Texaco Refining
and Marketing Inc

108 Cutting Boulevard
Richmond CA 94804

December 26, 1991

Mr. Tom Callaghan
California Regional Water
Quality Control Board
San Francisco Bay Area Region
2101 Webster Street, Ste. 500
Oakland, CA 94612

Dear Mr. Callaghan:

Enclosed is a copy of our Quarterly Technical Report dated December 17, 1991 for our former Texaco Service Station located at 2200 East 12th Street in Oakland, California. This report covers the third quarter of 1991.

Please call me at (510) 236-1770 if you have any questions.

Best Regards,

R.R. Zielinski
Area Supervisor

RRZ:pap

Enclosure

cc: Mr. Barney Chan
Alameda County Environmental
Health Department
80 Swan Way, Room 200
Oakland, CA 94621

pr: RRP

HP

2200EAST12.TC4

A Report Prepared for

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

QUARTERLY TECHNICAL REPORT
THIRD QUARTER OF 1991
FORMER TEXACO STATION
2200 EAST 12TH STREET
OAKLAND, CALIFORNIA

HLA Job No. 2251,175.03
December 16, 1991
1991 Report No. 3

by

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Project Engineer

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510/687-9660

Location:

FORMER TEXACO SERVICE STATION
2200 East 12th Street
Oakland, California
Alameda County

Consultant: **Harding Lawson Associates**

HARDING LAWSON ASSOCIATES
1355 Willow Way, Suite 109
Concord, California 94520
Attention: Marlene K. Watson

QUARTERLY SUMMARY REPORT - THIRD QUARTER 1991

- Investigation began in May 1988 and initially consisted of a sensitive receptor study and a preliminary subsurface investigation. Five shallow monitoring wells have been installed on site; three wells were installed off site. Dissolved petroleum hydrocarbons were found in water from two on-site wells, downgradient of the tanks and a pump island. To evaluate the extent of petroleum hydrocarbons in the vadose zone, 20 shallow soil borings were drilled and sampled near the pump islands and underground tanks. Slug tests were performed in two on-site wells to evaluate hydraulic properties of shallow saturated material. The site assessment report was completed and sent to Texaco Refining and Marketing Inc. in the third quarter of 1989. The remediation plan was issued in the second quarter of 1990, approved by the Alameda County Environmental Health Department in the third quarter of 1990, and implemented in the fourth quarter of 1990. Soils with hydrocarbon concentrations at and above 100 parts per million (ppm) were excavated between the sidewalk and the canopy covering the western pump islands. Following on-site treatment, the excavated soils were removed from the site to Redwood Landfill in Novato. MW-9E was abandoned, and MW-9I was installed in approximately the same location.

- During the third quarter of 1991:

  1. Water from the five on-site and three off-site monitoring wells was sampled and analyzed for BTEX and TPH as gasoline.

  2. Exxon removed and replaced the underground storage tanks and product lines. Soil samples were obtained from the excavation for laboratory analysis.

- During the fourth quarter of 1991, HLA plans the following:

  1. Continue with quarterly sampling and chemical analyses of groundwater from all monitoring wells.

- Benzene was found in groundwater from two on-site downgradient wells (MW-18B and MW-18I) and ethylbenzene was detected in groundwater from MW-18B. The extent of dissolved hydrocarbons in the shallow groundwater has been well evaluated.

- Remediation of soil was completed in the fourth quarter of 1990, and quarterly monitoring of groundwater will continue through the year 1991 to determine effectiveness of remediation.

INTRODUCTION

This quarterly technical report (QTR) presents the results of site investigation and remediation activities conducted by Harding Lawson Associates (HLA) at a service station site formerly owned by Texaco Refining and Marketing Inc. The station, at 2200 East 12th Street, Oakland, California (Plate 1), is currently owned and operated by Exxon Company U.S.A. During the third quarter, HLA performed sampling and analyses of groundwater from monitoring wells, and Exxon Company, U.S.A. (Exxon) removed the existing underground storage tanks (USTs), as well as the fuel dispensers and associated piping at the site. HLA was present to observe the removal of existing tanks and obtained confirmation samples on behalf of Texaco. This QTR summarizes HLA's work at the site, ongoing since May 1988, and presents results of the recent quarter's work, including observations, soil sampling, and analyses for the UST removal.

SITE DESCRIPTION

The site is on the southeast corner of the intersection of East 12th Street and 22nd Avenue; the surrounding area is occupied by commercial/retail businesses, including a Shell Oil Company (Shell) service station immediately across 22nd Avenue (Plate 2). The site is bordered on the west by East 12th Street, on the north by 22nd Avenue, and on the east by a building occupied by a mattress manufacturer. Adjacent to the site on the

south is a parcel owned by M.C.B. Industries and currently used for automobile storage.

The topography is relatively flat, sloping gently southwest toward East 12th Street and the Brooklyn Basin Tidal Canal. The site's surface is approximately 20 feet above Mean Sea Level, and drainage is toward East 12th Street. This area has been extensively developed, and surface runoff is mainly controlled by the municipal storm sewer system.

At the station, leaded and unleaded gasoline are dispensed and automotive repair services are provided. Structures include a building, three fuel pump islands, one underground waste oil tank, and three underground fuel storage tanks (Plate 3).

HYDROGEOLOGIC SETTING

The East Bay Plain is divided into seven groundwater subareas, defined by the California Department of Water Resources (DWR) on the basis of areal differences (i.e., faults and geologic conditions). The site lies within the Oakland Upland and Alluvial Plain subarea. The groundwater reservoir is made up of the Alameda and Temescal Formations, along with the Merritt Sand, with an aggregate thickness of more than 1,100 feet. Regionally, groundwater flows west-southwest, toward San Francisco Bay.

Most uses of groundwater in the East Bay Plain are related to irrigation or industrial needs; the majority of domestic water

is supplied by the East Bay Municipal Utility District (EBMUD) from surface sources.

Soils at the site, to the maximum depth explored (20 feet), generally consist of unconsolidated, stiff, sandy clay interbedded with silty sand and gravel lenses. During HLA's investigation, groundwater was initially encountered between 11 and 13 feet below grade and stabilized in the wells at approximately 6.5 feet below grade.

The tops of well casings were surveyed relative to an arbitrary datum with an assumed elevation of 100.0 feet. The HLA datum is located at the western end of the dispenser island nearest the underground storage tanks (USTs [Plate 3]). Water level measurements and survey data are presented in Table 1. The general direction of groundwater flow is to the west-northwest, with a gradient of about 0.007 foot per foot across the site, as shown on the Groundwater Surface Map, Plate 4. Estimates of the hydraulic conductivity of the slightly confined shallow soils range from 0.4 to 0.5 foot per day.

SUMMARY OF PREVIOUS WORK

Previous Reports

Since May 1988, HLA has investigated soil and groundwater conditions at this site. To date, the investigation and remediation plan have been presented in the following reports:

1. Sensitive Receptor Study May 24, 1988

2.	Subsurface Investigation	July 20, 1988
3.	Environmental Assessment	September 19, 1989
4.	Soil and Groundwater Remediation Plan	May 11, 1990

Previous Field Operations

During previous quarters, HLA completed the following field operations:

- Conducted a soil-gas survey on site and in city streets near the site. Probe locations are shown on Plate 5 and soil-gas survey results are presented in Table 2.
- Drilled and sampled 20 shallow soil borings (SB-1 through SB-20); locations are shown on Plate 6.
- Drilled, constructed, developed, and sampled five on-site monitoring wells (MW-9A through MW-9E) and three off-site wells (MW-9F through MW-9H); locations are shown on Plate 3.
- Obtained chemical analyses on soil and water samples to determine concentrations of petroleum hydrocarbons; results of analyses are presented in Tables 3 and 4, respectively.
- Conducted slug tests in MW-9B and MW-9E to estimate hydraulic conductivity and transmissivity values for the shallow aquifer; slug test results are presented in Table 5.
- Replaced Emco-Wheaton traffic boxes in public right-of-way with Phoenix Iron Works Model P-2001 traffic boxes, as specified by the City of Oakland.
- Implemented the remediation plan which consisted of excavating hydrocarbon-bearing soils with concentrations greater than 100 parts per million (ppm) from the vadose zone in the vicinity of MW-9E, and quarterly monitoring of the groundwater for dissolved hydrocarbons (Plate 3).
- MW-9E (located inside the remediation excavation boundaries) was abandoned and a new monitoring well (MW-9I) was installed in approximately the same location after backfilling the excavation (Plate 3).

SUMMARY OF FINDINGS

Vadose-zone Soil Condition

The area where detectable concentrations of petroleum products were found in vadose-zone soils and soil gas is near the pump islands on the west side of the station. Soil samples were collected from 11 borings (MW-9E, SB-4, and SB-12 through SB-20) to delineate the extent of hydrocarbons in the vadose zone around the pump island. Results of chemical analyses on soil samples from these borings are presented in Table 3.

Only two samples contained total petroleum hydrocarbons (TPH) in concentrations exceeding 100 ppm. These samples were from borings MW-9E and SB-4, on the west and east sides, respectively, of the pump island. The soil sample from a depth of 5.5 feet in MW-9E represents the highest hydrocarbon concentration detected in our investigation (1,[illegible] ppm TPH). We concluded that MW-9E and SB-4 are in two isolated occurrences of vadose-zone soil with TPH concentrations above 100 ppm. Correspondingly high concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) and TPH were detected in soil-gas samples from Probe Locations SG-01 and SG-03.

In May 1990, HLA submitted a Soil and Groundwater Remediation Plan. The plan was approved by Alameda County Environmental Health Hazardous Materials Division on October 22, 1990. Implementation of the remediation plan consisted of excavating hydrocarbon-bearing soils with concentrations greater than 100 ppm from the vadose zone in the vicinity of MW-9E. Soil

samples were taken from the walls and bottom of the excavation to confirm that hydrocarbon concentrations in the remaining soil were below 100 ppm (Table 6). The location of the soil excavation is shown on Plate 3. The excavated soils were systematically spread three feet thick over the space available behind the station office and garage, in compliance with Bay Area Air Quality Management District Regulation 8, Rule 40, and agitated periodically with mechanical equipment. The treated soils were transported from the site to the Redwood Landfill in Novato in December 1990.

Groundwater Condition

Shallow groundwater in the site vicinity contains detectable quantities of BTEX and TPH as gasoline, as shown in Table 4. The extent of organic hydrocarbons in the groundwater is well delineated and the plume (as delineated by January 1991 chemical analyses) appears to be extending downgradient, toward utility lines in East 12th Street and 22nd Avenue. The bottom of the storm drain in East 12th Street is approximately 8.5 feet below grade, approximately 2 feet below the water table.

