Texaco Refining
and Marketing Inc

10 Universal City Plaza
Universal City CA 91608

STID 1109

Ms. Susan Hugo
Alameda County Environmental
Health Department
80 Swan Way, Room 200
Oakland, CA 94621

SUBJECT: **500 GRAND AVENUE**
Oakland, CA

Dear Ms. Hugo:

This letter will confirm our telephone conversation regarding a proposed meeting in which I would like to discuss the future environmental direction for this site. Listed below is a report used to document tank closure requirements, and work plans established for the purpose of obtaining bids and awarding the necessary contracts to perform the additional work specified in these plans:

- Quarterly Tech. Report dated September, 10, 1992. This report covers Tank Closure Documentation.
- Phase II work as outlined in my September 18, 1992, letter, removal of soils excavated during tank closure. Bay Area Tank & Marine was the successful contractor, and they have promised me that their final report will be completed by March, 1993.
- Phase III work as outlined in my letter of November 25, 1993, the excavation, removal, and disposal of additional soils, approximately 1,000 cubic yards.

Most submitted

Please call me at (818) 505-2476 if you have any questions and to set a date for the meeting.

Very truly yours,

R Robles
Bob Robles
Texaco Refining and Marketing Inc.

RR:rr

Enclosure
Mr. Rich Hiett California Regional Water Quality Control Board
RRZielinski-Richmond

A Report Prepared for

Texaco Refining and Marketing, Inc.
10 Universal City Plaza
Universal City, California 91608

QUARTERLY TECHNICAL REPORT
SECOND QUARTER OF 1992
FORMER SERVICE STATION
500 GRAND AVENUE
OAKLAND, CALIFORNIA

HLA Job No. 10262.169
September 10, 1992
1992 Report No. 2

by

Jeanna S. Hudson
Registered Geologist

REGISTERED GEOLOGIST
JEANNA S. HUDSON
NO. 4492
STATE OF CALIFORNIA

Christian P. Muller
Associate Engineer

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, California 94520
510/687-9660

INTRODUCTION

This Quarterly Technical Report (QTR) presents the results of investigation activities by Harding Lawson Associates (HLA) during the second quarter of 1992 at a former service station site, 500 Grand Avenue, Oakland, California (Plate 1). This station was operated by Exxon Company U.S.A. (Exxon) between 1988 and the fourth quarter of 1991. Prior to 1988, the station was operated by Texaco Refining and Marketing Inc. (Texaco). During the fourth quarter 1991, Exxon's lease expired and the station was closed. All structures at the site have been demolished, and the site is currently enclosed by a locked chain-link fence. This report summarizes previous work at the site and presents second quarter activities.

SUMMARY OF PREVIOUS WORK

Texaco retained HLA to conduct a sensitive receptor survey at the subject location in May 1988. In June 1988, Texaco requested that HLA proceed with a subsurface investigation to evaluate whether hydrocarbons had affected shallow soil or groundwater. By the end of the first quarter of 1992, HLA had completed the following tasks in the site investigation:

- Conducted a soil-gas survey consisting of 18 soil-gas probe locations on or near the site.
- Installed and developed four 2-inch-diameter groundwater monitoring wells (MW-8A, MW-8B, MW-8C, and MW-8D) and six 4-inch-diameter monitoring wells (MW-8E, MW-8F, MW-8G, MW-8H, MW-8I, and MW-8J). Locations are shown on Plate 2.

- Obtained groundwater samples from each well on a quarterly basis and analyzed them for benzene, toluene, ethylbenzene, and xylenes (BTEX), and total petroleum hydrocarbons (TPH) as gasoline and as diesel fuel.

- Gauged water levels and estimated the direction of groundwater flow.

- Performed slug tests in monitoring wells MW-8C and MW-8E to estimate hydraulic conductivity.

- Drilled and sampled 15 soil borings (Plate 2) to delineate the extent of hydrocarbons in the vadose zone; analyzed soil samples for BTEX and TPH as gasoline.

- Analyzed soil samples from soil borings B-6, B-7, B-8, B-9, B-10, B-11, B-12, B-13, B-14, and B-8K for TPH as diesel fuel.

- Analyzed a soil sample from boring B-13 for halogenated volatile organics, semi-volatile organics, oil and grease, and selected metals.

- Pumped and disposed of 5,000 gallons of water from the tank backfill as an interim remedial measure.

- Submitted an Environmental Assessment Report, dated September 22, 1989, to Texaco.

- Issued an Interim Remedial Plan, dated December 7, 1990, in lieu of a Third Quarter Technical Report.

- Excavated the clay sewer pipes and contaminated soil from an abandoned utility trench near the former waste oil tank location. Analyzed soil and water samples for hydrocarbons.

RESULTS OF PREVIOUS WORK

The results of the soil-gas survey indicated petroleum hydrocarbon vapors in the unsaturated zone near the underground storage tanks and dispenser islands. Analyses of water samples from four existing observation wells in the tank backfill showed

the presence of dissolved petroleum hydrocarbons in groundwater adjacent to the underground tanks.

Soil samples and drill cuttings indicate that the subsurface materials at the site consist of clay and minor amounts of interbedded clayey sand. Analysis of slug test data obtained from MW-8C and MW-8E indicate a hydraulic conductivity of 0.02 to 0.03 foot/day. Groundwater would be expected to move through the soils relatively slowly.

Local groundwater, which is semiconfined, flows to the south and southeast toward Lake Merritt with a gradient of 0.07 foot/foot (Plate 3). Depth to the water-bearing zone is approximately 10 feet below grade. Historical water-level data from monitoring wells across the site show that, in most wells, static water levels have fluctuated 2.5 to 3.0 feet since early 1988.

Results of Soil Analyses

Soil samples from 15 soil borings and seven monitoring well locations were chemically analyzed to evaluate the horizontal and vertical extent of petroleum hydrocarbons in the subsurface. The analytical data are summarized in Tables 1 and 2.

The highest concentration of TPH as gasoline, 2900 parts per million (ppm), was found in a soil sample collected at a depth of 1.5 feet in boring B-11. Boring B-11 is located next to the underground storage tanks. Significant concentrations of TPH as

gasoline were also found in borings B-3 and B-7, near the fuel dispenser island.

The results of soil analyses for TPH as diesel fuel indicate concentrations ranging from nondetectable to 460 ppm (B-9); most of the soil samples with detectable concentrations contained less than 100 ppm TPH as diesel fuel.

Soil boring B-13 was drilled to assess soil conditions adjacent to the building. Because soil containing an oily substance was encountered during drilling, one soil sample collected at 2.5 feet below grade in B-13 was analyzed for semi-volatile organic compounds, halogenated volatile organics, total oil and grease, and selected metals. The analytical results, presented in Table 2, indicate that the sample contained naphthalene, 2 methylnapthalene, bis (2-ethylhexyl) phthalate, trichloroethane, chromium, zinc, and oil and grease.

Results of Previous Groundwater Analyses

Table 3 presents the results of groundwater analyses obtained since 1988. Groundwater from monitoring wells MW-8E, MW-8H, MW-8I, and MW-8J, and observation wells OB-3 and OB-4 frequently contained benzene in concentrations that exceed the Department of Health Services Drinking Water Action Levels (DWALs). In groundwater samples from wells MW-8A, MW-8B, MW-8C, MW-8F, and MW-8G BTEX concentrations have typically been either nondetectable or below the DWALs.

TPH as gasoline was detected in groundwater samples from STET MW-8E, MW-8H, MW-8I, and MW-8J. Groundwater samples from MW-8F and MW-8G typically contained nondetectable concentrations of BTEX and TPH as gasoline. However, TPH as diesel fuel and "heavy" hydrocarbons, above the range of diesel fuel, have been detected occasionally in groundwater from these downgradient locations since the second quarter 1990.

Waste Oil Tank Removal

In the third quarter 1990, workers installing overfill containment devices on the underground storage tanks (USTs) discovered floating hydrocarbons around the waste oil tank (Plate 2). Exxon removed this tank in September 1990. Waste oil and water were pumped from the tank backfill and disposed of by Exxon. Tank backfill material and affected soil were also excavated and disposed of by Exxon. Two vitrified clay sewer lines, apparently containing petroleum hydrocarbon products, were discovered adjacent to the waste oil UST location during the excavation process. Texaco Environmental Services excavated the clay lines and contaminated soil from the surrounding utility trench during the first quarter of 1991.

ACCOMPLISHMENTS DURING SECOND QUARTER OF 1992

During the second quarter of 1992, the following tasks were accomplished at the 500 Grand Avenue site:

- Purged and sampled four on-site monitoring wells, and five off-site monitoring wells. Water samples were analyzed for BTEX, TPH as gasoline, and TPH as diesel fuel.

- Measured water levels in nine monitoring wells (Table 4).

- Demolished on-site structures and removed three gasoline USTs.

- Removed approximately 25,000 gallons of hydrocarbon-bearing water from the tank backfill during excavation procedures.

- Collected confirmation soil samples from the bottom and sides of the tank excavation; analyzed the samples for petroleum hydrocarbons

- Obtained samples and arranged disposal of pea gravel from the UST excavation.

- Submitted a report titled "Underground Storage Tank Removal" to Texaco on June 8, 1992.

- Excavated soil from the southeast part of the site; collected and analyzed confirmation soil samples from the bottom and walls of the excavation.

Groundwater Sampling

HLA continued to monitor water levels and groundwater quality at the subject location during the second quarter of 1992. Each well was purged while monitoring temperature, conductivity, and pH of the water. The water samples were collected and transported, under chain-of-custody, to NET Pacific, Inc. in Santa Rosa, California. All of the water samples were analyzed for BTEX, TPH as gasoline, and TPH as diesel.

Results of Recent Groundwater Analyses

Table 3 and Plates 4 and 5 summarize results of the second quarter groundwater analyses. Laboratory reports are in Appendix A. Benzene concentrations exceeded the DWAL (1.0 part per billion [ppb]) in groundwater from MW-8E, MW-8G, MW-8H, MW-8I, and MW-8J (Plate 4). Groundwater from monitoring wells MW-8E and MW-8I contained the highest concentrations of benzene, 20,000 ppb and 1,800 ppb, respectively. TPH as gasoline was detected in groundwater from monitoring wells MW-8E, MW-8H, and MW-8I (Plate 5). Concentrations ranged from 190 ppb in MW-8H to 41,000 ppb in MW-8E.

TPH as diesel fuel was detected in groundwater from monitoring wells MW-8C, MW-8E, MW-8H, and MW-8I. We are not aware of records of diesel fuel being sold at the site in the past. Some of the heavier hydrocarbons detected may therefore result from the presence of aged gasoline, or from hydrocarbons originating in the area of the former waste oil tank. Laboratory reports from past analyses have indicated that the petroleum hydrocarbons quantified as diesel fuel may have been heavier than diesel hydrocarbons.

Plate 3 is the most recent contour map of the potentiometric groundwater surface, based on water levels measured on April 30, 1992 (Table 4). No significant changes in groundwater flow direction are apparent.

UST Removal

Texaco Marketing Division obtained a contract with Zaccor, Inc. (Zaccor) for demolition of on-site structures and tank removal. On April 13 through 15, 1992, Zaccor demolished structures, removed three USTs, stockpiled pea gravel used as backfill around the tanks, and removed the dispenser islands and associated piping.

Prior to removal, the product lines were flushed with water which was then contained in the turbine catch basin. The USTs were 10,000-gallon capacity fiberglass tanks which previously held unleaded gasoline and leaded gasoline.

Tank removal was conducted on April 14, 1992. Because the bottom of the tank backfill intersected the semiconfined water-bearing strata, the tank backfill material contained groundwater. During tank removal operations, Zaccor arranged for the pumping and disposal of approximately 25,000 gallons of hydrocarbon-bearing water from the excavation in an attempt to minimize tank buoyancy and to rid the backfill material of water. Zaccor subcontracted Allied Oil and Pumping and Oscar E. Erickson, Inc. to pump the water and remove it from the site. The water, which was hauled under a Hazardous Waste Manifest, was taken to Gibson Oil and Refining Co. Inc., in Redwood City, California.

