PROTECTION

98 JUL 30 PM 2: 06

July 15, 1998 705-3.OM2

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

Subject:

Second Quarter Groundwater Monitoring Report for 1372 Ocean Avenue,

Emeryville, California.

Mr. Ralston:

The enclosed report documents the second quarter monitoring of one groundwater monitoring well at the above mentioned property conducted in June 1998. This work is intended to comply with Alameda County Health Care Services Agency requirements to monitor groundwater quality beneath the property in the former location of an underground fuel storage tank. Work performed on the property this quarter included collecting a groundwater sample, laboratory analyses of the sample, and the preparation of this report.

Copies of this report have been forwarded to Susan Hugo (Alameda County), and to Kevin Graves (Regional Board) at the addresses listed below.

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

Sincerely,

International Geologic

Steve Bittman Project Manager

cc:

Susan Hugo Alameda County Health Services Environmental Protection (LOP)

1131 Harbor Bay Parkway, Suite 250

Alameda, California, 94502-9335

Kevin Graves

California Regional Water Quality Control Board

San Francisco Bay Region

2101 Webster Street, Suite 500

Oakland, California, 94612

## Second Quarter Groundwater Monitoring Report June 1998

for 1372 Ocean Avenue Emeryville, California

Prepared by

INTERNATIONAL GEOLOGIC 2831 Sylhowe Road Oakland, California 94602

### **Second Quarter Groundwater Monitoring Report**

June 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 square-foot 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 inferred 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 toward 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
June 21, 1998	9:30	4.38 feet

### **GROUNDWATER SAMPLE COLLECTION AND LABORATORY ANALYSES**

### **Groundwater Sample Collection**

A groundwater sample was collected from well MW-1 on June 21, 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	Sample Date 6/21/98
TPHg	< 50	57 °	65 <sup>ad</sup>
TPHd	120 b	120 b	180 <sup>cd</sup>
МТВЕ	< 5.0	< 5.0	7.1
Benzene	< 0.005	< 0.005	< 0.005
Toluene	< 0.005	< 0.005	< 0.005
Ethylbenzene	< 0.005	< 0.005	< 0.005
Xylenes	< 0.005	< 0.005	< 0.005
1,1- Dichloroethene	0.57	< 3.0	<2.0
cis 1,2-Dichloroethene	12	16	17
rans 1,2-Dichloroethen	e 2.2	<3.0	2.1
Tetrachloroethene	6.0	< 3.0	<3.0
Trichloroethene	41	82	78
Trichlorflouromethane	2.5	3.8	<2.0
Vinyl Chloride	1.1	3.0	2.2

### 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.

c:

Oil range compounds are significant.

d:

Liquid sample that contains approx. 5% sediment.

### **FINDINGS**

- 1) 65 ppb TPHg was present in the groundwater sample collected from well MW-1 in June 1998. This represents a slight increase as compared to the concentration of 57 ppb TPHg detected in March 1998. BTEX compounds were not detected in the groundwater sample for the current quarter, or in previous samplings.
- 7.1 ppb MTBE was detected in the groundwater sample collected from well MW-1, which is just over the laboratory detection limit of 5.0 ppb. This compound was not detected in the two previous sampling events (October 1997 and March 1998).
- 3) 180 ppb TPHd was present in the groundwater sample collected from well MW-1 in March 1998, which represents a slight increase as compared with the March 1998 results of 120 ppb TPHd.
- A slight decrease in VOC concentrations was detected in the groundwater sample collected from well MW-1 in June 1998 as compared to the March 1998 results, except for cis-1,2-Dichloroethene, which increased from 16 ppb to 17 ppb.

### **RECOMMENDATIONS**

- 1) Groundwater samples should continue to be collected from well MW-1 on a quarterly schedule during this year- September 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 monitoring 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.

Project Manager

CA Registered Geologist No. 5861

### **REFERENCES**

- Alameda County Health Care Services Agency, Department of Environmental Health. Letter to Mr. Frank DeWolfe, <u>Subject: Confirmation of Closure For Ten USTs at RIX Industries</u>, 6460 Hollis Street, Emeryville, <u>California</u>. May 3, 1995.
- Hageman/Aquiar Inc. <u>Quarterly Groundwater Sampling Report for RIX Industries</u>, 6460 Hollis <u>Street</u>, <u>Emeryville</u>, <u>California</u>. October 4, 1996.
- International Geologic. Letter Report, <u>Subsurface Investigation Related To A Suspected Underground Storage Tank Location</u>, For 1372 Ocean Avenue, <u>Emeryville</u>, <u>California</u>. May 7, 1997.
- International Geologic. Report, <u>Groundwater Monitoring Well Installation Report For 1372</u>
  <u>Ocean Avenue, Emeryville, California.</u> December 12, 1997.
- International Geologic. Report, First Quarter Groundwater Monitoring Report, March 1998, For 1372 Ocean Avenue, Emeryville, California. April 1, 1998.

