1R - 259

REPORTS

DATE:

1999

Highlander Environmental Corp.

Midland, Texas

March 1, 1999

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

Re: Pit Closure Report, William Weir Tank Battery (Closed), SW/4, NW/4, NW/4, Section 25, Township 19 South, Range 36 East, Lea County, New Mexico

Dear Mr. Price:

Texaco Exploration and Production, Inc. (Texaco) has retained Highlander Environmental Corp. (Highlander) to supervise closure of a former emergency pit and collect groundwater samples from three (3) monitoring wells (MW-1, MW-2 and MW-3) at its former William Weir Tank Battery (Site), located in Lea County, New Mexico. This report presents the results of pit closure and groundwater monitoring activities conducted at the Site during 1998.

1.0 Background

The Site is located approximately four (4) miles west of Monument, New Mexico, in the southwest quarter (SW/4) of the northwest quarter (NW/4), Section 25, Township 19 South, Range 36 East, Lea County, New Mexico. Figure 1 presents a Site location and topographic map for the Site. Figure 2 presents a Site drawing. The Site operated as an oilfield tank battery until it was abandoned approximately 20 years ago. The Site was in operation for approximately 20 to 30 years and included two (2) aboveground tanks, associated piping and an emergency pit. The Site measured approximately 75 feet by 250 feet. The pit had been covered and no aboveground structures or equipment remained at the Site, following abandonment.

1.1 Previous Investigations

From August 27 through September 23, 1997, Highlander personnel conducted subsurface investigations at the Site to determine the potential for impacts to soil and groundwater from previous operations. The subsurface investigations consisted of conducting an electromagnetic (EM-31) terrain conductivity survey, collection and analysis of soil samples, installation of three (3) groundwater monitoring wells (MW-1, MW-2 and MW-3) and collection of groundwater samples for laboratory testing. The investigation results were presented in the report titled, " Subsurface Environmental Assessment Report, William Weir Tank Battery (Abandoned), Lea County, New Mexico, October 1997", incorporated here by reference.

The report also presented a remediation plan, which proposed excavation of petroleum hydrocarbon affected soil from the pit, collection and disposal of discarded transite pipe, scraping soil from the former tank battery area and backfilling the Site with clean fill dirt. The petroleum hydrocarbon affected soils were to be remediated to 100 milligrams per kilogram

(mg/kg) TPH, as specified in the New Mexico Oil Conservation Division (NMOCD) Unlined Surface Impoundment Closure Guidelines (February 1993). The remediation plan also included collection of groundwater samples from the 3 onsite monitoring wells for benzene, toluene, ethylbenzene and xylenes (collectively referred to as BTEX) and total petroleum hydrocarbons (TPH) analysis, on a quarterly schedule for one year. The report was approved by the NMOCD on January 24, 1998. Appendix A presents a copy of the NMOCD correspondence.

2.0 Site Remediation Activities

2.1 Pit Excavation

During February 1998, Texaco contracted with B & H Maintenance & Construction, Inc., Eunice, New Mexico to excavate hydrocarbon affected soil from the pit and tank battery areas, under supervision by Highlander personnel. Hydrocarbon affected soil was hauled to C & C Landfarm, located southeast of Monument, New Mexico. Soil samples (composite) were collected from the walls of the excavation. Each sample comprised about 5 to 6 individual samples randomly collected from each wall. Soil samples were not collected from the bottom of the excavation, since the excavation extended below groundwater. The soil samples were hand delivered, under chain-of-custody control, to Maxim Technologies, Inc., Midland, Texas, and analyzed for BTEX, TPH and chloride. Table 1 presents a summary of the analysis. Appendix B presents the laboratory reports.

The soil samples from the east and south walls did not report TPH above the test method detection limit of 12 milligrams per kilogram (mg/kg). The composite samples from the west and north walls at reported TPH at 2530 mg/kg and 2,140 mg/kg, respectively. Soil samples were collected following removal of additional soil from the west and north walls of the excavation, and did not report TPH above the test method detection limit of 12 mg/kg. No BTEX levels were reported at concentrations above the test method detection limits. Approximately 2,220 cubic yards of hydrocarbon affected soil was excavated from the pit. Based on the laboratory results of soil samples from the pit, soil impacted by TPH above 100 mg/kg was removed from the Site. Soil samples from the north and south walls did not report chloride above the test method detection limit of 70 mg/kg. Soil samples from the east and west walls, however, reported chloride at 103 mg/kg. The background chloride levels range from approximately 102 mg/kg to 1219 mg/kg. The chloride levels reported in the excavation soil samples are within background concentrations.

Following excavation of the hydrocarbon affected soil and removal of groundwater from the excavation, a layer of clay, approximately 3 feet thick, was placed into the bottom of the excavation and compacted. Water was removed from the excavation by Chaparral Service, Inc., Eunice, New Mexico, and taken to an NMOCD approved disposal well. Discarded transite and steel pipe was removed from the former tank battery area for proper disposal. Soil from the former tank battery area was scraped to a depth of approximately 6 to 12 inches below ground surface and blended with clean fill. The blended fill was placed into the excavation, above the clay, and compacted. The remainder of the excavation and the tank battery area was filled with clean fill and compacted. Approximately 4,116 cubic yards of clean fill and clay was placed into

the excavation and former tank battery area. After final grading, the Site was seeded with wheat, at the landowner's request. Site photographs are presented in the photographs section.

2.2 Surface Water Samples and Analysis

On February 11 - 12, 1998, Highlander personnel, at the NMOCD's request, collected surface water samples from the pit excavation, Monument Spring and a seep, located immediately west of the Site. The samples were submitted under chain-of-custody control to Trace Analysis, Inc., Lubbock, Texas, and analyzed for volatile and semi-volatile organic compounds, polychlorinated biphenyl (PCB), metals (NMWQCC list), general chemistry parameters (chloride, sulfate, fluoride, nitrate and pH) and TDS. The samples for metals analysis were filtered prior to preservation. No volatile organic, semi-volatile organic or PCB compounds were detected in the surface water samples. Table 2 presents a summary of the metals analysis. Table 3 presents a summary of the general chemistry analysis. Appendix B presents the laboratory reports.

Referring to Table 2, barium, cadmium and chromium were the only dissolved metals detected in the surface water samples. The New Mexico Water Quality Control Commission (NMWQCC) does not have surface water quality standards for these constituents, however, the reported concentrations of barium (0.02 mg/L to 0.17 mg/L), cadmium (0.01 mg/L and 0.008 mg/L) and chromium (0.02 mg/L) did not exceed the NMWQCC human health standards for groundwater. The general chemistry parameters, except chloride and fluoride, were in compliance with the NMWQCC standards. Chloride (260 mg/L) and fluoride (1.9 mg/L to 3.5 mg/L) exceeded the NMWQCC groundwater standards of 250 mg/L and 1.6 mg/L, respectively, in surface water. The TDS concentrations (1,200 mg/L and 1,500 mg/L) also exceeded the NMWQCC standard of 1,000 mg/L. The levels of these constituents may be due to the sediment and turbidity of the surface water.

2.3 Groundwater Samples and Analysis

Groundwater samples were collected, in accordance with the Remediation Plan, from the three onsite monitoring wells (MW-1, MW-2 and MW-3) for four (4) consecutive quarters during 1998. The groundwater samples were collected on March 17, 1998, June 16, 1998, September 30, 1998 and December 17, 1998. Prior to sampling, groundwater was purged from each well by pumping with an electric submersible pump or hand bailing with dedicated disposable PVC bailers. A minimum of three (3) casing volumes of groundwater was removed from each well during each sample event. The purged water was contained in a portable tank, transported to the Texaco Exploration and Production, Inc. Eunice # 2 (North) Gas Plant and discharged to the main sump for disposal. Groundwater samples were collected from each monitor well following purging using clean dedicated disposable PVC bailers and nylon line. The groundwater samples were carefully transferred to appropriate containers, preserved, and transported under chain-of-custody control to Trace Analysis, Inc., Lubbock, Texas. The samples were analyzed for benzene, toluene, ethylbenzene, xylene (collectively referred to as BTEX), and total petroleum hydrocarbons (TPH). Groundwater samples were collected from well MW-3 on October 22, 1998 and December 17, 1998, and analyzed for semi-volatile organic

(polynuclear aromatic) compounds. Table 4 presents a summary of the BTEX, TPH and semi-volatile organic analysis. Appendix B presents the laboratory reports.

Referring to Table 4, benzene, toluene and xylene were not observed above the test method detection limits in groundwater samples from wells MW-1, MW-2 and MW-3 during the four quarterly monitoring events. Ethylbenzene was reported in groundwater samples from well MW-3 at 0.005 mg/L on March 17, 1998. However, it was not present above test method detection limits in samples from well MW-3 during the June, September and December 1998 monitoring events, nor was it present above the test method detection limits in samples from wells MW-1 and MW-2 during any sample event. Ethylbenzene was reported in groundwater from well MW-3 at 0.006 mg/L on September 23, 1997. The NMWQCC human health standard for ethylbenzene is 0.75 mg/L.

The groundwater samples were also analyzed for TPH, which was not observed above the test method detection limits in samples from wells MW-1 and MW-2 (March, June and September 1998), and MW-3 (March and June 1998). However, during September and December 1998, samples from well MW-3 reported TPH at 0.525 mg/L and 0.6 mg/L, respectively. Samples from wells MW-1 and MW-2 also reported TPH at 0.6 mg/L (December 1998). On October 22, 1998 and December 17, 1998, therefore, Highlander personnel collected additional samples from well MW-3 (downgradient) for polnuclear aromatic hydrocarbons (PAH) analysis. The October 22, 1998 sample reported naphthalene at 0.007 mg/L. Naphthalene was not report above the test method detection limit of 0.001 mg/L in the sample from December 17, 1998. No other PAH compounds were detected in the groundwater samples. The NMWQCC human health standard for naphthalene (total naphthalene plus monomethylnaphthalene) is 0.03 mg/L.