In spite of attempts to keep the tanks from floating, the tie-down straps broke on two of the tanks, allowing them to float in the excavation. A representative from the Oakland Fire Department (OFD) was not on site, but Zaccor personnel obtained

verbal permission from the OFD to remove the tanks from the excavation. No pre-existing cracks or holes were observed in any of the tanks.

Ms. Christine Meyers of the OFD arrived to observe the removal of the tanks from the site. Ms. Susan Hugo, Senior Hazardous Materials Specialist for the Alameda County Health Agency (ACHA), arrived as the third tank was being hauled away.

The final excavation was approximately 10 feet deep and approximately 1800 square feet in plan area (Plate 6). Ms. Hugo directed sampling of soil in the bottom and along the sidewalls of the tank excavation. Sample depths varied from approximately 5 to 10 feet below the ground surface; sample locations are shown on Plate 6. All soil samples were analyzed for TPH as gasoline, and for BTEX, in accordance with EPA Test Methods 8015-modified and 8020, respectively. Results of chemical analyses are summarized on Table 5 and laboratory data are presented in Appendix B.

Soil samples from the UST excavation contained less than 100 ppm of TPH as gasoline in all but one sample, which contained 130 ppm TPH. That sample, SS4, was collected at approximately 10 feet below grade in the bottom of the excavation. Benzene was detected in five of the samples in concentrations up to 0.20 ppm. Concentrations of individual BTEX components were generally less than 1.4 ppm.

On behalf of Texaco, HLA arranged for disposal of the pea gravel removed from the tank backfill. On May 4, 1992,

approximately 540 cubic yards (cy) of pea gravel were taken by Dillard Trucking of Byron, California, to Browning Ferris Industries (BFI) Waste Systems, a Class III landfill in Livermore, California. Following removal of the pea gravel from the site, Zaccor arranged for the excavation to be backfilled and compacted using clean, imported fill.

Soil Samples from Former Pump Dispensers and Fuel Line Areas

On April 15, HLA collected three soil samples from below the former dispenser island areas and one from the former piping trench, as directed by Ms. Susan Hugo of ACHA. The samples were collected from depths of five to six feet (locations are shown on Plate 6). Samples were analyzed for BTEX, TPH as gasoline (EPA Test Method 5030/8015/8020), and total oil and grease (Test Method SM 5520 E & F gravimetric). Sample PI-2A was requested by Ms. Susan Hugo because she noticed evidence of free product seepage in the area of the former dispensers. She requested that Texaco file an unauthorized leak report because of the free product observed at that location.

Soil samples obtained from excavations around the former pump islands and fuel lines indicated high concentrations of TPH as gasoline and total oil and grease, up to 2100 ppm and 6900 ppm, respectively (Table 5). The highest benzene concentration was 11 ppm in sample PI-1/5.

Excavation of Contaminated Soil

Following removal of stockpiled pea gravel, Zaccor resumed excavation of soil in the southeastern corner of the site. On May 5, 1992 approximately 1100 cy of soil were removed from an excavation approximately 55 feet wide, 60 feet long, and 7 to 9 feet deep (Plate 6). The limit of the excavation depth was determined by collecting confirmation soil samples and submitting them to an on-site chemical laboratory. At the direction of Ms. Susan Hugo of the ACHA, the sampling density on the bottom of the excavation was one sample per 20 lineal feet. The ACHA also required that soil be removed from the excavation if it contained concentrations of benzene greater than 0.5 ppm or concentrations of TPH as gasoline greater than 10 ppm.

Samples BE-1, BE-2, and BE-4 through BE-10 were collected from the bottom of the excavation (Plate 6). Three soil samples were collected from the excavation wall adjacent to Grand Avenue, and one sample was collected on the excavation wall closest to Euclid Avenue. Because additional excavation is anticipated on the south and west sides of the site, only one wall sample was collected from those excavation boundaries. Two samples, BE-3 an WS-1, were collected from a small excavation under the former service bay. A cement sump and automotive hoist had been located nearby.

Table 6 shows the results of BTEX and TPH as gasoline analyses on the soil samples removed from the excavation limits. Of the soil samples collected from the bottom of the excavation,

only BE-1 contained detectable TPH as gasoline (1.1 ppm). Samples BE-1, BE-2, BE-5, and BE-8 contained detectable benzene concentrations ranging from 0.011 to 0.043 ppm. Benzene and TPH as gasoline were not detected in samples BE-3 and WS-1.

Three soil samples, WS-2, WS-4, and WS-5 were collected from the excavation wall adjacent to Grand Avenue. Concentrations of TPH as gasoline ranged from 72 to 1000 ppm in those samples (Plate 6), and benzene concentrations ranged from 1.1 ppm to 22 ppm. Because of the public sidewalk and the presence of utilities beneath the sidewalk, no further excavation was conducted toward Grand Avenue.

Zaccor imported 1,100 cy of clean fill, placed it in the excavation, and compacted it. At the end of the second quarter, approximately 1,100 cy of soil from the excavation were stockpiled on-site. Texaco Environmental Services is arranging disposal of the soil at an appropriate facility.

ANTICIPATED ACTIVITIES FOR THIRD QUARTER OF 1992

In early May 1992, applications were filed with the Alameda Flood Control District, Zone 7, to obtain permits to destroy on-site monitoring wells MW-8A, MW-8E, and MW-8B. These wells are located in areas which will likely be excavated in the future. We anticipate that the wells will be decommissioned during the third quarter 1992. Texaco will continue to monitor groundwater at the site on a quarterly basis.

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Table 1. Results of Soil Sample Analyses
(concentrations in mg/kg [ppm])

Boring/ Well Number	Sample Depth (feet)	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other**
B-1	6.5	ND	ND	ND	ND	12	NA	
B-3	4.0	ND	ND	ND	5	520	NA	
B-4	3.5	ND	1	3.5	13	510	NA	
B-5	5.5	ND	ND	ND	ND	<10	NA	
B-5	10.5	ND	ND	ND	ND	ND	NA	
B-5	16.0	ND	ND	ND	ND	ND	NA	
B-6	2.0	ND	0.08	ND	ND	1.0	<100*	<100*
B-6	4.5	ND	0.09	ND	ND	ND	<10	<10
B-7	3.0	ND	6.7	5.1	50	580	<100*	<100*
B-8	2.0	0.05	ND	ND	0.34	3.4	<10	<10
B-9	2.5	0.05	0.32	0.81	6.4	100	460	<100*
B-8K	1.5	ND	ND	ND	ND	2.1		ND
	3.0	ND	0.05	ND	ND	6.6		ND
	5.5	ND	ND	0.08	0.05	84		20
B-10	1.5	0.28	ND	0.20	0.18	8.4		ND
	2.5	0.09	ND	ND	ND	ND		ND
	5.5	ND	ND	ND	ND	ND		ND
	8.5	ND	ND	ND	ND	ND		ND
B-11	1.5	ND	ND	5.4	1.6	2,900		30
	2.5	ND	ND	0.31	0.12	62		11
	5.5	ND	ND	0.06	ND	17		ND
	8.5	ND	ND	ND	ND	ND		ND
B-12	1.0	0.22	0.11	0.18	0.42	13		ND
	2.5	ND	ND	0.19	0.83	49		ND
	4.5	ND	ND	1.27	0.67	1,200		94
	6.0	ND	0.06	ND	ND	ND		ND
B-13	1.5	ND	ND	ND	ND	ND	ND	ND
	2.5	ND	ND	1.7	5.4	130	ND	1,000
	3.5	ND	0.06	0.06	0.30	26	ND	250
B-14	1.5	ND	ND	ND	ND	4.8	ND	85
	3.5	ND	ND	ND	ND	2.3	ND	62
MW-8D	1.3	ND	0.40	ND	0.50	10	NA	
MW-8E	5.5	0.82	6.5	5.5	26	750	NA	
MW-8F	11.0	ND	ND	ND	ND	ND	NA	
MW-8G	6.0	ND	ND	ND	ND	ND	NA	
MW-8H	1.5	ND	0.07	ND	ND	ND		ND
	3.0	ND	0.24	ND	ND	2.6		ND
	5.5	ND	ND	0.30	0.83	550		66
	10.5	ND	ND	ND	ND	ND		ND
MW-8I	1.5	0.10	ND	ND	ND	3.0		ND
	3.5	0.06	ND	ND	0.02	ND		ND
	5.5	ND	ND	2.7	9.2	280		ND
	10.5	ND	ND	ND	ND	ND		ND
MW-8J	1.5	0.18	0.09	0.06	0.05	24		ND
	3.0	0.08	0.14	0.04	ND	13		33
	5.5	ND	ND	25	9.2	2,100		83
	10.5	ND	0.02	ND	ND	8		ND

ND = Not detected
NA = Not analyzed
* Laboratory increased reporting limits because of matrix interference.
** "Heavy" petroleum hydrocarbons such as waste oil, mineral spirits, jet fuel, or fuel oil.

Table 2. Summary of Chemical Analyses Soil Sample B-13
(2.5 feet deep)

Semi-volatile Organics; EPA Test Method 8270

- Analyses for 55 semi-volatile organic compounds
- Results were below reporting limit on all except:

Naphthalene	0.90 ppm
2 Methylnapthalene	1.40 ppm
Bis (2-ethylhexyl) phthalate	0.26 ppm

Halogenated Volatile Organics; EPA Test Method 8010

- Analyses for 29 compounds
- Results were below reporting limits on all except:

Trichloroethane	0.06 ppm

Total Oil and Grease (IR); EPA Test Method 413.2 — 5600 ppm

Selected heavy metals - EPA Test Method 6010

Cadmium	Below reporting limit
Chromium	36 ppm
Lead	Below reporting limit
Zinc	41 ppm

Table 3. Results of Groundwater Analyses
Concentrations in µg/l (ppb)

Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other[2]
MW-8A	06/14/88	<0.5[1]	1.5	<2	6.6	--	--	--
	10/28/88	<0.5	<1	<2	<1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3	<50	--	--
	11/29/89	<0.5	1.0	<0.5	<0.5	<50	1,200	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	--	2,800
	04/26/90	<0.5	<0.5	<0.5	<0.5	<2,500	<50	890
	07/26/90	6.0	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	<50	130[3]
	04/23/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	07/23/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	<0.5	<0.5	<0.5	<0.5	<50	700[5]	--
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
MW-8B	06/14/88	<0.5	<1	<2	<1	--	--	--
	10/21/88	<0.5	<1	<2	3.1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3	<50	--	--
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	380
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	--	350
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	110
	07/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	<50	180[3]
	04/23/91	8.4	2.5	<0.5	5.1	<50	<50	<500
	07/23/91	<0.5	1.1	<0.5	2.0	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	<0.5	<0.5	<0.5	<0.5	<50	550[5]	--
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
MW-8C	06/14/88	5.3	3.5	2.6	13.0	--	--	--
	10/21/88	<0.5	<1	<2	<1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3.0	<50	--	--
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	190
	01/24/90	0.9	<0.5	<0.5	<0.5	<100	--	480
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	160
	07/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	76	110[3]
	04/23/91	12	25	3.7	19	800	<50	<500
	07/23/91	<0.5	0.6	<0.5	<0.5	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	1.2	<0.5	<0.5	<0.5	<50	840[5]	--
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	150	<500

Table 3 (continued)

Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other[2]
MW-8E	10/25/88	1,400	510	2.9	420	--	--	--
	09/28/89	5,600	3,100	<500	<3,000	22,000	--	--
	11/29/89	4,900	2,600	<250	1,490	15,000	6,800	<50
	01/24/90	10,100	3,340	540	1,790	36,000	--	4,900
	04/26/90	11,000	5,700	840	2,900	48,000	1,400	<50
	07/26/90	15,000	6,200	520	4,700	56,000	<50	<50
	(10/18/90)	1,500	1,300	170	1,800	15,000	620	<50
	01/08/91	14,000	5,400	860	1,700	51,000	17,000	520[3]
	04/23/91	19,000	6,100	750	4,100	50,000	4,800	<500
	07/23/91	16,000	5,400	1,100	4,000	47,000	3,500[4]	<500
	10/24/91	19,000	6,100	1,100	4,900	40,000	9,400	<500
	01/23/92	3,800	2,800	610	4,800	38,000	9,800[4]	--
	04/30/92	20,000	3,700	500	3,900	41,000	9,600	<500
MW-8F	04/14/89	<0.5	<1	<2	<1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3	<50	--	--
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	--	<300
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	110
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	360	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	380	620[3]
	04/23/91	5.9	3.1	<0.5	2.7	<50	1,400	3,200
	07/23/91	<0.5	0.8	<0.5	<0.5	<50	60	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	4.0	1.3	<0.5	1.9	<50	1,300[5]	--
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
MW-8G	04/14/89	<0.5	<1	<2	<1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3	<50	--	--
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	--	650
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	120
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	460	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	220	260[3]
	04/23/91	0.9	0.9	<0.5	<0.5	<50	1,100	<500
	07/23/91	0.5	1.5	<0.5	3.0	<50	<50	<500
	10/24/91	0.6	<0.5	<0.5	<0.5	<50	--	--
	01/24/92	<0.5	<0.5	<0.5	<0.5	<50	980[5]	--
	04/30/92	1.7	<0.5	<0.5	<0.5	<50	<50	<500

Table 3 (continued)

Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other[2]
MW-8H	01/24/90	14.8	14.8	10.8	38.8	460	--	<300
	04/26/90	67	19	43	64	830	<50	820
	(07/26/90)	45	1.3	12	8.2	190	<50	<50
	10/18/90	17	2.5	14	8.5	300	<50	<50
	01/08/91	12	2.2	6.4	4.0	320	180	89[3]
	04/23/91	1.5	<0.5	<0.5	<0.5	<50	730	<500
	07/23/91	21	1.8	9.7	2.6	270	<50	<500
	10/24/91	7.6	1.0	3.5	2.4	120	70	<500
	01/23/92	7.2	1.2	4.7	3.2	110	60[5]	--
	04/30/92	11	1.5	5.6	3.6	190	90	<500
MW-8I	01/24/90	116	2.9	13	30.5	580	--	440
	04/26/90	2,400	100	230	350	4,400	<50	1,400
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	92	4.1	37	21	530	<50	<50
	01/08/91	500	4.3	36	26	1,300	710	210[3]
	04/23/91	1,600	17	100	86	1,500	1,100	900
	07/23/91	1,600	30	140	63	1,700	260	<500
	10/25/91	470	6.0	76	13	760	230	<500
	01/23/92	420	7.2	27	20	820	210[4]	--
	04/30/92	1,800	19	180	25	2,200	430	<500
MW-8J	01/24/90	2.7	<0.5	1	2.6	<100	--	<300
	04/26/90	28	7.7	19	24	160	<50	320
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	8.3	<0.5	2.6	1.5	<50	<50	<50
	01/08/91	0.41	<0.3	<0.3	0.52	71	<50	69[3]
	04/23/91	16	2.2	9.3	4.6	300	550	<500
	07/23/91	4.6	<0.5	3.1	<0.5	<50	<50	<500
	10/24/91	0.8	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	0.8	<0.5	<0.5	<0.5	<50	<50	--
	04/30/92	2.3	<0.5	<0.5	<0.5	<50	<50	<500
OB-3	11/06/89	420	8	6	64	4,000	--	--
	04/26/90	160	19	5	8.6	1,000	3,200	<50
	(07/26/90)	<0.5	<0.5	<0.5	0.9	68	1,200	<50
	10/18/90	260	69	35	490	3,200	2,100	<50

Table 3 (continued)

Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other[2]
OB-4	11/06/89	500	11	10	24	4,000	--	--
	04/26/90	360	10	10	18	460	3,900	<50
	(07/26/90)	23	3.7	1.6	5.9	200	1,600	<50
	10/18/90	600	540	83	840	4,300	330	<50
DWAL		1.0	1.0	680	100	1,750		

DWAL Drinking water action levels, State of California Department of Health Services (April, 1989).

1 <0.5 indicates that concentrations are below the reporting limit of 0.5 µg/l.

2 "Heavy" petroleum hydrocarbons such as waste oil, mineral spirits, jet fuel, or fuel oil.

3 TPH as motor oil analyses; analyst did not feel that motor oil was indicted on the chromatogram.

4 Petroleum hydrocarbons quantified as diesel appear to be light hydrocarbons

5 Petroleum hydrocarbons quantified as diesel appear to be heavier hydrocarbons than diesel.

(07/26/90) Sample not analyzed for BTEX and TPH as gasoline within 14-day holding time

-- Samples not collected/not analyzed for compound

Table 4. Historical Record of Groundwater Elevations

Well		MW-8A	MW-8B	MW-8C	MW-8E	MW-8F	MW-8G	MW-8H	MW-8I	MW-8J
Top of Casing Elev.		99.72	101.11	98.41	99.38	97.94	97.24	98.90	98.27	97.69
Date										
MAR 29, 91	GW ELEV	97.40	100.85	91.94	96.10	89.35	BLOCKED	95.20	92.12	91.98
APR 23, 91	GW ELEV	97.41	100.80	91.74	96.36	89.09	87.80	92.87	91.98	93.88
JUN 10, 91	GW ELEV	96.90	100.69	90.33	96.30	88.36	86.95	95.22	92.16	91.52
JUN 28, 91	GW ELEV	97.19	100.70	91.05	96.13	88.46	86.94	95.07	91.97	91.38
JUL 23, 91	GW ELEV	97.37	100.59	91.04	96.14	88.15	86.50	95.05	91.86	91.02
AUG 22, 91	GW ELEV	97.04	100.49	89.62	95.90	86.50	84.68	95.10	91.83	90.94
OCT 03, 91	GW ELEV	97.26	100.59	90.48	96.06	86.36	84.15	95.11	91.80	90.92
OCT 24, 91	GW ELEV	97.19	100.49	90.73	95.93	86.19	83.82	94.88	91.70	90.81
NOV 26, 91	GW ELEV	96.69	100.38	90.82	96.04	86.31	84.22	95.02	91.69	91.10
DEC 30, 91	GW ELEV	97.44	100.81	91.26	95.85	87.43	85.30	95.06	91.86	91.28
JAN 23, 92	GW ELEV	97.15	100.57	91.53	95.81	87.70	85.94	95.16	91.94	91.38
FEB 28, 92	GW ELEV	97.24	100.82	91.72	96.03	88.01	86.41	94.46	91.72	91.41
MAR 26, 92	GW ELEV	97.59	101.04	91.72	96.37	89.16	88.04	94.69	91.82	91.49
APR 30, 92	GW ELEV	97.62	100.51	91.51	95.62	88.58	88.24	95.44	91.79	91.21

All measurements are in feet
Top of casing elevation relative to arbitrary datum of 100 feet
GW Elev = Groundwater elevation relative to arbitrary datum of 100 feet

Table 5. Results of Analyses on Soil Samples
from Tank Excavation and Dispenser Islands
500 Grand Avenue
Oakland, California

Results Presented in mg/kg (ppm)

Sample I.D.*	Date	Benzene	Toluene	Ethyl benzene	Xylenes	TPH as gasoline	Total Oil and Grease
SS1/10-B	04/14/92	<0.005	0.038	0.016	0.12	5.3	--
SS2/10-B	04/14/92	0.049	0.38	0.15	1.4	89	--
SS3/ 5-W	04/14/92	<0.005	<0.005	<0.005	0.011	<1.0	--
SS4/10-B	04/14/92	0.14	0.21	0.17	1.1	130	--
SS5/10-B	04/14/92	0.20	0.028	0.040	0.15	36	--
SS6/10-B	04/14/92	0.0057	<0.005	<0.005	0.017	2.3	--
SS7/ 5-W	04/14/92	<0.005	<0.005	<0.005	<0.005	<1.0	--
SS8/ 5-W	04/14/92	<0.005	<0.005	<0.005	<0.005	<1.0	--
SS9/ 5-W	04/14/92	0.0069	<0.005	<0.005	<0.005	<1.0	--
PI-1/5	04/15/92	11	60	32	180	2,100	190
PI-2/5	04/15/92	0.019	0.013	0.035	0.077	7.8	30
PI-2A/6	04/15/92	1.3	1.1	2.0	11	810	6,900
Fuel Line/5	04/15/92	0.92	2.9	3.6	21	390	36

* Sample I.D. contains the following components: SS1 = sample name
10 = depth of sample in feet
B = bottom of excavation
W = sidewall of excavation

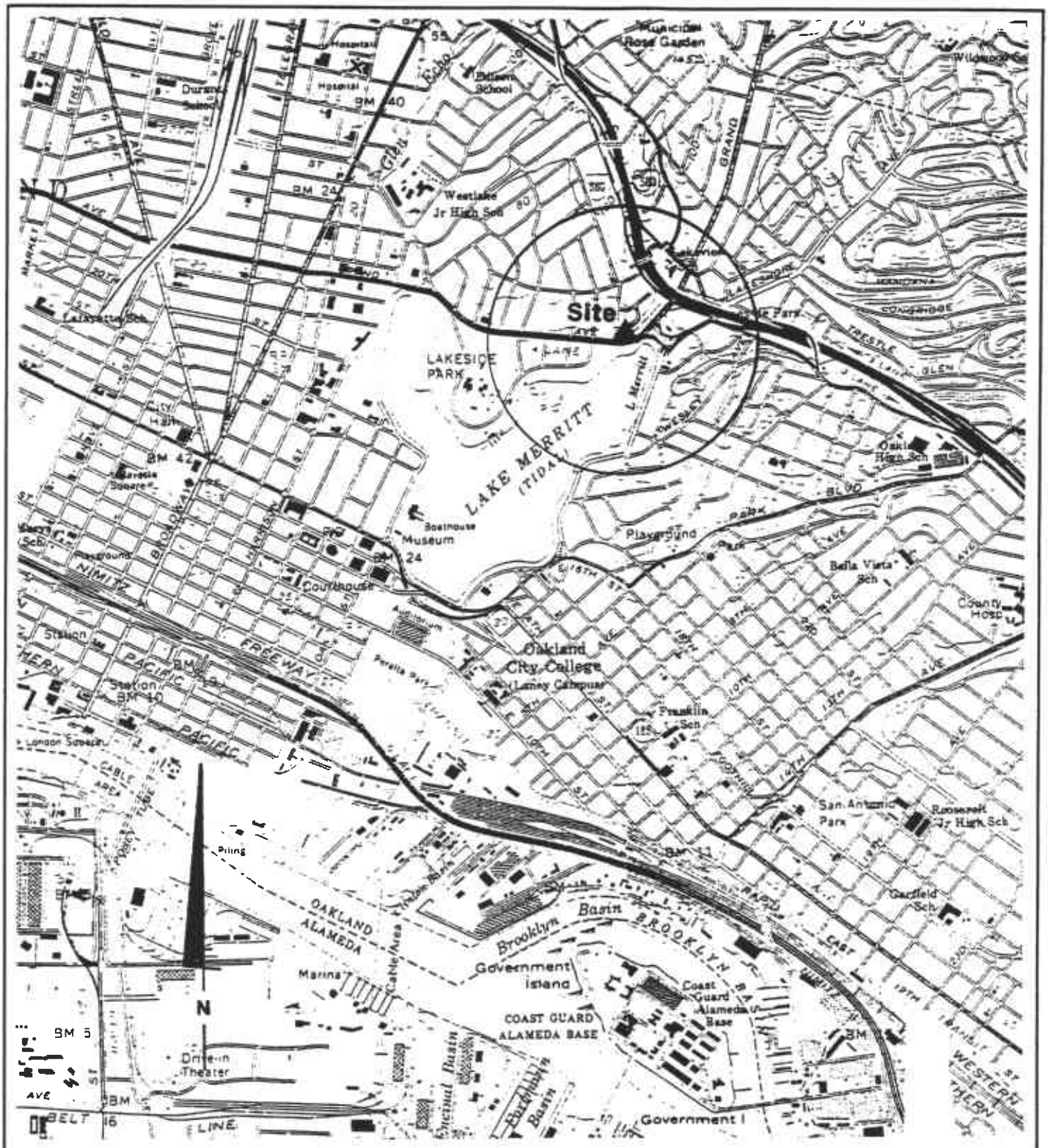
Table 6. Results of Analyses on Soil Samples
from Site Excavation
500 Grand Avenue
Oakland, California