### **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.



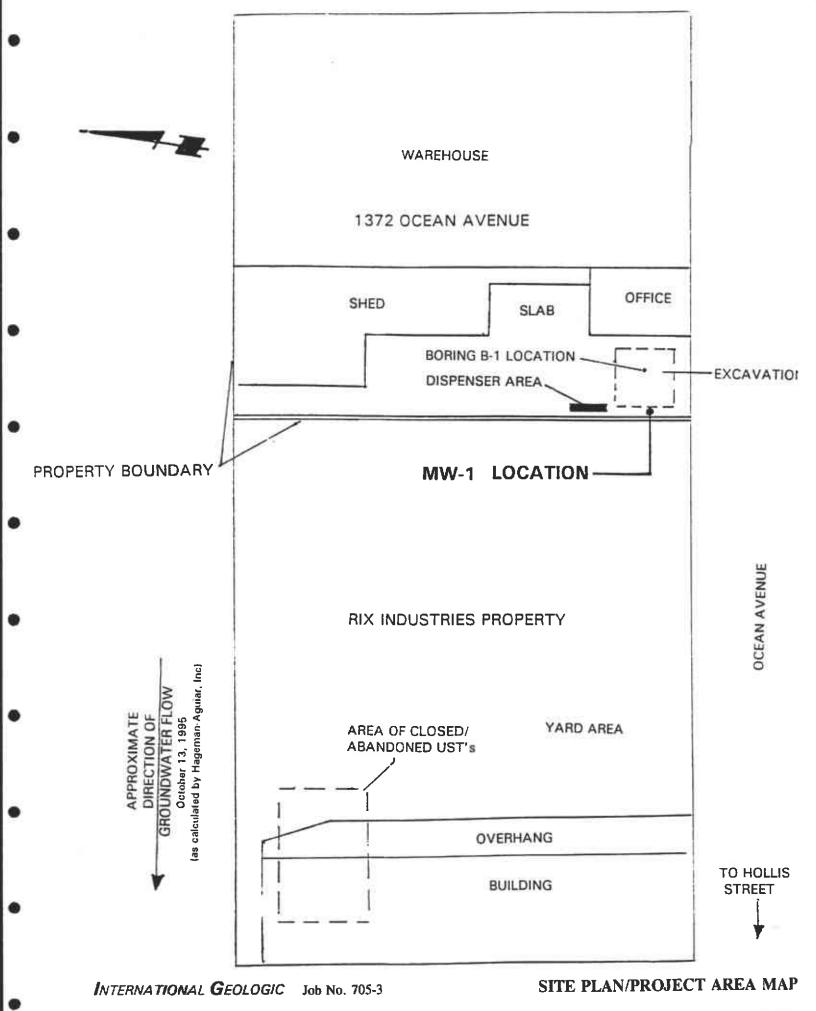
INTERNATIONAL GEOLOGIC Job No. 705-3 1372 Ocean Avenue

Emeryville, California

SITE VICINITY MAP

(Source: Thomas Bros. 1994)

FIGURE 1



1372 Ocean Avenue Emeryville, California APPROXIMATE SCALE: 1 INCH = 25 FEET

FIGURE 2

#### FIELD PROTOCOL

### **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.

### **WELL SAMPLING DATA SHEET**

SITE 1372 Doewn Ave

DATE 6/21/98

WELL NO. MW-(

WELL DEPTH 16

WELL DIAMETER 2

**DEPTH TO WATER** 

TIME / DATE

1 WELL VOLUME = ~ 2 sellors

PURGE METHOD Barley

**COLLECTION METHOD** 

	CUMULATIVE GA	AL.		E.C.	
TIME	PURGED	TURBIDITY	pН	(umhos/cm)	TEMP(F)
9:45	0 Start	Oml/Liter	10.21	970	65.4
	2 sal	~ m//Liter	9.20	840	65.4
	4	~Im//Liter	8.51	860	65.2
	6	~Iml/Loter	7.90	865	6510
	8	~ m//Liter	1.54	860	65,2
10:25	10	nl in / Liter	7.51	860	65,0
	· • · · · · · · · · · · · · · · · · · ·				

SAMPLE NO.	CONTAINER (TYPE/NUMBER)	PRESERVATIVE
Mw-1	40m/v04/3	ICE HCI
Mw-	40ml VOA 13	1 Ce HC
MW-1	Amber Liter/L	ice

