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April 1, 1998
705-3.TRA

Ms. Susan Hugo
Alameda Health Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-9335

Subject: Letter of Transmittal for First Quarter Groundwater Monitoring Report 705-3,
for 1372 Ocean Avenue, Emeryville, California.

Ms. Hugo:

We are pleased to submit the enclosed report outlining the quarterly monitoring performed at the above mentioned property in March 1998.

If you have any questions or comments, please contact me at (510) 530-8751. Thank you.

Sincerely,
International Geologic



Steve Bittman
Project Manager

cc: Mr. Kevin Graves
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Mr. Doug Ralston
Plant Insulation Company
1300 64th Street
Emeryville, California 94662

First Quarter Groundwater Monitoring Report
March 1998

for
1372 Ocean Avenue
Emeryville, California

Prepared by

INTERNATIONAL GEOLOGIC
2831 Sylhowe Road
Oakland, California 94602

April 1, 1998

First Quarter Groundwater Monitoring Report

March 1998

**for
1372 Ocean Avenue
Emeryville, California**

INTRODUCTION

The subject property is located at 1372 Ocean Avenue in Emeryville, California and is owned by the "Plant Insulation Company" of Emeryville, California (see site Vicinity Map, Figure 1). The site consists of a warehouse and adjoining storage yard built in 1955, and had been used by a trucking company during the 1950's and 1960's. A 2,500 ft² concrete and asphalt surfaced storage yard adjoins the west side of an onsite warehouse building.

BACKGROUND

Excavation

During preparations for the sale of the property, a suspected former fuel dispenser island was identified against the west fence in the yard area, suggesting the possible existence of an underground storage tank (UST) beneath the property (see Figure 2, Site Plan/Project Area Map). Mr. Doug Ralston, President of Plant Insulation Company, had no knowledge of a UST beneath the property, and subsurface locating techniques utilized near the area of the apparent fuel dispenser island, failed to locate a tank.

Subsequently on March 31, 1997, the suspected UST and dispenser areas were investigated by exploration/excavation. During excavations that reached approximately 4 feet below the ground surface (bgs) in a 15 foot by 15 foot area, an abandoned supply line and large sections of broken concrete slab were brought to the surface, suggesting that at least one UST had been removed at some time prior to Plant Insulation Company's ownership of the property (approximately 1975).

On April 10, 1997, one soil sample was collected at a depth of 5.5 feet bgs, and one grab groundwater sample was collected at a depth of approximately 6.5 feet bgs from a hand augured boring (B-1) in the excavation area (see Figure 2). The samples were laboratory analyzed for petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd), total and dissolved lead, and volatile and semi-volatile organic compounds. Analytical results of the soil sample indicated the presence of 150 parts per million (ppm) TPHg and 430 ppm TPHd. The groundwater sample contained 330 parts per billion (ppb) TPHg and 7,000 ppb TPHd. A soil sample collected from the former dispenser area at a depth of 2 feet bgs contained up to 210 ppm TPHd.

Monitoring Well Installation/Sampling

A requirement for a groundwater monitoring well to determine the extent of soil and groundwater contamination beneath the property, was set forth in a letter from the Alameda County Health Care Services Agency (ACHCSA) dated July 17, 1997.

On October 11, 1997, boring SB-1 was drilled to a depth of 16 feet bgs in a location about 9 feet in the downgradient direction (to the west) of the former UST location. Laboratory analyses of soil samples collected from boring SB-1 indicated the presence of up to 180 ppm TPHg and 500 ppm TPHd at a depth of 5.5 feet bgs. Groundwater monitoring well MW-1 was constructed in boring SB-1 at the location shown on Figure 2. Laboratory analytical results of the initial groundwater sample collected from well MW-1 on October 19, 1997, are presented in Table 2.

Detailed descriptions regarding site history, the discovery of the former underground fuel tank location, monitoring well installation and laboratory analytical results of soil and groundwater samples collected on site, can be reviewed in the International Geologic Letter Report, Subsurface Investigation Related To A Suspected Underground Storage Tank Location, For 1372 Ocean Avenue, Emeryville, California May 7, 1997, and in the International Geologic Report, Groundwater Monitoring Well Installation Report For 1372 Ocean Avenue, Emeryville, California December 12, 1997.

Hydrogeology

The direction of groundwater flow beneath the general area of the site has been most recently calculated to be approximately to the west. This direction was calculated by Hageman/Aguiar Inc., during the monitoring of three wells in August 1996 at the adjacent property to the west at 6460 Hollis Street (Hageman/Aguiar 10/4/96).

The depth to first encountered groundwater as measured during the drilling of boring SB-1, was approximately 7.5 feet bgs. Depth to groundwater measurements in well MW-1 are compiled in Table 1 below.

TABLE 1
DEPTH TO GROUNDWATER IN WELL MW-1
(Measured From Top of Well Casing)
1372 Ocean Avenue
Emeryville, California

DATE	TIME OF DAY	DEPTH TO WATER
October 12, 1997	15:00	4.09 feet
October 19, 1997	14:00	4.38 feet
March 6, 1998	13:00	3.12 feet

GROUNDWATER SAMPLE COLLECTION AND LABORATORY ANALYSES

Groundwater Sample Collection

A groundwater sample was collected from well MW-1 on March 6, 1998. Field procedures used by International Geologic during well sampling procedures, including a well sampling data sheet, are presented in Attachment 1 to this report.

Analytical Laboratory Methods/Results

Laboratory analyses were performed at McCampbell Analytical, Inc., in Pacheco, California (DHS Certified Number 1644). The groundwater sample was analyzed for the following:

- o TPHg, BTEX, and MTBE by EPA Test Method 8015/8020/5030.
- o TPHd by EPA Test Method 8015/3550.
- o VOCs by EPA Test Method 8010/601.

Laboratory results of the groundwater sample collected from well MW-1 are shown in Table 2 on the following page. The sample chain of custody record and laboratory data sheets are presented in Attachment 2.

TABLE 2
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF GROUNDWATER SAMPLES
1372 Ocean Avenue
Emeryville, California

Compound	Sample Date 10/19/97	Sample Date 3/6/98
TPHg	< 50	57 ^a
TPHd	120 ^b	120 ^b
MTBE	< 5.0	< 5.0
Benzene	< 0.005	< 0.005
Toluene	< 0.005	< 0.005
Ethylbenzene	< 0.005	< 0.005
Xylenes	< 0.005	< 0.005
1,1- Dichloroethene	0.57	< 3.0
cis 1,2-Dichloroethene	12	16
trans 1,2-Dichloroethene	2.2	< 3.0
Tetrachloroethene	6.0	< 3.0
Trichloroethene	41	82
Trichlorofluoromethane	2.5	3.8
Vinyl Chloride	1.1	3.0

Results expressed in parts per billion (ppb).

TPHg: Total petroleum hydrocarbons as gasoline.

TPHd: Total petroleum hydrocarbons as diesel.

MTBE: Methyl-Tertiary-Butyl-Ether.

a: One to a few isolated peaks present

b: Diesel range compounds are significant; no recognizable pattern.

FINDINGS

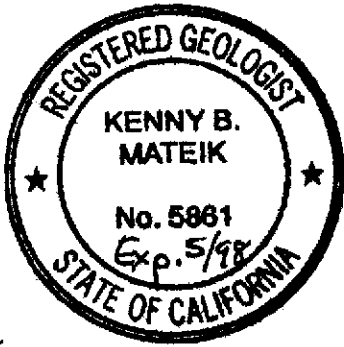
- 1) 57 ppb TPHg was present in the groundwater sample collected from well MW-1 in March 1998. This indicates a slight increase as compared to the concentration of TPHg present in a groundwater sample collected from well MW-1 in October 1997, which contained less than 50 ppb TPHg. 50 ppb was the detection limit for the TPHg analyses for both sampling events. BTEX and MTBE were not detected in the groundwater sample for the current quarter.
- 2) 120 ppb TPHd was present in the groundwater sample collected from well MW-1 in March 1998, which is the same concentration of TPHd detected in October 1997.
- 2) No significant change in VOC concentrations were detected in the groundwater sample collected from well MW-1 in March 1998 as compared to a sample collected in October 1997, except for Trichloroethene, which increased from 41 ppb to 82 ppb.

RECOMMENDATIONS

- 1) Groundwater samples should continue to be collected from well MW-1 on a quarterly basis this year- June 1998, September 1998, and December 1998.
- 2) Groundwater samples collected from well MW-1 should be analyzed at a laboratory certified by the state of California, for TPHg/BTEX using EPA Method 8015/8020/5030, TPHd using EPA Test Method 8015/3550, and for VOCs using EPA Test Method 601.
- 3) A quarterly letter report should be prepared documenting field observations and laboratory results. The report should be signed by a geologist registered by the state of California.
- 4) If hydrocarbon and VOC concentrations remain constant or decrease after the one year period, site closure should be granted.

CERTIFICATION

We certify that the work presented in this report was performed under our supervision. To the best of our knowledge, the data contained herein are true and accurate, and the work was performed in accordance with professional standards.



Steve Bittman 4/1/98
Steve Bittman Date
Project Manager

Ken Mateik 04/01/98
Ken Mateik Date
CA Registered Geologist No. 5861

REFERENCES

Alameda County Health Care Services Agency, Department of Environmental Health. Letter to Mr. Frank DeWolfe, Subject: Confirmation of Closure For Ten USTs at RIX Industries, 6460 Hollis Street, Emeryville, California. May 3, 1995.

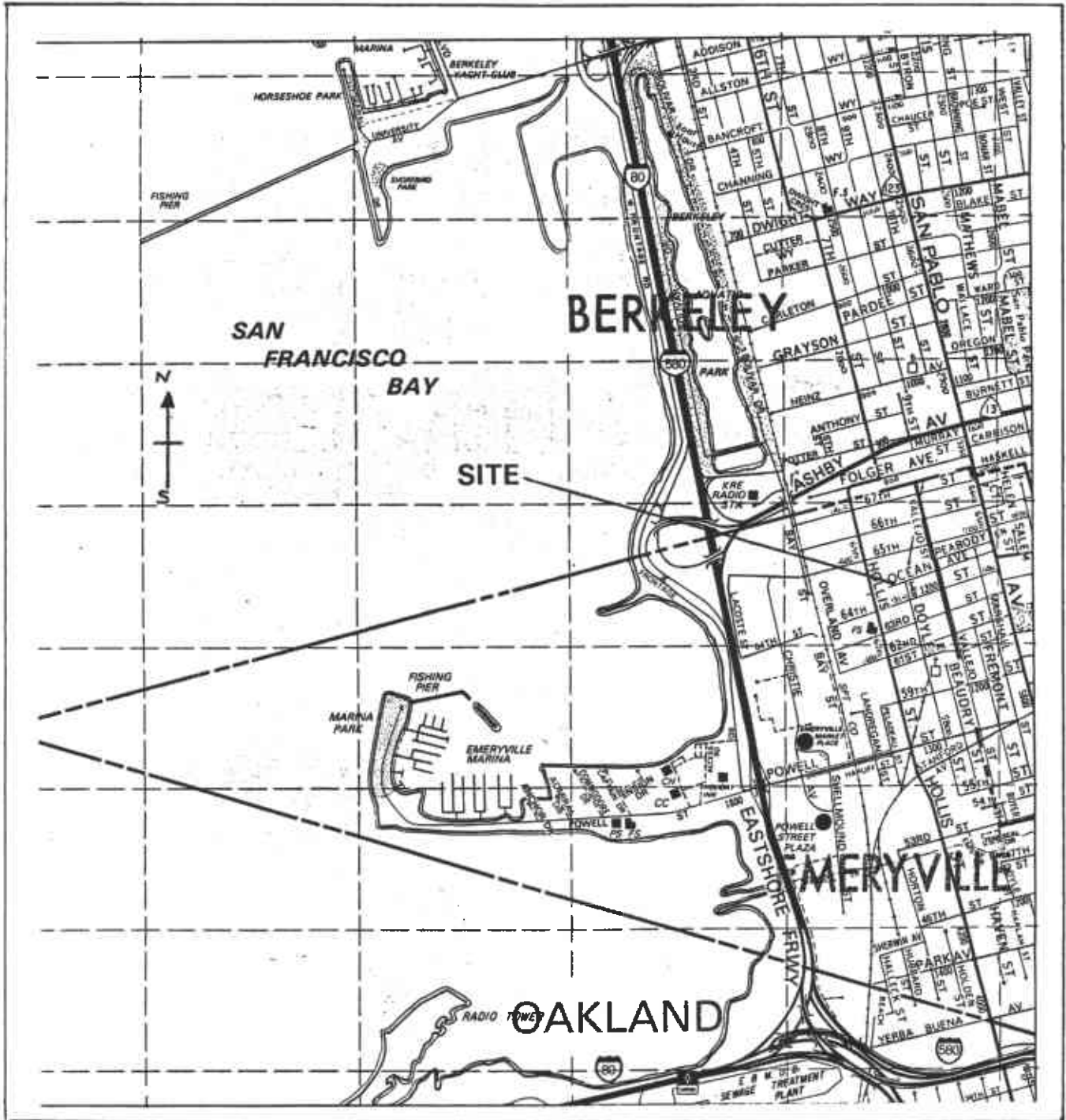
Hageman/Aquiar Inc. Quarterly Groundwater Sampling Report for RIX Industries, 6460 Hollis Street, Emeryville, California. October 4, 1996.

International Geologic. Letter Report, Subsurface Investigation Related To A Suspected Underground Storage Tank Location, For 1372 Ocean Avenue, Emeryville, California. May 7, 1997.

International Geologic. Report, Groundwater Monitoring Well Installation Report For 1372 Ocean Avenue, Emeryville, California. December 12, 1997.

LIMITATIONS

This report was prepared in accordance with standards of environmental geological practice generally accepted in California at the time this investigation was performed. This investigation was conducted solely for the purpose of evaluating environmental conditions with respect to a limited scan of hydrocarbons and volatile and semi-volatile organic compounds in the area sampled at the subject property. Evaluation of conditions at and near the site for the purpose of this investigation is made from a limited number of observation points. Actual subsurface conditions may differ at locations not sampled within the property. Further investigation, including subsurface exploration and laboratory testing of soil and groundwater samples collected at the site, can aid in evaluating subsurface environmental conditions and reduce the inherent uncertainties associated with this type of limited environmental assessment. Accuracy or completeness of public and proprietary records used to conduct limited assessments of this type is not implied. No soil engineering or geotechnical references are implied nor should be inferred.



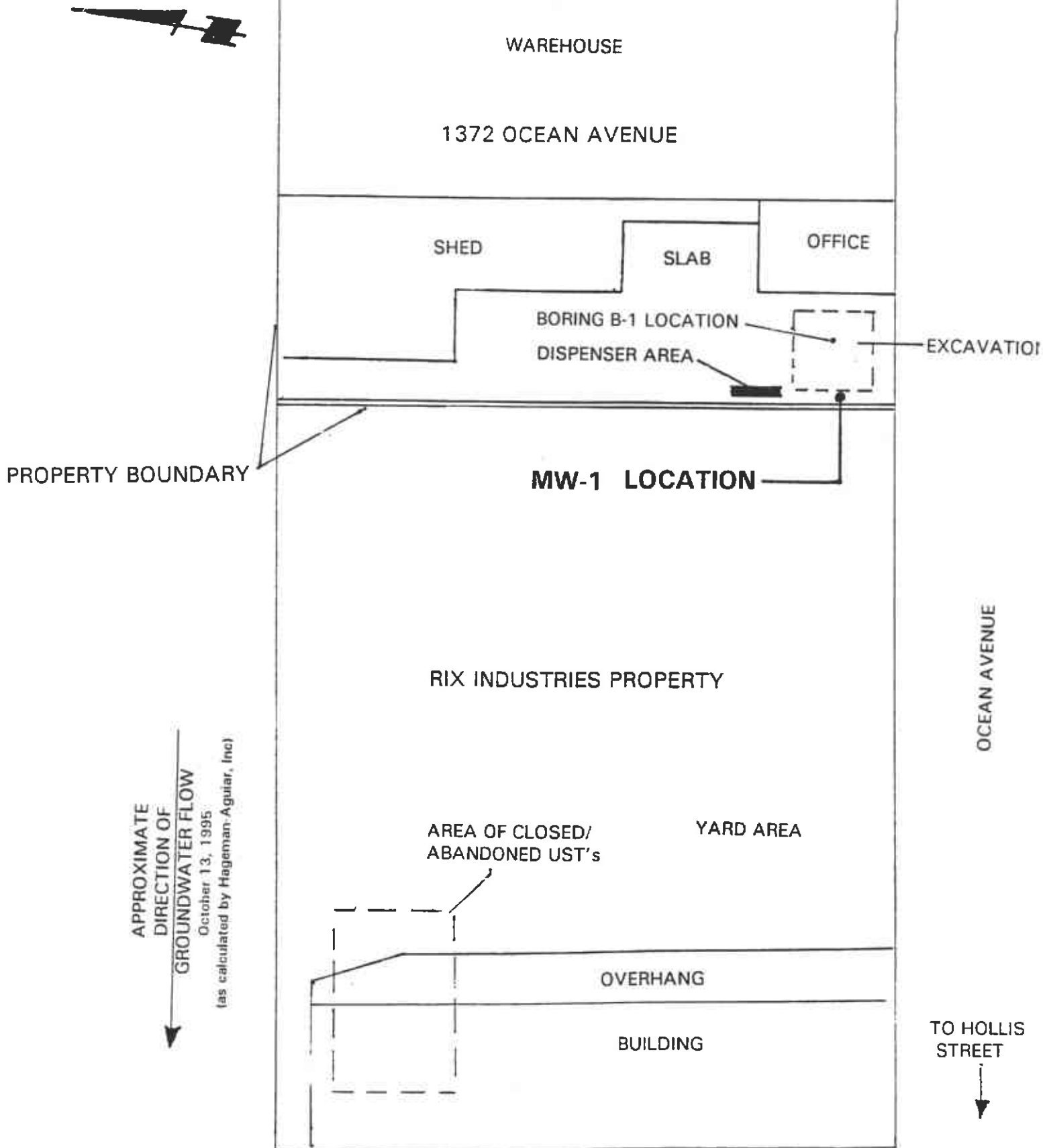
INTERNATIONAL GEOLOGIC Job No. 705-2

1372 Ocean Avenue
Emeryville, California

SITE VICINITY MAP

(Source: Thomas Bros. 1994)

FIGURE 1



INTERNATIONAL GEOLOGIC Job No. 705-2

SITE PLAN/PROJECT AREA MAP

1372 Ocean Avenue
Emeryville, California

APPROXIMATE SCALE: 1 INCH = 25 FEET

FIGURE 2

FIELD PROCEDURES

Groundwater Monitoring Well Sampling

The static water level in the well was measured to the nearest 0.01-foot using an electric water-level sounder cleaned with TSP and water before use. The liquid in the well was examined for visual evidence of contamination by gently lowering approximately half the length of a new disposable bailer past the air/water interface. The sample was then retrieved and inspected for floating product, sheen, emulsion, color, and clarity.

The well were purged using a dedicated PVC bailer cleaned with TSP and water prior to use. During the well purging process, electrical conductivity, Ph, and temperature values of the groundwater were recorded on a Well Sampling Data Sheet included at the end of the protocol description. Approximately six well casing volumes were purged*. Turbidity measurements were estimated of the purged well water.

Before sample collection, the water level in the well was allowed to recover to at least 80 percent of the initial level. A sample of the formation water was then collected from the well using a new disposable bailer. The water sample was then gently poured into laboratory-cleaned, amber colored, 1 liter bottles and 40-milliliter (ml) glass vials with .5 ml Hydrochloric acid added as a preservative.

Sample Labeling and Handling

Sample containers were labeled in the field with the date, project number, and sample identification, then promptly placed in iced storage for transport to the laboratory. A Chain of Custody Record was initiated by the field geologist and updated throughout handling of the samples, and accompanied the samples to a laboratory certified by the State of California for the analyses requested. Samples were transported to the laboratory promptly to help ensure that recommended sample holding times were not exceeded. Samples are properly disposed of after their useful life has expired.