Results Presented in mg/kg (ppm)

Sample I.D.*	Date	Benzene	Toluene	Ethyl benzene	Xylenes	TPH as Gasoline
BE-1-8.0	05/05/92	0.043	<0.005	0.058	<0.005	1.1
BE-2-8.0	05/05/92	0.011	<0.005	<0.005	<0.005	<1.0
BE-3-4.0	05/05/92	<0.005	<0.005	<0.005	<0.005	<1.0
BE-4-4.5	05/05/92	<0.005	<0.005	<0.005	<0.005	<1.0
BE-5-7.5	05/05/92	0.018	<0.005	<0.005	<0.005	<1.0
BE-6-7.5	05/05/92	<0.005	<0.005	<0.005	<0.005	<1.0
BE-7-8.0	05/05/92	<0.005	<0.005	<0.005	<0.005	<1.0
BE-8-8.0	05/05/92	0.028	<0.005	<0.005	<0.005	<1.0
BE-9-9.0	05/05/92	<0.005	<0.005	<0.005	<0.005	<1.0
BE-10-9.0	05/05/92	<0.005	<0.005	<0.005	<0.005	<1.0
WS-1-3.0	05/05/92	<0.005	<0.005	<0.005	<0.005	<1.0
WS-2-5.0	05/05/92	1.1	3.1	2.2	9.7	72
WS-3-7.5	05/05/92	<0.005	<0.005	<0.005	<0.005	<1.0
WS-4-5.0	05/05/92	22	28	30	100	1,000
WS-5-5.0	05/05/92	11	23	9.9	42	480

* Sample I.D. contains the following components:

BE-1	= Sample name
8.0	= Sample depth (in feet)
BE	= Bottom of excavation
WS	= Wall of excavation



REFERENCE: U.S.G.S. 7.5 minute Topographic Map, Oakland West, California, photo revised, 1980.

0 20 40

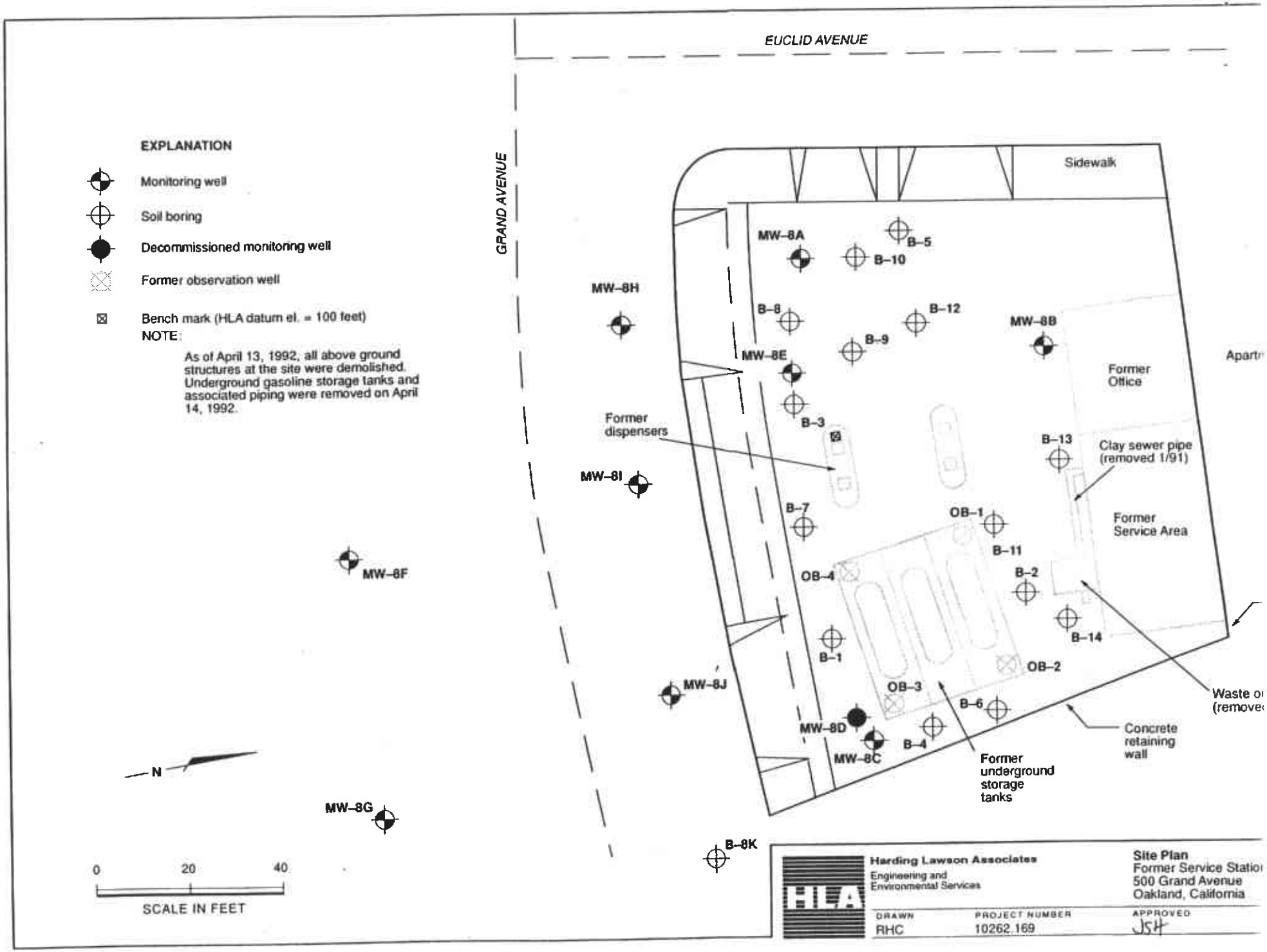
SCALE IN FEET

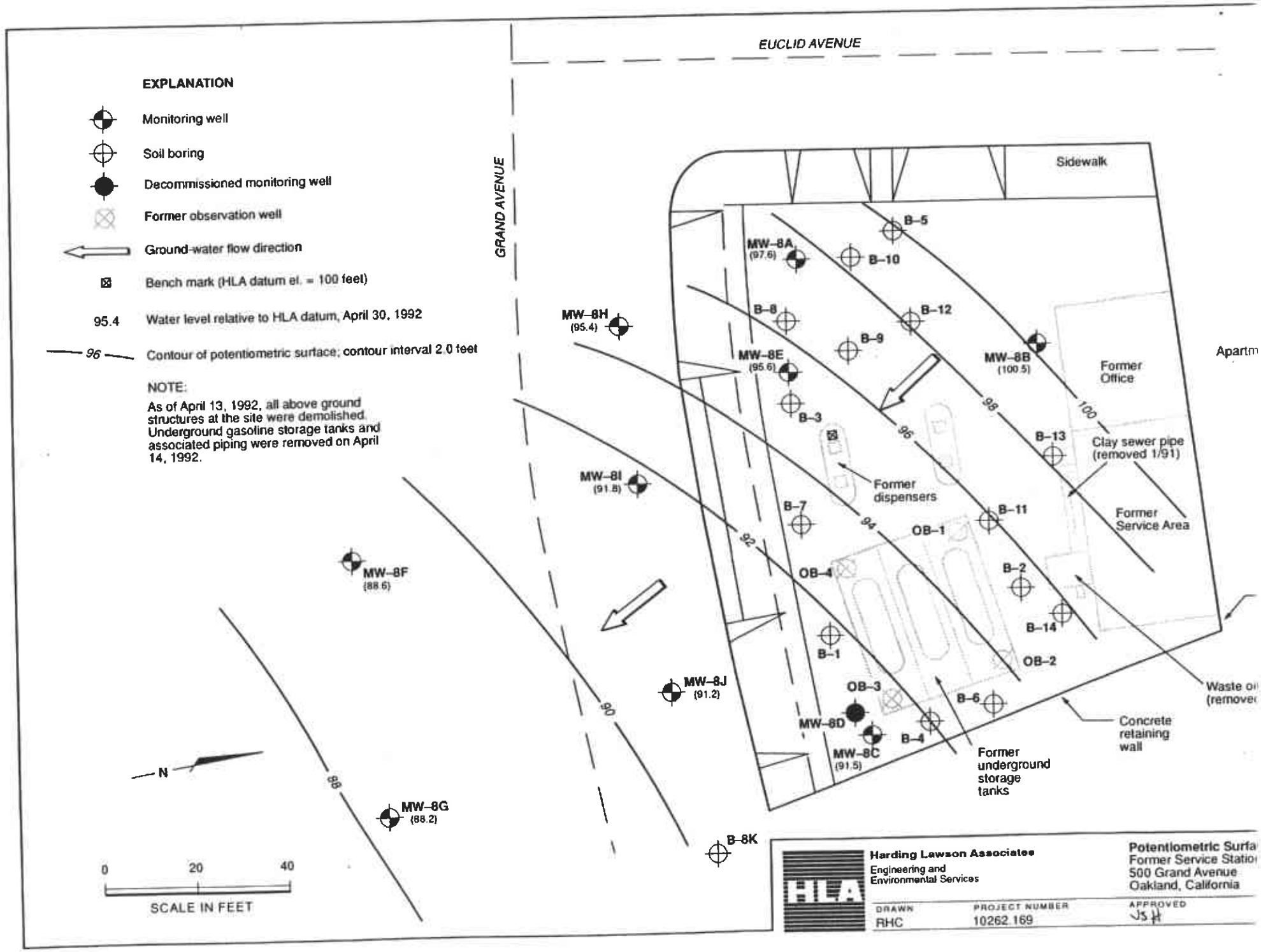
Harding Lawson Associates
Engineering and Environmental Services