FIELD OBSERVATIONS

RECOVERY PERCENTAGE

97 % at 10:25 Hrs

SAMPLER SP/3

110 Second Avenue South, #D7, Pacheco, CA 94553-5560
Telephone: 925-798-1620 Fax: 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

International Geologic	Client Project ID: Ocean Ave	Date Sampled: 06/21/98
2831 Sylhowe Road		Date Received: 06/22/98
Oakland, CA 94602	Client Contact: Steve Bittman	Date Extracted: 06/23-06/24/98
	Client P.O:	Date Analyzed: 06/23-06/24/98

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) <sup>+</sup>	МТВЕ	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery Surrogate
90913	MW-1	w	65,f,i	7.1	ND	ND	ND	ND	104
				-					-
			<u> </u>						
		į	7.						· <u></u>
-			<del></del>						·
Reporting	g Limit unless e stated; ND	w	50 ug/L	5.0	0.5	0.5	0.5	0.5	<del></del>
means not	detected above orting limit	S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

<sup>\*</sup> 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

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.

<sup>\*</sup> cluttered chromatogram; sample peak coelutes with surrogate peak

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Telephone: 925-798-1620 Fax: 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

International	Geologic	Client Pro	ject ID: Ocean Ave	Date Sampled: 0	6/21/98	
2831 Sylhowe Road				Date Received: 06/22/98		
Oakland, CA	94602	Client Cor	ntact: Steve Bittman	Date Extracted:	06/22/98	
		Client P.O	):	Date Analyzed:	06/25/98	
EPA methods mo			23) Extractable Hydrocarbon nia RWQCB (SF Bay Region) method		TD(3510)	
Lab ID	Client ID	Matrix	TPH(d) <sup>+</sup>		% Recovery Surrogate	
90913	MW-I	w	180,g,i		102	
_						
					·	
Reporting Lin stated; ND mean	nit unless otherwise ns not detected above	W	50 ug/L			
the rep	orting limit	S	1.0 mg/kg			

\*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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present;) liquid sample that contains greater than ~5 vol. % sediment.

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

<sup>&</sup>quot; cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.



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International Geologic	Client Project ID:	Ocean Ave	Date Sampled: 06/21/98  Date Received: 06/22/98  Date Extracted: 06/23-06/24/98		
2831 Sylhowe Road	, change to job the.				
Oakland, CA 94602	Client Contact: Ste	ve Bittman			
	Client P.O:		Date Analyzed	: 06/23-06/24/98	
EPA method 601 or 8010	Volatile	Halocarbons			
Lab ID	90913			<u> </u>	
Client ID	MW-1				
Matrix	w				
Compound		Concentra	tion	<u> </u>	
Bromodichloromethane	ND<2	l		1	
Bromoform <sup>(b)</sup>	ND<2			<u> </u>	
Bromomethane	ND<2	<u>_</u>		<del>  - </del>	
Carbon Tetrachloride(c)	ND<2			<del>                                     </del>	
Chlorobenzene	ND<2				
Chloroethane	ND<2				
2-Chloroethyl Vinyl Ether (d)	ND<2				
Chloroform (e)	ND<2			<u> </u>	
Chloromethane	ND<2			•	
Dibromochloromethane	ND<2		•		
1,2-Dichlorobenzene	ND<2				
1,3-Dichlorobenzene	ND<2				
1,4-Dichlorobenzene	ND<2				
Dichlorodifluoromethane	ND<2		· · · · ·		
1,1-Dichloroethane	ND<2		1.2		
1,2-Dichloroethane	ND<2			l	
1,1-Dichloroethene	ND<2				
cis 1,2-Dichloroethene	17				
trans 1,2-Dichloroethene	2.1				
1,2-Dichloropropane	ND<2				
cis 1,3-Dichloropropene	ND<2				
trans 1,3-Dichloropropene	ND<2				
Methylene Chloride <sup>(f)</sup>	ND<3				
1,1,2,2-Tetrachloroethane	ND<2				
Tetrachloroethene	ND<3				
1,1,1-Trichloroethane	ND<2				
1,1,2-Trichloroethane	ND<2				
Trichloroethene	78				
Trichlorofluoromethane	ND<2				
Vinyl Chloride <sup>(g)</sup>	2.2				
% Recovery Surrogate	101				
Comments	i				

<sup>\*</sup> 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

<sup>(</sup>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:

06/23/98-06/24/98 Matrix: WATER

	Concentration (mg/L)				% Reco		
Analyte	Sample			Amount			RPD
	(#89945) 	MS	MSD	Spiked	MS	MSD	
	- j				 		
TPH (gas)	0.0	103.3	103.3	100.0	103.3	103.3	0.0
Benzene	0.0	9.3	9.0	10.0	93.0	90.0	3.3
Toluene	0.0	9.7	9.4	10.0	97.0	94.0	3.1
Ethyl Benzene	0.0	10.3	10.2	10.0	103.0	102.0	1.0
Xylenes	0.0	30.5	29.8	30.0	101.7	99.3	2.3
TPH(diesel)	0.0	153	153	150	102	102	0.1
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

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

### QC REPORT FOR HYDROCARBON ANALYSES

Date: 06/25/98

Matrix: WATER

	Concent	ration	(mg/L)	% Recovery			
Analyte	Sample			Amount			RPD
l 	(#90902)	MS	MSD	Spiked	MS	MSD	
TPH (gas)	0.0	92.1	97.5	100.0	92.1	97.5	5.8
Benzene	0.0	8.7	9.4	100.0	87.0	94.0	7.7
Toluene	0.0	8.9	9.7	10.0	89.0	97.0	8.6
Ethyl Benzene	0.0	9.1	10.0	10.0	91.0	100.0	9.4
Xylenes	0.0	27.7	30.2	30.0	92.3	100.7	8.6
  TPH(diesel) 	0.0	168	165	150	112	110	2.2
TRPH (oil & grease)	0	25000	24400	23700	105	103	2.4

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

<sup>%</sup> Rec. = (MS - Sample) / amount spiked x 100

110 2nd Avenue South, #D7, Pacheco, CA 94553 Tele: 510-798-1620 Fax: 510-798-1622

### McCAMPBELL ANALYTICAL INC.

### QC REPORT FOR EPA 8010/8020/EDB

Date: 06/23/98

Matrix: WATER

	Conce	% Recovery					
Analyte	Sample  (#90262) 	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0.0	10.5	11.2	10.0	105	112	6.5
Trichloroethene EDB	0.0	9.4 9.4	9.9 9.3	10.0	94 94	99 93	5.2 1.1
Chlorobenzene	0.0	9.6	10.0	10.0	96 	100	4.1
Benzene Toluene	N/A N/A	N/A N/A	N/A N/A	N/A   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

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

<sup>%</sup> Rec. = (MS - Sample) / amount spiked x 100

### QC REPORT FOR EPA 8010/8020/EDB

Date: 06/24/98

Matrix: WATER

	Conce	% Recovery					
Analyte	Sample  (#90264) 	MS	MSD	Amount Spiked	MS	MSD	RPD
1,1-DCE	0.0	10.2	10.5	10.0	102	105	2.9
Trichloroethene	0.0	9.0	9.3	10.0	90	93	3.3
EDB	0.0	8.9	9.3	10.0	89	93	4.4
Chlorobenzene	0.0 	9.4	9.8	10.0   	94	98	4.2
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
	!			ii			

<sup>%</sup> Rec. \* (MS - Sample) / amount spiked x 100

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

CHAIN OF CUSTODY RECORD McCAMBELL ANALYTICAL INC. 110 2nd AVENUE SOUTH, #D7 TURN AROUND TIME PACHECO, CA 94553 Telephone: (510) 798-1620 RUSH 24 HOUR 48 HOUR Fax: (510) 798-1622 Report To: Steve Bittman Bill To: International Geologic Analysis Request Other Comments Company: International Geologic Total Petroleum Oil & Grease (5520 E&F/B&F) 2831 Sylhowe Rd. Oakland, CA 94602 Tele: (510) 530-8751 Fax: (510) 530-8794 Total Petroleum Hydrocarbons (418.1) Project Name: Ocean Ave Project #: Project Location: Encryille 19
Sampler Signature: St. Bettings BTEX ONLY (EPA 602 / 8020) EPA 608 / 8080 PCB's ONLY Lead (7240/7421/239.2/6010) EPA 624 / 8240 / 8260 METHOD SAMPLING TPH as Diesel (8015) **MATRIX** Type Comtainers PRESERVED PAH's / PNA's by EPA 608 / 8080 # Containers EPA 601 / 8010 CAM-17 Metals EPA 625 / 8270 SAMPLE ID LOCATION Air Sludge Other Time Date Water Soil Ice HCI HNO<sub>3</sub> 6/21/98 GJ 198 VOA Mw-1 6 90913 Liter MW-1 Relinquished By: Time: Received By: 0/1219E Date: Remarks: 2:15 12:00 man. VOAS | O&G | METALS | OTHER Relinquished By: Received By: Time: PRESERVATION GOOD CONDITION **APPROPRIATE** HEAD SPACE ABSENT CONTAINERS Relinquished By: Received By: Date: Time: