HYDRO ENVIRONMENTAL TECHNOLOGIES, INC.

2394 Mariner Square Drive, Suite 2
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Massachusetts
New York
Maryland

December 8, 1997

7-285.1

Mr. Larry Seto
Alameda County
Health Care Services Agency
Environmental Protection Division
1131 Harbor Bay Parkway, Room 250
Alameda, CA 94502

Re: 2415 Mariner Square Drive, Alameda, California

Dear Mr. Seto:

Enclosed please find a copy of Hydro-Environmental Technologies, Inc.'s (HETI's) Quarterly Monitoring Report, Third Quarter 1997 for sampling conducted on September 30, 1997 at the above-referenced site.

If you have any questions or require additional information, please feel free to call me at (510) 521-2684.

Sincerely,
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

Gary M. Pischke
Senior Geologist

enclosure

cc: Mr. John Beery, Mariner Square & Associates
Mr. Mike Grant, Union Pacific, Inc.
Mr. Jeff Smith, Phillips Petroleum Company
Mr. Glen Anderson, TRMI, Inc.

HYDRO
ENVIRONMENTAL
TECHNOLOGIES, INC.

QUARTERLY MONITORING REPORT, Third Quarter 1997

2415 Mariner Square Drive
Alameda, California 94501

Sampling Date: September 30, 1997

Prepared for:

Mariner Square & Associates
2900 Main Street, Suite 100
Alameda, California 94501

Southern Pacific Lines, Inc.
One Market Plaza
San Francisco, California

Phillips Petroleum Company
4th and Keeler Avenue
Bartlesville, Oklahoma 74004

Texaco, Inc.
10 Universal City Plaza, Suite 830
Universal City, California 91608-7812

Prepared by:

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.
2394 Mariner Square Drive, Suite 2
Alameda, CA 94501
HETI Job No. 7-285.1

December 8, 1997

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1.0 INTRODUCTION

This report presents the results of work conducted in the third quarter of 1997 by Hydro-Environmental Technologies, Inc. (HETI) at 2415 Mariner Square Drive in Alameda, California (Figure 1). All work was performed in accordance with California State Water Resources Control Board and San Francisco Bay Regional Water Quality Control Board (SFRWQCB) recommended guidelines and procedures. A copy of HETI 's standard sampling protocols have been submitted previously in HETI's Quarterly Monitoring Report, Fourth Quarter 1996 dated January 15, 1997.

2.0 BACKGROUND

The subject site is located in an area of commercial, light manufacturing and military usage immediately adjacent to and east of the Fleet Industrial Supply Center, Alameda Annex and south of the Oakland Inner Harbor. The site was reclaimed from marshlands in the late 1920's. Available maps indicate tidal channels were present in the former marshland covered by the site (Figure 2). In the past, the site was used for bulk fuel storage and distribution of refined oils, motor lubricants and fuel oils for use by ships until 1972.

Currently, the site is occupied by railroad boxcars which have been converted to offices, a restaurant and several buildings housing companies catering to the marine industry such as boat sales, storage, repairs, painting and sail manufacturing. The site no longer has bulk oils or fuel storage.

Proposed plans for the site include dividing the property into two parcels. A hotel and parking lot would be constructed on one parcel. A dry boat storage facility and parking would be constructed on the other parcel. The second parcel would include the existing monitoring wells and related environmental responsibility which would remain under Mariner Square and Associates.

The local geology consists primarily of clayey to silty sand (hydraulic fill) from approximately 7 to 17 feet below ground surface (bgs). Below the hydraulic fill, which was mechanically placed prior to the development of this portion of Alameda, the sediment consists of olive-grey sandy to silty clay with sand lenses, shells and organic matter from approximately 13 to 30 feet bgs (bay mud). Regional ground water flow is predominantly westerly, towards San Francisco Bay.

On November 25, 1991, AllWest Environmental, Inc. (AllWest) performed a Phase I Site Assessment of the property. AllWest recommended a soil and ground water investigation related to the fuel and oil storage, refining and distribution, and for contaminants related to boat maintenance, painting and repair. For complete details see AllWest's *Environmental Assessment* report dated December 3, 1991.

In April 1992, AllWest supervised installation of 24 geoprobes and collecting and analyzing 23 soil samples and four ground water samples. Elevated concentrations of petroleum hydrocarbons were detected in 20 of the soil samples and two of the ground water samples with maximum concentrations of 13,000 parts per million (ppm) and 1,200 ppm, respectively. For complete details see AllWest's *Subsurface Investigation Report* dated May 1, 1992.

In 1992, Subsurface Consultants, Inc. (SCI) supervised the drilling of six soil borings and the installation of six two-inch diameter monitoring wells designated MW-1 through MW-6. Petroleum hydrocarbon concentrations were detected in all soil samples collected and analyzed from the soil borings (Subsurface Consultants, Inc., *Quarterly Groundwater Monitoring Report,* dated December 23, 1992).

On June 14, 1994, McLaren/Hart supervised the drilling of 13 soil borings, collecting and analyzing 28 soil samples and the installation of three four-inch diameter monitoring wells designated MW-7, MW-8, and MW-9. In the past, hydrocarbons were detected in ground water samples collected from wells MW-1 through MW-6, and vinyl chloride and Freon-113 were detected in ground water samples collected from wells MW-2 and MW-4 (McLaren/Hart, *Supplemental Site Investigation and Limited Feasibility Study Report,* dated March 31, 1995). All monitoring well locations are shown on Figure 2, the Site Plan.

On August 6, 1997, the two underground storage tanks were removed. Soil and ground water samples were collected by HETI from the tank excavations. Laboratory results indicated hydrocarbons were present in both soil and ground water (HETI, *Tank Removal Report,* dated November 5, 1997).

In a letter from Ms. Juliet Shin, Alameda County Environmental Protection Division, dated December 26, 1995, the County required a minimum of four quarterly ground water monitoring events to delineate the plume and assure that migration is not occurring off-site or into the San Francisco Bay. Two monitoring events were performed in 1996. No monitoring and sampling was performed in the first two quarters of 1997 due to funding problems.

In subsequent letter and in the meeting of October 16, 1997, Ms. Juliet Shin, Mr. Larry Seto, and Ms. Madhulla Logan of the ACHCSA discussed the requirements for closure of the site. Per the County's request, this Quarterly Monitoring Report presents the results of the first sampling event. Three additional quarters of monitoring and sampling are required to fully evaluate the risk from hydrocarbons in ground water at the site. Closure of the site may be possible using the Regional Board's evaluation of the risk assessment for the Ecological Protection Zone (EPZ) performed by the tenants at the San Francisco International Airport (SFIA). The sites at SFIA have similar conditions of fill over Bay Mud and hydrocarbon concentrations.

3.0 FIELD ACTIVITIES

On September 30, 1997, the monitoring wells were gauged for depth to first encountered ground water to the nearest hundredth of a foot using an electronic water sounder. Following gauging, all monitoring wells, except well MW-6, were purged of a minimum of three well volumes or purged dry while pH, temperature and conductivity measurements were monitored for stabilization. Separate phase hydrocarbons (SPH) of less than 0.01 feet (sheen) were detected in well MW-6; therefore, it was not purged or sampled. MW-6 will be sampled next quarter for all the parameters tested in the other wells.

Purged water was stored on-site in two 55-gallon DOT drums with tight fitting lids. Gauging and purging data are included in Table 1 and Appendix A.

Following recovery of the water levels to at least 80% of their static level, ground water samples were collected from the monitoring wells using dedicated polyethylene bailers. Samples were then labeled, documented on a chain-of-custody form, and stored in a chilled cooler for transport to the analytical laboratory.

Ground water samples were analyzed for the following:

- total petroleum hydrocarbons as diesel (TPHd), motor oil (TPHmo) and gasoline (TPHg);
- benzene, toluene, ethylbenzene and total xylenes (BTEX) using the California Leaking Underground Fuel Tank (CA LUFT) Manual protocols;
- polynuclear aromatics (PNAs) by EPA Method 8310; and
- vinyl chloride by EPA Method 524.2.

The sample analyses were performed by NEI/GTEL Environmental Laboratories, Inc. a state of California DHS-certified laboratory located in Wichita, Kansas.

4.0 RESULTS

4.1 Ground Water Elevation

On September 30, 1997, depth to first encountered ground water in the wells ranged between 4.73 to 6.17 feet below top of well casing. Depth to water measurements and calculated ground water elevations in the wells are presented on Table 1. The depth to water measurements and the wellhead elevation data were used to calculate ground water elevation contours. These contours are shown on Figure 3, the Ground Water Contour Map. Figure 3 shows that ground water flows towards the southeast, with a ground water gradient of 0.66 to 0.72%.

4.2 Ground Water Sample Analytical Results

The analytical results indicated that dissolved TPHd was present in the ground water samples collected from seven of the eight wells sampled, in concentrations ranging from 70 (MW-3 and MW-8) to 4,100 micrograms per liter (µg/L) (MW-5). TPHd was not detected above the laboratory method detection limit in well MW-1. The analytical results are summarized in Tables 1 and 2, and a copy of the laboratory report is included in Appendix B.

TPHmo was not detected above the indicated laboratory method detection limit in the ground water samples collected from the eight wells except well MW-5 at a concentration of 520 µg/L.

TPHg was detected above the indicated laboratory method detection limit in the ground water samples collected from seven of the wells in concentrations ranging from 110 (MW-8) to 9,000 µg/L (MW-5). TPHg was not detected above the laboratory method detection limit in well MW-3. These results are shown on Figure 4, the TPHg Isoconcentration Map.

Benzene was detected above the indicated laboratory method detection limit in the ground water samples collected from all eight wells in concentrations ranging from 0.6 (MW-9) to 35 µg/L (MW-5). These results are shown on Figure 5, the Benzene Isoconcentration Map. Vinyl chloride was not detected above the indicated laboratory method detection limit in any of the wells sampled except well MW-4 with a concentration of 3.1 µg/L.

Concentrations of polynuclear aromatics were detected above the indicated laboratory method detection limits in the ground water samples collected from wells MW-2, MW-4, MW-5 and MW-9. These results are shown on Figure 6, The Polynuclear Aromatics Distribution Map.

The California Department of Health Services and the U.S. Environmental Protection Agency's (EPA) Drinking Water Standards, primary maximum contaminant levels (MCLs) for benzene are 1 µg/l and 5 µg/l, respectively. The state and federal MCLs for vinyl chloride are 0.5 µg/l and 2 µg/l, respectively. There are no state or federal MCLs for TPHd, TPHmo, or TPHg. The MCLs are listed on Tables 1 and 2.

As a comparison, the risk based standards for TPHg, TPHd, BTEX and vinyl chloride from San Francisco International Airport are included on Table 1. The standard shown is for the Ecological Protection Zone, which is any site within 300 feet of waters of the San Francisco Bay.

5.0 SUMMARY AND CONCLUSIONS

- The general ground water flow direction across the site is towards the southeast with an approximate ground water gradient ranging from 0.66% to 0.72%.

- TPHmo was detected in one of the eight wells sampled. TPHd was detected in seven of the eight wells sampled. TPHg was detected in seven of the eight wells sampled.

- Benzene was detected in all wells sampled and exceeded the state MCLs in five of the samples.

- Concentrations of dissolved hydrocarbons in ground water have increased in wells in the direction of ground water flow indicating possible migration towards MW-1. The observed flow may be caused by dewatering and pumping along the Webster Street Tube.

- Vinyl chloride was detected in one of the eight wells sampled and exceeded the state MCL in that sample.

- PNAs were detected in four of the eight wells sampled.

- SPH was noted in well MW-6 as a sheen. Previously, SPH had been noted in well MW-6 at a thickness of 0.02 feet. MW-6 will be sampled next quarter for all the parameters tested in the other wells.

- The ground water flow direction and laboratory results from this sampling event are generally consistent with the results noted in the Quarterly Monitoring Report Second Quarter 1996 dated January 15, 1997.

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60 CERTIFICATION

This report was prepared under the supervision of a registered geologist. All statements, conclusions and recommendations are based solely upon field observations and analytical analyses performed by a state-certified laboratory related to the work performed by Hydro-Environmental Technologies, Inc.

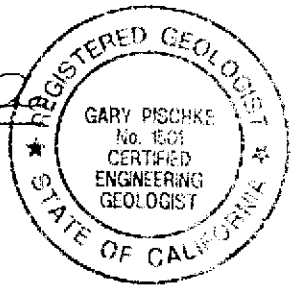
It is possible that variations in the soil or ground water conditions exist beyond the points explored in this investigation. Also, site conditions are subject to change at some time in the future due to variations in rainfall, temperature, regional water usage, or other factors.

The service performed by Hydro-Environmental Technologies, Inc. has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

Hydro-Environmental Technologies, Inc. includes in this report chemical analytical data from a state-certified laboratory. These analyses are performed according to procedures suggested by the U.S. EPA and the State of California. Hydro-Environmental Technologies, Inc. is not responsible for laboratory errors in procedure or result reporting.

Prepared by:

Gary Pischke, C.E.G.
Senior Geologist



Reviewed by:

Michael Zimmerman, P.E.
Western Regional Manager

Table 1

GROUND WATER ELEVATONS AND SAMPLE ANALYTICAL RESULTS

Mariner Square Associates
2415 Mariner Square Drive
Alameda, CA

Well I.D. #	Sample Date	TOC (feet)	DTW (feet)	GWE (feet)	TPHd (µg/L)	TPHmo (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Vinyl Cl (µg/L)
MW-1	6/13/94	11.99	5.69	6.30	--	--	--	--	--	--	--	--	--
	9/27/94	11.99	5.64	6.35	530	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--
	10/25/94	11.99	5.86	6.13	--	--	--	--	--	--	--	--	--
	6/28/96	11.99	5.34	6.65	ND<50	ND<200 (1)	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	--	ND<0.5
	10/31/96	11.99	5.38	6.61	93	ND<200	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	ND<10	ND<1.0
	9/30/97	11.99	5.08	6.91	ND<50	ND<200	120	4.7	ND<1.0	3.7	21	ND<10	ND<0.8
MW-2	6/13/94	15.21	5.92	9.29	--	--	--	--	--	--	--	--	--
	9/26/94	15.21	6.51	8.70	ND<50	240	320	ND<3.0	ND<3.0	ND<3.0	ND<3.0	--	--
	10/25/94	15.21	6.67	8.54	--	--	--	--	--	--	--	--	--
	6/28/96 (2)	15.21	5.68	9.53	100 (3,4)	ND<200 (1)	980	0.5	ND<1.0	2.3	3.1	--	ND<0.5
	10/31/96	15.21	6.37	8.84	180	ND<200	220	ND<0.5	ND<1.0	ND<1.0	ND<2.0	ND<10	ND<1.0
	9/30/97	15.21	6.17	9.04	150 (8)	ND<200	900	0.8	ND<1.0	2	6.2	ND<10	ND<0.8
MW-3	6/13/94	14.19	4.91	9.28	--	--	--	--	--	--	--	--	--
	9/27/94	14.19	5.29	8.90	720	ND<50	ND<50	ND<3.0	ND<0.3	ND<0.3	ND<0.3	--	--
	10/25/94	14.19	5.42	8.77	--	--	--	--	--	--	--	--	--
	6/28/96	14.19	4.69	9.50	120 (3)	ND<200 (1)	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	--	ND<0.5
	10/31/96	14.19	5.24	8.95	160	ND<200	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	ND<10	ND<1.0
	9/30/97	14.19	5.04	9.15	70 (8)	ND<200	ND<100	0.8	ND<1.0	ND<1.0	3.3	ND<10	ND<0.8
MW-4	6/13/94	13.95	4.50	9.45	--	--	--	--	--	--	--	--	--
	9/27/94	13.95	5.39	8.56	890	ND<50	ND<50	12	0.43	ND<0.3	ND<0.3	--	--
	10/25/94	13.95	5.55	8.40	--	--	--	--	--	--	--	--	--
	6/28/96	13.95	4.25	9.70	170 (3,4)	ND<200 (1)	180	4	ND<1.0	ND<1.0	ND<2.0	--	2.5
	10/31/96	13.95	5.05	8.90	330	ND<200	110	6.2	ND<1.0	ND<1.0	ND<2.0	ND<10	4.3
	9/30/97	13.95	4.73	9.22	170 (8)	ND<200	650	3.9	ND<1.0	ND<1.0	ND<2.0	460	3.1

Table 1

GROUND WATER ELEVATONS AND SAMPLE ANALYTICAL RESULTS

Mariner Square Associates
2415 Mariner Square Drive
Alameda, CA

Well I.D. #	Sample Date	TOC (feet)	DTW (feet)	GWE (feet)	TPHd (µg/L)	TPHmo (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Vinyl Cl (µg/L)
MW-5	6/13/94	14.60	5.30	9.30	--	--	--	--	--	--	--	--	--
	9/26/94	14.60	5.82	8.78	780	ND<500	3,100	**7.9**	11	8.7	14	--	--
	10/25/94	14.60	5.95	8.65	--	--	--	--	--	--	--	--	--
	6/28/96	14.60	5.04	9.56	610 (3,4)	790 (1)	5,000	**1.2**	6.8	21	14	--	ND<0.5
	10/31/96	14.60	5.73	8.87	4,900	860	6,800	**20**	5.9	15	19	ND<10	ND<1.0
	9/30/97	14.60	5.45	9.15	4100 (8)	520	9,000	**35**	5.3	36	32	12	ND<0.8
MW-6	6/13/94	14.81	5.96	8.85	--	--	--	--	--	--	--	--	--
	9/27/94	14.81	5.90	8.91	9,900	3,200	1,100	ND<3.0	ND<3.0	ND<3.0	ND<3.0	--	--
	10/7/94	14.81	5.82	8.99	--	--	--	--	--	--	--	--	--
	10/14/94	14.81	5.89	8.92	--	--	--	--	--	--	--	--	--
	10/21/94	14.81	5.90	8.91	--	--	--	--	--	--	--	--	--
	10/25/94	14.81	5.99	8.82	--	--	--	--	--	--	--	--	--
	6/28/96	14.81	5.33	9.48	SPH (0.16')	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
	10/31/96	14.81	5.17	9.64	SPH (0.02')	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
	9/30/97	14.81	5.58	9.23	Sheen	--	--	--	--	--	--	--	--
MW-7	9/27/94	13.61	5.95	7.66	1,800	ND<250	ND<250	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--
	10/25/94	13.61	6.09	7.52	--	--	--	--	--	--	--	--	--
	6/28/96	13.61	5.42	8.19	490 (3,4)	ND<200 (1)	560	0.6	ND<1.0	ND<1.0	2.7	--	ND<0.5
	10/31/96	13.61	5.90	7.71	420	ND<200	200	**1.1**	ND<1.0	ND<1.0	ND<2.0	ND<10	ND<1.0
	9/30/97	13.61	5.71	7.90	190 (8)	ND<200	750	**8.1**	5.3	ND<1.0	6.9	ND<10	ND<0.8
MW-8	9/27/94	12.64	6.06	6.58	320	ND<50	ND<50	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--
	10/25/94	12.64	6.26	6.38	--	--	--	--	--	--	--	--	--
	6/28/96	12.64	6.00	6.64	58 (3)	ND<200 (1)	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	--	ND<0.5
	10/31/96	12.64	5.85	6.79	120	ND<200	ND<100	ND<0.5	ND<1.0	ND<1.0	ND<2.0	ND<10	ND<1.0
	9/30/97	12.64	5.60	7.04	70 (8)	ND<200	110	**4.2**	ND<1.0	3.4	16	ND<10	ND<0.8

Table 1

GROUND WATER ELEVATONS AND SAMPLE ANALYTICAL RESULTS

Mariner Square Associates
2415 Mariner Square Drive
Alameda, CA

Well I.D. #	Sample Date	TOC (feet)	DTW (feet)	GWE (feet)	TPHd (µg/L)	TPHmo (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Vinyl Cl (µg/L)
MW-9	9/26/94	14.92	5.88	9.04	2,200	ND<500	ND<500	ND<0.3	ND<0.3	ND<0.3	ND<0.3	--	--
	10/25/94	14.92	6.04	8.88	--	--	--	--	--	--	--	--	--
	6/28/96	14.92	5.14	9.78	550 (3,4)	ND<200 (1)	390	5.2	ND<1.0	ND<1.0	ND<2.0	--	ND<0.5
	10/31/96	14.92	6.37	8.55	590	720	300	5.9	ND<1.0	ND<1.0	ND<2.0	ND<10	ND<1.0
	9/30/97	14.92	5.59	9.33	460 (8)	ND<200	150	0.6	ND<1.0	ND<1.0	2.7	ND<10	ND<0.8
CA Primary MCL (5)					--	--	--	1	100 (7)	680	1,750	35 (7)	0.5
Federal Primary MCL (6)					--	--	--	5	1,000	700	10,000	--	2
Saltwater Ecological Protection Zone Tier 1 (SFIA)					100	--	100	71	43	5000	2,200	--	17
Saltwater Ecological Protection Zone 1997 (SFIA)					3000	3000	37000	71	86	5000	2,200	--	17

Table 1

GROUND WATER ELEVATONS AND SAMPLE ANALYTICAL RESULTS

Mariner Square Associates
2415 Mariner Square Drive
Alameda, CA

Well I.D. #	Sample Date	TOC (feet)	DTW (feet)	GWE (feet)	TPHd (µg/L)	TPHmo (µg/L)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	Vinyl Cl (µg/L)

Notes:

TOC : Top of well casing referenced to mean sea level. Survey conducted by a state-licensed surveyor.
DTW : Depth to water.
GWE : Ground water elevation.
TPHg : Total petroleum hydrocarbons as gasoline by EPA Method 8015 (modified).
BTEX : Benzene, toluene, ethylbenzene and total xylenes by EPA Method 8020.
TPHd : Total petroleum hydrocarbons as diesel by EPA Method 8015 (modified).
TPHmo : Total Petroleum Hydrocarbons as lubricating oil by Cal LUFT manual DHS method with EPA 3630 (modified)- silica gel cleanup.
Vinyl Cl : Vinyl chloride by EPA Method 524.2.
µg/L : Micrograms per Liter.
--- : Not analyzed/sampled.
ND : Not detected above the indicated laboratory method detection limit.
(SPH) : Separate phase hydrocarbons - No sample collected.
(1) : Lubricating oil can not be qualitatively identified by type of oil because of chromatographic likeness of different oil types. Due to non-volatility of certain oils, much of the oil present may never be quantified by this gas chromatographic method. Quantitation obtained for lubricating oil by this method should, therefore, be treated as an estimate. This method quantifies lubricating oil against 10-W-40 standards. For the most accurate analysis of lubricating oil, an infrared method is recommended.
(2) : Water sample collected from MW-2 was analyzed for Freon 113 by EPA Method 8010A. Results were below the detection limit of 1.0 µg/L.
(3) : Qualitative identification is uncertain because the material present does not match laboratory standards.
(4) : Quantitation uncertain due to matrix interferences.
(5) : Drinking Water Standards, California Department of Health Services, Primary Maximum Contaminant Level (MCL).
(6) : Drinking Water Standards, U.S. Environmental Protection Agency, Primary Maximum Contaminant Level (MCL).
(7) : California State Action Level, Department of Health Services.
(8): Qualitative identification of diesel fuel is uncertain because the material present does not match laboratory standards.
SFIA San Francisco Internation Airport standards from Board Order 95-136 and proposed modifications by consolidated tenant group.
[ ] = The analytical result is greater than the CA Primary MCL value.

Table 2
POLYNUCLEAR AROMATICS SAMPLE ANALYTICAL RESULTS
Mariner Square & Associates
2415 Mariner Square Drive
Alameda, CA

Well No.	Sample Date	Naph-thalene µg/L	Acenaph-thalene µg/L	Acenaph-thene µg/L	Fluorene µg/L	Phenan-threne µg/L	Anthra-cene µg/L	Fluoran-thene µg/L	Pyrene µg/L
MW-1	6/28/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	10/31/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	9/30/97	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
MW-2	6/28/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	0.82	0.77
	10/31/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	9/30/97	ND<2.0	12.0	3.3	ND<2.0	ND<1.0	ND<1.0	1.0	1.1
MW-3	6/28/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	10/31/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	9/30/97	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
MW-4	6/28/96	ND<2.0	2.5	2.3	ND<2.0	ND<1.0	ND<1.0	1.8	2.1
	10/31/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	0.92	1.6
	9/30/97	ND<2.0	ND<2.0	3.7	ND<2.0	ND<1.0	ND<1.0	1.5	1.9
MW-5	6/28/96	2.0	96 (1)	3.0	ND<2.0	9.5	2.3	8.6	8.4
	10/31/96	ND<2.0	150	8.3	2.4	14	2.9	11	15
	9/30/97	2.6	100.0	11.0	5.0	16.0	3.9	15.0	16.0
MW-6	6/28/96	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
	10/31/96	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
	9/30/97	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
MW-7	6/28/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	10/31/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	9/30/97	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5

Table 2
POLYNUCLEAR AROMATICS SAMPLE ANALYTICAL RESULTS
Mariner Square & Associates
2415 Mariner Square Drive
Alameda, CA

Well No.	Sample Date	Naph-thalene µg/L	Acenaph-thalene µg/L	Acenaph-thene µg/L	Fluorene µg/L	Phenan-threne µg/L	Anthra-cene µg/L	Fluoran-thene µg/L	Pyrene µg/L
MW-8	6/28/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	10/31/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
	9/30/97	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	ND<0.5
MW-9	6/28/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	0.73	ND<0.5
	10/31/96	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	0.69	1.10
	9/30/97	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<1.0	ND<1.0	ND<0.5	0.56
CA Primary MCLs (2)		--	--	--	--	--	--	--	--
EPA Primary MCLs (3)		--	--	--	--	--	--	--	--

Table 2
POLYNUCLEAR AROMATICS SAMPLE ANALYTICAL RESULTS
Mariner Square & Associates
2415 Mariner Square Drive
Alameda, CA

Well No.	Sample Date	Benzo[a]-anthracene µg/L	Chrysene µg/L	Benzo[b]fluor-anthene µg/L	Benzo[k]fluor-anthene µg/L	Benzo[a]-pyrene µg/L	Dibenzo[a,h]-anthracene µg/L	Benzo[g,h,i]-perylene µg/L	Indeno[1,2,3-cd]-pyrene µg/L
MW-1	6/28/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	10/31/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/30/97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-2	6/28/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	10/31/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/30/97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-3	6/28/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	10/31/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/30/97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-4	6/28/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	10/31/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/30/97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-5	6/28/96	1.0	0.68	ND<0.5	ND<0.5	0.78	ND<0.5	0.57	ND<0.5
	10/31/96	1.9	1.8	0.51	ND<0.5	0.84	ND<0.5	ND<0.5	ND<0.5
	9/30/97	2.1	2.5	ND<0.5	ND<0.5	1.1	ND<0.5	ND<0.5	ND<0.5
MW-6	6/28/96	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
	10/31/96	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
	9/30/97	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
MW-7	6/28/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	10/31/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/30/97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5

Table 2

POLYNUCLEAR AROMATICS SAMPLE ANALYTICAL RESULTS

Mariner Square & Associates

2415 Mariner Square Drive

Alameda, CA

Well No.	Sample Date	Benzo[a]-anthracene µg/L	Chrysene µg/L	Benzo[b]fluor-anthene µg/L	Benzo[k]fluor-anthene µg/L	Benzo[a]-pyrene µg/L	Dibenzo[a,h]-anthracene µg/L	Benzo[g,h,i]-perylene µg/L	Indeno[1,2,3-cd]-pyrene µg/L
MW-8	6/28/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	10/31/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/30/97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
MW-9	6/28/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	10/31/96	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/30/97	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
CA Primary MCLs (2)		--	--	--	--	--	--	--	--
EPA Primary MCLs (3)		0.1	0.2	0.2	0.2	0.2	0.3	--	0.4

Table 2

POLYNUCLEAR AROMATICS SAMPLE ANALYTICAL RESULTS

Mariner Square & Associates

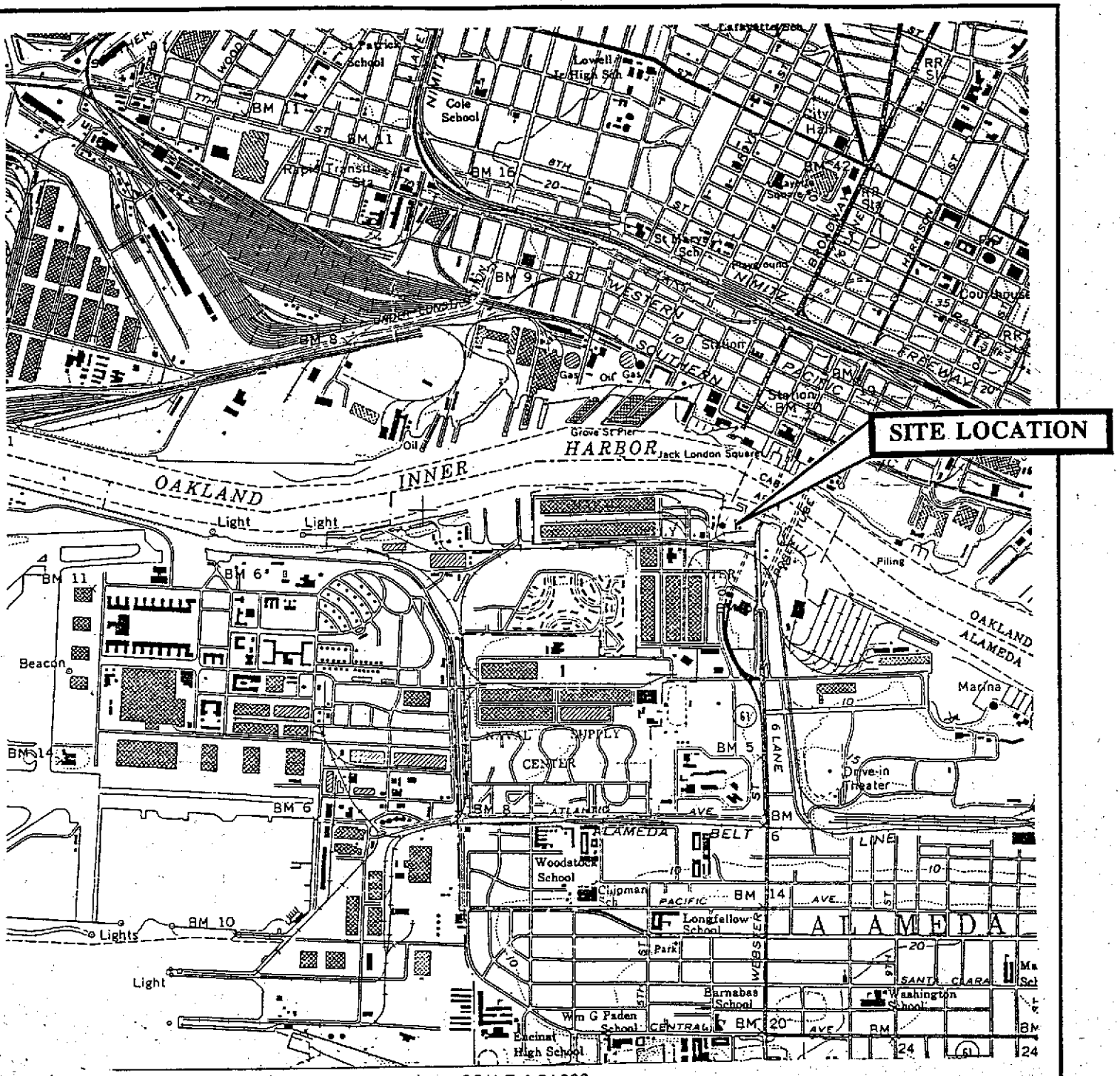
2415 Mariner Square Drive

Alameda, CA

Notes:

Polynuclear Aromatics:	Polynuclear Aromatics by EPA Method 8310.
Well No. :	Well identification number used by HETI.
Date:	Date ground water sample was collected.
µg/L :	Micrograms per liter (ppb).
ND :	Not detected in concentrations exceeding the laboratory method detection limit.
(1) :	The qualitative identification for Acenaphthylene is uncertain due to matrix interferences.
(2) :	Drinking Water Standards, California Department of Health Services, Primary Maximum Contaminant Level (MCL).
(3) :	Drinking Water Standards, U.S. Environmental Protection Agency, Primary Maximum Contaminant Level (MCL).
SPH :	Separate phase hydrocarbons - No sample collected.
	= The analytical result is greater than the MCL value.

FIGURES



SCALE 1:24 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 KILOMETER

CONTOUR INTERVAL 20 FEET

CALIF

QUADRANGLE LOCATION

SOURCE: USGS 7.5 MINUTE SERIES (TOPOGRAPHIC)
TITLED: OAKLAND WEST QUADRANGLE
PHOTOREVISED 1980

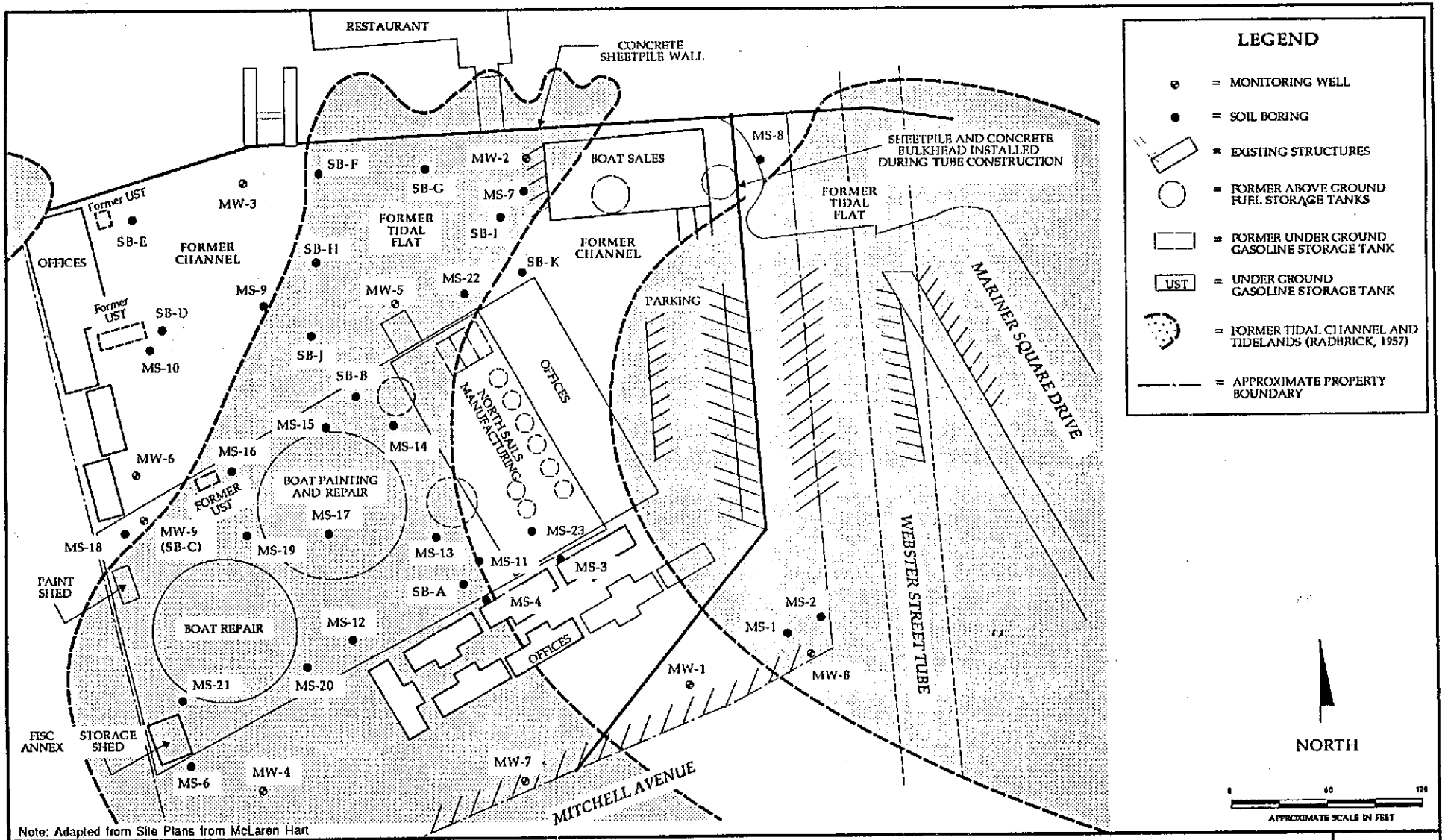
NORTH

HYDRO-
ENVIRONMENTAL
TECHNOLOGIES, INC.

SITE LOCATION MAP
Mariner Square
2415 Mariner Square Drive
Alameda, California

Figure
1

7-285 11/96



Note: Adapted from Site Plans from McLaren Hart

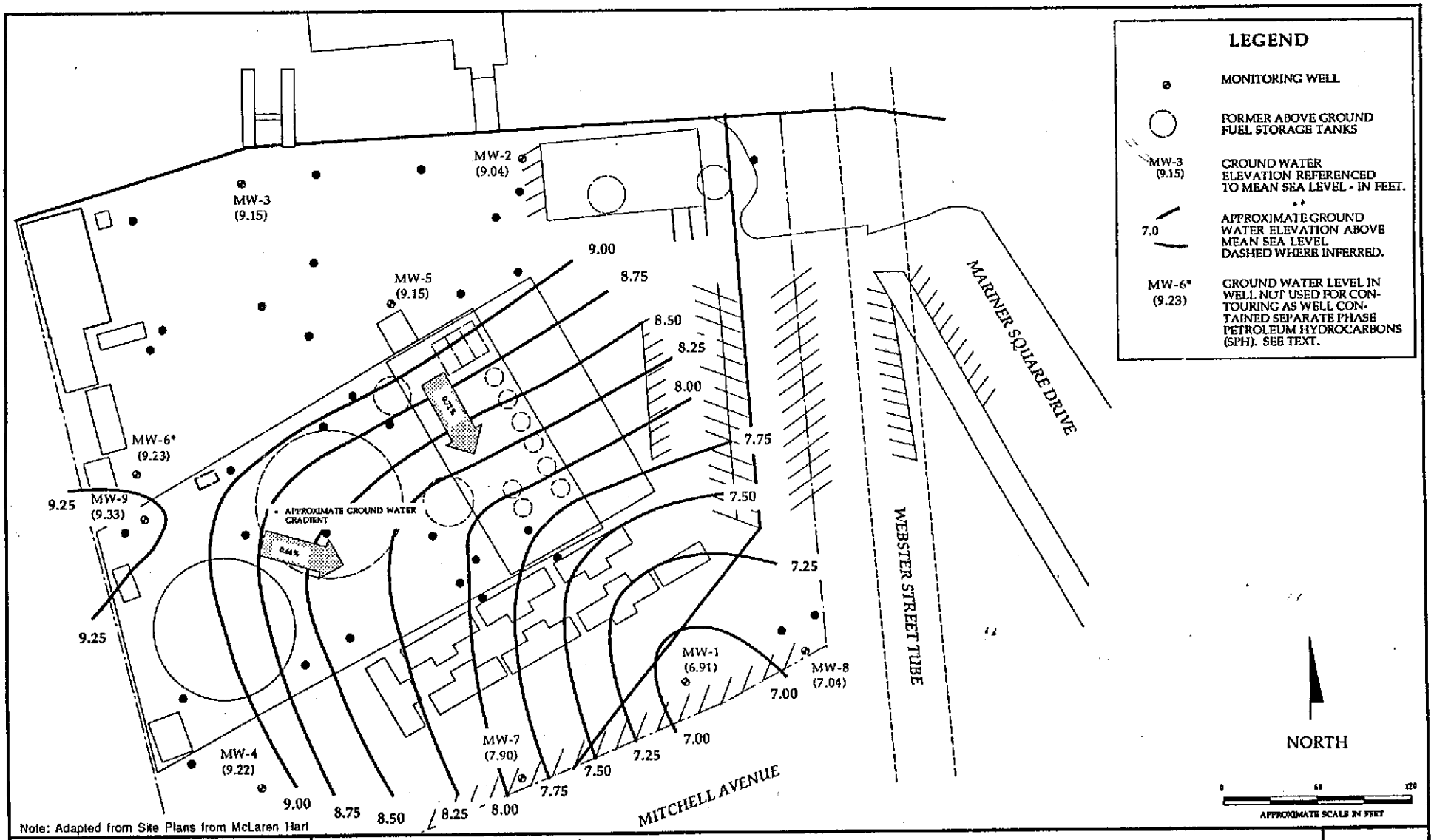
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

SITE PLAN

Mariner Square
2415 Mariner Square Drive
Alameda, California

Figure 2

7-285.1 11/97



Note: Adapted from Site Plans from McLaren Hart

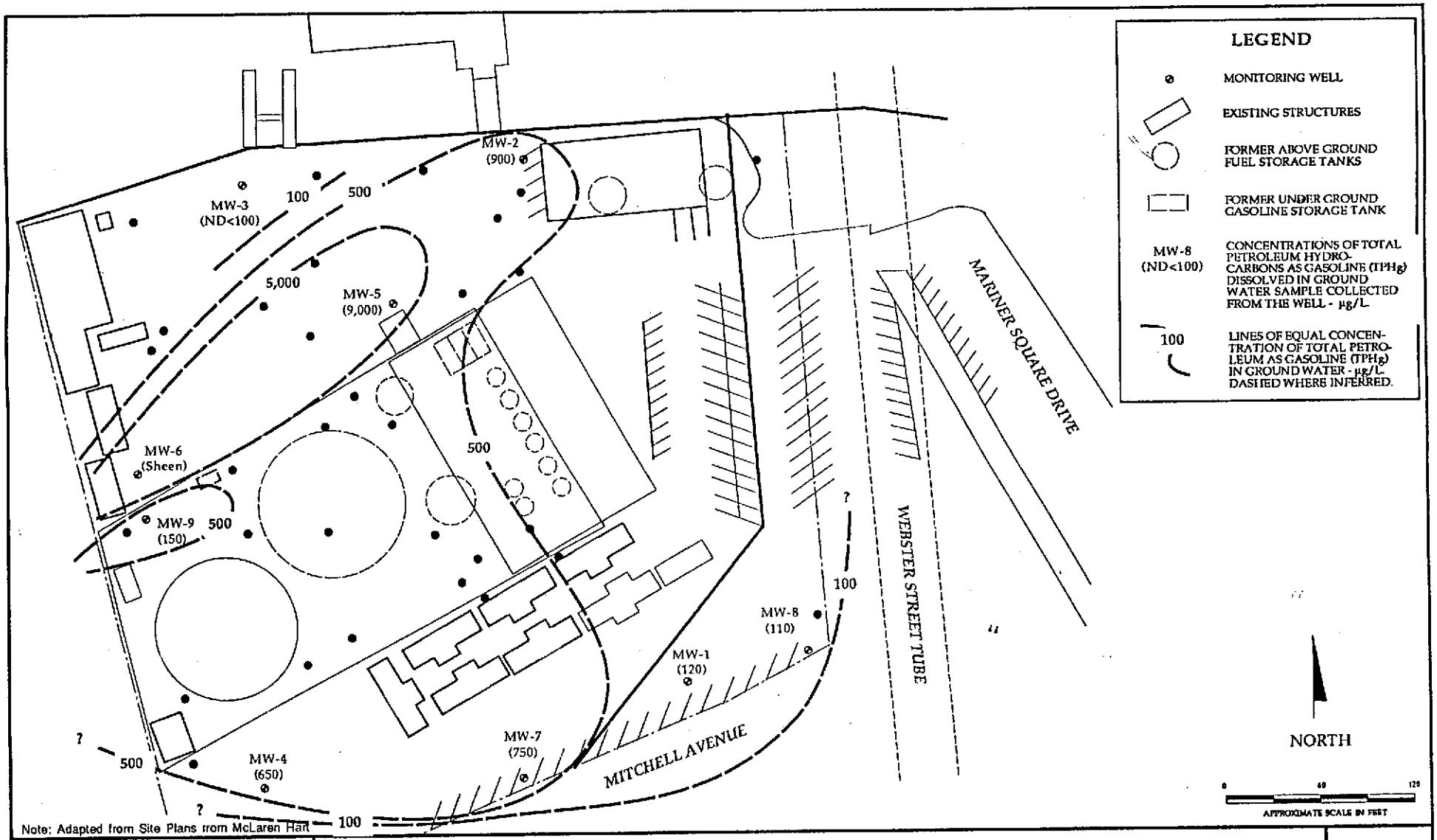
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

GROUND WATER CONTOUR MAP

Mariner Square
2415 Mariner Square Drive
Alameda, California

Figure 3

7-285.1 10/97



Note: Adapted from Site Plans from McLaren Hart

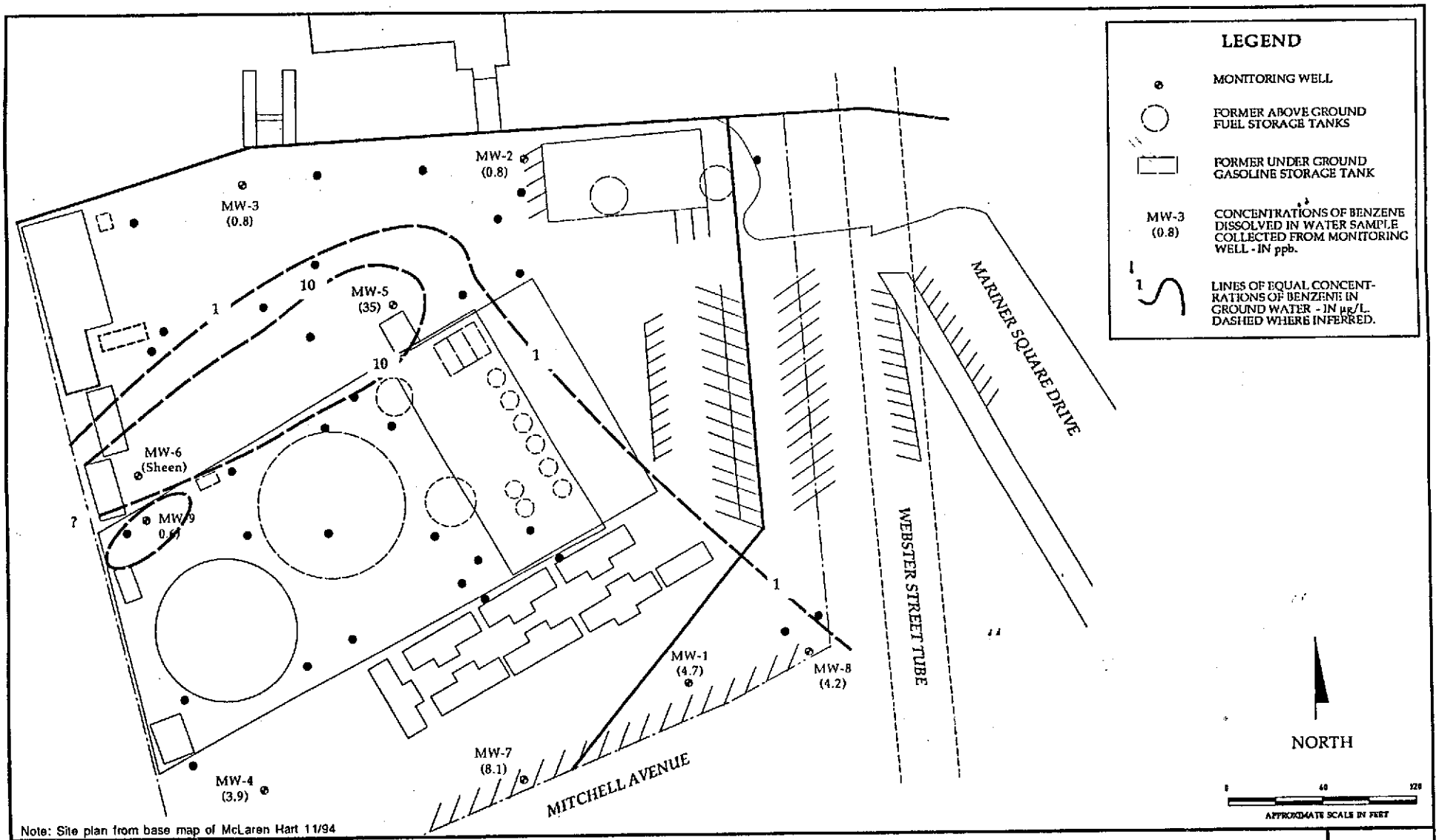
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

TPHg ISOCONCENTRATION MAP

Mariner Square
2415 Mariner Square Drive
Alameda, California

Figure 4

7-285.1 11/97



Note: Site plan from base map of McLaren Hart 11/94

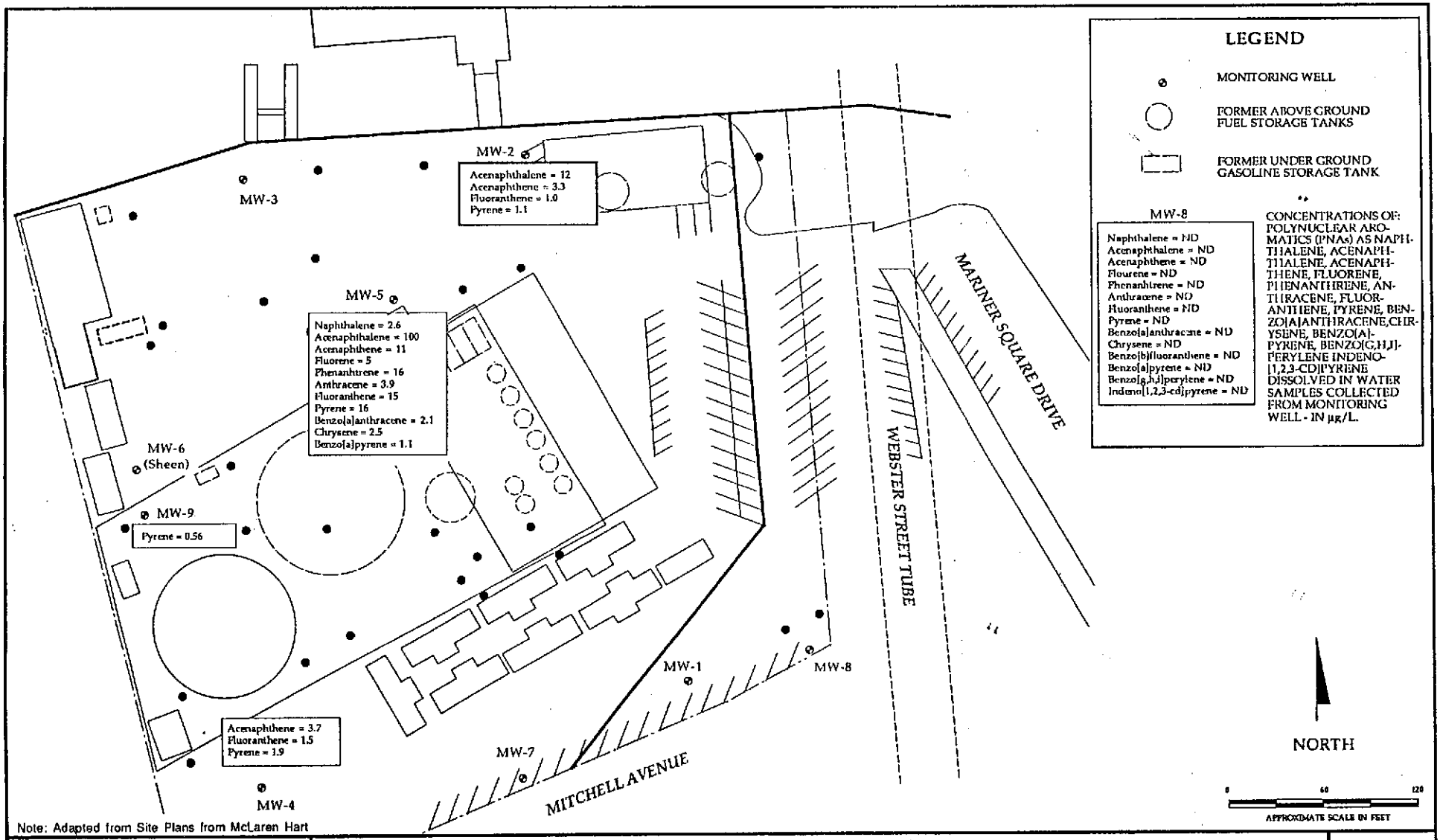
HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

BENZENE ISOCONCENTRATION MAP

Mariner Square
2415 Mariner Square Drive
Alameda, California

Figure 5

7-285.1 11/97



Note: Adapted from Site Plans from McLaren Hart

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

POLYNUCLEAR AROMATICS DISTRIBUTION MAP

Mariner Square
2415 Mariner Square Drive
Alameda, California

Figure 6

7-285.1 11/97

APPENDIX A

MONITORING WELL GAUGING DATA SHEET

GAUGED BY: Gary Pischke DATE: 9/30/97

GAUGED USING: MMC I/P, ORS I/P, Solinst: #1, (#2) #3

Monitoring Well I.D.	Depth to Water (feet)	Depth to Bottom (feet)	Separate-phase hydrocarbons thickness (feet)	Replacements		Condition/ Comments
				Lock	Bailer	
MW-1	5.08	14.73		Y	✓	Purge Sample order 3/4" 2
-2	6.17	12.25				5
-3	5.04	10.56		N	N	4
-4	4.73	12.21				6
-5	5.45	9.84				8
-6	5.58	———				9 product on probe
-7	5.71	13.28		Y	✓	3 4"
-8	5.60	13.57		N	✓	1 4"
-9	5.59	13.08		Y	Y	7 4"

HYDRO-
ENVIRONMENTAL
TECHNOLOGIES, INC.

LOCATION: Mariner Square

Job No. 7-2851

SHEET of

PURGED/SAMPLED BY: Gary Rechlee DATE: 9/30/97

GAUGING DATA:

Depth to bottom: 12.21 ft.

Depth to water: 4.73 ft.

Saturated Thickness: 7.48 ft.

Conversion	
diam.	gals/ft.
~~2 in.~~	~~x 0.16~~
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 1.19 gallons

volumes to purge x 3 vols.

*Total volume to purge = 3.60 gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer / (Submersible pump) / Suction lift pump / _____ (circle one)

Temp/Conductivity/pH Instrument: Corning

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH	
12:52p	0	—	—	—	
12:54p	2.0	24.4	7.34	7.46	muddy.
12:57p	3.6	24.1	6.72	7.33	
7:55p	Sample well.				

Color: grey Turbidity: moderate

Recharge: poor. SPP — ft. Sheen —

SAMPLING DATA: adjacent to UST stockpile.

Sampling method: Dedicated bailer / Disposable bailer

Sample for: (circle)

(TPHg/BTEX) METALS TOG 8010

(TPHd) O-Pb TEL 8020

(TPH mo) Total Pb EDB 8240

601 602 Nitrates 8260

Other: PNAs/MTBE/Vinyl Cl

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-4

LOCATION: 2415 Mariner Sq. Dr.

Job No. 7-283.1

SHEET of

PURGED/SAMPLED BY: Gary Pischke DATE: 9/30/97

GAUGING DATA:

Depth to bottom: 13.08 ft.

Depth to water: 5.59 ft.

Saturated Thickness: 7.49 ft.

Conversion	
diam.	gals/ft.
2 in	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 4.87 gallons

volumes to purge x 3 vols.

*Total volume to purge = 14.6 gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer / Submersible pump / Suction lift pump / _____ (circle one)

Temp/Conductivity/pH Instrument: Corning

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
3:40p.	0	—	—	—
3.43p	4.0	23.7	1506	8.16
3:46p.	7.5	24.2	1447	7.56
3:55p	9.5	24.8	1465	7.70
4:05p.	11.0	23.8	1779	7.81
4:15p.	13.0	23.8	1763	7.80
4:28p.	14.5	24.4	1650	7.93
7:25p	sample well.			

Color: grey Turbidity: moderate

Recharge: fair. SPP ____ ft. Sheen ____

SAMPLING DATA:

Sampling method: Dedicated bailer / Disposable bailer

Sample for: (circle)

TPHg/BTEX	METALS	TOG	8010
TPHd	O-Pb	TSL	8020
TPH mo	Total Pb	EDB	8240
601	602	Nitrates	8260

Other: _____

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-9

LOCATION: 2415 Manner Sq. Dr

Job No. 7-285.

SHEET of

PURGED/SAMPLED BY: Gary Pischke DATE: 9/30/97

GAUGING DATA:

Depth to bottom: 9.86 ft.

Depth to water: 5.45 ft.

Saturated Thickness: 4.41 ft.

Conversion	
diam.	gals/ft.
~~2 in.~~	~~x 0.16~~
4 in.	x 0.65
6 in.	x 1.44

Well casing volume .70 gallons

volumes to purge x 3 vols.

*Total volume to purge = 2.11 gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer/ ~~Submersible pump~~/ Suction lift pump/ _____ (circle one)

Temp/Conductivity/pH Instrument: Corning

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
4:41p	0	—	—	—
4:43p	1.0	24.6	1628	7.88
4:44p	2.25	24.1	1597	7.52
7:00p	Sample well			

Color: grey Turbidity: moderate

Recharge: good SPP — ft. Sheen —

SAMPLING DATA: No bailer

Sampling method: Dedicated bailer /(Disposable bailer)

Sample for: (circle)

(TPHg/BTEX) METALS TOG 8010

(TPHd) O-Pb TEL 8020

(TPH ext) Total Pb EDB 8240

601 602 Nitrates 8260

Other: MTBE/PNAs

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-5

LOCATION: 2445 Marina Bay, Dr

Job No. 7-285K

SHEET of

PURGED/SAMPLED BY: Gary Pischke DATE: 9/30/97

GAUGING DATA:

Depth to bottom: 12.25 ft.

Depth to water: 6.17 ft.

Saturated Thickness: 6.08 ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume .97 gallons

volumes to purge x 3 vols.

*Total volume to purge = 2.91 gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer/ Submersible pump/ Suction lift pump/ _____ (circle one)

Temp/Conductivity/pH Instrument: Corning

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
1:16p.	0	—	—	—
1:17p	1.5	22.5	3.02	7.91
1:18p.	3.0	23.1	2.08	7.52
6:09p	sample	well		

Color: brown Turbidity: moderate

Recharge: good SPP ____ ft. Sheen ____

SAMPLING DATA:

Sampling method: Dedicated bailer / Disposable bailer

Sample for: (circle)

TPHg/BTEX METALS TOG 8010

TPHd O-Pb TEL 8020

TPH mo Total Pb EDB 8240

601 602 Nitrates 8260

Other: TOTBE/ANA/VCL

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-2

LOCATION: 2415 Mariner Sq. Dr

Job No. 7085.1

SHEET of

PURGED/SAMPLED BY: Gary Pischke DATE: 9/30/97

GAUGING DATA:

Depth to bottom: 10.56 ft.

Depth to water: 5.04 ft.

Saturated Thickness: 5.52 ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 0.88 gallons

volumes to purge x 3 vols.

*Total volume to purge = 2.65 gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer/ ~~Submersible pump~~/ Suction lift pump/ _____ (circle one)

Temp/Conductivity/pH Instrument: Corning

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
12:24p	0	—	—	—
12:25	2.0	23.9	4.48	7.23
12:26	3.0	23.1	4.32	7.40
5:35p	Sample well.			

Color: grey Turbidity: moderate

Recharge: good SPP — ft. Sheen —

SAMPLING DATA:

Sampling method: Dedicated bailer/ Disposable bailer

Sample for: (circle)

TPH$_g$/BTEX METALS TOG 8010

TPHd O-Pb TEL 8020

TPH mo Total Pb EDB 8240

601 602 Nitrates 8260

Other: PNAs/MTBE

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-3

LOCATION: 2415 Monument Dr.

Job No. 7-28-51

SHEET of

PURGED/SAMPLED BY: Gary Pischke DATE: 9/30/97

GAUGING DATA:

Depth to bottom: 13.28 ft.

Depth to water: 5.71 ft.

Saturated Thickness: 7.57 ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 4.92 gallons

volumes to purge x 3 vols.

*Total volume to purge = 14.76 gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer/ Submersible pump/ Suction lift pump/ _____ (circle one)

Temp/Conductivity/pH Instrument: Corning

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
11:49	0	—	—	—
11:52	4.0	24.9	13.26	7.58
11:54a	8.0	25.7	8.49	7.53
11:56a	10.0	25.4	10.03	7.43
12:00p	12.0	25.6	10.39	7.50
12:02p	13.5	26.1	7.94	7.50
12:04p	15.0	26.1	8.03	7.40
4:53p	Sample well			

Color: brown Turbidity: moderate

Recharge: moderate - Fair SPP — ft. Sheen —

SAMPLING DATA:

Sampling method: Dedicated bailer / Disposable bailer

Sample for: (circle)

TPHg/BTEX METALS TOG 8010

TPHd O-Pb TEL 8020

TPH mo Total Pb EDB 8240

601 602 Nitrates 8260

Other: MTBE Only

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-7

LOCATION: 248

Job No. 7-285.1

SHEET of

PURGED/SAMPLED BY: Gary Pischke DATE: 9/30/97

GAUGING DATA:

Depth to bottom: ____ ft.

Depth to water: 5.58 ft.

Saturated Thickness: ____ ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume ____ gallons

volumes to purge x 3 vols.

*Total volume to purge = ____ gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer/ Submersible pump/ Suction lift pump/ ____ (circle one)

Temp/Conductivity/pH Instrument: ____

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
	0	____	____	____

Color: ____ Turbidity: ____

Recharge: ____ SPP ____ ft. Sheen ✓

SAMPLING DATA: None taken - product

Sampling method: Dedicated bailer /Disposable bailer

Sample for: (circle)

TPHg/BTEX METALS TOG 8010

TPHd O-Pb TEL 8020

TPH mo Total Pb EDB 8240

601 602 Nitrates 8260

Other: ____

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-6

LOCATION: ____

Job No.

SHEET of

PURGED/SAMPLED BY: Gary Pischke DATE: 9/30/97

GAUGING DATA:

Depth to bottom: 14.73 ft.

Depth to water: 5.08 ft.

Saturated Thickness: 9.65 ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 1.54 gallons

volumes to purge x 3 vols.

*Total volume to purge = 4.63 gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer/ Submersible pump/ Suction lift pump/ _____ (circle one)

Temp/Conductivity/pH Instrument: Corning

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
10:55a	0	—	—	—
10:57a	2.5	25.8	10.21	7.66
10:59a	5.0	25.4	5.58	7.63
✓ 11:14a	Sample well			

Color: brown Turbidity: slight

Recharge: good. SPP — ft. Sheen —

SAMPLING DATA:

Sampling method: Dedicated bailer / Disposable bailer

Sample for: (circle)

TPHg/BTEX METALS TOG 8010

TPHd O-Pb TEL 8020

TPH mo Total Pb EDB 8240

601 602 Nitrates 8260

Other: MTBE, Vinyl Cl.

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-1

LOCATION: 2415 Mariner Sq. Dr.

Job No. 7-285.1

SHEET of

PURGED/SAMPLED BY: Gary Pischke DATE: 9/30/97

GAUGING DATA:

Depth to bottom: 13.57 ft.

Depth to water: 5.60 ft.

Saturated Thickness: 7.97 ft.

Conversion	
diam.	gals/ft.
2 in.	x 0.16
4 in.	x 0.65
6 in.	x 1.44

Well casing volume 5.18 gallons

volumes to purge x 3 vols.

*Total volume to purge = 15.54 gallons

* unless chemical parameters do not stabilize

PURGING DATA:

Purge method: PVC bailer/ Submersible pump/ Suction lift pump/ _____ (circle one)

Temp/Conductivity/pH Instrument: Corning

Time	Volume (gallons)	Temp. (°F)	Conductivity (mS/cm)	pH
9:45a	0	—	—	—
9:47a	4.0	20.6	19.43	7.40
9:50a	8.0	20.9	15.12	7.48
9:53a	12.0	21.1	13.64	7.42
9:55	15.5	21.2	13.07	7.39
10:20	Sampled well.			

Color: grey Turbidity: moderate-slight.

Recharge: good. SPP — ft. Sheen —

SAMPLING DATA:

Sampling method: Dedicated bailer /Disposable bailer

Sample for: (circle)

TPHg/BTEX METALS TOG 8010

TPHd O-Pb TEL 8020

TPH mo Total Pb EDB 8240

601 602 Nitrates 8260

Other: MTBE, Vinyls.

HYDRO-ENVIRONMENTAL TECHNOLOGIES, INC.

PURGE/SAMPLE DATA SHEET

WELL # MW-8

LOCATION: 2415 Mariner Dr.

Job No. 7-285-1

SHEET of

APPENDIX B

NEI/GTEL
ENVIRONMENTAL LABORATORIES, INC.

Midwest Region
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

October 16, 1997

Gary Pischke
Hydro-Environmental Technologies, Inc.
2394 Mariner Square Dr.
Suite 2
Alameda, CA 94501

RE: NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Dear Gary Pischke:

Enclosed please find the analytical results for the samples received by NEI/GTEL Environmental Laboratories, Inc. on 10/02/97, 10/03/97 under Chain-of-Custody Number(s) 40111, 40112 & 40113.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by NEI/GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes. This report is to be reproduced only in full.

NEI/GTEL is certified by the California Department of Health Service under Certification Number 2147.

If you have any questions regarding this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
NEI/GTEL Environmental Laboratories, Inc.

Terry R. Loucks
Laboratory Director

300g. UST from Northpoint-
Holes notched and started leaking 8/6/97
01717328093-2W 0826 5257
COPIES & ENLARGEMENTS CALL 800-421-1030
2415 Marina Sq Dr. Alameda

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons By GC

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: ASTM D3328
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-09	W7100056-10	W7100056-11	W7100056-12
Client ID	MW-9	MW-4	MW-8	MW-1
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Prepared	10/06/97	10/06/97	10/06/97	10/06/97
Date Analyzed	10/15/97	10/15/97	10/15/97	10/15/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
TPH as Lubricating Oil	200	ug/L	< 200	< 200	< 200	< 200
TPH as Diesel	50	ug/L	**460**	**170**	**70**	< 50

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

ASTM D3328:

Extraction by EPA Method 3510 (liquid/liquid). Silica gel cleanup was performed on the sample extracts using (modified) EPA 3630. ASTM Method D3328(modified) is used for qualitative identification of fuel patterns. The method has been modified to include quantitation by applying calibration and quality assurance guidelines outlined in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. This method is equivalent to the California LUFT manual DHS method for diesel fuel. Lubricating oil can not be qualitatively identified by type of oil because of chromatographic likeness of different oil types. Due to non-volatility of certain oils, much of the oil present may not be quantified by this method. Quantitation obtained for lubricating oil by this method should, therefore, be treated as an estimate. This method quantifies lubricating oil against 10-W-30 standards. Due to potential loss of volatile components during sample preparation, quantitation of gasoline by this method should be considered an estimate.

W7100056-09:

Qualitative identification of diesel fuel is uncertain because the material present does not match laboratory standards.

W7100056-10:

Qualitative identification of diesel fuel is uncertain because the material present does not match laboratory standards.

W7100056-11:

Qualitative identification of diesel fuel is uncertain because the material present does not match laboratory standards.

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons By GC

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: ASTM D3328
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-13	W7100056-14	W7100056-15	W7100056-16
Client ID	MW-7	MW-2	MW-3	MW-5
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Prepared	10/06/97	10/06/97	10/06/97	10/06/97
Date Analyzed	10/15/97	10/15/97	10/15/97	10/16/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
TPH as Lubricating Oil	200	ug/L	< 200	< 200	< 200	520
TPH as Diesel	50	ug/L	190	150	70	4100

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

ASTM D3328:

Extraction by EPA Method 3510 (liquid/liquid). Silica gel cleanup was performed on the sample extracts using (modified) EPA 3630. ASTM Method D3328(modified) is used for qualitative identification of fuel patterns. The method has been modified to include quantitation by applying calibration and quality assurance guidelines outlined in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. This method is equivalent to the California LUFT manual DHS method for diesel fuel. Lubricating oil can not be qualitatively identified by type of oil because of chromatographic likeness of different oil types. Due to non-volatility of certain oils, much of the oil present may not be quantified by this method. Quantitation obtained for lubricating oil by this method should, therefore, be treated as an estimate. This method quantifies lubricating oil against 10-W-30 standards. Due to potential loss of volatile components during sample preparation, quantitation of gasoline by this method should be considered an estimate.

W7100056-13:

Qualitative identification of diesel fuel is uncertain because the material present does not match laboratory standards.

W7100056-14:

Qualitative identification of diesel fuel is uncertain because the material present does not match laboratory standards.

W7100056-15:

Qualitative identification of diesel fuel is uncertain because the material present does not match laboratory standards.

W7100056-16:

Qualitative identification of diesel fuel is uncertain because the material present does not match laboratory standards. Quantitation of diesel fuel is uncertain due to matrix interferences.

ANALYTICAL RESULTS
Polynuclear Aromatics

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: EPA 8310
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-09	W7100056-10	W7100056-11	W7100056-12
Client ID	MW-9	MW-4	MW-8	MW-1
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Prepared	10/06/97	10/06/97	10/06/97	10/06/97
Date Analyzed	10/14/97	10/14/97	10/14/97	10/14/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Naphthalene	2.0	ug/L	< 2.0	< 2.0	< 2.0	< 2.0
Acenaphthylene	2.0	ug/L	< 2.0	< 2.0	< 2.0	< 2.0
Acenaphthene	2.0	ug/L	< 2.0	**3.7**	< 2.0	< 2.0
Fluorene	2.0	ug/L	< 2.0	< 2.0	< 2.0	< 2.0
Phenanthrene	1.0	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Anthracene	1.0	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Fluoranthene	0.50	ug/L	< 0.50	**1.5**	< 0.50	< 0.50
Pyrene	0.50	ug/L	**0.56**	**1.9**	< 0.50	< 0.50
Benzo[a]anthracene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Chrysene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[b]fluoranthene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[k]fluoranthene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]pyrene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Dibenzo[a,h]anthracene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Indeno[1,2,3-cd]pyrene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8310:

Extraction by EPA Method 3510 (liquid/liquid). "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including Update 2.

ANALYTICAL RESULTS
Polynuclear Aromatics

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: EPA 8310
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-13	W7100056-14	W7100056-15	W7100056-16
Client ID	MW-7	MW-2	MW-3	MW-5
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Prepared	10/06/97	10/06/97	10/06/97	10/06/97
Date Analyzed	10/14/97	10/14/97	10/14/97	10/14/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Naphthalene	2.0	ug/L	< 2.0	< 2.0	< 2.0	**2.6**
Acenaphthylene	2.0	ug/L	< 2.0	**12.**	< 2.0	**100**
Acenaphthene	2.0	ug/L	< 2.0	**3.3**	< 2.0	**11.**
Fluorene	2.0	ug/L	< 2.0	< 2.0	< 2.0	**5.0**
Phenanthrene	1.0	ug/L	< 1.0	< 1.0	< 1.0	**16.**
Anthracene	1.0	ug/L	< 1.0	< 1.0	< 1.0	**3.9**
Fluoranthene	0.50	ug/L	< 0.50	**1.0**	< 0.50	**15.**
Pyrene	0.50	ug/L	< 0.50	**1.1**	< 0.50	**16.**
Benzo[a]anthracene	0.50	ug/L	< 0.50	< 0.50	< 0.50	**2.1**
Chrysene	0.50	ug/L	< 0.50	< 0.50	< 0.50	**2.5**
Benzo[b]fluoranthene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[k]fluoranthene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[a]pyrene	0.50	ug/L	< 0.50	< 0.50	< 0.50	**1.1**
Dibenzo[a,h]anthracene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Benzo[g,h,i]perylene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50
Indeno[1,2,3-cd]pyrene	0.50	ug/L	< 0.50	< 0.50	< 0.50	< 0.50

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8310:

Extraction by EPA Method 3510 (liquid/liquid). "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including Update 2.

W7100056-14:

The qualitative identification for Acenaphthylene is uncertain due to matrix interferences.

W7100056-16:

The qualitative identification for Acenaphthylene is uncertain due to matrix interferences.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: EPA 8010B
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-01	W7100056-02	W7100056-03	W7100056-04
Client ID	MW-9	MW-4	MW-8	MW-1
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Analyzed	10/06/97	10/07/97	10/06/97	10/06/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Dichlorodifluoromethane	5.0	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
Chloromethane	2.0	ug/L	< 2.0	< 2.0	< 2.0	< 2.0
Vinyl chloride	0.8	ug/L	< 0.8	**3.1**	< 0.8	< 0.8
Bromomethane	1.2	ug/L	< 1.2	< 1.2	< 1.2	< 1.2
Chloroethane	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
Trichlorofluoromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Methylene chloride	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
trans-1,2-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene	0.5	ug/L	< 0.5	**0.7**	< 0.5	< 0.5
Chloroform	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloroethylvinyl ether	1.0	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	1.2	ug/L	< 1.2	< 1.2	< 1.2	< 1.2
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
1,4-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
1,2-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8010B:

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

W7100056-02:

Sample was received at pH 7.

W7100056-04:

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: EPA 8010B
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-01	W7100056-02	W7100056-03	W7100056-04
Client ID	MW-9	MW-4	MW-8	MW-1
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Analyzed	10/06/97	10/07/97	10/06/97	10/06/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:

Notes: (continued)

Sample was received at pH 7.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: EPA 8010B
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-05	W7100056-06	W7100056-07	W7100056-08
Client ID	MW-7	MW-2	MW-3	MW-5
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Analyzed	10/07/97	10/06/97	10/06/97	10/07/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Dichlorodifluoromethane	5.0	ug/L	< 5.0	< 5.0	< 5.0	< 5.0
Chloromethane	2.0	ug/L	< 2.0	< 2.0	< 2.0	< 2.0
Vinyl chloride	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
Bromomethane	1.2	ug/L	< 1.2	< 1.2	< 1.2	< 1.2
Chloroethane	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
Trichlorofluoromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Methylene chloride	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
trans-1,2-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
cis-1,2-Dichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Chloroform	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1,1-Trichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Carbon tetrachloride	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloropropane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichloromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
2-Chloroethylvinyl ether	1.0	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
cis-1,3-Dichloropropene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,3-Dichloropropene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Tetrachloroethene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochloromethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
Bromoform	1.2	ug/L	< 1.2	< 1.2	< 1.2	< 1.2
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
1,4-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8
1,2-Dichlorobenzene	0.8	ug/L	< 0.8	< 0.8	< 0.8	< 0.8

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8010B:

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

W7100056-05:

Sample was received at pH 7.

W7100056-08:

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: EPA 8010B
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-05	W7100056-06	W7100056-07	W7100056-08
Client ID	MW-7	MW-2	MW-3	MW-5
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Analyzed	10/07/97	10/06/97	10/06/97	10/07/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:

Notes: (continued)

Sample was received at pH 7.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: EPA 8020A
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-01	W7100056-02	W7100056-03	W7100056-04
Client ID	MW-9	MW-4	MW-8	MW-1
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Analyzed	10/05/97	10/05/97	10/05/97	10/05/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
MTBE	10.	ug/L	< 10.	460	< 10.	< 10.
Benzene	0.5	ug/L	0.6	3.9	4.2	4.7
Toluene	1.0	ug/L	< 1.0	< 1.0	< 1.0	< 1.0
Ethylbenzene	1.0	ug/L	< 1.0	< 1.0	3.4	3.7
Xylenes (total)	2.0	ug/L	2.7	< 2.0	16.	21.
TPH as Gas	100	ug/L	150	650	110	120

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. Analyte list modified to include additional compounds. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: HYE01HYE01
Login Number: W7100056
Project ID (number): 7-285-1
Project ID (name): HYDRO/MARINER SQUARE

Method: EPA 8020A
Matrix: Aqueous

NEI/GTEL Sample Number	W7100056-05	W7100056-06	W7100056-07	W7100056-08
Client ID	MW-7	MW-2	MW-3	MW-5
Date Sampled	09/30/97	09/30/97	09/30/97	09/30/97
Date Analyzed	10/05/97	10/05/97	10/05/97	10/05/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
MTBE	10.	ug/L	< 10.	< 10.	< 10	12.
Benzene	0.5	ug/L	8.1	0.8	0.8	35.
Toluene	1.0	ug/L	5.3	< 1.0	< 1.0	5.3
Ethylbenzene	1.0	ug/L	< 1.0	2.0	< 1.0	36.
Xylenes (total)	2.0	ug/L	6.9	6.2	3.3	32.
TPH as Gas	100	ug/L	750	900	< 100	9000

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. Analyte list modified to include additional compounds. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

GTEL ENVIRONMENTAL LABORATORIES, INC.

4080 PIKE LANE, SUITE C
CONCORD, CA 94520
(510) 685-7852
(800) 423-7143

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

40111

Company Name: HydroEnvironmental
Phone #: 510-521-2684
FAX #: 1 510-521-5078
Company Address: 2394 Mariner Sq Dr Ste 2 Alameda, CA
Site Location: Mariner Square
Project Manager: Gary Pischke
Client Project ID: (#) 7-285-1
(NAME)
Sampler Name (Print): Gary Pischke

I attest that the proper field sampling procedures were used during the collection of these samples.

Field Sample ID	GTEL Lab # (Lab Use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	UNPRESERVED	OTHER (Specify)	Sampling: DATE	TIME
MW-9		6	X						X						9/30/97	7:40
MW-9		2	X						X						9/30	7:50
MW-9		2	X										X		9/30	7:51
MW-4		6	X						X						9/30	8:10
MW-4		(2)	X						X						9/30	8:15
MW-4		2	X										X		9/30	8:20

ANALYSIS REQUEST

BTEX 602 ☐ 8020 ☐ with MTBE ☐	BTEX/Gas Hydrocarbons PID/FID ☐ with MTBE ☐	Hydrocarbons GC/FID Gas ☐ Diesel ☐ Screen ☐	Hydrocarbon Profile (SIMDIS) ☐	Oil and Grease 413.1 ☐ 413.2 ☐ SM-503 ☐	TPH/IR 418.1 ☐ SM 503 ☐	EDB by 504 ☐ DBCP by 504 ☐	EPA 503.1 ☐ EPA 502.2 ☐	EPA 601 ☐ EPA 8010 ☐ TPHd/mo	EPA 602 ☐ EPA 8020 ☐	EPA 608 ☐ 8080 ☐ PCB only ☐	EPA 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐	EPA 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐	EPA 610 ☐ 8310 ☐	EP TOX Metals ☐ Pesticides ☐ Herbicides ☐	TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐	EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐	CAM Metals TTLC ☐ STLC ☐	Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐	Organic Lead ☐	Corrosivity ☐ Flash Point ☐ Reactivity ☐	OTHER: Vinyl chloride/Freon 12 only
	X																				X
								X													
																					X
	X																				X
								X													
																					X

TAT
Priority (24 hr) ☐
Expedited (48 hr) ☐
7 Business Days ☑
Other ____
Business Days ☑

Special Handling
GTEL Contact ____
Quote/Contract # ____
Confirmation # ____
P.O. # ____

QA/QC Level
Blue ☐ CLP ☐ Other ☐ ____

SPECIAL DETECTION LIMITS

REMARKS:

SPECIAL REPORTING REQUIREMENTS

FAX ☐

Lab Use Only Lot #: Storage Location

Work Order #:

CUSTODY RECORD

	Date	Time		Date	Time
Relinquished by Sampler: Gary Pischke	9/30/97	8:57p	Received by: Michael J		
Relinquished by:	10/1/97	2:12p	Received by: John Weber		
Relinquished by: John Weber	10/1/97	1700	Received by Laboratory: Waybill #	10/2/97	0816

GTEL ENVIRONMENTAL LABORATORIES, INC.

4080 PIKE LANE, SUITE C
CONCORD, CA 94520
(510) 685-7852
(800) 423-7143

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

40112

Company Name: Hydro Environmental
Phone #: 510-521-2684
FAX #: 510-521-5078
Company Address: 2394 Mariner Sq Dr Ste 2 Alameda, CA
Site Location: Mariner Square
Project Manager: Gary Pischke
Client Project ID: (#) 7-285-I
(NAME)
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Gary Pischke

Field Sample ID	GTEL Lab # (Lab Use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	UNPRESERVED	OTHER (Specify)	Sampling: DATE	TIME
MW-8		6	X						X						9/30/97	10:20
MW-8		2	X						X						9/30	10:26
MW-8		2	X										X		9/30	10:28
MW-1	5001	6	X						X						9/30	11:15
MW-1	5002	2	X						X						9/30	11:20
MW-1	5003	2	X										X		9/30	11:25
MW-7	5001	6	X						X						9/30	5:00
MW-7	5002	2	X						X						9/30	5:05
MW-7	5003	2	X										X		9/30	5:12

Field Sample ID	BTEX 602 ☐ 8020 ☐ with MTBE	BTEX/Gas Hydrocarbons PID/FID ☐ with MTBE ☒	Hydrocarbons GC/FID Gas ☐ Diesel ☐ Screen ☐	Hydrocarbon Profile (SIMDIS) ☐	Oil and Grease 413.1 ☐ 413.2 ☐ SM-503 ☐	TPH/IR 418.1 ☐ SM 503 ☐	EDB by 504 ☐ DBCP by 504 ☐	EPA 503.1 ☐ EPA 502.2 ☐	EPA 601 ☐ EPA 8010 ☐ Mild/mo	EPA 602 ☐ EPA 8020 ☐	EPA 608 ☐ 8080 ☐ PCB only ☐	EPA 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐	EPA 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐	EPA 610 ☐ 8310 ☐	EP TOX Metals ☐ Pesticides ☐ Herbicides ☐	TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐	EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐	CAM Metals TTLC ☐ STLC ☐	Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐	Organic Lead ☐	Corrosivity ☐ Flash Point ☐ Reactivity ☐	Vinyl Chloride/Freon	PNAs
MW-8		X							X												X	
MW-8									X													X
MW-8																						
MW-1		X																			X	
MW-1									X													X
MW-1																						
MW-7		X																			X	
MW-7									X													X
MW-7																						

TAT
Priority (24 hr) ☐
Expedited (48 hr) ☐
7 Business Days ☑
Other _____ Business Days ☐

Special Handling
GTEL Contact _____
Quote/Contract # _____
Confirmation # _____
P.O. # _____

QA/QC Level
Blue ☐ CLP ☐ Other ☐ _____

SPECIAL DETECTION LIMITS

REMARKS:

SPECIAL REPORTING REQUIREMENTS
FAX ☐

Lab Use Only Lot #: Storage Location
Work Order #:

CUSTODY RECORD

	Date	Time	
Relinquished by Sampler: Gary Pischke	9/30/97	8:57P	Received by:
Relinquished by:	10/1/97	2:12 P	Received by:
Relinquished by: Joan Weber	10/1/97	1700	Received by Laboratory: Waybill # 10/2/97 0810

GTEL ENVIRONMENTAL LABORATORIES, INC.

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(800) 423-7143

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

40113

Company Name: Hydro Environmental
Phone #: 510-521-2684
FAX #: 510-521-5078
Company Address: 2394 Mariner Sq Dr Ste 2 Alameda, CA
Site Location: Mariner Square
Project Manager: Gary Pischke
Client Project ID: (#) 7-285-1
(NAME)
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Gary Pischke

Field Sample ID	GTEL Lab # (Lab Use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	UNPRESERVED	OTHER (Specify)	Sampling: DATE	TIME
MW-2		6	X						X						9/30	6:34
MW-3		2	X						X						9/30	6:38
MW-4		3	X						X				X		9/30	6:40
MW-3'	15	6	X						X						9/30	5:41
MW-3	8	2	X						X						9/30	5:45
MW-7	9	2	X						X				X		9/30	5:45
MW-5		6	X						X						9/30	7:00
MW-5	10	2	X						X						9/30	7:10
MW-5	13	2	X										X		9/30	7:15

ANALYSIS REQUEST | OTHER

BTEX 602 ☐ 8020 ☐ with MTBE ☐
BTEX/Gas Hydrocarbons PID/FID ☐ with MTBE ☐
Hydrocarbons GC/FID Gas ☐ Diesel ☐ Screen ☐
Hydrocarbon Profile (SIMDIS) ☐
Oil and Grease 413.1 ☐ 413.2 ☐ SM-503 ☐
TPH/IR 418.1 ☐ SM 503 ☐
EDB by 504 ☐ DBCP by 504 ☐
EPA 503.1 ☐ EPA 502.2 ☐
EPA 601 ☐ EPA 8010 ☐ TPH/gas/mtbe
EPA 602 ☐ EPA 8020 ☐
EPA 608 ☐ 8080 ☐ PCB only ☐
EPA 624/PPL ☐ 8240/TAL ☐ NBS (+15) ☐
EPA 625/PPL ☐ 8270/TAL ☐ NBS (+25) ☐
EPA 610 ☐ 8310 ☐
EP TOX Metals ☐ Pesticides ☐ Herbicides ☐
TCLP Metals ☐ VOA ☐ Semi-VOA ☐ Pest ☐ Herb ☐
EPA Metals - Priority Pollutant ☐ TAL ☐ RCRA ☐
CAM Metals TTLC ☐ STLC ☐
Lead 239.2 ☐ 200.7 ☐ 7420 ☐ 7421 ☐ 6010 ☐
Organic Lead ☐
Corrosivity ☐ Flash Point ☐ Reactivity ☐
Methyl chloride / Freon

TAT
Priority (24 hr) ☐
Expedited (48 hr) ☐
5 Business Days ☑
Other ____ Business Days ☐

Special Handling
GTEL Contact ____
Quote/Contract # ____
Confirmation # ____
P.O. # ____

QA/QC Level
Blue ☐ CLP ☐ Other ☐ ____

SPECIAL DETECTION LIMITS

REMARKS:

SPECIAL REPORTING REQUIREMENTS
FAX ☐

Lab Use Only Lot #: Storage Location
Work Order #:

CUSTODY RECORD

	Date	Time	
Relinquished by Sampler: Gary Pischke	9/30/97	8:57P	Received by:
Relinquished by:	10/1/97	2:12P	Received by: John Weber
Relinquished by: John Weber	10/1/97	17:00	Received by Laboratory: Waybill # 0892 0890