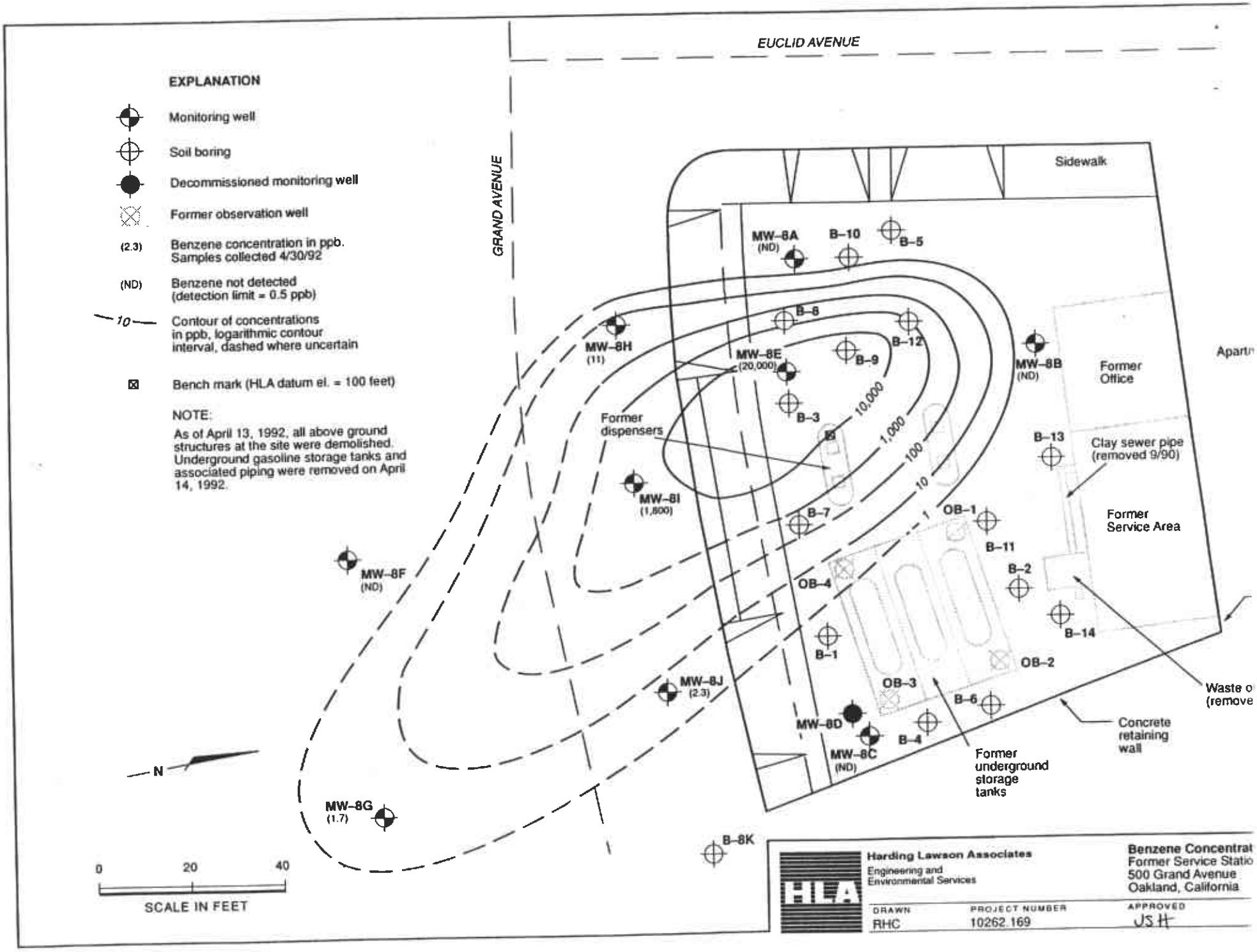
Regional Map
Exxon Service Station
500 Grand Avenue
Oakland, California

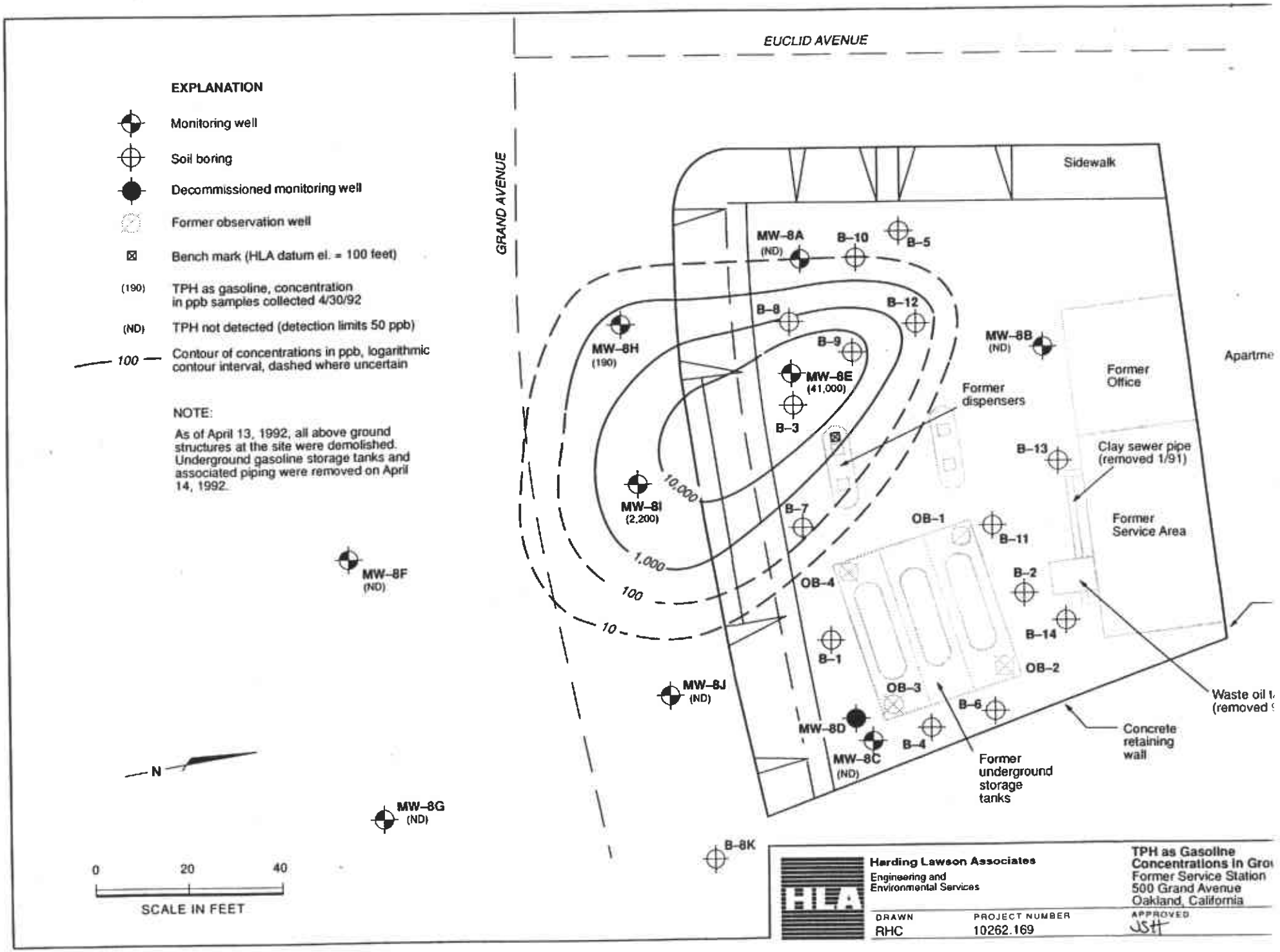
PLATE **1**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
RHC	2251,169.03	JSH	5/11/92	


EXPLANATION
Monitoring well
Soil boring
Decommissioned monitoring well
Former observation well
Bench mark (HLA datum el. = 100 feet)
NOTE:
As of April 13, 1992, all above ground structures at the site were demolished. Underground gasoline storage tanks and associated piping were removed on April 14, 1992.
EUCLID AVENUE
GRAND AVENUE
Sidewalk
MW-8A
B-5
B-10
MW-8H
B-8
B-12
MW-8B
B-9
MW-8E
Former Office
B-3
Former dispensers
B-13
Clay sewer pipe (removed 1/91)
MW-8I
B-7
OB-1
Former Service Area
B-11
MW-8F
OB-4
B-2
B-14
B-1
OB-2
MW-8J
OB-3
B-6
Waste oi
(removed
MW-8D
B-4
Concrete retaining wall
MW-8C
Former underground storage tanks
N
MW-8G
B-8K
0
20
40
SCALE IN FEET
Harding Lawson Associates
Engineering and Environmental Services
HLA
Site Plan
Former Service Station
500 Grand Avenue
Oakland, California
DRAWN
RHC
PROJECT NUMBER
10262.169
APPROVED
JSH

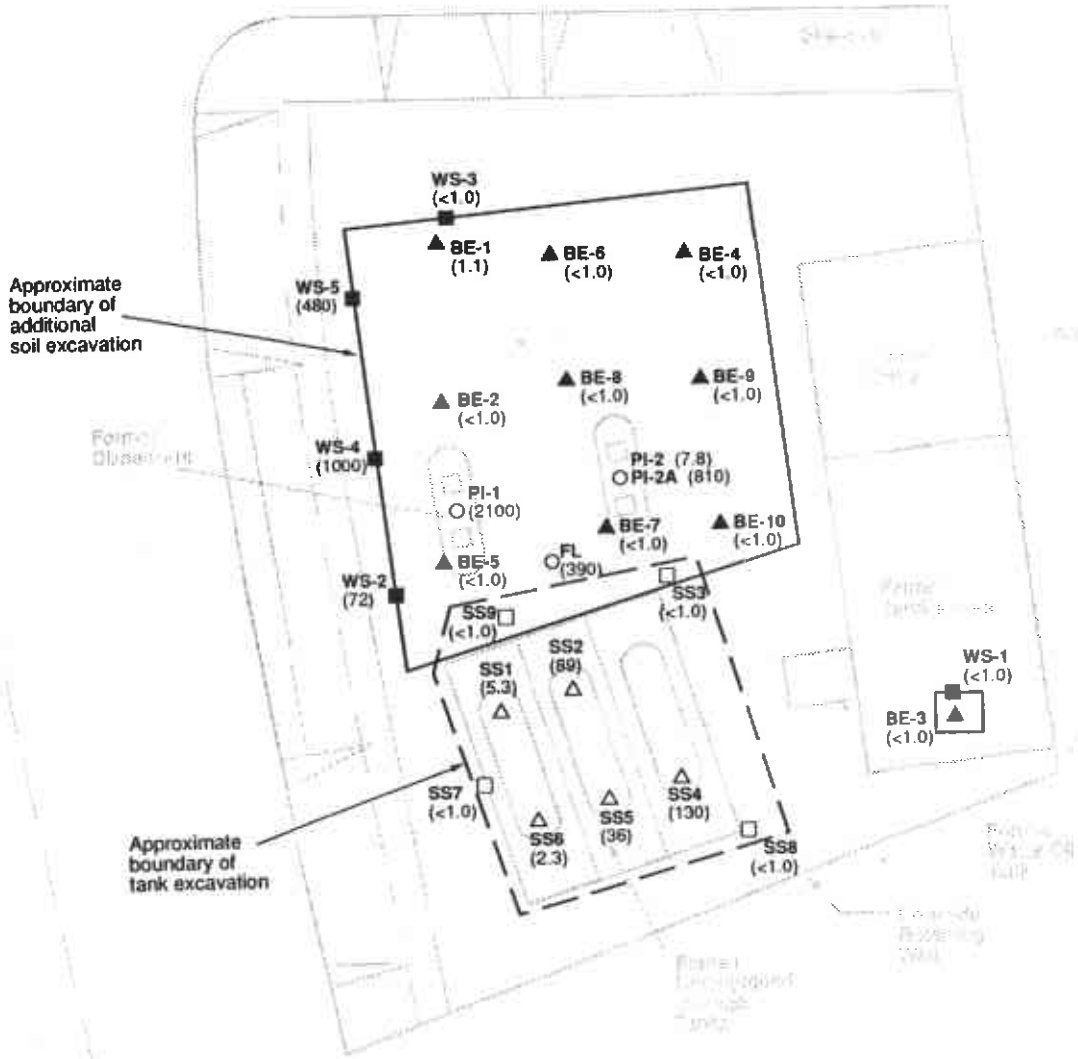

EXPLANATION
Monitoring well
Soil boring
Decommissioned monitoring well
Former observation well
Ground-water flow direction
Bench mark (HLA datum el. = 100 feet)
95.4
Water level relative to HLA datum, April 30, 1992
96
Contour of potentiometric surface; contour interval 2.0 feet
NOTE:
As of April 13, 1992, all above ground structures at the site were demolished. Underground gasoline storage tanks and associated piping were removed on April 14, 1992.
EUCLID AVENUE
GRAND AVENUE
Sidewalk
MW-8A (97.6)
MW-8H (95.4)
MW-8E (95.6)
MW-8B (100.5)
MW-8I (91.8)
MW-8F (88.6)
MW-8J (91.2)
MW-8D
MW-8C (91.5)
MW-8G (88.2)
B-8K
B-5
B-10
B-8
B-12
B-9
B-3
B-13
B-7
B-11
OB-1
OB-4
B-2
B-14
B-1
OB-2
OB-3
B-6
B-4
Former Office
Clay sewer pipe (removed 1/91)
Former dispensers
Former Service Area
Former underground storage tanks
Concrete retaining wall
Waste oi (remove
Apartm
100
98
96
94
92
90
88
N
0
20
40
SCALE IN FEET
Harding Lawson Associates
Engineering and Environmental Services
HLA
Potentiometric Surfa
Former Service Statio
500 Grand Avenue
Oakland, California
DRAWN
RHC
PROJECT NUMBER
10262.169
APPROVED
JSH


EXPLANATION
Monitoring well
Soil boring
Decommissioned monitoring well
Former observation well
(2.3) Benzene concentration in ppb. Samples collected 4/30/92
(ND) Benzene not detected (detection limit = 0.5 ppb)
10 Contour of concentrations in ppb, logarithmic contour interval, dashed where uncertain
Bench mark (HLA datum el. = 100 feet)
NOTE:
As of April 13, 1992, all above ground structures at the site were demolished. Underground gasoline storage tanks and associated piping were removed on April 14, 1992.
EUCLID AVENUE
GRAND AVENUE
Sidewalk
MW-8A (ND)
B-10
B-5
MW-8H (11)
B-8
B-12
MW-8E (20,000)
B-9
MW-8B (ND)
Former Office
B-3
10,000
1,000
100
10
1
Former dispensers
B-13
Clay sewer pipe (removed 9/90)
MW-8I (1,800)
B-7
OB-1
Former Service Area
B-11
MW-8F (ND)
OB-4
B-2
B-14
B-1
OB-2
MW-8J (2.3)
OB-3
B-6
Waste o (remove
MW-8D
B-4
Concrete retaining wall
MW-8C (ND)
Former underground storage tanks
N
MW-8G (1.7)
B-8K
0
20
40
SCALE IN FEET
Harding Lawson Associates
Engineering and Environmental Services
HLA
Benzene Concentrat
Former Service Statio
500 Grand Avenue
Oakland, California
DRAWN
RHC
PROJECT NUMBER
10262.169
APPROVED
JSH


EXPLANATION
Monitoring well
Soil boring
Decommissioned monitoring well
Former observation well
Bench mark (HLA datum el. = 100 feet)
(190) TPH as gasoline, concentration in ppb samples collected 4/30/92
(ND) TPH not detected (detection limits 50 ppb)
100 Contour of concentrations in ppb, logarithmic contour interval, dashed where uncertain
NOTE:
As of April 13, 1992, all above ground structures at the site were demolished. Underground gasoline storage tanks and associated piping were removed on April 14, 1992.
EUCLID AVENUE
GRAND AVENUE
Sidewalk
MW-8A (ND)
B-10
B-5
B-8
B-12
B-9
MW-8H (190)
MW-8E (41,000)
B-3
MW-8B (ND)
Former Office
Former dispensers
B-13
Clay sewer pipe (removed 1/91)
MW-8I (2,200)
10,000
1,000
100
10
B-7
OB-1
B-11
Former Service Area
OB-4
B-2
B-14
B-1
OB-2
MW-8J (ND)
OB-3
B-6
MW-8D
B-4
MW-8C (ND)
Concrete retaining wall
Former underground storage tanks
MW-8F (ND)
MW-8G (ND)
B-8K
N
0 20 40
SCALE IN FEET
Harding Lawson Associates
Engineering and Environmental Services
HLA
TPH as Gasoline Concentrations in Gro
Former Service Station
500 Grand Avenue
Oakland, California
DRAWN RHC
PROJECT NUMBER 10262.169
APPROVED JSH

EXPLANATION

- — — Approximate boundary of excavation at the time of tank removal (April 14 and 15, 1992)
- △ Soil sample (SS) from bottom of tank excavation (approximately 10 feet below grade)
- □ Soil sample (SS) from wall of tank excavation (5 to 10 feet below grade)
- ——— Approximate boundary of soil excavation (May 5 and 6, 1992)
- ○ Soil sample from pump island (PI) of fuel line (FL) prior to excavation (5 to 6 feet below grade)
- ▲ Soil sample (BE) from bottom of evcavation (4.5 to 9 feet below grade)
- ■ Soil sample (WS) from wall of excavation (5 to 7.5 feet below grade)
- (2.3) Total petroleum hydrocarbons as gasoline, in mg/kg (ppm)



N

0 20 40

SCALE IN FEET

Harding Lawson Associates
Engineering and Environmental Services

DRAWN SRG

JOB NUMBER 10262.169

APPROVED

Locations Sampled D
Excavation Operation
Former Service Station
500 Grand Avenue
Oakland, California

APPENDIX A

LABORATORY RESULTS OF GROUNDWATER ANALYSES

NATIONAL
ENVIRONMENTAL
TESTING, INC.

NET Pacific, Inc.
435 Tesconi Circle
Santa Rosa, CA 95401
Tel: (707) 526-7200
Fax: (707) 526-9623

HARDING ASSOC.
MAY 22 1992

Jeanna S. Hudson
Harding Lawson Associates
1355 Willow Way, Ste. 109
Concord, CA 94520

Date: 05/20/1992
NET Client Acct No: 1001
NET Pacific Job No: 92.2480
Received: 05/02/1992

Client Reference Information

TEXACO/500 Grand, Job: 2251.169.03

Sample analysis in support of the project referenced above has been completed and results are presented on following pages. Please refer to the enclosed "Key to Abbreviations" for definition of terms. Should you have questions regarding procedures or results, please feel welcome to contact Client Services.

Approved by:

Jules Skamarack
Laboratory Manager

JS:rct
Enclosure(s)

NET Pacific, Inc

Client No: 1001 Date: 05/20/1992
Client Name: Harding Lawson Associates
NET Job No: 92.2480 Page: 2

Ref: TEXACO/500 Grand, Job: 2251.169.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 8A 04/30/1992 121769	8B 04/30/1992 121770	Units
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			05-14-92	05-14-92	
DILUTION FACTOR*			1	1	
as Gasoline	5030	0.05	ND	ND	mg/L(ppm)
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			05-14-92	05-14-92	
DILUTION FACTOR*			1	1	
Benzene	8020	0.5	ND	ND	ug/L(ppb)
Ethylbenzene	8020	0.5	ND	ND	ug/L(ppb)
Toluene	8020	0.5	ND	ND	ug/L(ppb)
Xylenes (Total)	8020	0.5	ND	ND	ug/L(ppb)
SURROGATE RESULTS			--	--	
Bromofluorobenzene	5030		87	85	% Rec.
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			05-07-92	05-07-92	
DATE ANALYZED			05-14-92	05-14-92	
as Diesel	3510	0.05	ND	ND	mg/L(ppm)
as Motor Oil	3510	0.5	ND	ND	mg/L(ppm)

NET Pacific, Inc

Client No: 1001 Date: 05/20/1992
Client Name: Harding Lawson Associates
NET Job No: 92.2480 Page: 3

Ref: TEXACO/500 Grand, Job: 2251.169.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 8C 04/30/1992 121771	8E 04/30/1992 121772	Units
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			05-14-92	05-14-92	
DILUTION FACTOR*			1	100	
as Gasoline	5030	0.05	ND	41	mg/L(ppm)
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			05-14-92	05-14-92	
DILUTION FACTOR*			1	100	
Benzene	8020	0.5	ND	20,000	ug/L(ppb)
Ethylbenzene	8020	0.5	ND	500	ug/L(ppb)
Toluene	8020	0.5	ND	3,700	ug/L(ppb)
Xylenes (Total)	8020	0.5	ND	3,900	ug/L(ppb)
SURROGATE RESULTS			--	--	
Bromofluorobenzene	5030		87	99	% Rec.
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	20	
DATE EXTRACTED			05-07-92	05-07-92	
DATE ANALYZED			05-14-92	05-14-92	
as Diesel	3510	0.05	0.15	9.6	mg/L(ppm)
as Motor Oil	3510	0.5	ND	ND	mg/L(ppm)

NET Pacific, Inc

Client No: 1001 Date: 05/20/1992
Client Name: Harding Lawson Associates
NET Job No: 92.2480 Page: 4

Ref: TEXACO/500 Grand, Job: 2251.169.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 8F 04/30/1992 121773	8G 04/30/1992 121774	Units
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			05-14-92	05-14-92	
DILUTION FACTOR*			1	1	
as Gasoline	5030	0.05	ND	ND	mg/L(ppm)
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			05-14-92	05-14-92	
DILUTION FACTOR*			1	1	
Benzene	8020	0.5	ND	1.7	ug/L(ppb)
Ethylbenzene	8020	0.5	ND	ND	ug/L(ppb)
Toluene	8020	0.5	ND	ND	ug/L(ppb)
Xylenes (Total)	8020	0.5	ND	ND	ug/L(ppb)
SURROGATE RESULTS			--	--	
Bromofluorobenzene	5030		73	93	% Rec.
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			05-07-92	05-07-92	
DATE ANALYZED			05-14-92	05-14-92	
as Diesel	3510	0.05	ND	ND	mg/L(ppm)
as Motor Oil	3510	0.5	ND	ND	mg/L(ppm)

NET Pacific, Inc

Client No: 1001 Date: 05/20/1992
Client Name: Harding Lawson Associates
NET Job No: 92.2480 Page: 5

Ref: TEXACO/500 Grand, Job: 2251.169.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 8H 04/30/1992 121775	8I 04/30/1992 121776	Units
TPH (Gas/BTXE,Liquid)					
METHOD 5030 (GC,FID)			--	--	
DATE ANALYZED			05-14-92	05-14-92	
DILUTION FACTOR*			1	10	
as Gasoline	5030	0.05	0.19	2.2	mg/L(ppm)
METHOD 8020 (GC,Liquid)			--	--	
DATE ANALYZED			05-14-92	05-14-92	
DILUTION FACTOR*			1	1	
Benzene	8020	0.5	11	1,800	ug/L(ppb)
Ethylbenzene	8020	0.5	5.6	180	ug/L(ppb)
Toluene	8020	0.5	1.5	19	ug/L(ppb)
Xylenes (Total)	8020	0.5	3.6	25	ug/L(ppb)
SURROGATE RESULTS			--	--	
Bromofluorobenzene	5030		109	114	% Rec.
METHOD 3510 (GC,FID)					
DILUTION FACTOR*			1	1	
DATE EXTRACTED			05-07-92	05-07-92	
DATE ANALYZED			05-14-92	05-14-92	
as Diesel	3510	0.05	0.09	0.43	mg/L(ppm)
as Motor Oil	3510	0.5	ND	ND	mg/L(ppm)

NET Pacific, Inc

Client No: 1001 Date: 05/20/1992
Client Name: Harding Lawson Associates
NET Job No: 92.2480 Page: 6

Ref: TEXACO/500 Grand, Job: 2251.169.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results 8J 04/30/1992 121777	Units
TPH (Gas/BTXE,Liquid)				
METHOD 5030 (GC,FID)			--	
DATE ANALYZED			05-14-92	
DILUTION FACTOR*			1	
as Gasoline	5030	0.05	ND	mg/L(ppm)
METHOD 8020 (GC,Liquid)			--	
DATE ANALYZED			05-14-92	
DILUTION FACTOR*			1	
Benzene	8020	0.5	2.3	ug/L(ppb)
Ethylbenzene	8020	0.5	ND	ug/L(ppb)
Toluene	8020	0.5	ND	ug/L(ppb)
Xylenes (Total)	8020	0.5	ND	ug/L(ppb)
SURROGATE RESULTS			--	
Bromofluorobenzene	5030		90	% Rec.
METHOD 3510 (GC,FID)				
DILUTION FACTOR*			1	
DATE EXTRACTED			05-07-92	
DATE ANALYZED			05-14-92	
as Diesel	3510	0.05	ND	mg/L(ppm)
as Motor Oil	3510	0.5	ND	mg/L(ppm)

NET Pacific, Inc

Client No: 1001 Date: 05/20/1992
Client Name: Harding Lawson Associates
NET Job No: 92.2480 Page: 7

Ref: TEXACO/500 Grand, Job: 2251.169.03

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	108	ND	101	101	< 1
Benzene	0.5	ug/L	98	ND	108	96	12
Toluene	0.5	ug/L	88	ND	111	95	16
COMMENT: Blank Results were ND on other analytes tested.							
Gasoline	0.05	mg/L	108	ND	101	94	7.4
Benzene	0.5	ug/L	98	ND	105	102	2.5
Toluene	0.5	ug/L	88	ND	103	99	3.5
COMMENT: Blank Results were ND on other analytes tested.							