The lateral limits of the plume are delineated by MW-9A, MW-9C, MW-9D, MW-9F, MW-9G and MW-9H; samples from these wells indicated no detectable hydrocarbon concentrations except for an isolated occurrence in April 1991 in MW-9C. Samples from MW-9B, MW-9E, and MW-9I have exhibited benzene concentrations in groundwater that exceeded Maximum Contaminant Levels (MCLs). No

other constituent analyzed in these two samples exceeded the MCLs or Drinking Water Action Levels (DWALs).*

WATER SAMPLING PERFORMED DURING THE THIRD QUARTER OF 1991

Work Performed

HLA continued the one year quarterly monitoring program scheduled to follow soil remediation. On July 29, 1991, five on-site and three off-site monitoring wells were purged by removing three casing volumes of water or until the well was dry using a 12-volt pump. Groundwater temperature, pH, and conductivity were monitored prior to sampling. Groundwater samples were collected in a clean stainless steel bailer and decanted into 40-ml volatile organic analysis (VOA) vials. The samples were then transported, under chain-of-custody, to National Environmental Testing, Inc. in Santa Rosa, California, where they were analyzed for BTEX (EPA Test Method 602) and TPH as gasoline (EPA Test Method GC FID/5030). The laboratory analysis reports are presented in Appendix A and summarized in Table 4. The results of the analyses are discussed below.

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* The California Department of Health Services issued an action list for chemical contaminants of drinking water. Acceptable drinking water concentrations are specified for four gasoline constituents: benzene, toluene, ethylbenzene, and xylenes (BTEX). MCLs are drinking water standards enforced by law under California Code of Regulations, Title 22. DWALs are recommended levels, but are not enforced by law.

Discussion of Test Results

Benzene was detected in MW-9B at a concentration of 1.6 parts per billion (ppb). TPH as gasoline was detected in groundwater from MW-9B and MW-9I in concentrations of 100 ppb and 150 ppb, respectively. Petroleum hydrocarbons were not detected in any of the other monitoring wells.

Relatively high concentrations of BTEX and TPH in MW-9B, MW-9C, and MW-9I, which were observed in the previous quarter's sampling, were not observed in this quarter's water samples. The groundwater table at the time of sampling in the second quarter was the highest observed since October 1989, and the water table dropped back to lower levels at the time of the third quarter sampling. The high water table during the second quarter may have released hydrocarbons entrapped in the capillary fringe zone in the soils.

UNDERGROUND STORAGE TANK REMOVAL

Background

Prior to UST removal, Exxon retained Alton Geoscience (AG) to conduct a Preliminary Soil Assessment, the results of which were presented in a report dated August 26, 1991. During that investigation, AG drilled 10 soil borings to depths ranging from approximately 11.5 to 16.5 feet below grade. None of the 10 soil samples collected exhibited greater than 8 mg/kg TPH as gasoline or 0.16 mg/kg benzene.

There were two existing "wells" within the excavation area. The wells indicated "gas test" on the top, and appeared to be abandoned and filled with mud. The origin of these wells is not currently known. Both wells were within zones of excavation. Locations are shown on Plate 7.

UST Removal

Exxon coordinated removal of the existing USTs, as well as the fuel dispensers, and associated piping at the project site. HLA was present to observe the removal of the three existing tanks, and excavations for the USTs, pump islands, and product lines. Confirmation soil samples were obtained on behalf of Texaco.

On September 4, 1991, Petroleum Engineers, Inc. (PEI), of Santa Rosa, California, removed three USTs. The single-walled fiberglass tanks (two 10,000- and one 7,500-gallon capacity) previously held unleaded, super unleaded, and regular gasoline. Mssrs. Barney Chan and Brian P. Oliva of the Alameda County Health Agency (ACHA) were present during tank removal. Ms. Anita Y. F. Yan of Woodward-Clyde Consultants obtained samples on behalf of Exxon.

The USTs appeared to be in sound condition. HLA observed no holes or ruptures in the USTS. During UST removal, an HLA field geologist screened excavated soils with a photoionization detector (PID). The PID is able to detect the presence of some

volatile organic compounds (VOCs). Soil exhibiting evidence of VOCs was noted.

PEI extended the UST excavation laterally to the limits shown on Plate 7, shored the walls, and installed three 12,000-gallon double walled fiberglass USTs.

The dispenser pumps and associated underground piping were removed during the weeks ending September 6 and September 13, 1991.

Excavation Soil Samples

On September 4, HLA collected six soil samples from the UST excavation sidewalls. HLA also collected two samples near each of the fuel dispenser islands. On September 10 and 11, additional confirmation samples were obtained from the UST excavation and near the fuel dispenser islands. Sampling locations are shown on Plate 7 and approximate depths are given in Table 7.

Soil samples were sealed in stainless steel tubes by covering the ends with aluminum foil, plastic end caps, and Teflon tape. The samples were stored in a cooled ice chest and delivered under chain-of-custody procedures to National Environmental Testing, Inc., a state-certified laboratory in Santa Rosa, California.

Chemical Analyses of Soil

All soil samples were analyzed for TPH as gasoline, diesel fuel, and motor oil, and for BTEX, in accordance with respective

EPA Test Methods GC FID/5030, GC FID/3550, and Method 8020. Results of chemical analyses are presented in Table 7. Copies of laboratory reports and chain-of-custody documents are presented in Appendix B.

Results of Chemical Analyses

Soil samples from the fuel tank excavation sidewall exhibited relatively low to nondetectable concentrations of BTEX and TPH except for sample S-6 which contained 140 ppm TPH as gasoline and 14 ppm TPH as diesel. The excavation limits were extended both laterally and vertically beyond this sample location and confirmation of reduced hydrocarbon concentrations was obtained in sample S-13.

Soil from the fuel line trenches exhibited concentrations of TPH as gasoline or diesel fuel in excess of 100 ppm near the two northernmost pump islands. Sample S-9 contained 110 ppm TPH as gasoline and 48 ppm TPH as diesel. Sample S-11 contained 130 ppm as gasoline and 40 ppm as diesel. It was not possible to overexcavate in these locations due to the potential for undermining the footings for the existing canopy poles. Isolated samples S-16 and S-18 confirmed that the relatively high concentrations did not extend into deeper soil strata.

ANTICIPATED ACTIVITIES FOR THE FOURTH QUARTER OF 1991

HLA plans to continue the quarterly monitoring program by purging and sampling each of the eight monitoring wells on- and

off-site. The groundwater samples will be analyzed for BTEX and TPH as gasoline. Chemical test results will be presented in the fourth quarter 1991 Quarterly Technical Report.

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Table 1. Water Level Measurements and Survey Data
2200 East 12th Street
Oakland, California

Well No.	Date	Top of Casing Elevation[1] (feet)	Depth to Groundwater (feet)	Groundwater Surface Elevation[2] (feet)	Incremental Water Elevation Change[3] (feet)	Total Water Elevation Change Since 10/12/89[4] (feet)
MW-9A	10/12/89	100.07	7.25	92.82	--	--
	09/20/90		--	--	--	--
	10/19/90		7.23	92.84	+0.02	+0.02
	01/11/91		6.96	93.11	+0.27	+0.29
	04/30/91		6.74	93.33	+0.22	+0.51
	07/29/91		7.22	92.85	-0.48	+0.03
MW-9B	10/12/89	98.41	6.14	92.27	--	--
	09/20/90		6.28	92.13	-0.14	-0.14
	10/19/90		6.21	92.20	+0.07	-0.07
	01/11/91		6.21	92.20	0	-0.07
	04/30/91		5.74	92.67	+0.47	+0.40
	07/29/91		6.23	92.18	-0.49	-0.09
MW-9C	10/12/89	99.73	6.99	92.74	--	--
	09/20/90		--	--	--	--
	10/19/90		6.96	92.77	+0.03	+0.03
	01/11/91		6.60	93.13	+0.36	+0.39
	04/30/91		6.32	93.41	+0.28	+0.67
	07/29/91		6.92	92.81	-0.60	+0.07
MW-9D	10/12/89	101.46	8.40	93.06	--	--
	09/20/90		8.47	92.99	-0.07	-0.07
	10/19/90		8.43	93.03	+0.04	-0.03
	01/11/91		7.97	93.49	+0.46	+0.43
	04/30/91*		--	--	--	--
	07/29/91		8.35	93.11	-0.38	+0.05
MW-9E	10/12/89	98.41	5.70	92.71	--	--
	09/20/90		5.84	92.57	-0.14	-0.14
	10/19/90		5.78	92.63	+0.06	-0.08
	11/02/90	Well Abandoned				
MW-9F	10/12/89	96.96	6.07	90.89	--	--
	09/20/90		5.97	90.99	+0.10	+0.10
	10/19/90		5.94	91.02	+0.03	+0.13
	01/11/91		5.72	91.24	+0.22	+0.35
	04/30/91		5.74	91.22	+0.20	+0.33
	07/29/91		6.02	90.94	-0.28	+0.05
MW-9G	10/12/89	98.51	6.01	92.50	--	--
	09/20/90		6.03	92.48	-0.02	-0.02
	10/19/90		5.92	92.59	+0.11	+0.09
	01/11/91		5.72	92.79	+0.20	+0.29
	04/30/91		5.74	93.04	+0.25	+0.54
	07/29/91		5.97	92.54	-0.50	+0.04

Table 1. (continued)

Well No.	Date	Top of Casing Elevation[1] (feet)	Depth to Groundwater (feet)	Groundwater Surface Elevation[2] (feet)	Incremental Water Elevation Change[3] (feet)	Total Water Elevation Change Since 10/12/89[4] (feet)
MW-9H	10/12/89	97.14	8.35	88.79	--	--
	09/20/90		8.25	88.89	+0.10	+0.10
	10/19/90		8.17	88.97	+0.08	+0.18
	01/11/91		7.55	89.59	+0.62	+0.80
	04/30/91		8.02	89.12	+0.47	+0.33
	07/29/91		8.22	88.92	-0.20	+0.13
MW-9I	11/15/90	98.66	6.01	92.65	--	--
	01/11/91		5.80	92.86	+0.21	--
	04/30/91		5.45	93.21	+0.35	--
	07/29/91		6.07	92.59	-0.62	--

Notes:

1 Elevation relative to HLA temporary benchmark located at the western corner of the dispenser island nearest the underground storage tanks, with an arbitrary elevation of 100.0 feet (see Plate 3).

2 Groundwater surface elevation = top of casing elevation - depth to water.

3 Incremental groundwater elevation change = groundwater elevation - previous groundwater elevation.

4 Total groundwater elevation change = groundwater elevation - groundwater elevation on 10/12/89.

* Access to well blocked by a vehicle that could not be moved.

Table 2. Results of Soil-gas Survey
2200 East 12th Street
Oakland, California

Conducted on September 20, 1988
Concentrations in micrograms per liter (µg/L)

Sample	Depth (ft)	Benzene	Ethyl-benzene	Toluene	Xylenes	Total Petroleum Hydrocarbons
Air	N/A	<0.8	<0.8	<0.7	<0.8	<0.8
SG-01	5.0	320,000	620	1	2,200	700,000
WS-02	5.0	12,000	<80	<73	<80	25,000
SG-03	4.0	32,000	<8	<28,000	800	96,000
SG-04	5.0	<0.8	<0.8	<0.7	<0.8	<0.8
MW-9A	6.0	<76	<80	<73	<80	<76
SG-05	2.0	<0.8	<0.8	<0.7	<0.8	<0.8
SG-06	--	--	--	--	--	--
SG-07	--	--	--	--	--	--
SG-08	5.0	<0.8	<0.8	<0.7	<0.8	<0.8
SG-09	6.0	<0.8	<0.8	<0.7	<0.8	<0.8
WS-10	6.0	<76	<80	<73	<80	<76
SG-11	4.0	<0.8	<0.8	<0.7	<0.8	<0.8
SG-12	5.0	<0.8	<0.8	<0.7	<0.8	<0.8
SG-13	5.0	<0.8	<0.8	<0.7	<0.8	23
Air	N/A	<0.7	<0.8	<0.8	<0.8	<0.7

-- = Not able to obtain sample
N/A = Not applicable
Air = ambient air sample

Table 3. Results of Soil Analyses from Soil Borings
2200 East 12th Street
Oakland, California

Concentrations in milligrams per kilogram (mg/kg)

Sample Number	Depth (ft)	Benzene[1]	Ethyl-benzene[2]	Toluene[3]	Xylenes[3]	TPH as Gasoline[4]	TPH as Diesel[4]
SB-1	4.8	0.30	ND	0.2	ND	ND	NT
B-9-1	5.0	ND	ND	ND	ND	ND	NT
B-9-1	9.0	ND	ND	ND	ND	ND	NT
B-9-1	12.0	ND	ND	ND	ND	ND	NT
B-9-2	5.0	ND	ND	ND	ND	ND	NT
B-9-2	9.0	ND	ND	ND	ND	ND	NT
B-9-2	10.5	ND	ND	ND	ND	ND	NT
B-9-2	13.0	ND	ND	ND	ND	ND	NT
SB-4	4.0	1.0	2.3	0.9	5.8	160	NT
SB-4	9.0	ND	ND	ND	ND	ND	NT
SB-5	4.0	0.33	ND	ND	ND	ND	NT
SB-5	9.0	ND	ND	ND	ND	ND	NT
SB-6	5.0	ND	ND	ND	ND	ND	NT
SB-6	5.5	ND	ND	ND	ND	ND	NT
SB-7	4.0	ND	ND	ND	ND	ND	NT
SB-7	8.5	ND	ND	ND	ND	ND	NT
SB-8	5.5	0.43	ND	ND	ND	ND	NT
SB-8	9.0	ND	ND	ND	ND	ND	NT
SB-9	4.0	ND	ND	ND	ND	ND	NT
SB-9	9.0	ND	0.4	ND	1.1	39	NT
SB10-1	5.0	ND	ND	ND	ND	ND	NT
SB10-2	10.0	ND	ND	ND	ND	ND	NT
SB11-1	5.0	ND	ND	0.1	ND	ND	NT
SB11-2	10.0	ND	ND	ND	ND	ND	NT
SB-12	3.5	0.09	0.07	0.2	0.09	11 (1)	NT
SB-13	4.0	ND	ND	0.1	ND	1.7 (1)	NT
SB-14	4.5	ND	ND	ND	ND	3.5 (1)	NT
SB-15	3.5	0.07	ND	ND	ND	6.3 (1)	NT
SB-16	4.5	0.21	0.08	ND	ND	9.0 (1)	NT
SB-17	5.0	0.093 (.01)	0.139 (.01)	0.043 (.01)	ND (.01)	42 (2)	NT
SB-18	5.0	ND (.01)	0.021 (.01)	0.245 (.01)	0.015 (.01)	5 (2)	NT
SB-19	5.0	ND (.01)	0.022 (.01)	0.078 (.01)	ND (.01)	6 (2)	NT
SB-20	5.0	0.035 (.01)	0.017 (.01)	0.038 (.01)	ND (.01)	7 (2)	NT
MW-9D	6.0	ND	ND	ND	ND	ND	NT
MW-9D	10.5	ND	ND	ND	ND	ND	NT
MW-9E	5.5	ND	18	ND	ND	1,900	NT
MW-9E	9.0	ND	ND	ND	ND	ND	NT
MW-9G	4.0	ND	ND	0.2	ND	ND	NT
MW-9I	15.0	ND	ND (0.05)	ND (0.05)	ND (0.05)	ND (1)	ND

abandoned

ND = Not detected. NT = Not tested.

1 Detection limit 0.05 mg/kg except as noted in parentheses.
2 Detection limit 0.2 mg/kg except as noted in parentheses.
3 Detection limit 0.1 mg/kg except as noted in parentheses.
4 Detection limit 10 mg/kg except as noted in parentheses.

Table 4. Results of Groundwater Analyses
2200 East 12th Street
Oakland, California

Concentrations in micrograms per liter (µg/L)

Well Number	Date Sampled	EPA TEST METHOD 602 Benzene	Ethyl-benzene	Toluene	Xylenes	TPH as (Gasoline)
MW-9A	06/13/88	ND	ND	ND	ND	NT
	10/24/88	ND	ND	ND	ND	NT
	10/13/89	ND	ND[1]	ND[1]	ND[2]	NT
	10/19/90	ND	ND[1]	ND[1]	ND[1]	ND
	01/11/91	ND	ND[1]	ND[1]	ND[1]	ND
	04/30/91	ND	ND[1]	ND[1]	ND[1]	ND
	07/29/91	ND	ND[1]	ND[1]	ND[1]	ND
MW-9B	06/13/88	350	66	7.8	160	NT
	10/24/88	84	3.1	ND	3.2	NT
	10/13/89	4.1	ND[1]	ND[1]	ND[2]	NT
	10/19/90	27	2.3	ND[1]	ND[1]	62
	01/11/91	4.3	1.1	ND[1]	1.0	100
	04/30/91	68	3.9	1.0	ND[1]	170
	07/29/91	1.6	ND[1]	ND[1]	ND[1]	100
MW-9C	06/13/88	ND	ND	ND	ND	NT
	10/28/88	ND	ND	ND	ND	NT
	10/13/89	ND	ND[1]	ND[1]	ND[2]	NT
	10/19/90	ND	ND[1]	ND[1]	ND[1]	ND
	01/11/91	ND	ND[1]	ND[1]	ND[1]	ND
	04/30/91	100	ND[1]	1.6	ND[1]	240
	07/29/91	ND	ND[1]	ND[1]	ND[1]	ND
MW-9D	10/24/88	ND	ND	ND	ND	NT
	10/13/89	ND	ND[1]	ND[1]	ND[2]	NT
	10/19/90	ND	ND[1]	ND[1]	ND[1]	ND
	01/11/91	ND	ND[1]	ND[1]	ND[1]	ND
	07/29/91	ND	ND[1]	ND[1]	ND[1]	ND
MW-9E	10/24/88	1.3	ND	ND	ND	NT
	10/13/89	15	2.1[1]	ND[1]	ND[2]	NT
	10/19/90	4.0	0.9[1]	ND[1]	ND[1]	ND
	11/02/90	WELL ABANDONED				
MW-9F	12/06/88	ND	ND	ND	ND	NT
	10/13/89	ND	ND[1]	ND[1]	ND[2]	NT
	10/19/90	ND	ND[1]	ND[1]	ND[1]	ND
	01/11/91	ND	ND[1]	ND[1]	ND[1]	ND
	04/30/91	ND	ND[1]	ND[1]	ND[1]	ND
	07/29/91	ND	ND[1]	ND[1]	ND[1]	ND

Table 4. (continued)

Well Number	Date Sampled	EPA TEST METHOD 602 Benzene	Ethyl-benzene	Toluene	Xylenes	TPH as (Gasoline)
MW-9G	12/06/88	0.8	ND	ND	ND	NT
	10/13/89	ND	ND[1]	ND[1]	ND[2]	NT
	10/19/90	ND	ND[1]	ND[1]	ND[1]	ND
	01/11/91	ND	ND[1]	ND[1]	ND[1]	ND
	04/30/91	ND	ND[1]	ND[1]	ND[1]	ND
	07/29/91	ND	ND[1]	ND[1]	ND[1]	ND
MW-9H	12/06/88	ND	ND	ND	ND	NT
	10/13/89	ND	ND[1]	ND[1]	ND[2]	NT
	10/19/90	ND	ND[1]	ND[1]	ND[1]	ND
	01/11/91	ND	ND[1]	ND[1]	ND[1]	ND
	04/30/91	ND	ND[1]	ND[1]	0.5	ND
	07/29/91	ND	ND[1]	ND[1]	ND[1]	ND
MW-9I	11/15/90	4.0	1.1[1]	1.2[1]	2.2[1]	55
	01/11/91	6.1	ND[1]	ND[1]	ND[1]	ND
	04/30/91	100	4.2	3.5	4.4	460
	07/29/91	ND	ND[1]	ND[1]	ND[1]	150
Detection limits		0.5	2.0	1.0	1.0	50

ND = Not detected NT = Not Tested

[1] Detection limit = 0.5

[2] Detection limit = 3.0

Table 5. Slug Test Results
2200 East 12th Street
Oakland, California

Well Number	Lithology of Tested Zone	Thickness of Zone (feet)	Estimated Hydraulic Conductivity of Zone (feet/day)
MW-9B	Clayey sand	2.5	0.42
MW-9E	Sandy clay with gravel	13.0	0.52

Table 6. Results of Soil Analysis from Remediation Excavation
2200 East 12th Street
Oakland, California

Concentrations in milligrams per kilogram (mg/kg)

Sample Number	Depth (ft)	Benzene[1]	Ethyl-benzene[1]	Toluene[1]	Xylenes[1]	TPH as Gasoline[2]	TPH as Diesel[2]
S-1	5-W	0.66	0.77	0.038	0.076	9.5	1.4
S-2	5-W	0.32	1.5	0.15	0.17	40	6.1
S-3	6-W	0.49	0.15	0.028	0.16	2.3	ND
S-4	5-W	1.2	1.7	0.056	0.052	16	1.3
S-5	5-W	2.8	12	1.5	ND	290*	22
S-6	6-W	0.28	0.52	0.028	0.21	7.7	10
S-7	7-B	0.30	0.68	0.070	0.36	17	1.4
S-8	7-W	0.068	0.20	0.19	0.27	52	2.2

W = Sample taken from wall of excavation
B = Sample taken from base of excavation
ND = Not detected.
1 Detection Limit 0.0050 mg/kg.
2 Detection Limit 1.0 mg/kg.
* Excavation extended beyond this sample both horizontally and vertically. Hydrocarbon concentrations less than 100 ppm are confirmed in samples S-7 and S-8

Table 7. Results of Soil Analyses from Tank Pull Excavation
2200 East 12th Street
Oakland, California

Concentrations in milligrams per kilogram (mg/kg)

Sample Number	Date	Depth (ft)	Benzene[1]	Ethyl-benzene[1]	Toluene[1]	Xylenes[1]	TPH as Gasoline[2]	TPH as Diesel[2]	TPH as Motor Oil[3]
S-1	09/04/91	7 - S	0.062	0.024	0.009	0.020	9.1	4.9**	ND
S-2	09/04/91	8 - S	ND	ND	ND	ND	ND	ND	ND
S-3	09/04/91	8 - S	ND	ND	ND	ND	ND	ND	ND
S-4	09/04/91	11 - S	ND	ND	ND	0.0028	ND	ND	ND
S-5	09/04/91	12 - S	ND	ND	ND	0.0052	ND	ND	ND
S-6	09/04/91	11 - S	ND (50)	1.9	ND (50)	3.1	140*	14**	ND
S-7	09/04/91	3 - B	0.220	0.160	0.025	0.120	9.2	23**	ND
S-8	09/04/91	6 - B	NT	NT	NT	NT	NT	NT	NT
S-9	09/04/91	3 - B	ND (25)	0.036	0.060	0.550	110***	48**	33
S-10	09/04/91	4 - B	NT	NT	NT	NT	NT	NT	NT
S-11	09/04/91	3 - B	0.400	1.100	0.180	2.600	130***	40**	89
S-12	09/04/91	4 - B	NT	NT	NT	NT	NT	NT	NT

Table 7. (continued)

Sample Number	Date	Depth (ft)	Benzene[1]	Ethyl-benzene[1]	Toluene[1]	Xylenes[1]	TPH as Gasoline[2]	TPH as Diesel[2]	TPH as Motor Oil[3]
S-13	09/10/91	14.5 - B	ND	ND	0.0075	ND	ND	ND	ND
S-14	09/10/91	14.5 - B	ND	ND	ND	ND	ND	ND	ND
S-15	09/10/91	14.5 - B	ND	ND	ND	ND	ND	ND	17
S-16	09/11/91	12 - B	0.070	ND	0.030	0.0068	ND	ND	ND
S-17	09/11/91	13 - B	0.0066	ND	0.020	ND	ND	ND	ND
S-18	09/11/91	12 - B	ND (25)	0.112	0.046	0.350	17	3.6	ND

1 Detection limit 0.0025 mg/kg.

2 Detection limit 1 mg/kg.

3 Detection limit 10/mg/kg

* Excavation extended beyond sample point. Reduced concentrations observed in S-13.

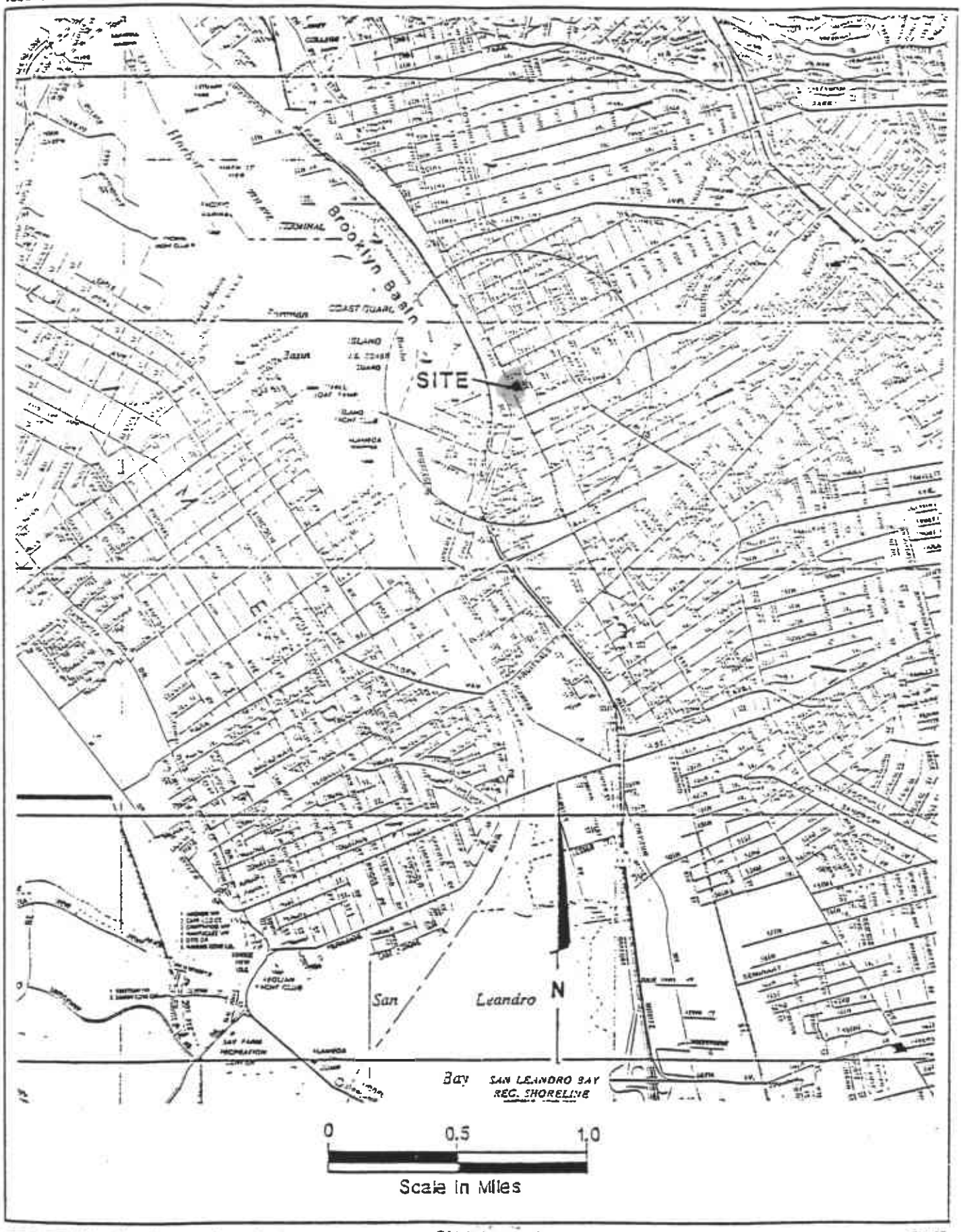
** The positive result for the petroleum hydrocarbons as diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

*** Overexcavation in the pump island areas was not possible due to possible undermining of canopy footings. excavations to obtain samples S-16, S-17 and S-18 were performed in isolated areas and solely for purposes of sampling.

S - Sidewall of excavation

B - Bottom of Excavation

105649

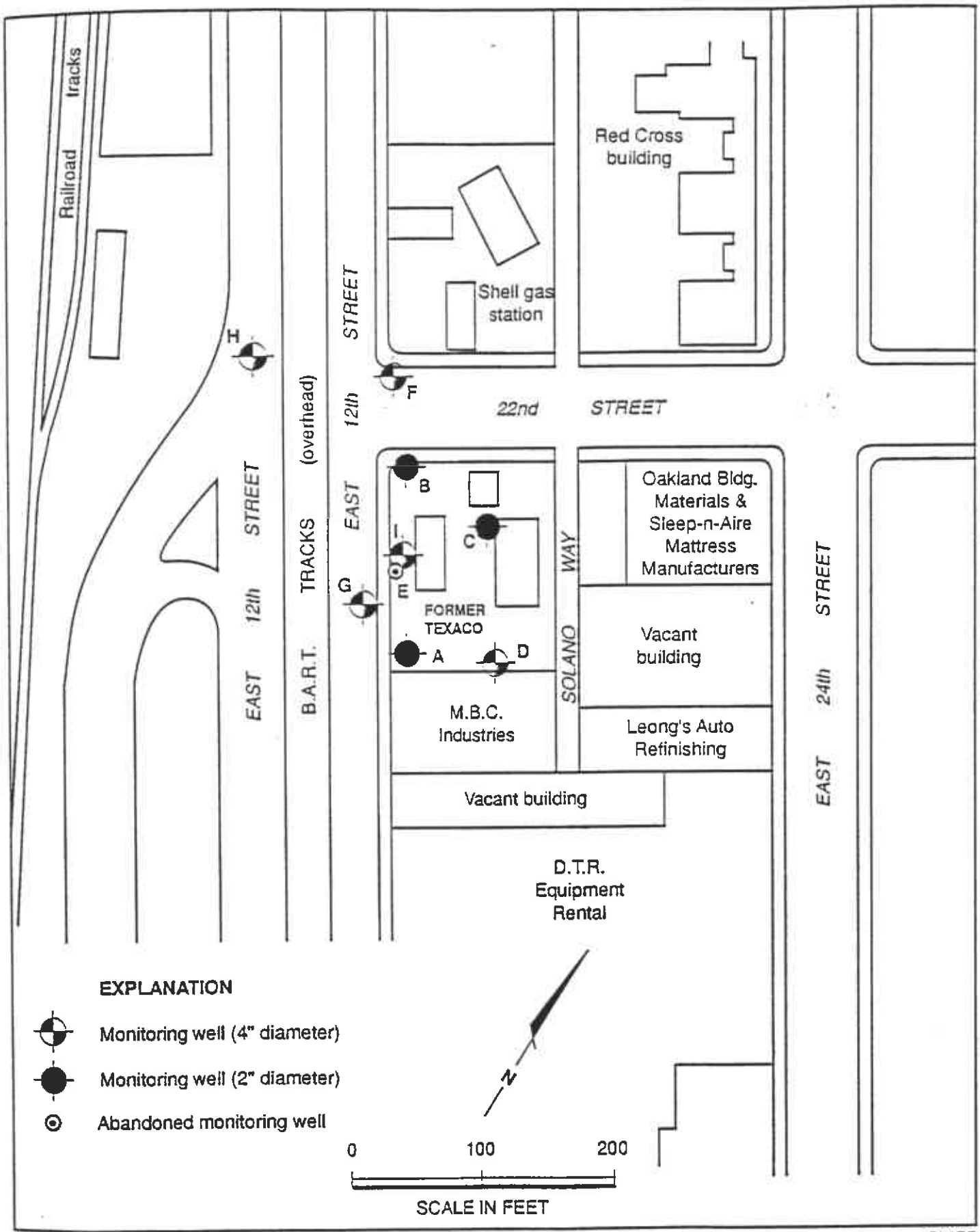


Harding Lawson Associates
Engineers and Geoscientists

Site Location
Former Texaco Service Station
2200 East 12th Street
Oakland, California

