89	98	1	80-120	0 - 20	QC00738
LCSD	Benzene	mg/Kg	<0.050	50	5	4.97	99	2	80-120	0 - 20	QC00738
LCSD	Toluene	mg/Kg	<0.050	50	5	4.89	98	2	80-120	0 - 20	QC00738
LCSD	Ethylbenzene	mg/Kg	<0.050	50	5	4.68	94	3	80-120	0 - 20	QC00738
LCSD	M,P,O-Xylene	mg/Kg	<0.050	50	15	14.0	93	3	80-120	0 - 20	QC00738

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	C6-C10	mg/Kg	<50	1	250	201	80		80-120	0 - 20	QC00653
LCS	>C10-C28	mg/Kg	<50	1	250	191	76		80-120	0 - 20	QC00653
LCS	C6-C28	mg/Kg	<50	1	500	393	79		80-120	0 - 20	QC00653
LCSD	C6-C10	mg/Kg	<50	1	250	198	79	2	80-120	0 - 20	QC00653
LCSD	>C10-C28	mg/Kg	<50	1	250	184	74	4	80-120	0 - 20	QC00653
LCSD	C6-C28	mg/Kg	<50	1	500	382	76	3	80-120	0 - 20	QC00653

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	DRO	mg/Kg	<50	1	250	187	75		80-120	0 - 20	QC00654
LCSD	DRO	mg/Kg	<50	1	250	178	71	5	80-120	0 - 20	QC00654

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	DRO	mg/Kg	<50	1	250	195	78		80-120	0 - 20	QC00655
LCSD	DRO	mg/Kg	<50	1	250	196	78	1	80-120	0 - 20	QC00655

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	DRO	mg/Kg	<50	1	250	196	78		80-120	0 - 20	QC00656
LCSD	DRO	mg/Kg	<50	1	250	821	328	123	80-120	0 - 20	QC00656

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	MTBE		0.1	mg/Kg	0.098	98	80 - 120	5/4/99	QC00720
ICV	Benzene		0.1	mg/Kg	0.100	100	80 - 120	5/4/99	QC00720
ICV	Toluene		0.1	mg/Kg	0.098	98	80 - 120	5/4/99	QC00720
ICV	Ethylbenzene		0.1	mg/Kg	0.097	97	80 - 120	5/4/99	QC00720
ICV	M,P,O-Xylene		0.3	mg/Kg	0.286	95	80 - 120	5/4/99	QC00720
CCV (1)	MTBE		0.1	mg/Kg	0.099	99	80 - 120	5/4/99	QC00720
CCV (1)	Benzene		0.1	mg/Kg	0.105	105	80 - 120	5/4/99	QC00720
CCV (1)	Toluene		0.1	mg/Kg	0.104	104	80 - 120	5/4/99	QC00720
CCV (1)	Ethylbenzene		0.1	mg/Kg	0.102	102	80 - 120	5/4/99	QC00720
CCV (1)	M,P,O-Xylene		0.3	mg/Kg	0.301	100	80 - 120	5/4/99	QC00720

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	MTBE		0.1	mg/Kg	0.112	112	80 - 120	5/4/99	QC00721
ICV	MTBE		0.1	mg/Kg	0.112	112	80 - 120	5/4/99	QC00721
ICV	Benzene		0.1	mg/Kg	0.104	104	80 - 120	5/4/99	QC00721
ICV	Benzene		0.1	mg/Kg	0.104	104	80 - 120	5/4/99	QC00721
ICV	Toluene		0.1	mg/Kg	0.103	103	80 - 120	5/4/99	QC00721
ICV	Toluene		0.1	mg/Kg	0.103	103	80 - 120	5/4/99	QC00721
ICV	Ethylbenzene		0.1	mg/Kg	0.102	102	80 - 120	5/4/99	QC00721
ICV	Ethylbenzene		0.1	mg/Kg	0.102	102	80 - 120	5/4/99	QC00721
ICV	M,P,O-Xylene		0.3	mg/Kg	0.302	101	80 - 120	5/4/99	QC00721
ICV	M,P,O-Xylene		0.3	mg/Kg	0.302	101	80 - 120	5/4/99	QC00721
CCV (1)	MTBE		0.1	mg/Kg	0.103	103	80 - 120	5/4/99	QC00721
CCV (1)	MTBE		0.1	mg/Kg	0.103	103	80 - 120	5/4/99	QC00721
CCV (1)	Benzene		0.1	mg/Kg	0.106	106	80 - 120	5/4/99	QC00721
CCV (1)	Benzene		0.1	mg/Kg	0.106	106	80 - 120	5/4/99	QC00721
CCV (1)	Toluene		0.1	mg/Kg	0.105	105	80 - 120	5/4/99	QC00721
CCV (1)	Toluene		0.1	mg/Kg	0.105	105	80 - 120	5/4/99	QC00721
CCV (1)	Ethylbenzene		0.1	mg/Kg	0.104	104	80 - 120	5/4/99	QC00721
CCV (1)	Ethylbenzene		0.1	mg/Kg	0.104	104	80 - 120	5/4/99	QC00721
CCV (1)	M,P,O-Xylene		0.3	mg/Kg	0.308	103	80 - 120	5/4/99	QC00721
CCV (1)	M,P,O-Xylene		0.3	mg/Kg	0.308	103	80 - 120	5/4/99	QC00721