NET Pacific, Inc

KEY TO ABBREVIATIONS and METHOD REFERENCES

<	:	Less than; When appearing in results column indicates analyte not detected at the value following. This datum supercedes the listed Reporting Limit.
*	:	Reporting Limits are a function of the dilution factor for any given sample. To obtain the actual reporting limits for this sample, multiply the stated Reporting Limits by the dilution factor (but do not multiply reported values).
ICVS	:	Initial Calibration Verification Standard (External Standard).
mean	:	Average; sum of measurements divided by number of measurements.
mg/Kg (ppm)	:	Concentration in units of milligrams of analyte per kilogram of sample, wet-weight basis (parts per million).
mg/L	:	Concentration in units of milligrams of analyte per liter of sample.
mL/L/hr	:	Milliliters per liter per hour.
MPN/100 mL	:	Most probable number of bacteria per one hundred milliliters of sample.
N/A	:	Not applicable.
NA	:	Not analyzed.
ND	:	Not detected; the analyte concentration is less than applicable listed reporting limit.
NTU	:	Nephelometric turbidity units.
RPD	:	Relative percent difference, 100 [Value 1 - Value 2]/mean value.
SNA	:	Standard not available.
ug/Kg (ppb)	:	Concentration in units of micrograms of analyte per kilogram of sample, wet-weight basis (parts per billion).
ug/L	:	Concentration in units of micrograms of analyte per liter of sample.
umhos/cm	:	Micromhos per centimeter.

Method References

Methods 100 through 493: see "Methods for Chemical Analysis of Water & Wastes", U.S. EPA, 600/4-79-020, rev. 1983.

Methods 601 through 625: see "Guidelines Establishing Test Procedures for the Analysis of Pollutants" U.S. EPA, 40 CFR, Part 136, rev. 1988.

Methods 1000 through 9999: see "Test Methods for Evaluating Solid Waste", U.S. EPA SW-846, 3rd edition, 1986.

SM: see "Standard Methods for the Examination of Water & Wastewater, 17th Edition, APHA, 1989.

(6117)

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, California 94520
415/687-9660
Telecopy: 415/687-9673

CHAIN OF CUSTODY FORM

Lab: NET PACIFIC

Samplers: JAMES E. McCOY
GERTRUDE E. COLE

Job Number: 2251.169.03

Name/Location: TEXACO / 500 GRAND

Project Manager: JEANNA S. HUDSON

Recorder: J-E McCoy (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCl	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES	ANALYSIS REQUESTED: EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	TPH's BTEX	TPHd
23	X				3			3	92	BA		920430				NORMAL TURN AROUND TIME							X	X
23	X				2			3	92	BB		920430												
23	X				2			3	92	BC		920430												
23	X				2			3	92	BE		920430												
23	X				2			3	92	BF		920430												
23	X				2			3	92	BG		920430												
23	X				2			3	92	BH		920430												
23	X				2			3	92	BI		920430												
23	X				2			3	92	BJ		920430												

CUSTODY SEALED 5-1

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS

CHAIN OF CUSTODY RECORD

11:30

RELINQUISHED BY: (Signature) J-E McCoy	RECEIVED BY: (Signature)	DATE/TIME 5-1
RELINQUISHED BY: (Signature) 5-1 19:00	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME 5/2/92 1000
METHOD OF SHIPMENT NCS		

Laboratory Copy White · Project Office Copy Yellow · Field or Office Copy Pink

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APPENDIX B

LABORATORY RESULTS OF SOIL ANALYSES

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052001	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-1-8.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	1.1
Benzene	0.005	0.043
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	0.058

Qa/QC: Sample blank is none detected
Duplicate deviation is 1.2%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

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Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052002	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-2-8.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.011
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Lab Director

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2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052003	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-3-4.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected
Spike recovery is 85%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

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2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052004	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca WS-1-3.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Ronald G. Evans
Lab Director

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2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052005	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca WS-2-5.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	72
Benzene	0.005	1.1
Toluene	0.005	3.1
Xylenes	0.005	9.7
Ethylbenzene	0.005	2.2

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Lab Director

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2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052006	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca WS-3-7.5

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Lab Director

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Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052007	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca WS-4-5.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	1000
Benzene	0.005	22
Toluene	0.005	28
Xylenes	0.005	100
Ethylbenzene	0.005	30

Qa/QC: Sample blank is none detected
Duplicate deviation is 12%

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Ronald G. Evans
Lab Director

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2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052008	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca WS-5-5.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	480
Benzene	0.005	11
Toluene	0.005	23
Xylenes	0.005	42
Ethylbenzene	0.005	9.9

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Ronald G. Evans
Lab Director

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5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052009	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-4-4.5

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052010	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-5-7.5

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.018
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

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Lab Director

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5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052011	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-6-7.5

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

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5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052012	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-7-8.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052013	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-8-8.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	0.028
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052014	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-9-9.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

MOBILE CHEM LABS INC.

5021 Blum Road, Suite 3 • Martinez, CA 94553
Phone (415) 372-3700 • Fax (415) 372-6955

2251,223.03/011925

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, CA 94520
Attn: Jeanna Hudson
Project Manager

Date Sampled: 05-05-92
Date Received: 05-05-92
Date Reported: 05-05-92

Sample Number	Sample Description
V052015	Project # 2251,223.03 Texaco Station 500 Grand Ave. Oakland, Ca BE-10-9.0

ANALYSIS

	Detection Limit	Sample Results
	ppm	ppm
Total Petroleum Hydrocarbons as Gasoline	1.0	<1.0
Benzene	0.005	<0.005
Toluene	0.005	<0.005
Xylenes	0.005	<0.005
Ethylbenzene	0.005	<0.005

Qa/QC: Sample blank is none detected

Note: Analysis was performed using EPA methods 5030 and TPH LUFT with method 8020 used for BTX distinction.
(ppm) = (mg/kg)

MOBILE CHEM LABS

Ronald G. Evans
Lab Director

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, California 94520
415/687-9660
Telecopy: 415/687-9673

CHAIN OF CUSTODY FORM

Lab: Mobile Chem Lab

Samplers: Steve Hansen

Job Number: 225,223.03

Name/Location: Texaco - 500 Grand

Project Manager: Jeanna Hudson

Recorder: Steve B. Hansen (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	Ice	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES
			X					X	BE	6	7.5	92	05	05		
SO			X					X	BE	7	8.0	92	05	05		
SO			X					X	BE	8	8.0	92	05	05		
SO			X					X	BE	9	9.0	92	05	05		
SO			X					X	BE	10	9.0	92	05	05		

ANALYSIS REQUESTED	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	TPH as Jet
						X	X
						X	X
						X	X
						X	X

LAB NUMBER: ..	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
V	05	201				
		012				
		013				
		014				
		015				

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Steve B. Hansen	RECEIVED BY: (Signature) MCL	DATE/TIME 1800 5/5/92
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy Yel Project Office Copy Field or Office Copy Pi

6533

Harding Lawson Associates
1355 Willow Way, Suite 109
Concord, California 94520
415/687-9660
Telecopy: 415/687-9673

CHAIN OF CUSTODY FORM

Lab: Mobile Chem Lab

Samplers: Steve Hansen

Job Number: 2251 223.03

Name/Location: Texaco - 500 Grand

Project Manager: Jeanna Hudson

Recorder: Steven B. Hansen
(Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	Ice	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES
SO			X					X	BE	1	8	92	05	05		
SO			X					X	BE	2	8					
SO			X					X	BE	3	4					
SO			X					X	CS	1	3					
SO			X					X	WS	2	5					
SO			X					X	WS	3	7.5					
SO			X					X	WS	4	5					
SO			X					X	WS	5	5					
SO			X					X	BE	4	4.5					
SO			X					X	BE	5	7.5					

ANALYSIS REQUESTED	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	TPH w/ gas BTEX
							X
							X
							X
							X
							X
							X
							X
							X
							X

LAB NUMBER: Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
V052	001				
	002				
	003				
	004				
	005				
	006				
	007				
	008				
	009				
	010				

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) Steven B. Hansen	RECEIVED BY: (Signature) Mobile Chem Inc	DATE/TIME 5/5/92 1600
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DISPATCHED BY: (Signature) DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
METHOD OF SHIPMENT		

Laboratory Copy (White) Project Office Copy (Yellow) Field or Office Copy (Pink)

6533

DISTRIBUTION

4 copies: Texaco Refining and Marketing, Inc.
10 Universal City Plaza
Universal City, California 91608

Attention: Mr. Robert Robles

1 copy: Texaco Refining and Marketing, Inc.
108 Cutting Boulevard
Richmond, California 94804

Attention: Mr. R. R. Zielinski

JSH/SJO/mlw 033291P/R59

QUALITY CONTROL REVIEWER

Michael A. Sides
Environmental Engineer

Texaco Refining
and Marketing Inc
10 Universal City Plaza
Universal City CA 91608

September 18, 1992

SITE: 500 W.GRAND
OAKLAND, CA

Mr. Forrest Canutt
Bay Area Tank & Marine
4851 Sunrise Drive Ste. 104
Martinez CA 94553

Dear Forrest:

Enclosed is a Texaco S188 MISCELLANEOUS BID AND WORK CONTRACT bid proposal for the above site. Please fill in all areas identified with an X, sign, and witness this form. Return the original and all copies of the bid proposal to me by noon October 1, 1992. The documentation called for on the Scope Of Work shall accompany your final contract invoice.

When work contracts are awarded, Texaco expects the contractor to provide a personnel listing of his employees and his subcontractors employees together with OSHA required training certificates of completion for all listed employees.

If you have any questions or would like to discuss this bid further, call me at (818) 505 2476.

Very truly yours,

Bob Robles
Environmental Coordinator

RRZielinski-Richmond

pr

EXHIBIT "A"

September 17, 1992

500 W. GRAND AVE
OAKLAND, CA

Scope Of Work

This is a "Turn Key" contract. Contractor shall pay all fees, licenses, sub-contractor fees, etc. for a "Lump Sum Fee" to cover all work noted below. Contractor shall indicat the total amount of his contract bid at the, " For and in consideration", portion of the attached S188 contract.

Contractor shall furnish all material, labor, and equipment to remove and dispose of approximately 1,100 cubic yards of soil from the above site. These soils were excavated in April of this year. The contamination level for the soil samples, taken at the time of their removal, are indicated on the attached laboratory analyses and are made a part of this contract.