PLATE
1

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
-	2251,175.03	MKW	08/13/91		

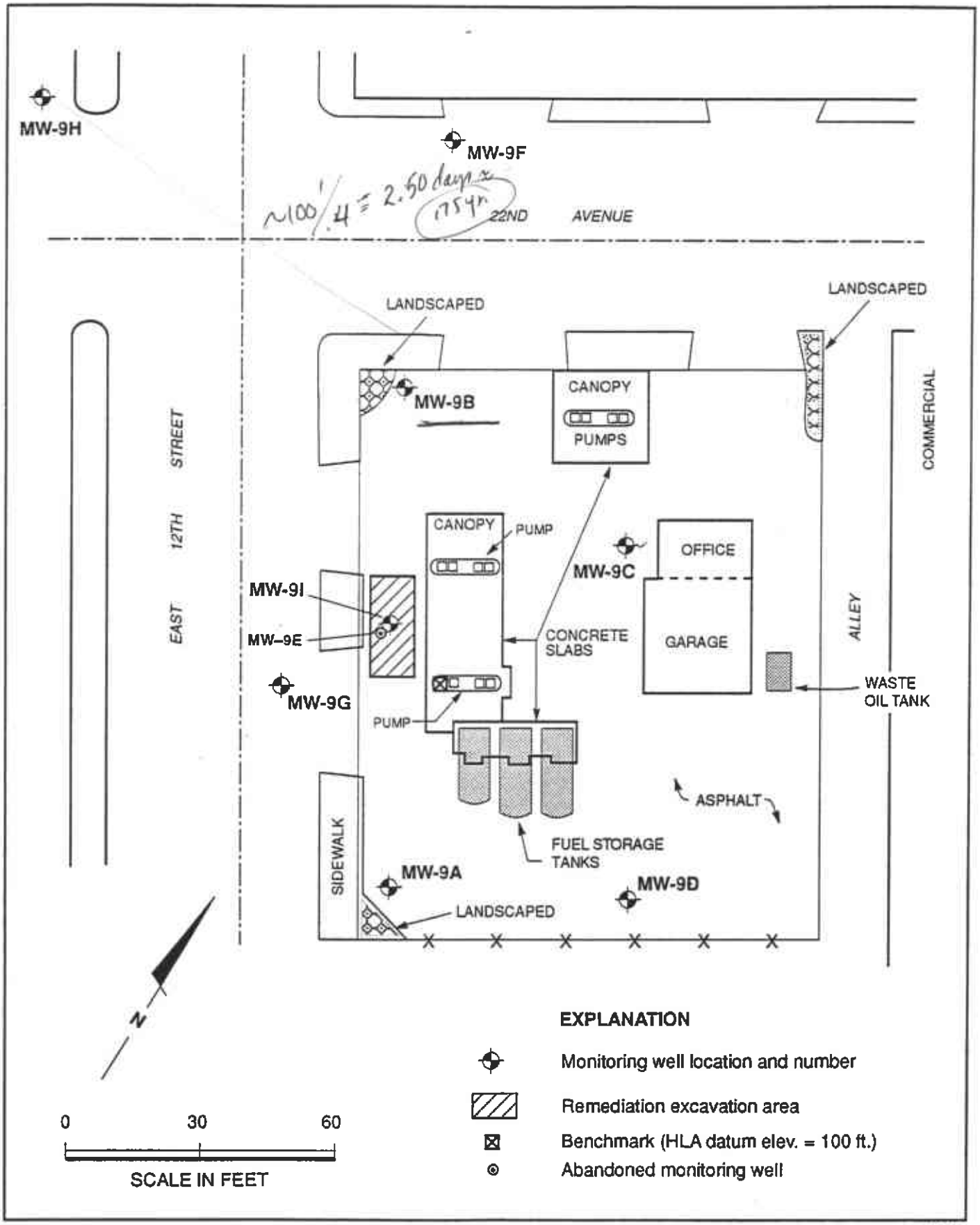


Harding Lawson Associates
Engineering and Environmental Services

Vicinity Plan
Former Texaco Service Station
2200 East 12th Street
Oakland, California

PLATE **2**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
RHC	2251,175.03	HKW	08/13/91	

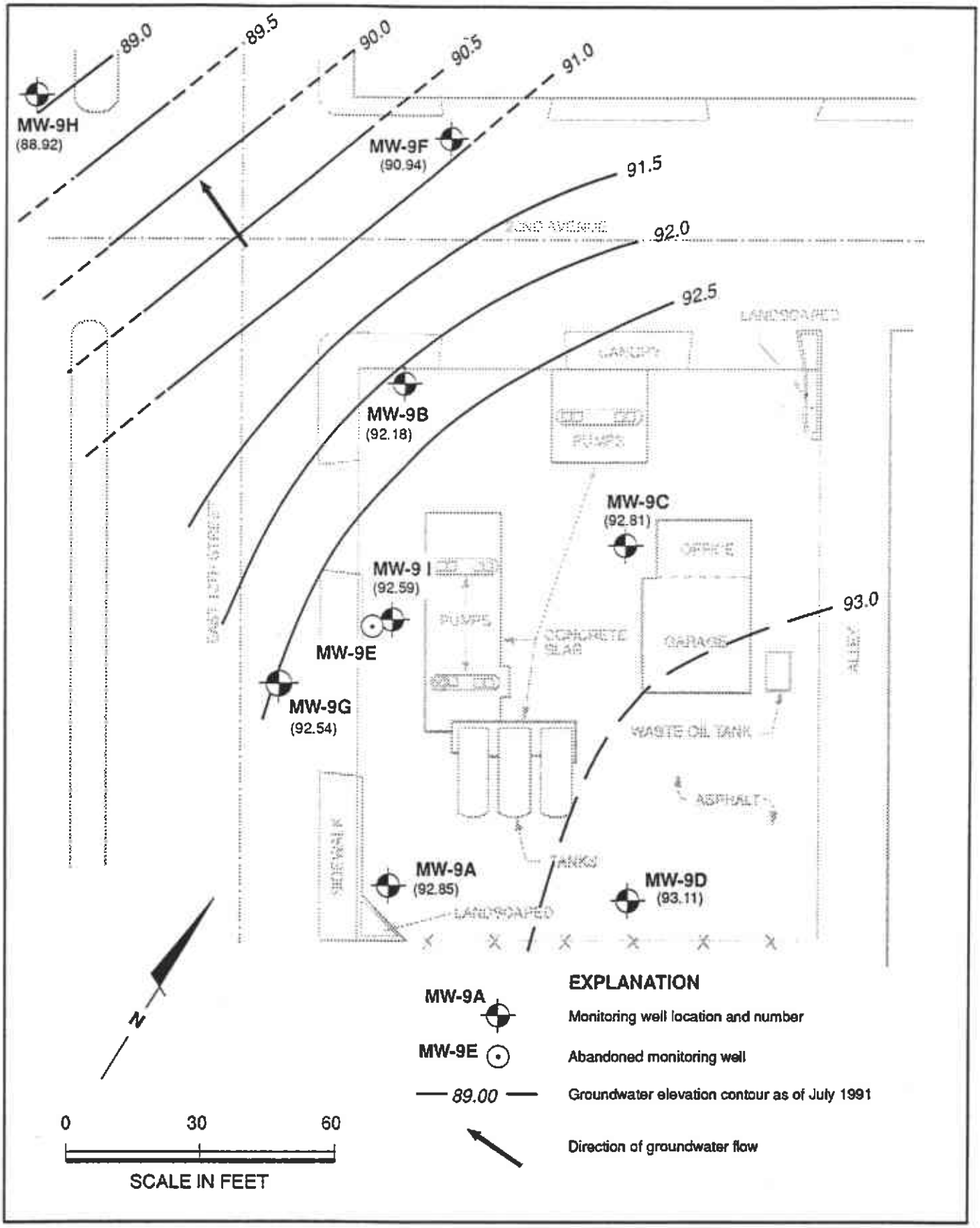


Harding Lawson Associates
Engineering and Environmental Services

Site Plan
Former Texaco Service Station
2200 East 12th Street
Oakland, California

PLATE **3**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
EH/RHC	2251,175.03		12/17/91	

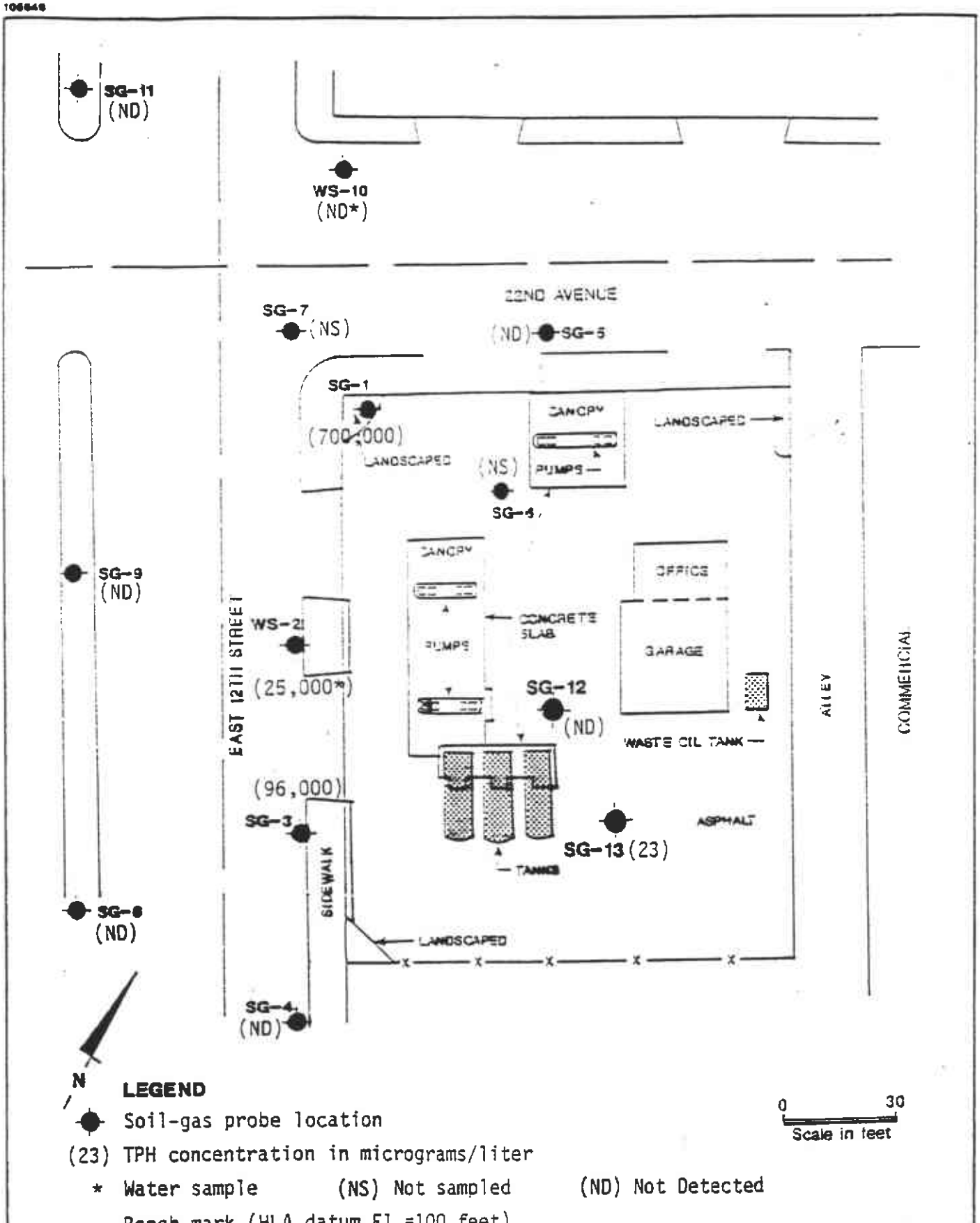


Harding Lawson Associates
Engineering and
Environmental Services

Groundwater Surface Map
Former Texaco Service Station
2200 East 12th Street
Oakland, California

PLATE
4

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
EH/RHC	2251,175.03		10/08/91	

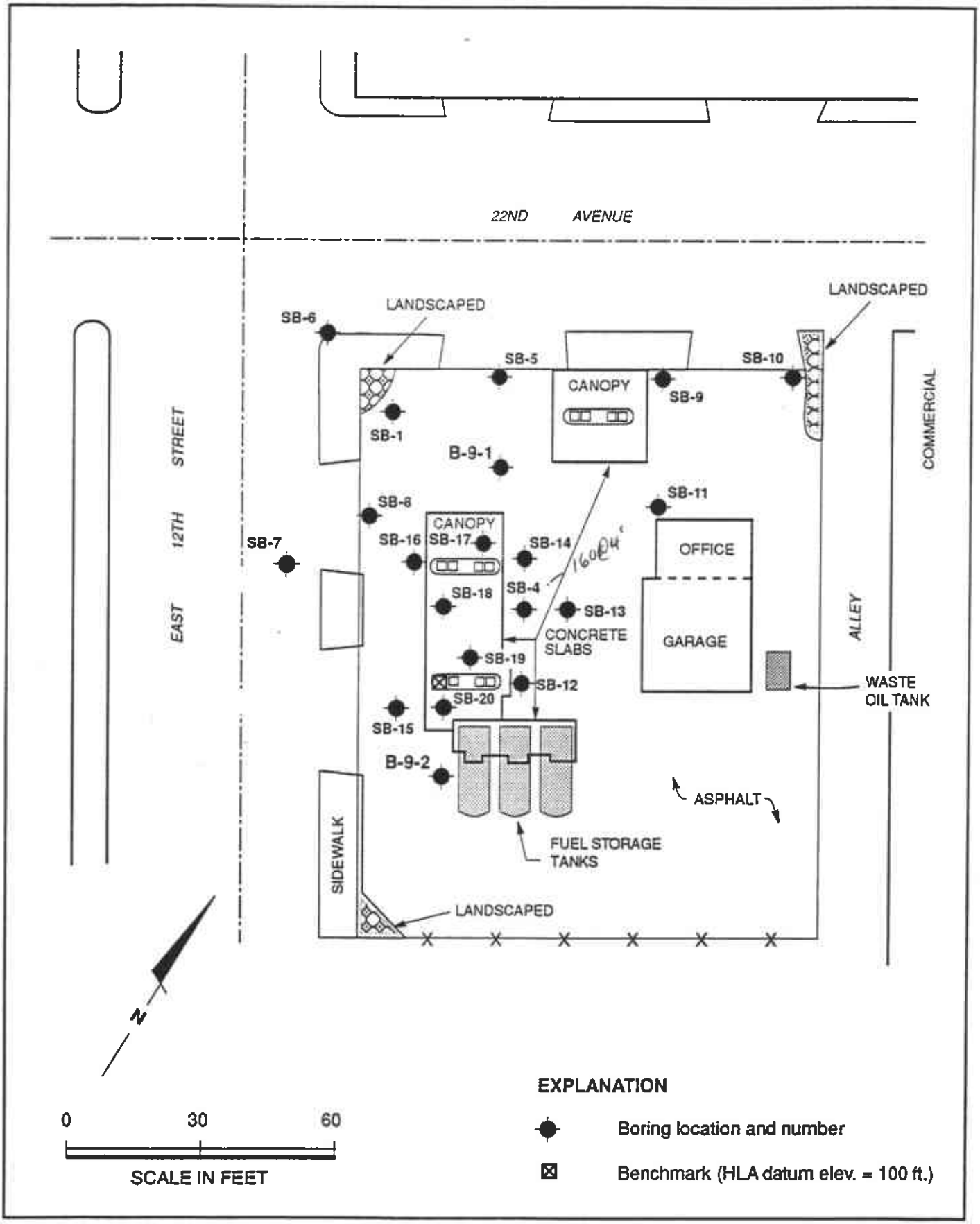


Harding Lawson Associates
Engineers and Geoscientists

Soil-gas Probe Locations
Former Texaco Service Station
2200 East 12th Street
Oakland, California

PLATE
5

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,175.03	HKW	08/13/91		

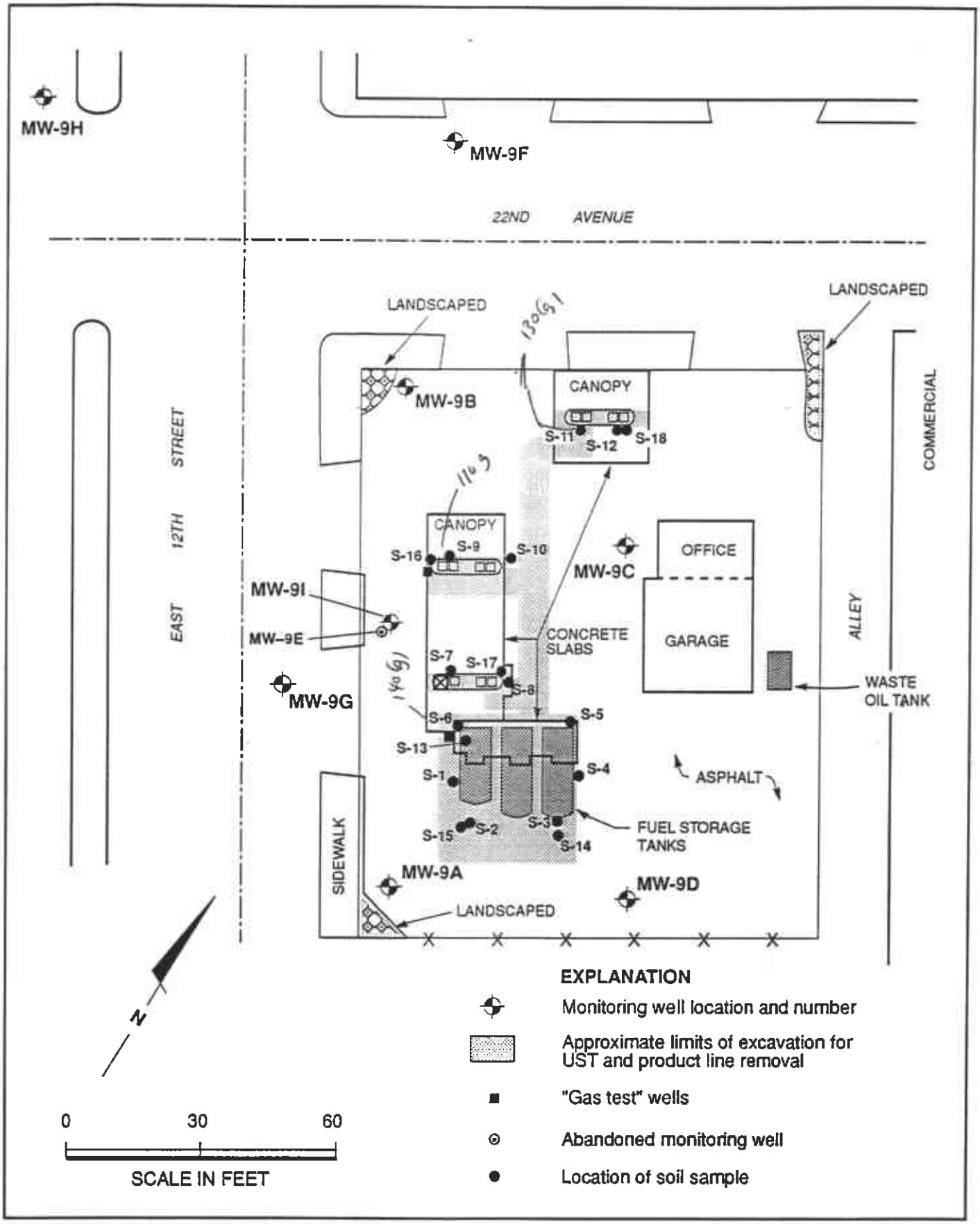


Harding Lawson Associates
Engineering and Environmental Services

Soil Boring Locations
Former Texaco Service Station
2200 East 12th Street
Oakland, California

PLATE **6**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
EH/RHC	2251,175.03		11/22/91	



Harding Lawson Associates
Engineering and Environmental Services

UST Removal
Former Texaco Service Station
2200 East 12th Street
Oakland, California

PLATE **7**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
EH/RHC	2251,175.03		12/17/91	

APPENDIX A

LABORATORY TEST RESULTS (THIRD QUARTER 1991)
GROUNDWATER MONITORING

NATIONAL
ENVIRONMENTAL
TESTING, INC.

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

HARDING ASSOC.

AUG 21 1991

Marlene Watson
Harding Lawson Associates
1355 Willow Way, Ste. 109
Concord, CA 94520

Date: 08-19-91
NET Client Acct No: 10.01
NET Pacific Log No: 8907
Received: 07-30-91 0800

Client Reference Information

TEXACO, E. 12th St., Job: 2251,175.03

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)

Ref: TEXACO, E. 12th St., Job: 2251,175.03

			Descriptor, Lab No. and Results		
			MW-9A 07-29-91	MW-9B 07-29-91	
Parameter	Method	Reporting Limit	93097	93098	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			08-06-91	08-06-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	0.10	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			08-06-91	08-06-91	
Benzene		0.5	ND	1.6	ug/L
Ethylbenzene		0.5	ND	ND	ug/L
Toluene		0.5	ND	ND	ug/L
Xylenes, total		0.5	ND	ND	ug/L

Ref: TEXACO, E. 12th St., Job: 2251,175.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-9C 07-29-91 93099	 MW-9D 07-29-91 93100	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			08-06-91	08-06-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	ND	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			08-06-91	08-06-91	
Benzene		0.5	ND	ND	ug/L
Ethylbenzene		0.5	ND	ND	ug/L
Toluene		0.5	ND	ND	ug/L
Xylenes, total		0.5	ND	ND	ug/L

NET Pacific, Inc

Client No: 10.01 Date: 08-19-91
Client Name: Harding Lawson Associates
NET Log No: 8907 Page: 4

Ref: TEXACO, E. 12th St., Job: 2251,175.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-9F 07-29-91 93101	 MW-9G 07-29-91 93102	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			08-06-91	08-06-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	ND	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			08-06-91	08-06-91	
Benzene		0.5	ND	ND	ug/L
Ethylbenzene		0.5	ND	ND	ug/L
Toluene		0.5	ND	ND	ug/L
Xylenes, total		0.5	ND	ND	ug/L

NET Pacific, Inc

Client No: 10.01 Date: 08-19-91
Client Name: Harding Lawson Associates
NET Log No: 8907 Page: 5

Ref: TEXACO, E. 12th St., Job: 2251,175.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results MW-9H 07-29-91 93103	MW-9I 07-29-91 93104	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (WATER)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			08-06-91	08-07-91	
METHOD GC FID/5030			--	--	
as Gasoline		0.05	ND	0.15	mg/L
METHOD 602			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			08-06-91	08-07-91	
Benzene		0.5	ND	ND	ug/L
Ethylbenzene		0.5	ND	ND	ug/L
Toluene		0.5	ND	ND	ug/L
Xylenes, total		0.5	ND	ND	ug/L

NET Pacific, Inc

Client Acct: 10.01
Client Name: Harding Lawson Associates
NET Log No: 8907

Date: 08-12-91
Page: 6

Ref: TEXACO, E. 12th St., Job: 2251,175.03

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	0.05	mg/L	111	ND	108	110	1.8
Benzene	0.5	ug/L	94	ND	85	89	4.6
Toluene	0.5	ug/L	96	ND	91	92	1.8
Benzene	0.5	ug/L	82	ND	93	104	12
Toluene	0.5	ug/L	84	ND	94	94	< 1

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, (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, (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.

[redacted] Associates
1355 Willow Way, Suite 109
Concord, California 94520
415/687-9660
Telecopy: 415/687-9673

CHAIN OF CUSTODY FORM

(8901)

Lab: NET

Samplers: DPM, SBH

Job Number: 2251,175.03

Name/Location: Texaco E. 12th

Project Manager: M. Watson

Recorder: D Meyer (Signature Required)

SOURCE-CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	HCl VOA	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	BTEX TPHD's
23	X							3	mw	-	9A	91	07	29									X
23	X							3	mw	-	9B												X
23	X							3	mw	-	9C												X
23	X							3	mw	-	9D												X
23	X							3	mw	-	9E												X
23	X							3	mw	-	9G												X
23	X							3	mw	-	9H												X
23	X							3	mw	-	9I												X

LAB NUMBER: Yr	Wk	Seq	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
						CUSTODY SEALED 7/29/91 @ 18:30 J.W.

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) D Meyer	RECEIVED BY: (Signature) Jeff Winkler	DATE/TIME 7/29/91 16:45
RELINQUISHED BY: (Signature) Jeff Winkler 7/29 18:30	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 7/30/91 0800
METHOD OF SHIPMENT NCS		

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

6533

APPENDIX B

LABORATORY TEST RESULTS (THIRD QUARTER 1991)
SOIL SAMPLES FROM UST REMOVAL

NATIONAL
ENVIRONMENTAL
TESTING, INC.

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

HARDING ASSOC.

SEP 13 1991

Marlene Watson
Harding Lawson Associates
1355 Willow Way, Ste. 109
Concord, CA 94520

Date: 09-12-91
NET Client Acct No: 10.01
NET Pacific Log No: 9611
Received: 09-04-91 1735

Client Reference Information

TEXACO, 12th St. Tank Pull, Job: PW-91-5954.03

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)

Ref: TEXACO, 12th St. Tank Pull, Job: PW-91-5954.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results S-1 09-04-91 96412**	S-2 09-04-91 96413	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			09-04-91	09-04-91	
METHOD GC FID/5030			--	--	
as Gasoline		1	9.1	ND	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			09-04-91	09-04-91	
Benzene		2.5	62	ND	ug/Kg
Ethylbenzene		2.5	24	ND	ug/Kg
Toluene		2.5	9.0	ND	ug/Kg
Xylenes, total		2.5	20	ND	ug/Kg
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			09-06-91	09-06-91	
DATE ANALYZED			09-09-91	09-09-91	
METHOD GC FID/3550			--	--	
as Diesel		1	4.9	ND	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

** Note: The positive result for the PETROLEUM HYDROCARBONS as diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

NET Pacific, Inc

Client No: 10.01 Date: 09-12-91
®Client Name: Harding Lawson Associates
NET Log No: 9611 Page: 3

Ref: TEXACO, 12th St. Tank Pull, Job: PW-91-5954.03

			Descriptor, Lab No. and Results		
			S-3 09-04-91	S-4 09-04-91	
Parameter	Method	Reporting Limit	96414	96415	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			09-04-91	09-04-91	
METHOD GC FID/5030			--	--	
as Gasoline		1	ND	ND	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			09-04-91	09-04-91	
Benzene		2.5	ND	ND	ug/Kg
Ethylbenzene		2.5	ND	ND	ug/Kg
Toluene		2.5	ND	ND	ug/Kg
Xylenes, total		2.5	ND	2.8	ug/Kg
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			09-06-91	09-06-91	
DATE ANALYZED			09-09-91	09-09-91	
METHOD GC FID/3550			--	--	
as Diesel		1	ND	ND	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc

Client No: 10.01 Date: 09-12-91
©Client Name: Harding Lawson Associates
NET Log No: 9611 Page: 4

Ref: TEXACO, 12th St. Tank Pull, Job: PW-91-5954.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results S-5 09-04-91 96416	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (SOIL)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			09-04-91	
METHOD GC FID/5030			--	
as Gasoline		1	ND	mg/Kg
METHOD 8020			--	
DILUTION FACTOR *			1	
DATE ANALYZED			09-04-91	
Benzene		2.5	ND	ug/Kg
Ethylbenzene		2.5	ND	ug/Kg
Toluene		2.5	ND	ug/Kg
Xylenes, total		2.5	5.2	ug/Kg
PETROLEUM HYDROCARBONS			--	
EXTRACTABLE (SOIL)			--	
DILUTION FACTOR *			1	
DATE EXTRACTED			09-06-91	
DATE ANALYZED			09-09-91	
METHOD GC FID/3550			--	
as Diesel		1	ND	mg/Kg
as Motor Oil		10	ND	mg/Kg

NET Pacific, Inc

Client No: 10.01 Date: 09-12-91
®Client Name: Harding Lawson Associates
NET Log No: 9611 Page: 5

Ref: TEXACO, 12th St. Tank Pull, Job: PW-91-5954.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results S-6 09-04-91 96417**	Units
Methyl-tert-butyl-ether		10	ND	ug/Kg
PETROLEUM HYDROCARBONS			--	
VOLATILE (SOIL)			--	
DILUTION FACTOR *			20	
DATE ANALYZED			09-05-91	
METHOD GC FID/5030			--	
as Gasoline		1	140	mg/Kg
METHOD 8020			--	
DILUTION FACTOR *			20	
DATE ANALYZED			09-05-91	
Benzene		2.5	ND	ug/Kg
Ethylbenzene		2.5	1,900	ug/Kg
Toluene		2.5	ND	ug/Kg
Xylenes, total		2.5	3,100	ug/Kg
PETROLEUM HYDROCARBONS			--	
EXTRACTABLE (SOIL)			--	
DILUTION FACTOR *			1	
DATE EXTRACTED			09-06-91	
DATE ANALYZED			09-09-91	
METHOD GC FID/3550			--	
as Diesel		1	14	mg/Kg
as Motor Oil		10	ND	mg/Kg

** Note: The positive result for the PETROLEUM HYDROCARBONS as Diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

Ref: TEXACO, 12th St. Tank Pull, Job: PW-91-5954.03

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	1	mg/Kg	102	ND	70	70	< 1
Motor Oil	10	mg/Kg	95	ND	N/A	N/A	N/A
Gasoline	1	mg/Kg	104	ND	96	82	16
Benzene	2.5	ug/Kg	101	ND	94	86	8.3
Toluene	2.5	ug/Kg	100	ND	94	86	8.5
Gasoline	1	mg/Kg	93	ND	84	87	4.0
Benzene	2.5	ug/Kg	105	ND	95	102	7.0
Toluene	2.5	ug/Kg	106	ND	96	102	6.0

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, (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, (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.

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

CHAIN OF CUSTODY FORM

Lab: NET 9611

Samplers: DPM

Job Number: PW-91.5954.03

Name/Location: Texaco 12th-Tank Pull

Project Manager: M. Watson

Recorder: DMeyer (Signature Required)

SOURCE CODE	MATRIX (Water / Sediment / Soil / Oil)	#CONTAINERS & PRESERV. (Unpres. / H_2SO_4 / HNO_3 / 6"SS tube)	SAMPLE NUMBER OR LAB NUMBER (Yr / Wk / Seq)	DATE (Yr / Mo / Dy / Time)	STATION DESCRIPTION/ NOTES	EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	TPHg BTEX	Ext HC as diesel	MTBE added per mwb NP 9/6/91
48	Soil X	1	S-1	91 09 04	24hr tnt							X	X	
48	Soil X	1	S-2	↓								X	X	
48	Soil X	1	S-3	↓								X	X	
48	Soil X	1	S-4	↓								X	X	
48	Soil X	1	S-5	↓								X	X	
48	Soil X	1	S-6	↓								X	X	X

(Ext HC as diesel: added 9/5 per DM to NP KL)

LAB NUMBER (Yr / Wk / Seq)	DEPTH IN FEET	COL MTD CD	QA CODE	MISCELLANEOUS
				Please check w/ Marlene Watson re: analysis

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature)	RECEIVED BY: (Signature)	DATE/TIME
DMeyer	Jeff Winkler	9/4/91 15:05
Jeff Winkler 9/4/91 16:00	Sharyl Ford	9/4/91 1600
Sharyl Ford		

DISPATCHED BY: (Signature)	DATE/TIME	RECEIVED FOR LAB BY: (Signature)	DATE/TIME
		Kunzle	9/4/91 1735

METHOD OF SHIPMENT

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

6533

NATIONAL
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Santa Rosa, CA 95401
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Fax: (707) 526-9623

HARDING ASSOC.