3.0 Conclusions

- The results of laboratory analysis of soil samples from the pit indicate that soil impacted by TPH above 100 mg/kg was removed from the Site for commercial landfarming. The chloride levels in soil were within background concentrations, and BTEX was not reported in soil samples above the test method detection limits.
- Barium (0.02 mg/L to 0.17 mg/L), cadmium (0.01 mg/L and 0.008 mg/L) and chromium (0.02 mg/L), the only dissolved metals detected in surface water samples from the excavation, seep and spring, and did not exceed the NMWQCC human health standards for groundwater. Chloride (260 mg/L) and fluoride (1.9 mg/L to 3.5 mg/L) were the only general chemistry parameters in the surface water samples that exceeded the NMWQCC groundwater standards of 250 mg/L and 1.6 mg/L, respectively. The TDS concentrations (1,200 mg/L to 1,500 mg/L) of the surface water samples also exceeded the NMWQCC standard of 1,000 mg/L. The levels of these constituents may be due to the sediment and turbidity of the surface water.
- Benzene, toluene and xylene were not detected above the test method detection limits in groundwater samples from wells MW-1, MW-2 and MW-3 during the quarterly monitoring.

Ethylbenzene was only detected in groundwater samples from well MW-3 on September 23, 1997 (0.006 mg/L) and March 17, 1998 (0.005 mg/L). However, during June, September and December, ethylbenzene was not present above test method detection limits in sample from well MW-3. The NMWQCC human health standard for ethybenzene is 0.75 mg/L.

- Samples from wells MW-1 and MW-2 (March, June and September-1998), and MW-3 (March and June-1998) did not have detectable levels of TPH. However, during September and December 1998, samples from well MW-3 reported TPH at 0.525 mg/L and 0.6 mg/L, respectively. Also, samples from wells MW-1 and MW-2 reported TPH at 0.6 mg/L (December 1998). The results of PAH analysis of groundwater samples from well MW-3 on October 22, 1998 and December 17, 1998, only reported naphthalene (0.007 mg/L) on October 22, 1998. Naphthalene was not reported above the test method detection limit of 0.001 mg/L on December 17, 1998. No other PAH compounds were detected in the groundwater samples. The NMWQCC human health standard for naphthalene (total naphthalene plus monomethylnaphthalene) is 0.03 mg/L.

4.0 Recommendations

Based on the pit excavation, surface water and groundwater sample results, Highlander recommends that the NMOCD consider the Site formally closed in accordance with its guidelines and standards.

Sincerely,
Highlander Environmental Corp.

Mark J. Larson
Senior Project Manager

Encl.

cc: Mr. Rodney Bailey

TABLES

Table 1: Summary of Laboratory Analysis of Soil Samples from Pit Excavation
Texaco Exploration and Production, Inc.
William Weir Tank Battery (Closed)
Lea County, New Mexico

Sample Location	Sample Date	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylene mg/kg	TPH (418.1) mg/kg	Chloride mg/kg
East Wall	2/12/98	<0.02	<0.02	<0.02	<0.02	<12	103
	2/16/98	-	-	-	-	-	-
West Wall	2/12/98	<0.02	<0.02	<0.02	<0.02	2530	103
	2/16/98	-	-	-	-	<10	-
North Wall	2/12/98	<0.02	<0.02	<0.02	<0.02	2140	<70
	2/16/98	-	-	-	-	<10	-
South Wall	2/12/98	<0.02	<0.02	<0.02	<0.02	<12	<70
	2/16/98	-	-	-	-	-	-

Notes: Analysis performed by Trace Analyses, Inc., Lubbock, Texas

1. mg/kg: Milligrams per kilogram
2. <: Analyte concentration below test method detection limit
3. -: No data available

Table 2: Summary of Dissolved Metals Analysis of Surface Water Samples,
Texaco Exploration and Production, Inc.
William Weir Tank Battery (Closed)
Lea County, New Mexico

Sample Location	Sample Date	Arsenic mg/L	Barium mg/L	Cadmium mg/L	Chromium mg/L	Lead mg/L	Mercury mg/L	Selenium mg/L	Silver mg/L
Seep	2/11/98	<0.005	0.02	0.008	0.02	<0.01	<0.001	<0.05	<0.005
Spring	2/11/98	<0.005	0.07	<0.005	<0.01	<0.01	<0.001	<0.05	<0.005
Excavation	2/12/98	<0.005	0.17	0.01	<0.01	<0.01	<0.001	<0.05	<0.005

Notes: Analysis performed by Trace Analyses, Inc., Lubbock, Texas

1. mg/L: Milligrams per liter
2. <: Analyte concentration below test method detection limit

Table 3: Summary of General Chemistry Analyses of Surface Water Samples
Texaco Exploration and Production, Inc.
William Weir Tank Battery (Closed)
Lea County, New Mexico

Sample Location	Sample Date	Chloride mg/L	Sulfate mg/L	Fluoride mg/L	Nitrate (as N) mg/L	TDS mg/L	PH S.U.
Seep	2/11/98	250	370	3.5	<2.0	1,200	8.7
Spring	2/11/98	65	85	1.9	2.4	240	8.7
Excavation	2/12/98	260	570	2.9	2.9	1,500	7.5

Notes: Analysis performed by Trace Analyses, Inc., Lubbock, Texas

1. mg/L: Milligrams per liter
2. <: Analyte concentration below test method detection limit
3. S.U.: Standard units

Table 4: **Summary of Organic Analysis of Groundwater Samples from Monitoring Wells, Texaco Exploration and Production, Inc., William Weir Tank Battery (Closed), Lea County, New Mexico**

Parameter	Reporting Unit	Sample Date	MW-1	MW-2	MW-3
Volatile Organic					
Benzene	mg/L	9/23/97	<0.001	<0.001	<0.001
	mg/L	3/17/98	<0.001	<0.001	<0.001
	mg/L	6/16/98	<0.001	<0.001	<0.001
	mg/L	9/30/98	<0.001	<0.001	<0.005
	mg/L	12/17/98	<0.001	<0.001	<0.005
Toluene	mg/L	9/23/97	<0.001	<0.001	<0.001
	mg/L	3/17/98	<0.001	<0.001	<0.001
	mg/L	6/16/98	<0.001	<0.001	<0.001
	mg/L	9/30/98	<0.001	<0.001	<0.005
	mg/L	12/17/98	<0.001	<0.001	<0.005
Ethylbenzene	mg/L	9/23/97	<0.001	<0.001	0.006
	mg/L	3/17/98	<0.001	<0.001	0.005
	mg/L	6/16/98	<0.001	<0.001	<0.001
	mg/L	9/30/98	<0.001	<0.001	<0.005
	mg/L	12/17/98	<0.001	<0.001	<0.005
Xylene	mg/L	9/23/97	<0.001	<0.001	<0.001
	mg/L	3/17/98	<0.001	<0.001	<0.001
	mg/L	6/16/98	<0.001	<0.001	<0.001
	mg/L	9/30/98	<0.001	<0.001	<0.005
	mg/L	12/17/98	<0.001	<0.001	<0.005

Notes: Analysis performed by Trace Analysis, Inc. Lubbock, Texas

1. mg/L: Denotes concentration in milligrams per liter
2. <: Denotes concentration below test method detection limit

Table 4: **(continued) Summary of Organic Analysis of Groundwater Samples from Monitoring Wells**
Texaco Exploration and Production, Inc.,
William Weir Tank Battery (Closed),
Lea County, New Mexico

Parameter	Reporting Unit	Sample Date	MW-1	MW-2	MW-3
Total BTEX	mg/L	9/23/97	<0.001	<0.001	0.006
	mg/L	3/17/98	<0.001	<0.001	0.005
	mg/L	6/16/98	<0.001	<0.001	<0.001
	mg/L	9/30/98	<0.001	<0.001	<0.001
	mg/L	12/17/98	<0.001	<0.001	<0.005
***Total Petroleum Hydrocarbons**	mg/L	9/23/97	<0.500	<0.500	<0.500
	mg/L	3/17/98	<0.500	<0.500	<0.500
	mg/L	6/16/98	<0.500	<0.500	<0.500
	mg/L	9/30/98	<0.500	<0.500	0.525
	mg/L	12/17/98	0.6	0.6	0.6
Semi Volatile Organic (PAH)					
Naphthalene	mg/L	10/22/98	-	-	0.007
	mg/L	12/17/98	-	-	<0.001

Notes: Analysis performed by Trace Analysis, Inc. Lubbock, Texas

1. mg/L: Denotes concentrationin milligrams per liter
2. <: Denotes concentration below test method detection limit
3. *: Denotes TPH by EPA Method 418.1
4. -: No data available

FIGURES

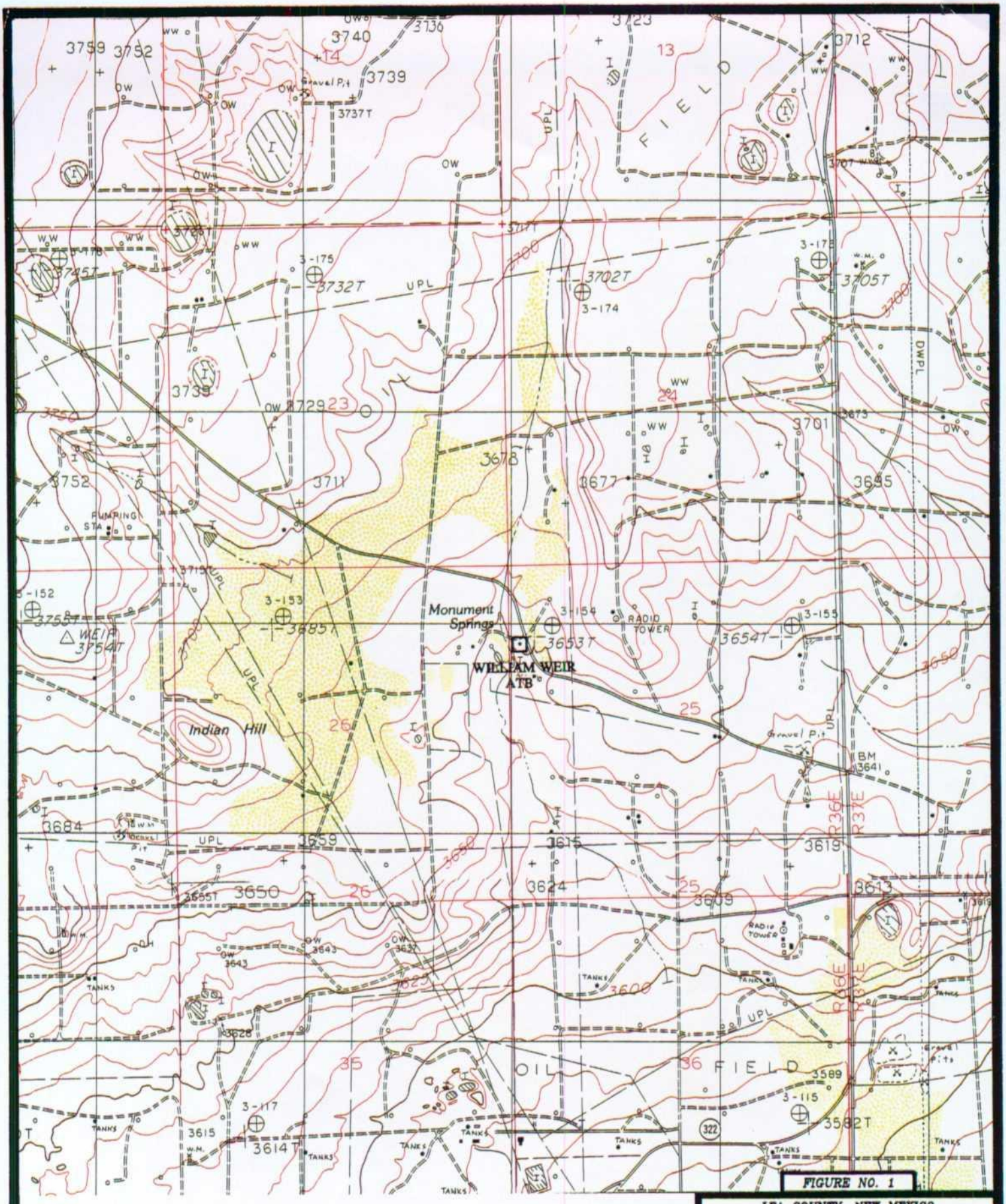


FIGURE NO. 1

LEA COUNTY, NEW MEXICO

TEXACO

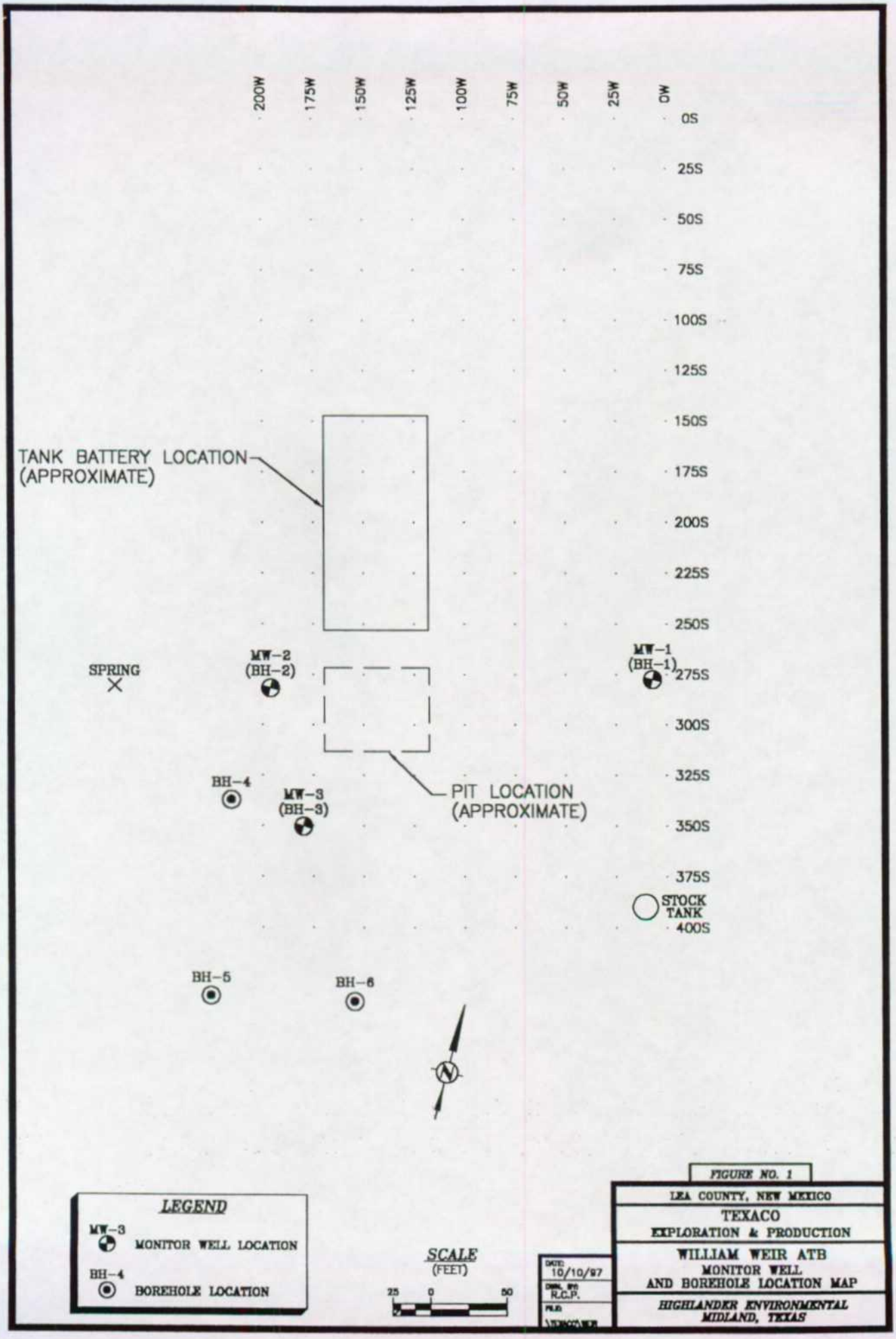
EXPLORATION & PRODUCTIION INC.

TOPOGRAPHIC MAP

HIGHLANDER ENVIRONMENTAL
MIDLAND, TEXAS

TAKEN FROM U.S.G.S.
MONUMENT NORTH AND
MONUMENT SOUTH, NM
7.5' QUADRANGLES

SCALE: 1" =2000'


200W
175W
150W
125W
100W
75W
50W
25W
0W
0S
25S
50S
75S
100S
125S
150S
175S
200S
225S
250S
275S
300S
325S
350S
375S
400S
TANK BATTERY LOCATION (APPROXIMATE)
SPRING
MW-2 (BH-2)
MW-1 (BH-1)
BH-4
MW-3 (BH-3)
PIT LOCATION (APPROXIMATE)
STOCK TANK
BH-5
BH-6
N
LEGEND
MW-3 MONITOR WELL LOCATION
BH-4 BOREHOLE LOCATION
SCALE (FEET)
25 0 50
DATE: 10/10/97
CHK. BY: R.C.P.
FILE:
FIGURE NO. 1
LEA COUNTY, NEW MEXICO
TEXACO
EXPLORATION & PRODUCTION
WILLIAM WEIR ATB
MONITOR WELL
AND BOREHOLE LOCATION MAP
HIGHLANDER ENVIRONMENTAL
MIDLAND, TEXAS

APPENDIX A

NMOCD Correspondence
January 24, 1998

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

January 24, 1998

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

Re: Subsurface Environmental Assessment Report and Work Plan, William Weir Tank Battery (Abandoned) ; Location sw/4,nw/4,nw/4 Sec 25, Ts19s-R36e, Lea Co. NM.

New Mexico Oil Conservation Division (NMOCD) is in receipt of the above referenced document. **The NMOCD hereby approves of the work plan with the following additional conditions:**

1. "OCD APPROVAL CONDITIONS FOR RCRA EXEMPT UNLINED PIT CLOSURES" (Attached hereto).

2. Texaco shall sample any groundwater encountered during excavated. The sample analysis requirements will be pursuant to WQCC rules & regulations and/or NMOCD rule 19. This requirement is due to the close proximity (less than 200 feet) to the Cooper Ranch Monument Spring and Seep.

3. Texaco shall reference and include the physical location on all future submittals.

4. The NMOCD would like to receive a closure report within one year of today's date if feasible.

5. Texaco shall notify the NMOCD 48 hours in advance so NMOCD may witness and/or split samples from the bottom of the excavation.

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

Sincerely Yours,

Wayne Price

Wayne Price-Environmental Engineer

cc: Chris Williams-NMOCD District I Supervisor
Roger Anderson-Environmental Bureau Chief, Santa Fe, NM
Bill Olson-Environmental Bureau, Santa Fe, NM

attachments- approval conditions.

MAXIM TECHNOLOGIES INC

1703 West Industrial P.O. Box 2150 * Midland, Texas 79701 * 915/683-3349 FAX 915/686-0492

Client Mark Larson
Highlander Services Corp.
1910 N. Big Spring
Midland, TX 79705

Customer No. 107548
Report No. M8-02-065
Report Date 03/02/98 10:33

Project Project #980, Texaco -W. Weir

Phone: 915-682-4559 Fax: 915-682-3946

Date Sampled 02/12/98

Sampled By Vijay Kurki

Sample Type Soil

Transported by Mark Larson

P.O. # _____

Date Received 02/13/98

Lab No.	Sample Identification
M8-02-065-01	East Sidewall
M8-02-065-02	West Sidewall
M8-02-065-03	North Sidewall
M8-02-065-04	South Sidewall

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Reviewed By

MAXIM

ALLAN B. JOHNSTON

TEST RESULTS BY SAMPLE

Client: Highlander Services Corp.