Contractor must furnish documentation verifying how each step of the work, outlined below, was performed to insure that proper disposal of these contaminated soils was attained. These verification documents must include, but not limited to, all laboratory analyses, bills of lading, TSD facility documentation for material received, and how contaminated soils are treated and/or disposed of.

The work consist of:

- Pre-screening and analyzing the soil pile to determine present levels of contamination an to obtain pre-acceptance from TSD facility. Isolate and treat on-site any hazardous soil found.
- Provide on-site mobil laboratory and sample as required to determine which soils require treatment.
- Load and transport soils to a properly licensed TSD facility.
- Treat those soils that were determined to be hazardous to levels that are no longer hazardous. Any required treatment shall comply with all county and state requirements. After on-site treatment samples again will be taken to insure the soils are no longer hazardous.
- Furnish a city approved traffic plan which covers the activities on-site, off-site, and with an established truck rout to the TAD facility.

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates (Concord)	Client Project ID:	#2251,223.03, Texaco, 500 Grand	Sampled:	Apr 15, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 15, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	4/15-16/92
Attention: Jeanna Hudson	First Sample #:	204-0605	Reported:	Apr 17, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0605	PI-1	2,100	11	60	32	180
204-0606	PI-2A	810	1.3	1.1	2.0	11
Detection Limits:		**100**	**0.50**	**0.50**	**0.50**	**0.50**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL
1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates (Concord)	Client Project ID:	#2251,223.03, Texaco, 500 Grand	Sampled:	Apr 15, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 15, 1992
Concord, CA 94520	Analysis Method:	SM 5520 E&F (Gravimetric)	Extracted:	Apr 16, 1992
Attention: Jeanna Hudson	First Sample #:	204-0605	Analyzed:	Apr 17, 1992
			Reported:	Apr 17, 1992

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
204-0605	PI-1	190
204-0606	PI-2	30
204-0607	PI-2A	6,900
204-0608	Fuel Line	36

Detection Limits:	**30**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates (Conc	Client Project ID:	#2251,223.03, Texaco, 500 Grand	Sampled:	Apr 15, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 15, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	4/15-16/92
Attention: Jeanna Hudson	First Sample #:	204-0608	Reported:	Apr 17, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0608	Fuel Line	390	0.92	2.9	3.6	21
Detection Limits:		**50**	**0.25**	**0.25**	**0.25**	**0.25**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

larding Lawson Associates	Client Project ID:	2251, 223. 03	Sampled:	Apr 14, 1992
355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 20, 1992
ttention: Jeanna S. Hudson	First Sample #:	204-0539	Reported:	Apr 27, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0539	SS 2	89	0.049	0.38	0.15	1.4
etection Limits:		**2.0**	**0.010**	**0.010**	**0.010**	**0.010**

w to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
alytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors quired additional sample dilution, detection limits for this sample have been raised.

EQUOIA ANALYTICAL

ott A. Chieffo
oject Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates	Client Project ID:	2251, 223. 03	Sampled:	Apr 14, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 20, 1992
Attention: Jeanna S. Hudson	First Sample #:	204-0541	Reported:	Apr 27, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0541	SS 4	130	0.14	0.21	0.17	1.1
Detection Limits:		**20**	**0.10**	**0.10**	**0.10**	**0.10**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL
1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates	Client Project ID:	2251, 223. 03	Sampled:	Apr 14, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 20, 1992
Attention: Jeanna S. Hudson	First Sample #:	204-0542	Reported:	Apr 27, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0542	SS 5	36	0.20	0.028	0.040	0.15
Detection Limits:		**5.0**	**0.025**	**0.025**	**0.025**	**0.025**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates (Concord)	Client Project ID:	#2251,223.03, Texaco, 500 Grand	Sampled: Apr 15, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received: Apr 15, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed: 4/15-16/92
Attention: Jeanna Hudson	First Sample #:	204-0606	Reported: Apr 17, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0606	PI-2	7.8	0.019	0.013	0.035	0.077
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

JSH
APR 1992

Harding Lawson Associates	Client Project ID:	2251, 223. 03	Sampled:	Apr 14, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 20, 1992
Attention: Jeanna S. Hudson	First Sample #:	204-0538	Reported:	Apr 27, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0538	SS 1	5.3	N.D.	0.038	0.016	0.12
204-0540	SS3	N.D.	N.D.	N.D.	N.D.	0.011
204-0543	SS 6	2.3	0.0057	N.D.	N.D.	0.017
204-0544	SS 7	N.D.	N.D.	N.D.	N.D.	N.D.
204-0545	SS 8	N.D.	N.D.	N.D.	N.D.	N.D.
204-0546	SS 9	N.D.	0.0069	N.D.	N.D.	N.D.
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

Texaco Refining
and Marketing Inc

10 Universal City Plaza
Universal City CA 91608

September 18, 1992

SITE: 500 W.GRAND
OAKLAND, CA

Mr. Forrest Canutt
Bay Area Tank & Marine
4851 Sunrise Drive Ste. 104
Martinez CA 94553

Dear Forrest:

Enclosed is a Texaco S188 MISCELLANEOUS BID AND WORK CONTRACT bid proposal for the above site. Please fill in all areas identified with an X, sign, and witness this form. Return the original and all copies of the bid proposal to me by noon October 1, 1992. The documentation called for on the Scope Of Work shall accompany your final contract invoice.

When work contracts are awarded, Texaco expects the contractor to provide a personnel listing of his employees and his subcontractors employees together with OSHA required training certificates of completion for all listed employees.

If you have any questions or would like to discuss this bid further, call me at (818) 505 2476.

Very truly yours,

Bob Robles
Environmental Coordinator

RRZielinski-Richmond

pr

EXHIBIT "A"

September 17, 1992

500 W. GRAND AVE
OAKLAND, CA

Scope Of Work

This is a "Turn Key" contract. Contractor shall pay all fees, licenses, sub-contractor fees, etc. for a "Lump Sum Fee" to cover all work noted below. Contractor shall indicat the total amount of his contract bid at the, " For and in consideration", portion of the attached S188 contract.

Contractor shall furnish all material, labor, and equipment to remove and dispose of approximately 1,100 cubic yards of soil from the above site. These soils were excavated in April of this year. The contamination level for the soil samples, taken at the time of their removal, are indicated on the attached laboratory analyses and are made a part of this contract.

Contractor must furnish documentation verifying how each step of the work, outlined below, was performed to insure that proper disposal of these contaminated soils was attained. These verification documents must include, but not limited to, all laboratory analyses, bills of lading, TSD facility documentation for material received, and how contaminated soils are treated and/or disposed of.

The work consist of:

- Pre-screening and analyzing the soil pile to determine present levels of contamination an to obtain pre-acceptance from TSD facility. Isolate and treat on-site any hazardous soil found.
- Provide on-site mobil laboratory and sample as required to determine which soils require treatment.
- Load and transport soils to a properly licensed TSD facility.
- Treat those soils that were determined to be hazardous to levels that are no longer hazardous. Any required treatment shall comply with all county and state requirements. After on-site treatment samples again will be taken to insure the soils are no longer hazardous.
- Furnish a city approved traffic plan which covers the activities on-site, off-site, and with an established truck rout to the TAD facility.

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates (Concord)	Client Project ID:	#2251,223.03, Texaco, 500 Grand	Sampled:	Apr 15, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 15, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	4/15-16/92
Attention: Jeanna Hudson	First Sample #:	204-0605	Reported:	Apr 17, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0605	PI-1	2,100	11	60	32	180
204-0606	PI-2A	810	1.3	1.1	2.0	11
Detection Limits:		**100**	**0.50**	**0.50**	**0.50**	**0.50**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates (Concord)	Client Project ID:	#2251,223.03, Texaco, 500 Grand	Sampled:	Apr 15, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 15, 1992
Concord, CA 94520	Analysis Method:	SM 5520 E&F (Gravimetric)	Extracted:	Apr 16, 1992
Attention: Jeanna Hudson	First Sample #:	204-0605	Analyzed:	Apr 17, 1992
			Reported:	Apr 17, 1992

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg (ppm)
204-0605	PI-1	190
204-0606	PI-2	30
204-0607	PI-2A	6,900
204-0608	Fuel Line	36

Detection Limits:	**30**

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates (Conc	Client Project ID:	#2251,223.03, Texaco, 500 Grand	Sampled:	Apr 15, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 15, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	4/15-16/92
Attention: Jeanna Hudson	First Sample #:	204-0608	Reported:	Apr 17, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0608	Fuel Line	390	0.62	2.9	3.6	21
Detection Limits:		**50**	**0.25**	**0.25**	**0.25**	**0.25**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

larding Lawson Associates	Client Project ID:	2251, 223. 03	Sampled:	Apr 14, 1992
355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 20, 1992
ttention: Jeanna S. Hudson	First Sample #:	204-0539	Reported:	Apr 27, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0539	SS 2	89	0.049	0.38	0.15	1.4
etection Limits:		**2.0**	**0.010**	**0.010**	**0.010**	**0.010**

w to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
alytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors quired additional sample dilution, detection limits for this sample have been raised.

EQUOIA ANALYTICAL

ott A. Chieffo
roject Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates	Client Project ID:	2251, 223. 03	Sampled:	Apr 14, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 20, 1992
Attention: Jeanna S. Hudson	First Sample #:	204-0541	Reported:	Apr 27, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0541	SS 4	130	0.14	0.21	0.17	1.1
Detection Limits:		**20**	**0.10**	**0.10**	**0.10**	**0.10**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL
1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates	Client Project ID:	2251, 223. 03	Sampled:	Apr 14, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	Apr 20, 1992
Attention: Jeanna S. Hudson	First Sample #:	204-0542	Reported:	Apr 27, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0542	SS 5	36	0.20	0.028	0.040	0.15
Detection Limits:		**5.0**	**0.025**	**0.025**	**0.025**	**0.025**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

SEQUOIA ANALYTICAL

Scott A. Chieffo
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Harding Lawson Associates (Concord)	Client Project ID:	#2251,223.03, Texaco, 500 Grand	Sampled:	Apr 15, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received:	Apr 15, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed:	4/15-16/92
Attention: Jeanna Hudson	First Sample #:	204-0606	Reported:	Apr 17, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0606	PI-2	7.8	0.019	0.013	0.035	0.077
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Belinda C. Vega
Laboratory Director

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

JSH
Apr 1992

Harding Lawson Associates	Client Project ID:	2251, 223. 03	Sampled: Apr 14, 1992
1355 Willow Way, Suite 109	Matrix Descript:	Soil	Received: Apr 14, 1992
Concord, CA 94520	Analysis Method:	EPA 5030/8015/8020	Analyzed: Apr 20, 1992
Attention: Jeanna S. Hudson	First Sample #:	204-0538	Reported: Apr 27, 1992

TOTAL PETROLEUM FUEL HYDROCARBONS with BTEX DISTINCTION (EPA 8015/8020)

Sample Number	Sample Description	Low/Medium B.P. Hydrocarbons mg/kg (ppm)	Benzene mg/kg (ppm)	Toluene mg/kg (ppm)	Ethyl Benzene mg/kg (ppm)	Xylenes mg/kg (ppm)
204-0538	SS 1	5.3	N.D.	0.038	0.016	0.12
204-0540	SS3	N.D.	N.D.	N.D.	N.D.	0.011
204-0543	SS 6	2.3	0.0057	N.D.	N.D.	0.017
204-0544	SS 7	N.D.	N.D.	N.D.	N.D.	N.D.
204-0545	SS 8	N.D.	N.D.	N.D.	N.D.	N.D.
204-0546	SS 9	N.D.	0.0069	N.D.	N.D.	N.D.
Detection Limits:		**1.0**	**0.0050**	**0.0050**	**0.0050**	**0.0050**

Low to Medium Boiling Point Hydrocarbons are quantitated against a gasoline standard.
Analytes reported as N.D. were not present above the stated limit of detection.

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Scott A. Chieffo
Project Manager