*The quantity of water purged from the wells was calculated as follows:

1 well casing volume = $\pi r^2 h (7.48)$ where:

r = radius of the well casing in feet.

h = column of water in the well in feet.

(depth to bottom - depth to water).

7.48 = conversion constant from cubic feet to gallons.

Gallons removed/1 well casing volume = number of well casing volumes removed from the well.

Water generated by the purging of the wells was stored on site in 17E DOT 55-gallon drums.

INTERNATIONAL GEOLOGIC

WELL SAMPLING DATA SHEET

SITE 1372 Ocean Ave.

DATE 3/6/98

WELL NO. Mw-1

WELL DEPTH 16'

WELL DIAMETER 2"

DEPTH TO WATER TIME / DATE

1 WELL VOLUME = 2 gal.

3.12'	13:05 3/6
3.18'	13:40 3/6

PURGE METHOD Bailer

COLLECTION METHOD Disposable Bailer

TIME	CUMULATIVE GAL. PURGED	TURBIDITY	pH	E.C. (umhos/cm)	TEMP(F)
13:10	∅ Start	∅	8.91	1310	64.0
	2	~1 ml/Liter	8.92	860	60.8
	4	~1 ml/Liter	8.66	780	59.7
	6	~1 ml/Liter	8.37	770	58.7
	8	~1 ml/Liter	8.18	760	58.5
↓	10	~1 ml/Liter	8.05	760	58.5
13:35	12	~1 ml/Liter	7.94	750	57.9

SAMPLE NO.	CONTAINER (TYPE/NUMBER)	PRESERVATIVE
Mw-1	40 ml VOA / 3	Ice HCl
Mw-1	40 ml VOA / 3	Ice HCl
Mw-1	Liter Amber / 2	Ice

FIELD OBSERVATIONS

RECOVERY PERCENTAGE

99 % at

13:40 Hrs

SAMPLER SRB



McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94553
Telephone : 510-798-1620 Fax : 510-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

International Geologic 2831 Sylhowe Road Oakland, CA 94602	Client Project ID: #705-2	Date Sampled: 03/06/98
		Date Received: 03/09/98
	Client Contact: Steve Bittman	Date Extracted: 03/09-03/10/98
	Client P.O:	Date Analyzed: 03/09-03/10/98

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*
EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	% Recovery Surrogate
86522	MW-1	W	57,f	ND	ND	ND	ND	ND	97
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	W		50 ug/L	5.0	0.5	0.5	0.5	0.5	
	S		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

cluttered chromatogram; sample peak coelutes with surrogate peak

**The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.



McCAMPBELL ANALYTICAL INC.

110 Second Avenue South, #D7, Pacheco, CA 94553
 Telephone : 510-798-1620 Fax : 510-798-1622
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International Geologic 2831 Sylhowe Road Oakland, CA 94602	Client Project ID: #705-2	Date Sampled: 03/06/98
	Client Contact: Steve Bittman	Date Received: 03/09/98
	Client P.O:	Date Extracted: 03/11-03/12/98
		Date Analyzed: 03/11-03/12/98

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	86522			
Client ID	MW-1			
Matrix	W			
Compound	Concentration			
Bromodichloromethane	ND<3			
Bromoform ^(b)	ND<3			
Bromomethane	ND<3			
Carbon Tetrachloride ^(c)	ND<3			
Chlorobenzene	ND<3			
Chloroethane	ND<3			
2-Chloroethyl Vinyl Ether ^(d)	ND<3			
Chloroform ^(e)	ND<3			
Chloromethane	ND<3			
Dibromochloromethane	ND<3			
1,2-Dichlorobenzene	ND<3			
1,3-Dichlorobenzene	ND<3			
1,4-Dichlorobenzene	ND<3			
Dichlorodifluoromethane	ND<3			
1,1-Dichloroethane	ND<3			
1,2-Dichloroethane	ND<3			
1,1-Dichloroethene	ND<3			
cis 1,2-Dichloroethene	16			
trans 1,2-Dichloroethene	ND<3			
1,2-Dichloropropane	ND<3			
cis 1,3-Dichloropropene	ND<3			
trans 1,3-Dichloropropene	ND<3			
Methylene Chloride ^(f)	ND<3			
1,1,2,2-Tetrachloroethane	ND<3			
Tetrachloroethene	ND<3			
1,1,1-Trichloroethane	ND<3			
1,1,2-Trichloroethane	ND<3			
Trichloroethene	82			
Trichlorofluoromethane	3.8			
Vinyl Chloride ^(g)	3.0			
% Recovery Surrogate	94			
Comments				

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe
 Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe
 ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 03/09/98

Matrix: WATER

Analyte	Concentration (mg/L)			Amount Spiked	% Recovery		RPD
	Sample (#86263)	MS	MSD		MS	MSD	
TPH (gas)	0.0	119.7	121.6	100.0	119.7	121.6	1.5
Benzene	0.0	11.0	11.2	10.0	110.0	112.0	1.8
Toluene	0.0	11.5	11.8	10.0	115.0	118.0	2.6
Ethyl Benzene	0.0	11.2	11.6	10.0	112.0	116.0	3.5
Xylenes	0.0	32.9	33.6	30.0	109.7	112.0	2.1
TPH(diesel)	0	135	132	150	90	88	2.2
TRPH (oil & grease)	0	24900	23900	23700	105	101	4.1

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

QC REPORT FOR EPA 8010/8020/EDB

Date: 03/11/98-03/12/98

Matrix: WATER

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample # (86202)	MS	MSD		MS	MSD	
1,1-DCE	0.0	11.7	12.0	10.0	117	120	2.5
Trichloroethene	0.0	10.0	10.2	10.0	100	102	2.0
EDB	0.0	8.6	8.9	10.0	86	89	3.4
Chlorobenzene	0.0	10.1	10.2	10.0	101	102	1.0
Benzene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Toluene	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Chlorobz (PID)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

$$\% \text{ Rec.} = (\text{MS} - \text{Sample}) / \text{amount spiked} \times 100$$

$$\text{RPD} = (\text{MS} - \text{MSD}) / (\text{MS} + \text{MSD}) \times 2 \times 100$$

10650 X1418.doc

McCAMPBELL ANALYTICAL

110 2nd AVENUE, # D7

PACHECO, CA 94553

(510) 798-1620

FAX (510) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME:

RUSH 24 HOUR 48 HOUR 5 DAY

REPORT TO: Steve Bittman BILL TO: International Geologic

COMPANY:

TELE: (510) 530-8751

FAX #: (510) 530-8794

PROJECT NUMBER: 705-2

PROJECT NAME:

PROJECT LOCATION:

SAMPLER SIGNATURE:

Steve Bittman

SAMPLE ID	LOCATION	SAMPLING		# CONTAINERS	TYPE CONTAINERS	MATRIX					METHOD PRESERVED		ANALYSIS REQUEST	OTHER	COMMENTS
		DATE	TIME			WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3			
MW-1		3/6/98		3	VOA	X					X	X			86522
MW-1		3/6/98		3	VOA	X					X	X			
MW-1		3/6/98		2	Li:lv	X					X	X			

BTEX & TPH as Gasoline (602/8020 & 8015) MTBE

THP as Diesel (8015)

Total Petroleum Oil & Grease (5520 ELF/5520 DM)

Total Petroleum Hydrocarbons (418.1)

EPA 601/8010

EPA 602/8020

EPA 608/8080

EPA 608/8060 - PCBs Only

EPA 624/8240/8260

EPA 625/8270

CAH - 17 Metals

EPA - Priority Pollutant Metals

LEAD (7240/7421/2372/6010)

ORGANIC LEAD

REI

RELINQUISHED BY: Steve Bittman

DATE: 3/9/98 TIME: 0945

RECEIVED BY: Nidia Treca

RELINQUISHED BY:

DATE: TIME:

RECEIVED BY:

RELINQUISHED BY:

DATE: TIME:

RECEIVED BY LABORATORY:

REMARKS:

ICE GOOD CONDITION HEAD SPACE ABSENT

PRESERVATION APPROPRIATE CONTAINERS

VOAS | O&G | METALS | OTHER