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	MTBE		0.1	mg/Kg	0.098	98	80 - 120	5/4/99	QC00738
ICV	Benzene		0.1	mg/Kg	0.096	96	80 - 120	5/4/99	QC00738

ICV	Toluene	0.1	mg/Kg	0.095	95	80 - 120	5/4/99	QC00738
ICV	Ethylbenzene	0.1	mg/Kg	0.093	93	80 - 120	5/4/99	QC00738
ICV	M,P,O-Xylene	0.3	mg/Kg	0.274	91	80 - 120	5/4/99	QC00738
CCV (1)	MTBE	0.1	mg/Kg	0.104	104	80 - 120	5/4/99	QC00738
CCV (1)	Benzene	0.1	mg/Kg	0.106	106	80 - 120	5/4/99	QC00738
CCV (1)	Toluene	0.1	mg/Kg	0.105	105	80 - 120	5/4/99	QC00738
CCV (1)	Ethylbenzene	0.1	mg/Kg	0.104	104	80 - 120	5/4/99	QC00738
CCV (1)	M,P,O-Xylene	0.3	mg/Kg	0.308	103	80 - 120	5/4/99	QC00738

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	C6-C10		250	mg/Kg	232	93	80 - 120	4/29/99	QC00653
ICV	>C10-C28		250	mg/Kg	232	93	80 - 120	4/29/99	QC00653
ICV	C6-C28		500	mg/Kg	464	93	80 - 120	4/29/99	QC00653
CCV (1)	C6-C10		250	mg/Kg	230	92	80 - 120	4/29/99	QC00653
CCV (1)	>C10-C28		250	mg/Kg	213	85	80 - 120	4/29/99	QC00653
CCV (1)	C6-C28		500	mg/Kg	443	89	80 - 120	4/29/99	QC00653
CCV (2)	C6-C10		250	mg/Kg	213	85	80 - 120	4/29/99	QC00653
CCV (2)	>C10-C28		250	mg/Kg	206	82	80 - 120	4/29/99	QC00653
CCV (2)	C6-C28		500	mg/Kg	418	84	80 - 120	4/29/99	QC00653

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	DRO		250	mg/Kg	215	86	80 - 120	4/29/99	QC00654
CCV (1)	DRO		250	mg/Kg	219	88	80 - 120	4/29/99	QC00654
CCV (2)	DRO		250	mg/Kg	200	80	80 - 120	4/29/99	QC00654

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	DRO		250	mg/Kg	201	80	80 - 120	4/29/99	QC00655
CCV (1)	DRO		250	mg/Kg	281	112	80 - 120	4/29/99	QC00655
CCV (2)	DRO		250	mg/Kg	242	97	80 - 120	4/29/99	QC00655

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	DRO		250	mg/Kg	222	89	80 - 120	4/30/99	QC00656
CCV (1)	DRO		250	mg/Kg	202	81	80 - 120	4/30/99	QC00656

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	GRO		1	mg/Kg	1.08	108	80 - 120	5/4/99	QC00722
CCV (1)	GRO		1	mg/Kg	1.13	113	80 - 120	5/4/99	QC00722

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	GRO		1	mg/Kg	1.08	108	80 - 120	5/4/99	QC00723
CCV (1)	GRO		1	mg/Kg	1.08	108	80 - 120	5/4/99	QC00723

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	GRO		1	mg/Kg	1.03	103	80 - 120	5/4/99	QC00740
CCV (1)	GRO		1	mg/Kg	1.08	108	80 - 120	5/4/99	QC00740

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

May 7, 1999
Receiving Date: 04/29/99
Sample Type: Soil
Project #: 1181
Client Name: Texaco

Sampling Date: 04/05/99
Sample Condition: I & C
Sample Received by: VW
Project Name: J.C. Turner Property

TA#	FIELD CODE	TOTAL Cl (mg/kg)
T123740	BH-1, 20-20.6'	21
T123743	BH-2, 20-20.6'	21
T123747	BH-3, 30-30.5'	14
T123751	BH-4, 30-31'	23
T123755	BH-5, 30-30.5'	130
T123760	BH-6, 40-41'	210
T123765	BH-7, 40-41'	120
ICV		494
CCV		505
REPORTING LIMIT		2.0
RPD		1
% Extraction Accuracy		109
% Instrument Accuracy		99
PREP DATE		05/03/99
ANALYSIS DATE		05/03/99

METHODS: EPA SM 4500 Cl-B
CHEMIST: JS
TOTAL Cl SPIKE: 10,000 mg/kg TOTAL Cl

TOTAL Cl CV: 500 mg/L TOTAL Cl

Director, Dr. Blair Leftwich

5-7-99
DATE

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

May 24, 1999
Receiving Date: 04/29/99
Sample Type: Soil
Project #: 1181
Client Name: Texaco

CORRECTED

Sampling Date: 04/05/99
Sample Condition: I & C
Sample Received by: VW
Project Name: J.C. Turner Property

TA#	FIELD CODE	TOTAL Cl (mg/kg)
T123772	BH-8, 52-53'	140
T123777	BH-9, 42-43'	130
ICV		505
CCV		496
REPORTING LIMIT		2.0
RPD		2
% Extraction Accuracy		105
% Instrument Accuracy		101
PREP DATE		05/03/99
ANALYSIS DATE		05/03/99

***Corrected field code.**

METHODS: EPA SM 4500 Cl-B
CHEMIST: JS
TOTAL Cl SPIKE: 10,000 mg/kg TOTAL Cl
TOTAL Cl CV: 500 mg/L TOTAL Cl

Director, Dr. Blair Leftwich

5-24-99
DATE

99042914

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705
(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 4

CLIENT NAME: Texaco | SITE MANAGER: M. Larson

PROJECT NO.: 1181 | PROJECT NAME: J. C. Turner Property

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH (8015 DRO + GRO)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
123738	4/26/99	08:41	S	✓		BH-1, 0 - 1.81'	1			✓	✓			HOLD															
39	4/26/99	08:50	S	✓		BH-1, 10 - 10.6'	1			✓	✓				✓														
40	4/26/99	09:05	S	✓		BH-1, 20 - 20.6'	1			✓	✓		✓		✓										✓				
41	4/26/99	09:37	S	✓		BH-2, 0 - 1.7'	1			✓	✓				✓														
42	4/26/99	09:45	S	✓		BH-2, 10 - 10.7'	1			✓	✓			HOLD															
43	4/26/99	09:50	S	✓		BH-2, 20 - 20.6'	1			✓	✓		✓		✓										✓				
44	4/26/99	10:27	S	✓		BH-3, 0 - 2'	1			✓	✓			HOLD															
45	4/26/99	10:35	S	✓		BH-3, 10 - 10.6'	1			✓	✓				✓														
46	4/26/99	10:40	S	✓		BH-3, 20 - 20.5'	1			✓	✓			HOLD															
47	4/26/99	10:50	S	✓		BH-3, 30 - 30.5'	1			✓	✓		✓		✓										✓				

RELINQUISHED BY: (Signature) — Date: 4/28/99 Time: 06:00

RECEIVED BY: (Signature) Helen Shelton — Date: 4/28/99 Time: 11:00 PM

RELINQUISHED BY: (Signature) Helen Shelton — Date: 4/28/99 Time: 6:00 PM

RECEIVED BY: (Signature) — Date: Time:

RELINQUISHED BY: (Signature) — Date: Time:

RECEIVED BY: (Signature) — Date: Time:

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP: 79424
CONTACT: Neil PHONE: (800) 378-1296

RECEIVED BY: (Signature) Vicki Wmsham
DATE: 4-29-99 TIME: 10:00 Am

SAMPLED BY: (Print & Sign) MJ Larson — Date: 4/27/99 Time: 13:50

SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS — AIRBILL #: Greyhound 4 — OTHER:

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: * - Means Hold Sample - Call 5/7

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

(915) 682-4559 Fax (915) 682-3946

CLIENT NAME: Texaco | SITE MANAGER: M. Larson

PROJECT NO.: 1181 | PROJECT NAME: J. C. Turner Property

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH (8015 m. DRO + GRO)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/808	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
123748	4/26/99	12:45	S	✓		BH-4, 0-2'	1				✓		X	O	✓	D													
49	4/26/99	12:50	S	✓		BH-4, 10-11.7'	1				✓				✓														
50	4/26/99	13:00	S	✓		BH-4, 20-20.5'	1				✓		X	HOLD															
51	4/26/99	13:10	S	✓		BH-4, 30-31'	1				✓		✓		✓										✓				
52	4/26/99	13:40	S	✓		BH-5, 0-1'	1				✓		X	HOLD															
53	4/26/99	13:48	S	✓		BH-5, 10-11'	1				✓		X	HOLD															
54	4/26/99	13:55	S	✓		BH-5, 20-20.5'	1				✓				✓														
55	4/26/99	14:05	S	✓		BH-5, 30-30.5'	1				✓		✓		✓										✓				
56	4/27/99	07:45	S	✓		BH-6, 0-0.6'	1				✓		X	HOLD															
57	4/27/99	07:50	S	✓		BH-6, 10-11'	1				✓		X	HOLD															

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 4/28/99 Time: 9:00 — RECEIVED BY: (Signature) Helen Shelton — Date: 4/28/99 Time: 11:00PM

RELINQUISHED BY: (Signature) Helen Shelton — Date: 4/28/99 Time: 6:00 PM — RECEIVED BY: (Signature) — Date: — Time:

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

SAMPLED BY: (Print & Sign) M Larson — Date: 4/27/99 Time: 13:50

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

RECEIVING LABORATORY: Trace Analysis, Inc. — RECEIVED BY: (Signature) Vicki Wndha

ADDRESS: 6701 Aberdeen

CITY: Lubbock STATE: Tx ZIP: 79424

CONTACT: Hall PHONE: (800) 378-1296 — DATE: 4-29-99 TIME: 10:00 Am

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: * Means Hold Sample - Call

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

(915) 682-4559 Fax (915) 682-3946

CLIENT NAME: Texaco | SITE MANAGER: M. Larson

PROJECT NO.: 1181 | PROJECT NAME: J. C. Turner Property

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 / 8015 MOD / TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	ECI	GC-MS Vol. 8240/8260/624	GC-MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
58	4/27/99	08:02	S			BH-6, 20-21'	1				✓			✓														
59	4/27/99	08:10	S			BH-6, 30-31'	1				✓			✓															
60	4/27/99	08:27	S			BH-6, 40-41'	1				✓			✓											✓				
61	4/27/99	08:00	S			BH-7, 0-2'	1				✓		2	~~✓~~ HOLD			2												
62	4/27/99	09:05	S			BH-7, 10-11'	1				✓			HOLD															
63	4/27/99	09:10	S			BH-7, 20-21'	1				✓			HOLD															
64	4/27/99	09:22	S			BH-7, 30-31'	1				✓			✓															
65	4/27/99	09:38	S			BH-7, 40-41'	1				✓			✓											✓				
66	4/27/99		S			Duplicate	1				✓			✓															
67	4/27/99	10:07	S			BH-8, 0-1.6'	1				✓			✓															

RELINQUISHED BY: (Signature) [signature] Date: 4/28/99 Time: 8:00 | RECEIVED BY: (Signature) Helen Ashton Date: 4/28/99 Time: 1:00PM | SAMPLED BY: (Print & Sign) MJ Larson Date: 4/27/99 Time: 13:30

RELINQUISHED BY: (Signature) Helen Ashton Date: 4/28/99 Time: 6:00PM | RECEIVED BY: (Signature) Date: Time: | SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED Greyhound AIRBILL #: 4 OTHER:

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

RECEIVING LABORATORY: Trace Analysis, Inc. | RECEIVED BY: (Signature)
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: Tx ZIP: 79424
CONTACT: Nell PHONE: (800) 378-1296 DATE: TIME:

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: * Means Hold Sample - Call

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

10 samples - H5 MK

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

CLIENT NAME: Texaco | SITE MANAGER: M. Larson

PROJECT NO.: 1131 | PROJECT NAME: J. C. Turner Property

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1	8015 MOD.	TX1006	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC-MS Vol. 8240/8260/624	GC-MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, (Chloride)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
68	4/27/99	10:12	S	✓		BH-8, 10-11'	1				✓		HOLD																		
69	4/27/99	10:20	S	✓		BH-8, 20-21'	1				✓		HOLD																		
70	4/27/99	10:27	S	✓		BH-8, 30-31'	1				✓		HOLD																		
71	4/27/99	10:52	S	✓		BH-8, 41-42'	1				✓		HOLD																		
72	4/27/99	11:13	S	✓		BH-8, 52-53'	1				✓		✓			✓											✓				
73	4/27/99	13:10	S	✓		BH-9, 0-2'	1				✓					✓															
74	4/27/99	13:15	S	✓		BH-9, 10-11'	1				✓		HOLD																		
75	4/27/99	13:20	S	✓		BH-9, 20-21'	1				✓					✓															
76	4/27/99	13:30	S	✓		BH-9, 30-31'	1				✓					✓															
77	4/27/99	13:48	S	✓		BH-9, 42-43'	1				✓					✓											✓				

RELINQUISHED BY: (Signature) — Date: 4/29/99 Time: 06:00
RECEIVED BY: (Signature) Helen Shelton — Date: 4/28/99 Time: 1100PM

RELINQUISHED BY: (Signature) Helen Shelton — Date: 4/28/99 Time: 6:00 PM
RECEIVED BY: (Signature) — Date: Time:

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

RECEIVING LABORATORY: Trace Analysis, Inc
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: Tx ZIP: 79424
CONTACT: Nell PHONE: (800) 378-1296
RECEIVED BY: (Signature) DATE: TIME:

SAMPLED BY: (Print & Sign) M Larson Date: 4/27/99 Time: 13:59
SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED Greyhound AIRBILL #: 4 OTHER:

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: * Means Hold Sample - Call

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

10 samples - HS MB

TRACEANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Highlander Environmental Services
1910 N. Big Spirng St.
Midland, TX 79705

Report Date: 5/11/99

Project Number: 1181
Project Name: J.C. Turner Property
Project Location: N/A

Order ID Number: 99043003

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
123830	BH-10 20-21'	Soil	4/28/99	7:57	4/30/99
123832	BH-10 40-41'	Soil	4/28/99	8:20	4/30/99
123834	BH-11 10-11'	Soil	4/28/99	8:50	4/30/99
123836	BH-11 30-31'	Soil	4/28/99	9:08	4/30/99
123837	Duplicate	Soil	4/28/99	-	4/30/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 5 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 123830
Description: BH-10 20-21'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00557	QC00665	50
GRO		<5	mg/Kg	1	Mod. 602	5/4/99	5/4/99	RC	PB00613	QC00740	5

Sample Number: 123832
Description: BH-10 40-41'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00557	QC00665	50
GRO		<5	mg/Kg	1	Mod. 602	5/10/99	5/8/99	SO	PB00666	QC00818	5

Sample Number: 123834
Description: BH-11 10-11'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00557	QC00665	50
GRO		<5	mg/Kg	1	Mod. 602	5/10/99	5/8/99	SO	PB00666	QC00818	5

Sample Number: 123836
Description: BH-11 30-31'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
Ethylbenzene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
M,P,O-Xylene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
Total BTEX		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
DRO		<50	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00557	QC00665	50
GRO		<5	mg/Kg	1	Mod. 602	5/10/99	5/8/99	SO	PB00666	QC00818	5

Sample Number: 123837
Description: Duplicate

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
Benzene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
Toluene		<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001

Ethylbenzene	<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
M,P,O-Xylene	<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
Total BTEX	<0.05	mg/Kg	50	S 8021B	5/10/99	5/8/99	RC	PB00665	QC00825	0.001
DRO	<50	mg/Kg	1	Mod. 8015B	4/30/99	4/30/99	MF	PB00557	QC00665	50
GRO	<5	mg/Kg	1	Mod. 602	5/10/99	5/8/99	SO	PB00666	QC00818	5

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
MTBE		<0.050	mg/Kg	0.001	5/8/99	PB00665	QC00825
Benzene		<0.050	mg/Kg	0.001	5/8/99	PB00665	QC00825
Toluene		<0.050	mg/Kg	0.001	5/8/99	PB00665	QC00825
Ethylbenzene		<0.050	mg/Kg	0.001	5/8/99	PB00665	QC00825
M,P,O-Xylene		<0.050	mg/Kg	0.001	5/8/99	PB00665	QC00825
Total BTEX		<0.050	mg/Kg	0.001	5/8/99	PB00665	QC00825

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
DRO		<50	mg/Kg	50	4/30/99	PB00557	QC00665

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
GRO		<5	mg/Kg	5	5/8/99	PB00666	QC00818

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Standard	Param	Units	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	DRO	mg/Kg	<50	1	250	221	88		80-120	0 - 20	QC00665
MSD	DRO	mg/Kg	<50	1	250	242	97	9	80-120	0 - 20	QC00665

Quality Control Report
Lab Control Spikes and Duplicate Spike

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	MTBE	mg/Kg	<0.050	1	5	5.27	105		80-120	0 - 20	QC00825
LCS	Benzene	mg/Kg	<0.050	1	5	4.94	99		80-120	0 - 20	QC00825
LCS	Toluene	mg/Kg	<0.050	1	5	4.88	98		80-120	0 - 20	QC00825
LCS	Ethylbenzene	mg/Kg	<0.050	1	5	4.80	96		80-120	0 - 20	QC00825
LCS	M,P,O-Xylene	mg/Kg	<0.050	1	15	14.1	94		80-120	0 - 20	QC00825
LCSD	MTBE	mg/Kg	<0.050	1	5	5.16	103	2	80-120	0 - 20	QC00825
LCSD	Benzene	mg/Kg	<0.050	1	5	4.83	97	2	80-120	0 - 20	QC00825
LCSD	Toluene	mg/Kg	<0.050	1	5	4.78	96	2	80-120	0 - 20	QC00825
LCSD	Ethylbenzene	mg/Kg	<0.050	1	5	4.71	94	2	80-120	0 - 20	QC00825
LCSD	M,P,O-Xylene	mg/Kg	<0.050	1	15	13.7	91	3	80-120	0 - 20	QC00825

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	DRO	mg/Kg	<50	1	250	189	76		80-120	0 - 20	QC00665
LCSD	DRO	mg/Kg	<50	1	250	195	78	3	80-120	0 - 20	QC00665

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	GRO	mg/Kg	<5	1	1	1.02			80-120	0 - 20	QC00818
LCSD	GRO	mg/Kg	<5	1	1	1.00			80-120	0 - 20	QC00818

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	MTBE		0.1	mg/Kg	0.093	93	80 - 120	5/8/99	QC00825
ICV	Benzene		0.1	mg/Kg	0.093	93	80 - 120	5/8/99	QC00825
ICV	Toluene		0.1	mg/Kg	0.094	94	80 - 120	5/8/99	QC00825
ICV	Ethylbenzene		0.1	mg/Kg	0.095	95	80 - 120	5/8/99	QC00825
ICV	M,P,O-Xylene		0.3	mg/Kg	0.274	91	80 - 120	5/8/99	QC00825
CCV (1)	MTBE		0.1	mg/Kg	0.099	99	80 - 120	5/8/99	QC00825
CCV (1)	Benzene		0.1	mg/Kg	0.099	99	80 - 120	5/8/99	QC00825
CCV (1)	Toluene		0.1	mg/Kg	0.098	98	80 - 120	5/8/99	QC00825
CCV (1)	Ethylbenzene		0.1	mg/Kg	0.101	101	80 - 120	5/8/99	QC00825
CCV (1)	M,P,O-Xylene		0.3	mg/Kg	0.297	99	80 - 120	5/8/99	QC00825

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	DRO		250	mg/Kg	200	80	80 - 120	4/30/99	QC00665
CCV (1)	DRO		250	mg/Kg	247	99	80 - 120	4/30/99	QC00665

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	GRO		250	mg/Kg	1.03	0	80 - 120	5/4/99	QC00740
CCV (1)	GRO		250	mg/Kg	1.08	0	80 - 120	5/4/99	QC00740

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	GRO		250	mg/Kg	0.828	0	80 - 120	5/8/99	QC00818
CCV (1)	GRO		250	mg/Kg	1.18	0	80 - 120	5/8/99	QC00818

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

May 10, 1999
Receiving Date: 04/30/99
Sample Type: Soil
Project #: 1181
Client Name: Texaco

Sampling Date: 04/28/99
Sample Condition: I & C
Sample Received by: VW
Project Name: J.C. Turner Property

TA#	FIELD CODE	TOTAL Cl (mg/kg)
T123832	BH-10, 40-41'	280
ICV		505
CCV		496
REPORTING LIMIT		2.0
RPD		2
% Extraction Accuracy		105
% Instrument Accuracy		101
PREP DATE		05/03/99
ANALYSIS DATE		05/03/99

METHODS: EPA SM 4500 Cl-B
CHEMIST: JS
TOTAL Cl SPIKE: 10,000 mg/kg TOTAL Cl
TOTAL Cl CV: 500 mg/L TOTAL Cl

Director, Dr. Blair Leftwich

5-10-99
DATE

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

May 10, 1999
Receiving Date: 04/30/99
Sample Type: Soil
Project #: 1181
Client Name: Texaco

Sampling Date: 04/28/99
Sample Condition: I & C
Sample Received by: VW
Project Name: J. C. Turner Property

TA#	FIELD CODE	TOTAL CHLORIDE (mg/kg)
T123836	BH-11, 30-31'	56
T123837	Duplicate	68
ICV		506
CCV		497
REPORTING LIMIT		2.0
RPD		0
% Extraction Accuracy		117
% Instrument Accuracy		101
PREP DATE		05/10/99
ANALYSIS DATE		05/10/99

METHODS: EPA SM 4500 Cl-B
CHEMIST: JS
TOTAL CHLORIDE SPIKE: 10,000 mg/kg TOTAL CHLORIDE
TOTAL CHLORIDE CV: 500 mg/L TOTAL CHLORIDE

Director, Dr. Blair Leftwich

5-10-99
DATE

9904300 3

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Texaco | SITE MANAGER: M. Larson

PROJECT NO.: 1181 | PROJECT NAME: J. C. Turner Property

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	BTEX 8020/602	MTBE 8020/602	TPH 418.1 / 8015 MOD. TX1005	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	ECI	GC/MS Vol. 8240/8260/624	GC/MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)	GRO/DRO
123828	4/28/99	07:42	S			BH-10, 0-1.2'	1				✓			Hold															
29	4/28/99	07:45	S			BH-10, 10-12'	1				✓			Hold																
30	4/28/99	07:57	S			BH-10, 20-21'	1				✓				✓															
31	4/28/99	08:14	S			BH-10, 30-31'	1				✓			Hold																
32	4/28/99	08:20	S			BH-10, 40-41'	1				✓		✓		✓										✓					
33	4/28/99	08:48	S			BH-11, 0-1.3'	1				✓			Hold																
34	4/28/99	08:50	S			BH-11, 10-11'	1				✓				✓															
35	4/28/99	09:00	S			BH-11, 20-21'	1				✓			Hold																
36	4/28/99	09:03	S			BH-11, 30-31'	1				✓		✓		✓										✓					
37	4/28/99		S			Duplicate	1				✓		✓		✓										✓					

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 4/29/99 Time: 09:15 — RECEIVED BY: (Signature) Helen Shelton — Date: 4/29/99 Time: 09:15

SAMPLED BY: (Print & Sign) MLarson — Date: 4/28/99 Time: 09:00

RELINQUISHED BY: (Signature) Helen Shelton — Date: 4/29/99 Time: 10:45 PM — RECEIVED BY: (Signature) — Date: — Time:

SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED — AIRBILL # 15933495165 — OTHER: 4

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

RECEIVING LABORATORY: Trace Analysis, Inc. — RECEIVED BY: (Signature) Vicki Windham

ADDRESS: 6701 Aberdeen — CITY: Lubbock — STATE: Tx — ZIP: 79424

CONTACT: Neil — PHONE: (800) 378-1296 — DATE: 4-30-99 — TIME: 09:45 Am

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP please — RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: X - Means Hold and Call me

10 Samples - HC

5/10 PM 5/11

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

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E Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Highlander Environmental Services
1910 N. Big Spring St.
Midland, TX 79705

Report Date: 5/20/99

Project Number: 1181
Project Name: J.C. Turner Property
Project Location: N/A

Order ID Number: 99042914

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
123762	BH-7 10-11'	Soil	4/27/99	9:05	4/29/99
123768	BH-8 10-11'	Soil	4/27/99	10:12	4/29/99
123774	BH-9 10-11'	Soil	4/27/99	13:15	4/29/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 3 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 123762
Description: BH-7 10-11'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO	*	<50	mg/Kg	1	Mod. 8015B	5/12/99	5/12/99	MF	PB00689	QC00856	50

* DRO - Sample did not meet holding time.

Sample Number: 123768
Description: BH-8 10-11'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO	*	<50	mg/Kg	1	Mod. 8015B	5/12/99	5/12/99	MF	PB00689	QC00856	50
GRO		<5.0	mg/Kg	1	Mod. 8015B	5/16/99	5/16/99	RC	PB00760	QC00956	0.1

* DRO - Sample did not meet holding time.

Sample Number: 123774
Description: BH-9 10-11'

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
DRO	*	<50	mg/Kg	1	Mod. 8015B	5/12/99	5/12/99	MF	PB00689	QC00856	50

* DRO - Sample did not meet holding time.

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
DRO		<50	mg/Kg	50	5/12/99	PB00689	QC00856

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
GRO		<5	mg/Kg	0.1	5/16/99	PB00760	QC00956

Quality Control Report
Matrix Spike and Matrix Duplicate Spike

Standard	Param	Units	Sample Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
MS	DRO	mg/Kg	<50	1	250	230	92		70 - 130	0 - 30	QC00856
MSD	DRO	mg/Kg	<50	1	250	239	96	4	70 - 130	0 - 30	QC00856

Report Date: 5/20/99 Order ID Number: 99050109 Page Number: 3 of 3

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	DRO		250	mg/Kg	302	120	70 - 130	5/13/99	QC00898
CCV (1)	DRO		250	mg/Kg	231	92	70 - 130	5/13/99	QC00898
CCV (2)	DRO		250	mg/Kg	227	91	70 - 130	5/13/99	QC00898

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	GRO		1	mg/Kg	0.955	96	80 - 120	5/16/99	QC00956
CCV (1)	GRO		1	mg/Kg	1.10	110	80 - 120	5/16/99	QC00956

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

Analytical and Quality Control Report

Mark Larson
Highlander Environmental Services
1910 N. Big Spirng St.
Midland, TX 79705

Report Date: 5/12/99

Project Number: 1181
Project Name: J.C. Turner Property
Project Location: N/A

Order ID Number: 99042903

Enclosed are the Analytical Results and Quality Control Data Reports for the following samples submitted to TraceAnalysis, Inc. for analysis:

Sample Number	Sample Description	Matrix	Date Taken	Time Taken	Date Received
123672	Decon Water	Water	4/26/99	14:20	4/29/99

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

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Dr. Blair Leftwich, Director

Analytical Results Report

Sample Number: 123672
Description: Decon Water

Param	Flag	Result	Units	Dilution	Analytical Method	Date Prepared	Date Analyzed	Analyst	Prep Batch #	QC Batch #	RDL
MTBE		<0.001	mg/L	1	S 8021B	5/3/99	5/3/99	RC	PB00584	QC00696	0.001
Benzene		<0.005	mg/L	5	S 8021B	5/3/99	5/3/99	RC	PB00584	QC00696	0.001
Toluene		<0.005	mg/L	5	S 8021B	5/3/99	5/3/99	RC	PB00584	QC00696	0.001
Ethylbenzene		<0.005	mg/L	5	S 8021B	5/3/99	5/3/99	RC	PB00584	QC00696	0.001
M,P,O-Xylene		<0.005	mg/L	5	S 8021B	5/3/99	5/3/99	RC	PB00584	QC00696	0.001
Total BTEX		<0.005	mg/L	5	S 8021B	5/3/99	5/3/99	RC	PB00584	QC00696	0.001
DRO		<5	mg/L	1	Mod. 8015B	4/29/99	5/3/99	MF	PB00545	QC00858	50
GRO		<0.1	mg/L	1	Mod. 602	5/5/99	5/4/99	RC	PB00606	QC00729	5

Quality Control Report
Method Blanks

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
MTBE		<0.001	mg/L	0.001	5/3/99	PB00584	QC00696
Benzene		<0.001	mg/L	0.001	5/3/99	PB00584	QC00696
Toluene		<0.001	mg/L	0.001	5/3/99	PB00584	QC00696
Ethylbenzene		<0.001	mg/L	0.001	5/3/99	PB00584	QC00696
M,P,O-Xylene		<0.001	mg/L	0.001	5/3/99	PB00584	QC00696
Total BTEX		<0.001	mg/L	0.001	5/3/99	PB00584	QC00696

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
DRO		<5	mg/L	50	5/3/99	PB00545	QC00858

Param	Flag	Blank Result	Units	Reporting Limit	Date Analyzed	Prep Batch #	QC Batch #
GRO		<0.1	mg/L	5	5/4/99	PB00606	QC00729

Quality Control Report
Lab Control Spikes and Duplicate Spike

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	MTBE	mg/L	<0.001	1	0.1	-0.099	-99		70 - 130	0 - 30	QC00696
LCS	Benzene	mg/L	<0.001	1	0.1	-0.098	-98		70 - 130	0 - 30	QC00696
LCS	Toluene	mg/L	<0.001	1	0.1	-0.104	-104		70 - 130	0 - 30	QC00696
LCS	Ethylbenzene	mg/L	<0.001	1	0.1	-0.097	-97		70 - 130	0 - 30	QC00696
LCS	M,P,O-Xylene	mg/L	<0.001	1	0.3	-0.276	-92		70 - 130	0 - 30	QC00696
LCSD	MTBE	mg/L	<0.001	1	0.1	-0.095	-95	-4	70 - 130	0 - 30	QC00696
LCSD	Benzene	mg/L	<0.001	1	0.1	-0.096	-96	-2	70 - 130	0 - 30	QC00696
LCSD	Toluene	mg/L	<0.001	1	0.1	-0.103	-103	-1	70 - 130	0 - 30	QC00696
LCSD	Ethylbenzene	mg/L	<0.001	1	0.1	-0.096	-96	-1	70 - 130	0 - 30	QC00696
LCSD	M,P,O-Xylene	mg/L	<0.001	1	0.3	-0.273	-91	-1	70 - 130	0 - 30	QC00696

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	DRO	mg/L	<5	1	1	22	2200		70 - 130	0 - 30	QC00858
LCSD	DRO	mg/L	<5	1	1	21	2100	5	70 - 130	0 - 30	QC00858

Standard	Param	Units	Blank Result	Dil.	Spike Amount Added	Matrix Spike Result	% Rec.	RPD	% Rec. Limit	RPD Limit	QC Batch #
LCS	GRO	mg/L	<0.1	1	250	1.04	0		70 - 130	0 - 30	QC00729
LCSD	GRO	mg/L	<0.1	1	250	0.969	0	7	70 - 130	0 - 30	QC00729

Quality Control Report
Continuing Calibration Verification Standard

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	MTBE		0.1	mg/L	0.098	98	70 - 130	5/3/99	QC00696
ICV	Benzene		0.1	mg/L	0.094	94	70 - 130	5/3/99	QC00696
ICV	Toluene		0.1	mg/L	0.099	99	70 - 130	5/3/99	QC00696
ICV	Ethylbenzene		0.1	mg/L	0.094	94	70 - 130	5/3/99	QC00696
ICV	M,P,O-Xylene		0.3	mg/L	0.264	88	70 - 130	5/3/99	QC00696
CCV (1)	MTBE		0.1	mg/L	0.094	94	70 - 130	5/3/99	QC00696
CCV (1)	Benzene		0.1	mg/L	0.092	92	70 - 130	5/3/99	QC00696
CCV (1)	Toluene		0.1	mg/L	0.096	96	70 - 130	5/3/99	QC00696
CCV (1)	Ethylbenzene		0.1	mg/L	0.090	90	70 - 130	5/3/99	QC00696
CCV (1)	M,P,O-Xylene		0.3	mg/L	0.254	85	70 - 130	5/3/99	QC00696

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	DRO		1	mg/L	244	24400	70 - 130	5/3/99	QC00858
CCV (1)	DRO		1	mg/L	230	23000	70 - 130	5/3/99	QC00858
CCV (2)	DRO		1	mg/L	214	21400	70 - 130	5/3/99	QC00858

Standard	Param	Flag	CCVs TRUE Conc.	Units	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed	QC Batch #
ICV	GRO		250	mg/L	0.988	0	70 - 130	5/4/99	QC00729
CCV (1)	GRO		250	mg/L	0.896	0	70 - 130	5/4/99	QC00729

TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9 Lubbock, Texas 79424 800•378•1296 806•794•1296 FAX 806•794•1298
4725 Ripley Avenue, Suite A El Paso, Texas 79922 888•588•3443 915•585•3443 FAX 915•585•4944
E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
HIGHLANDER ENVIRONMENTAL SERVICES
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

May 11, 1999
Receiving Date: 04/29/99
Sample Type: Water
Project #: 1181
Client Name: Texaco

Sampling Date: 04/26/99
Sample Condition: I & C
Sample Received by: VW
Project Name: J.C. Turner Property

TA#	FIELD CODE	TOTAL Cl (mg/L)
T123672	Decon Water	300
ICV		11.54
CCV		12.48
REPORTING LIMIT		0.5
RPD		0
% Extraction Accuracy		93
% Instrument Accuracy		92
PREP DATE		05/07/99
ANALYSIS DATE		05/07/99

METHODS: EPA 300.0
CHEMIST: JS
TOTAL Cl SPIKE: 62.5 mg/L TOTAL Cl

TOTAL Cl CV: 12.5 mg/L TOTAL Cl

Director, Dr. Blair Leftwich

5-11-99
DATE

123672

99042903

Analysis Request and Chain of Custody Record

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

(915) 682-4559 Fax (915) 682-3946

PAGE: 1 OF: 1

CLIENT NAME: Terracc SITE MANAGER: M. Larson

PROJECT NO.: 1181 PROJECT NAME: J. C. Turner Property

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
123672	4/24/99	14:25	W		X	Recon Water	4	N			X	

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 4020/602	MTBE 8020/602	TPH (8015 M GRO + DRO)	PAH 8270	RCRA Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pd Hg Se	TCLP Volatiles	TCLP Semi Volatiles	RCI	GC.MS Vol. 8240/8260/624	GC.MS Semi. Vol. 8270/625	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, (Chloride)	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
X	X	X											*			

RELINQUISHED BY: (Signature) Date: 4/29/99 Time: 06:00

RECEIVED BY: (Signature) Helen Skelton Date: 4/28/99 Time: 1100 PM

SAMPLED BY: (Print & Sign) M Larson Date: 4/24/99 Time: 14:25

RELINQUISHED BY: (Signature) Helen Skelton Date: 4/28/99 Time: 4:00 PM

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (Circle) FEDEX HAND DELIVERED BUS UPS 4 AIRBILL # 159384515 4 OTHER: Overnight

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP: 79424
CONTACT: Neil PHONE: (806) 794-1296

RECEIVED BY: (Signature) Vicki Windham
DATE: 4-29-99 TIME: 9:30 Am

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: * - Hdd + Cacl MS Run Cl per Mark 5/6/99

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.