SEP 24 1991

Marlene Watson
Harding Lawson Assoc.
1355 Willow Way, Ste.109
Concord, CA 94520

Date: 09-20-91
NET Client Acct No: 010.01
NET Pacific Log No: 9723
Received: 09-11-91 0800

Client Reference Information

Texaco, 12th St. Tank Pull, Job: 2251,203.03

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)

Ref: Texaco, 12th St. Tank Pull, Job: 2251,203.03

			Descriptor, Lab No. and Results		
			S-13 09-09-91	S-14 09-09-91	
Parameter	Method	Reporting Limit	96971	96972	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			09-12-91	09-12-91	
METHOD GC FID/5030			--	--	
as Gasoline		1	ND	ND	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			1	1	
DATE ANALYZED			09-12-91	09-12-91	
Benzene		2.5	ND	ND	ug/Kg
Ethylbenzene		2.5	ND	ND	ug/Kg
Toluene		2.5	7.5	ND	ug/Kg
Xylenes, total		2.5	ND	ND	ug/Kg
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			09-11-91	09-11-91	
DATE ANALYZED			09-13-91	09-13-91	
METHOD GC FID/3550			--	--	
as Diesel		1	ND	ND	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

NET Pacific, Inc.

Client No: 010.01 Date: 09-20-91
Client Name: Harding Lawson Assoc.
NET Log No: 9723 Page: 3

Ref: Texaco, 12th St. Tank Pull, Job: 2251,203.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results S-15 09-09-91 96973	Units
PETROLEUM HYDROCARBONS			--	
VOLATILE (SOIL)			--	
DILUTION FACTOR *			1	
DATE ANALYZED			09-12-91	
METHOD GC FID/5030			--	
as Gasoline		1	ND	mg/Kg
METHOD 8020			--	
DILUTION FACTOR *			1	
DATE ANALYZED			09-12-91	
Benzene		2.5	ND	ug/Kg
Ethylbenzene		2.5	ND	ug/Kg
Toluene		2.5	ND	ug/Kg
Xylenes, total		2.5	ND	ug/Kg
PETROLEUM HYDROCARBONS			--	
EXTRACTABLE (SOIL)			--	
DILUTION FACTOR *			1	
DATE EXTRACTED			09-11-91	
DATE ANALYZED			09-13-91	
METHOD GC FID/3550			--	
as Diesel		1	ND	mg/Kg
as Motor Oil		10	17	mg/Kg

Ref: Texaco, 12th St. Tank Pull, Job: 2251,203.03

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	1	mg/Kg	108	ND	81	81	< 1
Motor Oil	10	mg/Kg	93	ND	N/A	N/A	N/A

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Gasoline	1	mg/Kg	104	ND	70	72	2.8
Benzene	2.5	ug/Kg	101	ND	77	82	5.9
Toluene	2.5	ug/Kg	99	ND	79	84	6.1

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, (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, (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.

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CHAIN OF CUSTODY FORM

Lab: NET

Samplers: DPM

Job Number: 2251,203.03

Name/Location: Texaco 12th st - tank pull

Project Manager: M. Watson

Recorder: D Meyer (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	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 gas BTEX	TPH diesel
18			X		X			5	13		91	09	09	1200	Std turnaround							X	X
18			X		X			5	14		91	09	10	1330								X	X
18			X		X			5	15														X	X

CUSTODY SEALED @ 1900 9/10/91

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

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) D Meyer	RECEIVED BY: (Signature) Mike James	DATE/TIME 9/10/91 2200
RELINQUISHED BY: (Signature) Mike Thomas	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) G Temple	DATE/TIME 9/11/91 0800
METHOD OF SHIPMENT: NLS		

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

6533

NATIONAL
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TESTING, INC.

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Santa Rosa, CA 95401
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Fax: (707) 526-9623

HARDING ASSOC.

OCT 2 - 1991

Marlene Watson
Harding Lawson Associates
1355 Willow Way, Ste. 109
Concord, CA 94520

Date: 09-30-91
NET Client Acct No: 10.01
NET Pacific Log No: 9777
Received: 09-13-91 0800

Client Reference Information

TEXACO, 2200 12th St. Oakland, Job: 2251,203.03

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: 10.01 Date: 09-30-91
Client Name: Harding Lawson Associates
NET Log No: 9777 Page: 2

Ref: TEXACO, 2200 12th St. Oakland, Job: 2251,203.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results S-7 09-04-91 97290**	S-11 09-04-91 97291**	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			1	10	
DATE ANALYZED			09-16-91	09-17-91	
METHOD GC FID/5030			--	--	
as Gasoline		1	9.2	130	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			1	10	
DATE ANALYZED			09-16-91	09-17-91	
Benzene		2.5	220	400	ug/Kg
Ethylbenzene		2.5	160	1,100	ug/Kg
Toluene		2.5	25	180	ug/Kg
Xylenes, total		2.5	120	2,600	ug/Kg
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			1	2	
DATE EXTRACTED			09-14-91	09-14-91	
DATE ANALYZED			09-15-91	09-17-91	
METHOD GC FID/3550			--	--	
as Diesel		1	23	40	mg/Kg
as Motor Oil		10	ND	89	mg/Kg

** Note: The positive result for the PETROLEUM HYDROCARBONS as Diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

NET Pacific, Inc

Client No: 10.01 Date: 09-30-91
Client Name: Harding Lawson Associates
NET Log No: 9777

Ref: TEXACO, 2200 12th St. Oakland, Job: 2251,203.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results S-9 09-04-91 97292**	S-16 09-11-91 97293	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			10	1	
DATE ANALYZED			09-17-91	09-16-91	
METHOD GC FID/5030			--	--	
as Gasoline		1	110	ND	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			10	1	
DATE ANALYZED			09-17-91	09-16-91	
Benzene		2.5	ND	70	ug/Kg
Ethylbenzene		2.5	36	ND	ug/Kg
Toluene		2.5	60	30	ug/Kg
Xylenes, total		2.5	550	6.8	ug/Kg
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			09-14-91	09-14-91	
DATE ANALYZED			09-15-91	09-15-91	
METHOD GC FID/3550			--	--	
as Diesel		1	48	ND	mg/Kg
as Motor Oil		10	33	ND	mg/Kg

** Note: The positive result for the PETROLEUM HYDROCARBONS as Diesel analysis on this sample appears to be a lighter hydrocarbon than diesel.

NET Pacific, Inc

Client No: 10.01 Date: 09-30-91
Client Name: Harding Lawson Associates
NET Log No: 9777 Page: 4

Ref: TEXACO, 2200 12th St. Oakland, Job: 2251,203.03

Parameter	Method	Reporting Limit	Descriptor, Lab No. and Results S-17 09-11-91 97294	S-18 09-11-91 97295	Units
PETROLEUM HYDROCARBONS			--	--	
VOLATILE (SOIL)			--	--	
DILUTION FACTOR *			1	10	
DATE ANALYZED			09-16-91	09-16-91	
METHOD GC FID/5030			--	--	
as Gasoline		1	ND	17	mg/Kg
METHOD 8020			--	--	
DILUTION FACTOR *			1	10	
DATE ANALYZED			09-16-91	09-16-91	
Benzene		2.5	6.6	ND	ug/Kg
Ethylbenzene		2.5	ND	112	ug/Kg
Toluene		2.5	20	46	ug/Kg
Xylenes, total		2.5	ND	350	ug/Kg
PETROLEUM HYDROCARBONS			--	--	
EXTRACTABLE (SOIL)			--	--	
DILUTION FACTOR *			1	1	
DATE EXTRACTED			09-14-91	09-14-91	
DATE ANALYZED			09-15-91	09-15-91	
METHOD GC FID/3550			--	--	
as Diesel		1	ND	3.6	mg/Kg
as Motor Oil		10	ND	ND	mg/Kg

Ref: TEXACO, 2200 12th St. Oakland, Job: 2251,203.03

QUALITY CONTROL DATA

Parameter	Reporting Limits	Units	Cal Verf Stand % Recovery	Blank Data	Spike % Recovery	Duplicate Spike % Recovery	RPD
Diesel	1	mg/Kg	98	ND	57	58	2.4
Motor Oil	10	mg/Kg	106	ND	N/A	N/A	N/A
Gasoline	1	mg/Kg	100	ND	93	93	< 1
Benzene	2.5	ug/Kg	102	ND	94	89	5.5
Toluene	2.5	ug/Kg	101	ND	95	95	< 1
Gasoline	1	mg/Kg	106	ND	96	91	5.3
Benzene	2.5	ug/Kg	100	ND	94	89	5.5
Toluene	2.5	ug/Kg	102	ND	95	90	5.4

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, (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, (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.

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CHAIN OF CUSTODY FORM

1177

Lab: NET Pacific, Inc

Samplers: DPM

Job Number: 2251,203.03

Name/Location: Texaco 2200 12th St. Oakland

Project Manager: Marlene Watson

Recorder: D Meyer (Signature Required)

SOURCE CODE	MATRIX: Water	Sediment	Soil	Oil	#CONTAINERS & PRESERV.: Unpres.	H_2SO_4	HNO_3	SAMPLE NUMBER OR LAB NUMBER: Yr	Wk	Seq	DATE: Yr	Mo	Dy	Time	STATION DESCRIPTION/ NOTES
A			X		X			S	7		91	09	04		Std trnrnd.
A			X		X			S	11						
A			X		X			S	9						
A			X		X			S	16		91	09	11		
A			X		X			S	17						
A			X		X			S	18						

CUSTODY SEALED 9/12/91 @ 19:00 F.W. Initials

EPA 601/8010	EPA 602/8020	EPA 624/8240	EPA 625/8270	ICP METALS	EPA 8015M/TPH	TPH/Gas BTEX	TPH diesel
						X	X
						X	X
						X	X
						X	X
						X	X
						X	X

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

CHAIN OF CUSTODY RECORD

RELINQUISHED BY: (Signature) D Meyer	RECEIVED BY: (Signature) Jeff Winkler	DATE/TIME 9/12/91 14:10
RELINQUISHED BY: (Signature) Jeff Winkler 9/12 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) Kenyale	DATE/TIME 9/13/91 0830
METHOD OF SHIPMENT NCC		

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

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Attention: Mr. R. R. Zielinski

MKW/MAS/pkp 032479M/R51

QUALITY CONTROL REVIEWER

Stephen J. Osborne
Principal Engineer