Sample: 01A East Sidewall Collected: 02/12/98 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
TOT.PET. HYDROCARBONS-SOIL	EPA 418.1	< 12	mg/kg	12	02/13/98	CDS

Sample: 01B East Sidewall Collected: 02/12/98 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
CHLORIDE	SM 4500-CL,B	103	mg/kg	70	02/17/98	KDO

Sample: 02A West Sidewall Collected: 02/12/98 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
TOT.PET. HYDROCARBONS-SOIL	EPA 418.1	2530	mg/kg	300	02/13/98	CDS

Sample: 02B West Sidewall Collected: 02/12/98 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
CHLORIDE	SM 4500-CL,B	103	mg/kg	70	02/17/98	KDO

Sample: 03A North Sidewall Collected: 02/12/98 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
TOT.PET. HYDROCARBONS-SOIL	EPA 418.1	2140	mg/kg	300	02/13/98	CDS

Sample: 03B North Sidewall Collected: 02/12/98 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
CHLORIDE	SM 4500-CL,B	< 70	mg/kg	70	02/17/98	KDO

03/02/98 10:33 **TEST RESULTS BY SAMPLE**

Client: Highlander Services Corp.

Sample: 04A South Sidewall Collected: 02/12/98 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
TOT.PET. HYDROCARBONS-SOIL	EPA 418.1	< 12	mg/kg	12	02/13/98	CDS

Sample: 04B South Sidewall Collected: 02/12/98 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
CHLORIDE	SM 4500-CL,B	< 70	mg/kg	70	02/17/98	KDO

Sample Description: East Sidewall Lab No: 01A
Test Description: BTEX - SOIL SAMPLE Method: SW-846,8021B Test Code: BTEX_S
Collected: 02/12/98 Category: S

Date Extracted		Date Analyzed	02/13/98
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846,8020

Compound	Results
BTEX in Soil	
Benzene	< 0.02
Toluene	< 0.02
Ethylbenzene	< 0.02
Total Xylenes	< 0.02

Sample Description: West Sidewall Lab No: 02A
Test Description: BTEX - SOIL SAMPLE Method: SW-846,8021B Test Code: BTEX_S
Collected: 02/12/98 Category: S

Date Extracted		Date Analyzed	02/13/98
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846,8020

Compound	Results
BTEX in Soil	
Benzene	< 0.02
Toluene	< 0.02
Ethylbenzene	< 0.02
Total Xylenes	< 0.02

Sample Description: North Sidewall Lab No: 03A
Test Description: BTEX - SOIL SAMPLE Method: SW-846,8021B Test Code: BTEX_S
Collected: 02/12/98 Category: S

Date Extracted		Date Analyzed	02/13/98
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846,8020

Compound	Results
BTEX in Soil	
Benzene	< 0.02
Toluene	< 0.02
Ethylbenzene	< 0.02
Total Xylenes	< 0.02

Sample Description: South Sidewall Lab No: 04A
Test Description: BTEX - SOIL SAMPLE Method: SW-846,8021B Test Code: BTEX_S
Collected: 02/12/98 Category: S

Date Extracted		Date Analyzed	02/13/98
Analyst	WJJ	Detection Limit	0.02
Units	mg/kg	Method	SW-846,8020

Compound	Results
BTEX in Soil	
Benzene	< 0.02
Toluene	< 0.02
Ethylbenzene	< 0.02
Total Xylenes	< 0.02

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: OF: 1

CLIENT NAME:

SITE MANAGER:

PROJECT NO.:

PROJECT NAME:

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	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)
	1/10/98																												
	2/10/98																												
	2/10/98																												
	1/10/98																												

ANALYSIS REQUEST
(Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Date: 2/12/98 Time: 9:00 AM

RECEIVED BY: (Signature) Date: Time:

SAMPLED BY: (Print & Sign) Date: 1/10/98 Time:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

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

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY:
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Shelly Stewart
DATE: 2-13-98 TIME: 10:07

HIGHLANDER CONTACT PERSON:

Results by: Fax

RUSH Charges Authorized: (Yes) No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS:

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

PAGE: 1 OF: 1

CLIENT NAME: Texaco | SITE MANAGER: Mark Larson

PROJECT NO.: 980 | PROJECT NAME: W. Wein

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	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)	Chloride
	2/12/98		✓			East Sidewalk	2					✓	✓		✓														✓	
	2/12/98		✓			West Sidewalk	2						✓		✓														✓	
	2/12/98		✓			North Sidewalk	2						✓		✓														✓	
	2/12/98		✓			South Sidewalk	2						✓		✓														✓	

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) [signature] Date: 2/13/98 Time: 9:00am
RECEIVED BY: (Signature) Date: Time:
SAMPLED BY: (Print & Sign) VIJAY KUKREJA Date: 2/12/98 Time: 11:00am

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS AIRBILL # HAND DELIVERED UPS OTHER:

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

RECEIVING LABORATORY: Environ-Tech, Inc.
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Kelly Hawk
DATE: 2-13-98 TIME: 10:07

HIGHLANDER CONTACT PERSON: Mark Larson
Results by: 2/16/98
RUSH Charges Authorized: (Yes) No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: Call w/ Results by 8:30 AM 2/16/98

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.

MAXIM TECHNOLOGIES INC

1703 West Industrial P.O. Box 2150 * Midland, Texas 79701 * 915/683-3349 FAX 915/686-0492

Client Mark Larson
Highlander Services Corp.
1910 N. Big Spring
Midland, TX 79705

Customer No. 107548
Report No. M8-02-069
Report Date 02/23/98 09:06

Project Texaco W. Weir - Project #980

Phone: 915-682-4559 Fax: 915-682-3946

Date Sampled 02/16/98

Sampled By Client

Sample Type Soil

Transported by Client

P.O. # _____

Date Received 02/17/98

Lab No.	Sample Identification
M8-02-069-01	North Side
M8-02-069-02	West Side

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our prior written approval. Our letters and reports apply only to the sample tested and are not necessarily indicative of the qualities of apparently identical or similar samples.

MAXIM

ON

Reviewed By

ALLAN B. JOHNSTON

MAXIM

Report No. M8-02-069

02/23/98 09:06

TEST RESULTS BY SAMPLE

Client: Highlander Services Corp.

Sample: 01A North Side Collected: 02/16/98 15:15 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
TOT.PET. HYDROCARBONS-SOIL	EPA 418.1	< 10	mg/kg	10	02/17/98	ABJ

Sample: 02A West Side Collected: 02/16/98 15:20 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
TOT.PET. HYDROCARBONS-SOIL	EPA 418.1	< 10	mg/kg	10	02/17/98	ABJ

Analysis Request and Chain of Custody Record

PAGE: 1 OF: 1

HIGHLANDER ENVIRONMENTAL CORP.

1910 N. Big Spring St.
Midland, Texas 79705

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

CLIENT NAME: Terrace SITE MANAGER: M. Larson

PROJECT NO.: 980 PROJECT NAME: W. Wein

ANALYSIS REQUEST (Circle or Specify Method No.)

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	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)
	2/16/98	15:15	S			North Side	2			✓				✓															
	2/16/98	15:20	S			West Side	2				✓			✓															

RELINQUISHED BY: (Signature) Date: 2/17/98 Time: 08:16 RECEIVED BY: (Signature) Bill R. Isaacs Date: 2-17-98 Time: 8:17 SAMPLED BY: (Print & Sign) Date: 2/16/98 Time: 15:20

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time: SAMPLE SHIPPED BY: (Circle)

RELINQUISHED BY: (Signature) Date: Time: RECEIVED BY: (Signature) Date: Time: FEDEX BUS AIRBILL #

HAND DELIVERED UPS OTHER:

RECEIVING LABORATORY: Mar-Tech Laboratories RECEIVED BY: (Signature)

ADDRESS: HIGHLANDER CONTACT PERSON: Mark Larson Results by: Mark 2/17/98

CITY: STATE: ZIP: RUSH Charges Authorized:

CONTACT: PHONE: DATE: TIME: (Yes) No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS:

Please Fill out all copies – Laboratory retains yellow copy – Return original copy to Highlander Enviromentalist 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

PAGE: 1 OF: 1

CLIENT NAME: Tenneco

SITE MANAGER: M. Larson

PROJECT NO.: 980

PROJECT NAME: W. Wein

ANALYSIS REQUEST (Circle or Specify Method No.)

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	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)
	2/16/98	15:15	S			North Side	2				✓			✓															
	2/16/98	15:20	S			West Side	2				✓			✓															

RELINQUISHED BY: (Signature) Date: 2/17/98 Time: 08:10

RECEIVED BY: (Signature) Date: 2-17-98 Time: 8:17

SAMPLED BY: (Print & Sign) Date: 2/16/98 Time: 15:25

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

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

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: T-Tex Environmental RECEIVED BY: (Signature)
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE: DATE: TIME:

HIGHLANDER CONTACT PERSON:

Results by: 2/17/98

RUSH Charges Authorized: (Yes) No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS:

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

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Project No: 980
Project Location: NA

Prep Date: 02/23/98
Analysis Date: 02/23/98
Sampling Date: 02/11/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir

TA #: T91137
FIELD CODE: Seep

8260 Compounds	Reporting Limit	Concentration (ug/L)	QC	RPD	EA	IA
Vinyl chloride	2	ND	89			89
1,1-Dichloroethene	1	ND	89	6	90	89
Methylene chloride	5	ND				
1,1-Dichloroethane	1	ND				
Chloroform	1	ND	101			101
1,2-Dichloroethane	1	ND				
1,1,1-Trichloroethane	1	ND				
Carbon Tetrachloride	1	ND				
Benzene	1	ND		5	104	
Toluene	1	ND	99	5	102	99
1,1,2-Trichloroethane	1	ND				
1,2-Dibromoethane	1	ND				
Tetrachloroethene	1	ND				
Ethylbenzene	1	ND	99			99
m & p-Xylene	1	ND				
o-Xylene	1	ND				
1,1,2,2-Tetrachloroethane	1	ND				

	% Recovery
Dibromofluoromethane	110
Toluene-d8	105
4-Bromofluorobenzene	104

ND = Not Detected

Methods: EPA SW 846-5030, 8260.
CHEMIST: AG

Director, Dr. Blair Leftwich

2-26-98
Date

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Project No: 980
Project Location: NA

Prep Date: 02/23/98
Analysis Date: 02/23/98
Sampling Date: 02/11/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir

TA #: T91138
FIELD CODE: Spring

8260 Compounds	Reporting Limit	Concentration (ug/L)	QC	RPD	EA	IA
Vinyl chloride	2	ND	89			89
1,1-Dichloroethene	1	ND	89	6	90	89
Methylene chloride	5	ND				
1,1-Dichloroethane	1	ND				
Chloroform	1	ND	101			101
1,2-Dichloroethane	1	ND				
1,1,1-Trichloroethane	1	ND				
Carbon Tetrachloride	1	ND				
Benzene	1	ND		5	104	
Toluene	1	ND	99	5	102	99
1,1,2-Trichloroethane	1	ND				
1,2-Dibromoethane	1	ND				
Tetrachloroethene	1	ND				
Ethylbenzene	1	ND	99			99
m & p-Xylene	1	ND				
o-Xylene	1	ND				
1,1,2,2-Tetrachloroethane	1	ND				

	% Recovery
Dibromofluoromethane	109
Toluene-d8	105
4-Bromofluorobenzene	106

ND = Not Detected

Methods: EPA SW 846-5030, 8260.
CHEMIST: AG

Director, Dr. Blair Leftwich

2-26-98
Date

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Project No: 980
Project Location: NA

Prep Date: 02/16/98
Analysis Date: 02/16/98
Sampling Date: 02/12/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir

TA #: T91139
FIELD CODE: Excavation

8260 Compounds	Reporting Limit	Concentration (ug/L)	QC	RPD	EA	IA
Vinyl chloride	20	ND	98			98
1,1-Dichloroethene	10	ND	95	5	99	95
Methylene chloride	50	ND				
1,1-Dichloroethane	10	ND				
Chloroform	10	ND	104			104
1,2-Dichloroethane	10	ND				
1,1,1-Trichloroethane	10	ND				
Carbon Tetrachloride	10	ND				
Benzene	10	ND		1	98	
Toluene	10	ND	103	1	100	103
1,1,2-Trichloroethane	10	ND				
1,2-Dibromoethane	10	ND				
Tetrachloroethene	10	ND				
Ethylbenzene	10	ND	103			103
m & p-Xylene	10	ND				
o-Xylene	10	ND				
1,1,2,2-Tetrachloroethane	10	ND				

	% Recovery
Dibromofluoromethane	115
Toluene-d8	103
4-Bromofluorobenzene	105

ND = Not Detected

Methods: EPA SW 846-5030, 8260.
CHEMIST: AG

Director, Dr. Blair Leftwich

2-26-98
Date

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

February 17, 1998
Receiving Date: 02/14/98
Sample Type: Water
Project No: 980
Project Location: NA

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

Prep Date: 02/18/98
Analysis Date: 02/19/98
Sampling Date: 02/11-12/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir

DISSOLVED METALS

TA#	FIELD CODE	As (mg/L)	Se (mg/L)	Cd (mg/L)	Cr (mg/L)	Pb (mg/L)	Ag (mg/L)	Ba (mg/L)	Hg (mg/L)
T91137	Seep	<0.05	<0.05	0.008	0.02	<0.01	<0.005	0.02	<0.0010
T91138	Spring	<0.05	<0.05	<0.005	<0.01	<0.01	<0.005	0.07	<0.0010
T91139	Excavation	<0.05	<0.05	0.01	<0.01	<0.01	<0.005	0.17	<0.0010
ICV		1.0	0.99	1.0	1.0	1.0	0.19	0.95	0.0048
CCV		0.99	0.95	1.0	1.0	0.98	0.18	0.96	0.0048
REPORTING LIMIT		0.05	0.05	0.005	0.01	0.01	0.005	0.005	0.0010
RPD		5	0	5	0	0	14	5	2
% Extraction Accuracy		105	95	105	105	105	77	100	103
% Instrument Accuracy		99	99	100	100	99	95	95	96

TA#	FIELD CODE	Zn (mg/L)	Fe (mg/L)	Mn (mg/L)	Cu (mg/L)
T91137	Seep	<0.01	0.09	0.020	<0.02
T91138	Spring	<0.01	0.03	0.007	<0.02
T91139	Excavation	0.02	0.15	0.100	<0.02
ICV		1.0	1.0	1.0	1.0
CCV		0.99	1.0	0.99	1.0
REPORTING LIMIT		0.01	0.01	0.003	0.02
RPD		5	0	5	4
% Extraction Accuracy		105	110	95	110
% Instrument Accuracy		99	100	99	100

METHODS: EPA SW 846-3005, 6010B, 7470.
CHEMIST: As, Se, Cd, Cr, Pb, Ag, Ba, Zn, Fe, Mn, Cu: RR Hg: HC
DISSOLVED SPIKE: 2.0 mg/L As, Se, Cd, Cr, Pb, Ba, Zn, Fe, Mn, Cu; 1.0 mg/L Ag; 0.0050 mg/L Hg.
DISSOLVED METALS CV: 1.0 mg/L As, Se, Cd, Cr, Pb, Ba, Zn, Fe, Mn, Cu; 0.20 mg/L Ag; 0.0050 mg/L Hg.

Director, Dr. Blair Leftwich

2-26-98
DATE

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Sampling Date: 02/11/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir
Project No: 980
Extraction Date: 02/17/98
Analysis Date: 02/17/98

TA # T91137

Field Code: Seep

EPA 8270	Reporting Limit	Concentration (mg/L)	QC	RPD	%EA	%IA
Phenol	0.001	ND	83	31**	55	104
Naphthalene	0.001	ND	77	10	93	96
2-Methylnaphthalene/1-Methylnaphthalene	0.001	ND	78			98
Benzo[a]pyrene	0.001	ND	78	9	112	98

ND = NOT DETECTED

SURROGATES	% RECOVERY
2-Fluorophenol SURR	**44**
Phenol-d6 SURR	**36**
Nitrobenzene-d5 SURR	**62**
2-Fluorobiphenyl SURR	**61**
2,4,6-Tribromophenol SURR	**56**
Terphenyl-d14 SURR	**69**

***NOTE: RPD out of limits.**

METHODS: EPA SW 846-3510, 8270.

CHEMIST: MB

2-26-98

Director, Dr. Blair Leftwich **Date**

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Sampling Date: 02/11/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir
Project No: 980
Extraction Date: 02/17/98
Analysis Date: 02/17/98

TA # T91138

Field Code: Spring

EPA 8270	Reporting Limit	Concentration (mg/L)	QC	RPD	%EA	%IA
Phenol	0.001	ND	83	31**	55	104
Naphthalene	0.001	ND	77	10	93	96
2-Methylnaphthalene/1-Methylnaphthalene	0.001	ND	78			98
Benzo[a]pyrene	0.001	ND	78	9	112	98

ND = NOT DETECTED

SURROGATES	% RECOVERY
2-Fluorophenol SURR	**42**
Phenol-d6 SURR	**35**
Nitrobenzene-d5 SURR	**61**
2-Fluorobiphenyl SURR	**65**
2,4,6-Tribromophenol SURR	**59**
Terphenyl-d14 SURR	**75**

***NOTE: RPD out of limits.**

METHODS: EPA SW 846-3510, 8270.

CHEMIST: MB

BL 2-26-98

Director, Dr. Blair Leftwich **Date**

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Sampling Date: 02/12/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir
Project No: 980
Extraction Date: 02/17/98
Analysis Date: 02/17/98

TA # T91139

Field Code: Excavation

EPA 8270	Reporting Limit	Concentration (mg/L)	QC	RPD	%EA	%IA
Phenol	0.01	ND	83	31**	55	104
Naphthalene	0.01	ND	77	10	93	96
2-Methylnaphthalene/1-Methylnaphthalene	0.01	ND/0.041	78			98
Benzo[a]pyrene	0.01	ND	78	9	112	98

ND = NOT DETECTED

SURROGATES	% RECOVERY
2-Fluorophenol SURR	**44**
Phenol-d6 SURR	**47**
Nitrobenzene-d5 SURR	**82**
2-Fluorobiphenyl SURR	**106**
2,4,6-Tribromophenol SURR	**121**
Terphenyl-d14 SURR	**128**

***NOTE: RPD out of limits.**

METHODS: EPA SW 846-3510, 8270.

CHEMIST: MB

2-26-98

Director, Dr. Blair Leftwich **Date**

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Project No: 980
Project Location: NA

Prep Date: 02/17/98
Analysis Date: 02/20/98
Sampling Date: 02/11/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir

TA#	FIELD CODE	TOTAL PCB (mg/L)
T91137	Seep	<0.001
T91138	Spring	<0.001
QC	Quality Control	0.38
Reporting Limit		0.001
RPD		0
% Extraction Accuracy		64
% Instrument Accuracy		96

METHODS: EPA SW 846-3510, 8080.
CHEMIST: RC
TOTAL PCB SPIKE: 0.005 mg/L TOTAL PCB.
TOTAL PCB QC: 0.40 mg/L TOTAL PCB.

Director, Dr. Blair Leftwich

2-26-98
DATE

TRACEANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Project No: 980
Project Location: NA

Prep Date: 02/17/98
Analysis Date: 02/20/98
Sampling Date: 02/12/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir

TA#	FIELD CODE	TOTAL PCB (mg/L)
T91139	Excavation	<0.01
QC	Quality Control	0.38
Reporting Limit		0.01
RPD		0
% Extraction Accuracy		64
% Instrument Accuracy		96

METHODS: EPA SW 846-3510, 8080.
CHEMIST: RC
TOTAL PCB SPIKE: 0.005 mg/L TOTAL PCB.
TOTAL PCB QC: 0.40 mg/L TOTAL PCB.

Director, Dr. Blair Leftwich

2-26-98
DATE

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

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

February 26, 1998
Receiving Date: 02/14/98
Sample Type: Water
Project No: 980
Project Location: NA

Prep Date: 02/14/98
Analysis Date: 02/14/98
Sampling Date: 02/11-12/98
Sample Condition: Intact & Cool
Sample Received by: NG
Client Name: Texaco
Project Name: W. Weir

TA#	FIELD CODE	pH (s.u.)	CHLORIDE (mg/L)	TDS (mg/L)	SULFATE (mg/L)	FLUORIDE (mg/L)	N03-N (mg/L)
T91137	Seep	8.7	250	1,200	370	3.5	<2.0
T91138	Spring	8.7	65	240	85	1.9	2.4
T91139	Excavation	7.5	260	1,500	570	2.9	2.9
ICV		7.0	23	---	25	5.2	10
CCV		7.0	23	---	25	5.2	10
REPORTING LIMIT		---	50	---	50	1.0	2.0
RPD		0	0	4	0	0	0
% Extraction Accuracy		---	90	---	99	105	103
% Instrument Accuracy		100	91	---	99	105	103

METHODS: EPA 150.1, 160.1, 300.0.
CHEMIST: pH: CS TDS: RS/JS CHLORIDE/SULFATE/FLUORIDE/N03-N: JS
CHLORIDE SPIKE: 250 mg/L CHLORIDE.
SULFATE SPIKE: 250 mg/L SULFATE.
FLUORIDE SPIKE: 2.5 mg/L FLUORIDE.
N03-N SPIKE: 12.5 mg/L S03-N.
CHLORIDE CV: 25 mg/L CHLORIDE.
SULFATE CV: 25 mg/L SULFATE.
FLUORIDE CV: 5.0 mg/L FLUORIDE.
N03-N CV: 10 mg/L S03-N.

Director, Dr. Blair Leftwich

2-26-98
Date

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

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

February 27, 1998
Receiving Date: 02/14/98
Sample Type: Water
Project No: 980
Project Location: NA

Prep Date: 02/26/98
Analysis Date: 02/26/98
Sampling Date: 02/11-12/98
Sample Condition: Intact & Cool
Sample Received by: NG
Project Name: W. Weir
Client Name: Texaco

TA#	FIELD CODE	TOTAL CYANIDE (mg/L)
T91137	Seep	0.010
T91138	Spring	0.020
T91139	Excavation	<0.010
ICV		0.044
CCV		0.045
REPORTING LIMIT		0.010
METHOD BLANK		<0.010
RPD		3
% Extraction Accuracy		84
% Instrument Accuracy		111

METHODS: EPA 335.2.
CHEMIST: RS/JS
TOTAL CYANIDE SPIKE AND QC: 0.040 mg/L TOTAL CYANIDE.

Director, Dr. Blair Leftwich

2-27-98
DATE

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.: 980 | PROJECT NAME: W. Weir

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	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)	See Attached List
	2/11/98	14:45	W		G	Soap	6	Y																					/	
	2/11/98	15:15	W		G	Spring	6	Y																					/	
	2/12/98	—	W		G	Excavation	6	Y																					/	

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Mark Larson	Date: 2/13/98 Time: 13:00	RECEIVED BY: (Signature) [signature]	Date: 2/13/98 Time: 2140 pm
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RELINQUISHED BY: (Signature)	Date: Time:	RECEIVED BY: (Signature)	Date: Time:
RECEIVING LABORATORY: Trace Analysis, Inc. ADDRESS: CITY: STATE: ZIP: CONTACT: PHONE:		RECEIVED BY: (Signature) DATE: TIME:	

SAMPLED BY: (Print & Sign) M. LORSON — Date: Time:

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

HIGHLANDER CONTACT PERSON: Mark Larson

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS:

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.

9/137-39

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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.: 780 | PROJECT NAME: W. Weir

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	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)	See Attached List
9/137	2/11/96	14:45	W		X	Seep	6	Y																					X	
138	2/11/96	15:15	W		X	Spring	6	Y																					X	
139	2/12/96	-	W		X	Excavation	6	Y																					X	

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature)	Date/Time	RECEIVED BY: (Signature)	Date/Time	SAMPLED BY: (Print & Sign)	Date/Time
Mark Larson	2/13/96 13:xx	[illegible]	2/13/96 [illegible]	M. Larson	
RELINQUISHED BY: (Signature)	Date/Time	RECEIVED BY: (Signature)	Date/Time	SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED	AIRBILL # OTHER:
RELINQUISHED BY: (Signature) Karen Winkler	2/13/96 6:15pm	RECEIVED BY: (Signature) Mell Green	2/14/96 11:45am	HIGHLANDER CONTACT PERSON: Mark Larson	Results by: RUSH Charges Authorized: Yes No
RECEIVING LABORATORY: Trace Analysis, Inc		RECEIVED BY: (Signature)			
ADDRESS:					
CITY: STATE: ZIP:		DATE: TIME:			
CONTACT: PHONE:					

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: 0°

8-26 2-22

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.

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
Highlander Environmental Services
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Lab Receiving # : 9803000342
Sampling Date: 3/17/98
Sample Condition: Intact and Cool
Sample Received By: VW

Date: Mar 24, 1998
Date Rec: 3/19/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

TA#	Field Code	MATRIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
T 93905	MW-1	Water	<0.001	<0.001	<0.001	<0.001	<0.001
T 93906	MW-2	Water	<0.001	<0.001	<0.001	<0.001	<0.001
T 93907	MW-3	Water	<0.001	<0.001	0.005	<0.001	0.005
Method Blank			<0.001	<0.001	<0.001	<0.001	
Reporting Limit			0.001	0.001	0.001	0.001	
QC			0.101	0.093	0.094	0.280	
RPD			3	2	15	0	
% Extraction Accuracy			106	97	99	99	
% Instrument Accuracy			101	93	94	93	

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	3/19/98	EPA 8021B	3/21/98	JG	0.100 ea	0.1 ea

3-24-98

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
Highlander Environmental Services
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Date: Mar 25, 1998
Date Rec: 3/19/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

Lab Receiving # : 9803000342
Sampling Date: 3/17/98
Sample Condition: Intact and Cool
Sample Received By: VW

TA#	Field Code	MATRIX	TRPHC (mg/L)
T 93905	MW-1	Water	<0.500
T 93906	MW-2	Water	<0.500
T 93907	MW-3	Water	<0.500
Method Blank			<0.500
Reporting Limit			0.5
QC			100
RPD			3
% Extraction Accuracy			108
% Instrument Accuracy			100

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
TRPHC	N/A	3/21/98	EPA 418.1	3/23/98	MS	100	8.5

Director, Dr. Blair Leftwich

3-25-98
Date

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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.: 980 | PROJECT NAME: W. Weir

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)	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)
93905	3/17/98	10:50	W		✓	MW-1	4	N	✓		✓	✓	✓		✓													
6	3/17/98	11:05	W		✓	MW-2	4	N	✓		✓	✓	✓		✓													
7	3/17/98	11:20	W		✓	MW-3	4	N	✓		✓	✓	✓		✓													

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Date: 3/18/98 Time: 09:30
RECEIVED BY: (Signature) Helen Shelton Date: 3/18/98 Time: 9:30
SAMPLED BY: (Print & Sign) M.J. LARSON Date: 3/17/98 Time: 11:20

RELINQUISHED BY: (Signature) Helen Shelton Date: 3/18/98 Time: 6:15 PM
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX (BUS) UPS HAND DELIVERED AIRBILL #: OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
HIGHLANDER CONTACT PERSON: MARK LARSON
Results by:

RECEIVING LABORATORY: TRACE
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature) Eli Windham
DATE: 3-19-98 TIME: 10:00 AM
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:
MATRIX: (W-Water) S-Soil A-Air SL-Sludge SD-Solid O-Other
REMARKS: Bus 155 758 8879

Accounting receives Gold copy

TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

ANALYTICAL RESULTS FOR
Highlander Environmental Services
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Lab Receiving # : 9806000280
Sampling Date: 6/16/98
Sample Condition: Intact and Cool
Sample Received By: VW

Date: Jun. 23, 1998
Date Rec: 6/17/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

TA#	Field Code	MATRIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
100497	MW-1	Water	<0.001	<0.001	<0.001	<0.001	<0.001
100498	MW-2	Water	<0.001	<0.001	<0.001	<0.001	<0.001
100499	MW-3	Water	<0.001	<0.001	<0.001	<0.001	<0.001
Method Blank			<0.001	<0.001	<0.001	<0.001	
Reporting Limit			0.001	0.001	0.001	0.001	
QC			0.105	0.104	0.111	0.340	
RPD			1	1	1	1	
% Extraction Accuracy			108	107	110	117	
% Instrument Accuracy			105	104	111	113	

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	6/19/98	EPA 8021B	6/19/98	JG	0.100 ea	0.1 ea

Director, Dr. Blair Leftwich

6-23-98
Date

TRACE ANALYSIS, INC.

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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 Spirng St.
Midland TX 79705

Date: Jun 22, 1998
Date Rec: 6/17/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

Lab Receiving # : 9806000280
Sampling Date: 6/16/98
Sample Condition: Intact and Cool
Sample Received By: VW

TA#	Field Code	MATRIX	TRPHC (mg/L)
100497	MW-1	Water	<0.500
100498	MW-2	Water	<0.500
100499	MW-3	Water	<0.500
Method Blank			<0.500
Reporting Limit			0.5
QC			96
RPD			3
% Extraction Accuracy			98
% Instrument Accuracy			96

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
TRPH	N/A	6/18/98	EPA 418.1	6/18/98	MS	100	8.5

Director, Dr. Blair Leftwich

6-22-98
Date

100497-99

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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.: 980

PROJECT NAME: W. Hein

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)	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)
100497	6/16/98	11:30	W		✓	MW-1	3				✓		✓		✓														
498	6/16/98	12:30	W		✓	MW-2	3				✓		✓		✓														
499	6/16/98	12:55	W		✓	MW-3	3				✓		✓		✓														

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Date: 6/16/98 Time: 17:00

RELINQUISHED BY: (Signature) Helen Shelton Date: 6/16/98 Time: 6:00 PM

RELINQUISHED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:

RECEIVED BY: (Signature) Helen Shelton Date: 6/16/98 Time: 5:00 PM

RECEIVED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Vicki Wooten DATE: 6-17-98 TIME: 9:40 AM

SAMPLED BY: (Print & Sign) M. Larson Date: 6/16/98 Time: 12:55

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

HIGHLANDER CONTACT PERSON: M. Larson

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: Bus 4 6.22

Please Fill out all required info. Relinquish original copy to Highlander Environmental Corp. 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

PAGE: 1 OF: 1

CLIENT NAME: Texaco | SITE MANAGER: M. Lavon

PROJECT NO.: 181 | PROJECT NAME: W. Hein

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)	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)
	6/16/98	11:30	W		X	MW-1	3			X			X		X														
	6/16/98	12:30	W		X	MW-2	3			X			X		X														
	6/16/98	12:55	W		X	MW-3	3			X			X		X														

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) — Date: 6/16/98 Time: 17:00
RECEIVED BY: (Signature) Helen Hollum — Date: 6/16/98 Time: 5:00 PM
SAMPLED BY: (Print & Sign) M. Lavon — Date: 6/16/98 Time: 12:55

RELINQUISHED BY: (Signature) — Date: Time:
RECEIVED BY: (Signature) — Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX (BUS) UPS HAND DELIVERED AIRBILL #: OTHER:

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

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS:
CITY: STATE: ZIP:
CONTACT: PHONE:
RECEIVED BY: (Signature)
DATE: TIME:

HIGHLANDER CONTACT PERSON: M. Lavon

Results by:

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS:

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.

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
Highlander Environmental Services
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Lab Receiving # : 9810000057
Sampling Date: 9/30/98
Sample Condition: Intact and Cool
Sample Received By: VW

Date: Oct 13, 1998
Date Rec: 10/2/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

TA#	Field Code	MATRIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
108884	MW-1	Water	<0.001	<0.001	<0.001	<0.001	<0.001
108885	MW-2	Water	<0.001	<0.001	<0.001	<0.001	<0.001
108886	MW-3	Water	<0.005	<0.005	<0.005	<0.005	<0.005
Method Blank			<0.001	<0.001	<0.001	<0.001	
Reporting Limit			0.001	0.001	0.001	0.001	
QC			0.088	0.091	0.095	0.284	
RPD			3	4	3	3	
% Extraction Accuracy			102	101	99	101	
% Instrument Accuracy			88	91	95	95	

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	10/9/98	EPA 8021B	10/9/98	CS	0.100 ea	0.1 ea

BB

Director, Dr. Blair Leftwich

10-13-98

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 Spirng St.
Midland TX 79705

Date: Oct 08, 1998
Date Rec: 10/2/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

Lab Receiving # : 9810000057
Sampling Date: 9/30/98
Sample Condition: Intact and Cool
Sample Received By: VW

TA#	Field Code	MATRIX	TRPHC (mg/L)
108884	MW-1	Water	<0.500
108885	MW-2	Water	<0.500
108886	MW-3	Water	0.525
Method Blank			<0.500
Reporting Limit			0.5
QC			104
RPD			15
% Extraction Accuracy			110
% Instrument Accuracy			104

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
TRPHC	N/A	10/5/98	EPA 418.1	10/7/98	MF	100	8.5

Director, Dr. Blair Leftwich

10-8-98
Date

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.: 980 | PROJECT NAME: W. Weir

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	PAH 8270	Total 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. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
108884	9/3/98	13:40	W	1		MW-1	3	Y			1		1	1	1														
85	9/3/98	14:10	W	1		MW-2	3	Y			1		1	1	1														
86	9/3/98	14:45	W	1		MW-3	3	Y			1		1	1	1														

ANALYSIS REQUEST (Circle or Specify Method No.)

RELINQUISHED BY: (Signature) Date: 10/1/98 Time: 4:10 PM
RECEIVED BY: (Signature) Helen Shelton Date: 10/1/98 Time: 4:10 PM
SAMPLED BY: (Print & Sign) M. Larson Date: 9/30/98 Time: 14:45

RELINQUISHED BY: (Signature) Helen Shelton Date: 10/1/98 Time: 6:45 PM
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED AIRBILL # 159384383 4 OTHER:

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

RECEIVING LABORATORY: Trace Analysis
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: Tx ZIP: 79424
CONTACT: ATTN PHONE: 800 378 1296
RECEIVED BY: (Signature) Vicki Wyndham DATE: 10-2-98 TIME: 10:00 am

HIGHLANDER CONTACT PERSON: M. Larson

Results by:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: ND

Please Fill out all copies - Project Manager retains White copy - Accounting receives Pink copy - Lab retains Yellow copy Return Gold copy to Highlander Environmental Corp.

Bus · 9 samples - HS

10/14

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. Lowen

PROJECT NO.: 980 | PROJECT NAME: W. Weir

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	PAH 8270	Total 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)
	9/3/96	13:45	W		X	MW-1	3	Y	X		X		X		X														
	9/3/96	14:10	W		X	MW-2	3	Y	X		X		X		X														
	9/3/96	14:45	W		X	MW-3	3	Y	X		X		X		X														

RELINQUISHED BY: (Signature) Date: 9/4/96 Time: 11:00 AM | RECEIVED BY: (Signature) Date: 10/1/96 Time: 11:10 PM | SAMPLED BY: (Print & Sign) Date: 9/3/96 Time: 1345

RELINQUISHED BY: (Signature) Date: Time: | RECEIVED BY: (Signature) Date: Time: | SAMPLE SHIPPED BY: (Circle) FEDEX BUS HAND DELIVERED UPS | AIRBILL # OTHER:

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

RECEIVING LABORATORY: [illegible] | RECEIVED BY: (Signature)
ADDRESS: [illegible]
CITY: [illegible] STATE: [illegible] ZIP: [illegible]
CONTACT: [illegible] PHONE: [illegible] DATE: TIME:

HIGHLANDER CONTACT PERSON: [illegible] | Results by: | RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS:

Please Fill out all copies – Project Manager retains White copy – Accounting receives Pink copy – Lab retains Yellow copy Return Gold copy to Highlander Environmental Corp.

1 sample - MW

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

November 2, 1998
Receiving Date:10/23/98
Sample Type: Water
Project No: 980
Project Name:W. Weir
Project Loc.:
Sampling Date: 10/22/98
Sample Condition: I & C
Sample Received by: VW
Extraction Date: 10/27/98
Analysis Date: 10/29/98

PAH Reporting T111051

8270 Compounds (mg/L)	Limit	MW-3	QC	RPD	%EA	%IA
Naphthalene	0.001	0.007	71	5	75	89
Acenaphthylene	0.001	ND	70	6	87	88
Acenaphthene	0.001	ND	69	6	85	86
Fluorene	0.001	ND	73	7	92	91
Phenanthrene	0.001	ND	74	8	91	93
Anthracene	0.001	ND	71	8	93	89
Fluoranthene	0.001	ND	77	6	99	96
Pyrene	0.001	ND	75	7	102	94
Benzo[a]anthracene	0.001	ND	74	9	97	93
Chrysene	0.001	ND	72	8	96	90
Benzo[b]fluoranthene	0.001	ND	82	5	106	103
Benzo[k]fluoranthene	0.001	ND	73	1	108	91
Benzo[a]pyrene	0.001	ND	73	7	106	91
Indeno[1,2,3-cd]pyrene	0.001	ND	64	14	93	80
Dibenz[a,h]anthracene	0.001	ND	65	14	99	81
Benzo[g,h,i]perylene	0.001	ND	65	18	93	81

ND = Not Detected

SURROGATES	% RECOVERY
Nitrobenzene-d5 SURR	77
2-Fluorobiphenyl SURR	71
Terphenyl-d14 SURR	77

METHODS: EPA SW 846-8270, 3510.

CHEMIST: DG

Director, Dr. Blair Leftwich

11-2-98
DATE

1051

530

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.: 980 | PROJECT NAME: W. Weir

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE
111051	10/22/98	11:50	W	X		MW-3	1	N			X	X

ANALYSIS REQUEST (Circle or Specify Method No.)

BTEX 8020/602 | MTBE 8020/602 | TPH | 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)

RELINQUISHED BY: (Signature) Date: 10/22/98 Time: 6:00

RECEIVED BY: (Signature) Helen Shelton Date: 10/22/98 Time: 4:50PM

SAMPLED BY: (Print & Sign) Date: 10/22/98 Time: 11:50

RELINQUISHED BY: (Signature) Helen Shelton Date: 10/22/98 Time: 6:15 PM

RECEIVED BY: (Signature) Date: Time:

SAMPLE SHIPPED BY: (circle) FEDEX BUS UPS HAND DELIVERED

4° AIRBILL # GLE 159384101C OTHER:

RELINQUISHED BY: (Signature) Date: Time:

RECEIVED BY: (Signature) Date: Time:

RECEIVING LABORATORY: Trace Analysis, Inc.
ADDRESS: 6701 Aberdeen
CITY: Lubbock STATE: TX ZIP:
CONTACT: Nall PHONE: (806) 378-1296

RECEIVED BY: (Signature) Vicki Wmdh
DATE: 10-23-98 TIME: 10:30

HIGHLANDER CONTACT PERSON: M. Larson

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

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS:

11/2

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

PAGE: 1 OF: 1

CLIENT NAME: Texaco SITE MANAGER: M. Larson

PROJECT NO.: 980 PROJECT NAME: W. Weir

LAB I.D. NUMBER	DATE	TIME	MATRIX	COMP.	GRAB	SAMPLE IDENTIFICATION	NUMBER OF CONTAINERS	FILTERED (Y/N)	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	ANALYSIS REQUEST (Circle or Specify Method No.): BTEX 8020/602	MTBE 8020/602	TPH	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)
	10/22/98	11:30	W	X		MW-3	1	N			X	X			X													

RELINQUISHED BY: (Signature) Date: 10/22/98 Time: 16:30
RECEIVED BY: (Signature) Date: 10/23/98 Time: 9:30 AM
SAMPLED BY: (Print & Sign) Date: 10/22/98 Time: 11:30

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
SAMPLE SHIPPED BY: (Circle) FEDEX BUS UPS HAND DELIVERED AIRBILL # OTHER:

RELINQUISHED BY: (Signature) Date: Time:
RECEIVED BY: (Signature) Date: Time:
HIGHLANDER CONTACT PERSON: M. Larson
Results by:

RECEIVING LABORATORY: Lancaster Laboratories Inc. RECEIVED BY: (Signature)
ADDRESS: 2425 New Holland Pike
CITY: Lancaster STATE: PA ZIP:
CONTACT: Nell PHONE: (717) 656-2300 DATE: TIME:
RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS:

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.

TRACE ANALYSIS, INC.
6701 Aberdeen Avenue Lubbock, Texas 79424 806•794•1296 FAX 806•794•1298

ANALYTICAL RESULTS FOR
Highlander Environmental Services
Attention Mark Larson
1910 N. Big Spirng St.
Midland TX 79705

Lab Receiving # : 9812000402
Sampling Date: 12/17/9
Sample Condition: Intact and Cool
Sample Received By: VW

Date: Dec 21, 1998
Date Rec: 12/18/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

TA#	Field Code	MATRIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
115254	MW-1	Water	<0.001	<0.001	<0.001	<0.001	<0.001
115255	MW-2	Water	<0.001	<0.001	<0.001	<0.001	<0.001
115256	MW-3	Water	<0.005	<0.005	<0.005	<0.005	<0.005
Method Blank			<0.001	<0.001	<0.001	<0.001	
Reporting Limit			0.001	0.001	0.001	0.001	
QC			0.066	0.060	0.054	0.140	
RPD			1	1	1	1	
% Extraction Accuracy			101	108	115	113	
% Instrument Accuracy			66	60	54	47	

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	12/18/98	EPA 8021B	12/18/98	CS	0.100 ea	0.1 ea

BB
Director, Dr. Blair Leftwich

12-21-98
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 Spirng St.
Midland TX 79705

Lab Receiving # : 9812000402
Sampling Date: 12/17/9
Sample Condition: Intact and Cool
Sample Received By: VW

Date: Jan 04, 1999
Date Rec: 12/18/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

CORRECTED

TA#	Field Code	MATRIX	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL-BENZENE (mg/L)	M,P,O XYLENE (mg/L)	TOTAL BTEX (mg/L)
115254	MW-1	Water	<0.005	<0.005	<0.005	<0.005	<0.005
115255	MW-2	Water	<0.005	<0.005	<0.005	<0.005	<0.005
115256	MW-3	Water	<0.005	<0.005	<0.005	<0.005	<0.005
Method Blank			<0.005	<0.005	<0.005	<0.005	
Reporting Limit			0.001	0.001	0.001	0.001	
QC			0.096	0.095	0.093	0.268	

Corrected - Samples rerun due to low QC.

RPD	2	3	3	3
% Extraction Accuracy	101	103	102	99
% Instrument Accuracy	96	95	93	89

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
BTEX	EPA 5030	12/30/98	EPA 8021B	12/31/98	CS	0.100 ea	0.1 ea

BF
Director, Dr. Blair Leftwich

1-4-99
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 Spirng St.
Midland TX 79705

Date: Dec 22, 1998
Date Rec: 12/18/98
Project: 980
Proj Name: TEPI
Proj Loc: N/A

Lab Receiving # : 9812000402
Sampling Date: 12/17/98
Sample Condition: Intact and Cool
Sample Received By: VW

TA#	Field Code	MATRIX	TRPHC (mg/L)
115254	MW-1	Water	0.6
115255	MW-2	Water	0.6
115256	MW-3	Water	0.6
Method Blank			<0.5
Reporting Limit			0.5
QC			105
RPD			3
% Extraction Accuracy			121
% Instrument Accuracy			105

TEST	PREP METHOD	PREP DATE	ANALYSIS METHOD	ANALYSIS COMPLETED	CHEMIST	QC: (mg/L)	SPIKE: (mg/L)
TRPH	N/A	12/21/98	EPA 418.1	12/21/98	MF	100	8.5

Director, Dr. Blair Leftwich

12.22.98
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 CORP.
Attention: Mark Larson
1910 N. Big Spring St.
Midland, TX 79705

December 29, 1998
Receiving Date: 12/18/98
Sample Type: Water
Project No: 980
Project Name: W. Weir
Project Loc.: Texaco
Sampling Date: 12/17/98
Sample Condition: I & C
Sample Received by: VW
Extraction Date: 12/22/98
Analysis Date: 12/24/98

PAH Reporting T115256

8270 Compounds (mg/L)	Limit	MW - 3	QC	RPD	%EA	%IA
Naphthalene	0.001	ND	75	4	58	94
Acenaphthylene	0.001	ND	73	3	68	91
Acenaphthene	0.001	ND	75	5	63	94
Fluorene	0.001	ND	78	3	64	98
Phenanthrene	0.001	ND	77	2	59	96
Anthracene	0.001	ND	81	2	63	101
Fluoranthene	0.001	ND	87	1	68	109
Pyrene	0.001	ND	72	1	62	90
Benzo[a]anthracene	0.001	ND	80	2	63	100
Chrysene	0.001	ND	82	1	47	103
Benzo[b]fluoranthene	0.001	ND	84	7	59	105
Benzo[k]fluoranthene	0.001	ND	72	6	76	90
Benzo[a]pyrene	0.001	ND	81	3	68	101
Indeno[1,2,3-cd]pyrene	0.001	ND	76	6	58	95
Dibenz[a,h]anthracene	0.001	ND	76	6	48	95
Benzo[g,h,i]perylene	0.001	ND	75	4	60	94

ND = Not Detected

SURROGATES	% RECOVERY
Nitrobenzene-d5 SURR	62
2-Fluorobiphenyl SURR	53
Terphenyl-d14 SURR	37

METHODS: EPA SW 846-8270, 3510

CHEMIST: MA

Director, Dr. Blair Leftwich

30 Dec 98
DATE

115256

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.: 980 | PROJECT NAME: W. Weir

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)	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. 8270/825	PCB's 8080/608	Pest. 808/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
115254	12/17/98	11:30	W		G	MW-1	3	N	X		X	X	X	X	X														
55	12/17/98	11:05	W		G	MW-2	3	N	X		X	X	X	X	X														
56	12/17/98	10:40	W		G	MW-3	4	N	X		X	X	X	X	X														

Added PAH 115256 m 12-22

RELINQUISHED BY: (Signature) — Date: 12/17/98 Time: 15:00
RECEIVED BY: (Signature) Helen Shelton — Date: 12/17/98 Time: 4:00 PM

RELINQUISHED BY: (Signature) Helen Shelton — Date: 12/17/98 Time: 6:30 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: Tex ZIP:
CONTACT: Nell PHONE: 80-375-1256
RECEIVED BY: (Signature) Vicki Wade
DATE: 12.18.98 TIME: 9:30 m

SAMPLED BY: (Print & Sign) M.J. Larson — Date: 12/17/98 Time: 11:30

SAMPLE SHIPPED BY: (Circle)
FEDEX BUS UPS 4° AIRBILL # 1593844395
HAND DELIVERED OTHER:

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: ASAP
RUSH Charges Authorized: 12/30
Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: Run PAH only if TPH above detection

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

PAGE: 1 OF: 1

CLIENT NAME: Texaco

SITE MANAGER: M. Larson

PROJECT NO.: 980

PROJECT NAME: W. Weir

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)	PAH 8270 See Comments below	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. 8270/825	PCB's 8080/608	Pest. 608/608	BOD, TSS, pH, TDS, Chloride	Gamma Spec.	Alpha Beta (Air)	PLM (Asbestos)
	12/11/98	11:30	W		X	MW-1	3	N	X		X	X	X	X	X														
	12/11/98	11:05	W		X	MW-2	3	N	X		X	X	X	X	X														
	12/11/98	10:40	W		X	MW-3	4	N	X		X	X	X	X	X														

RELINQUISHED BY: (Signature) — Date: 12/11/98 Time: 15:00
RECEIVED BY: (Signature) — Date: 12/17/98 Time: 4:00 PM

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

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

RECEIVING LABORATORY: Xenco Laboratories, Inc.
ADDRESS: 5002 Basin
CITY: Midland STATE: Texas ZIP:
CONTACT: Gail PHONE: 915-563-1296
RECEIVED BY: (Signature) — DATE: TIME:

SAMPLED BY: (Print & Sign) M.J. Larson — Date: 12/11/98 Time: 11:30

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

HIGHLANDER CONTACT PERSON: Mark Larson

Results by: A.P.

RUSH Charges Authorized: Yes No

SAMPLE CONDITION WHEN RECEIVED:

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

REMARKS: Run PAH only if TPH above detection

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.

PHOTOGRAPHS

PHOTOGRAPHS
WILLIAM WEIR TANK BATTERY (CLOSED)

1. Excavated Pit Location (Looking South)

2. Clay Fill Placement (Looking South)

PHOTOGRAPHS
WILIAM WEIR TANK BATTERY (CLOSED)

3. Clay Fill Placement (Looking Northeast)

4. Clay Fill Placement (Looking Southeast)

PHOTOGRAPHS
WILLIAM WEIR TANK BATTERY (CLOSED)

5. Clean Fill Placement (Looking Northwest)

6. Final Grade (Looking Southwest)

PHOTOGRAPHS
WILLIAM WEIR TANK BATTERY (CLOSED)

7. Final Grade (Looking Southeast)

8. Final Grade (Looking Northeast)