

One Market Plaza
Spear Street Tower, Suite 717
San Francisco, CA 94105
(415) 957-9557



26 October 1989
Project 1382B

Mr. Andrew Getz
HFH Limited
1351 Ocean Avenue
Emeryville, California 94608

Subject: Groundwater Sampling and Analysis
Monitoring Well 1A
1351 Ocean Avenue
Emeryville, California

Dear Mr. Getz:

As outlined in our 18 October 1988 scope of services, Geomatrix Consultants, Inc. (Geomatrix) has resampled monitoring well 1A, located at the subject site. Geomatrix collected the shallow groundwater sample for analysis of total petroleum hydrocarbons as diesel as part of the self-monitoring program designed to determine if diesel is present above detection limits in the shallow groundwater at the site.

The monitoring well, located approximately 10 feet west of a former diesel tank location (Figure 1), was installed on 3 November 1988 at the request of Mr. Dennis Byrne of the Alameda County Department of Health, Division of Hazardous Materials. Analyses of soil samples collected during construction of the well and of a groundwater sample collected on 11 December 1988, indicated no total petroleum hydrocarbons as diesel were present.

Geomatrix resampled well 1A on 17 July 1989 in accordance with the groundwater sampling protocol in our February 1989 Soil Sampling and Groundwater Monitoring Report for the subject site (Appendix A, Protocol No. 3). A groundwater sample and duplicate were collected and delivered to Brown and Caldwell Laboratories in Emeryville, California for analysis of total petroleum hydrocarbons as diesel, using the California Department of Health Services test method for the presence of diesel.

As indicated in the attached laboratory report, no diesel was present above the detection limit of 0.2 milligram per liter. In summary, the results of the resampling efforts substantiate our previous findings that the soil and shallow groundwater surrounding the former diesel tank location have not been significantly impacted.

Geomatrix Consultants, Inc.
Consulting Engineers and Earth Scientists

ALAMEDA COUNTY
DEPT. OF ENVIRONMENTAL HEALTH
10/27/89

Mr. Andrew Getz
HFH Limited
26 October 1989
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Please contact the undersigned if you have any questions or require further information.

Sincerely yours,
GEOMATRIX CONSULTANTS, INC.

Matthew T. Turner

Matthew T. Turner
Staff Environmental Scientist

Nancy T. Bice

Nancy T. Bice, C.E.G.
Senior Project Hydrogeologist

Enclosure

cc: Dennis Byrne, Alameda County Department of Environmental Health
Lisa McCann, California Regional Water Control Board, San Francisco
Bay Region
Philip Tringale, Geomatrix Consultants, Inc.

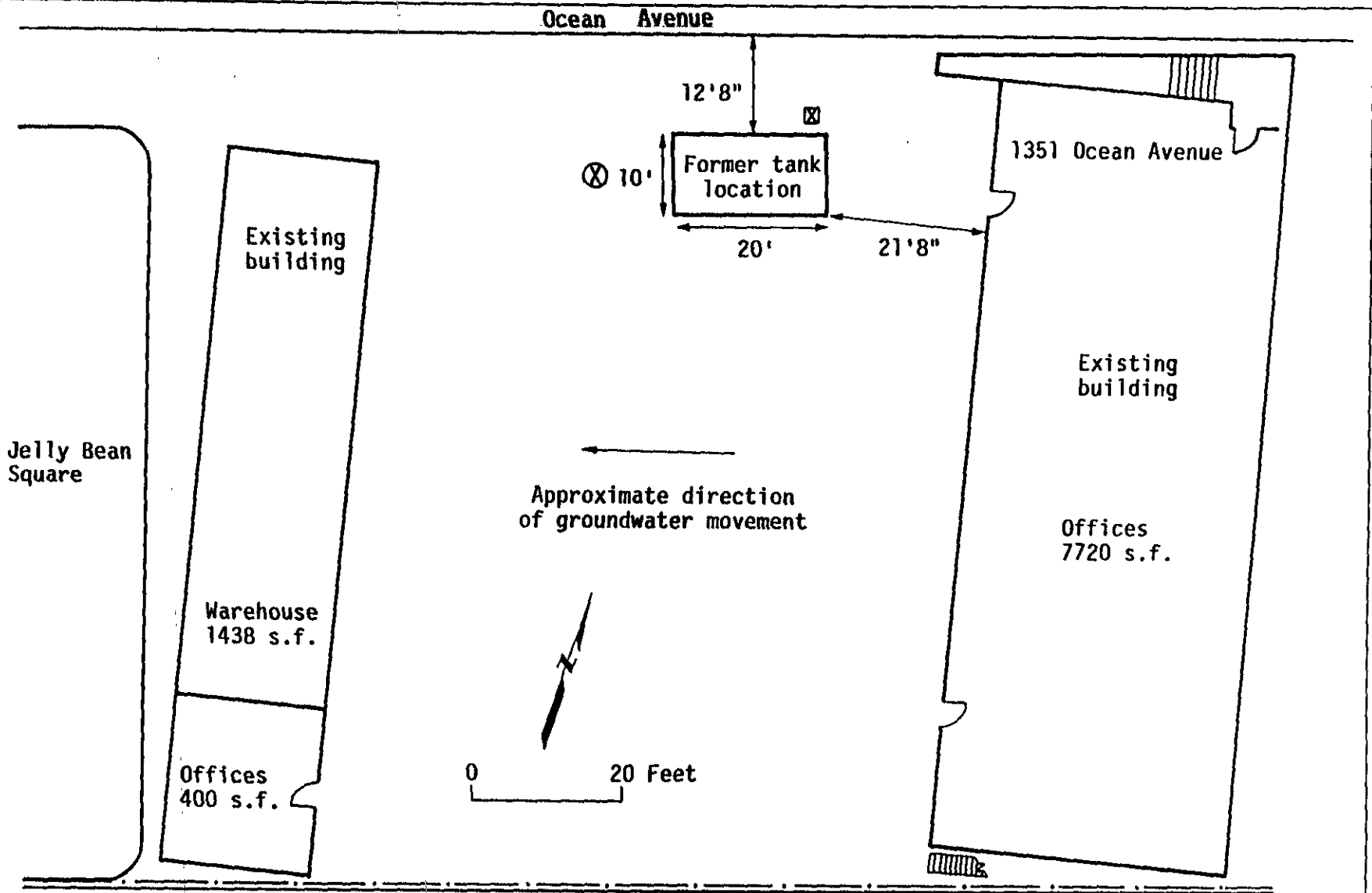


FORMER DIESEL TANK EXCAVATION AND MONITORING WELL

1351 Ocean Avenue
Emeryville, California

Figure 2

Project No.
1382B



EXPLANATION

- ☒ Former diesel dispenser location
- ⊗ Approximate location of shallow groundwater monitoring well

ANALYTICAL LABORATORY REPORTS



LOG NO: E89-07-711

Received: 31 JUL 89

Reported: 17 AUG 89

Mr. Matt Turner
Geomatrix Consultants
1 Market Plaza, Spear Tower, Ste.717
San Francisco, California 94105

Project: 1382B

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, AQUEOUS SAMPLES	DATE SAMPLED
07-711-1	G.E. 0731-1	31 JUL 89
PARAMETER	07-711-1	
TPH - Semivolatile Hydrocarbons		
Date Analyzed	08.15.89	
Dilution Factor, Times	1	
C12 to C25 Hydrocarbons, mg/L	<0.2	
Other TPH - Semivolatile Hydrocarbons	---	

Hedy J. Ficklin for
Sim D. Lessley, Ph.D., Laboratory Director

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
 ORDER E8907711

DATE REPORTED : 08/18/89

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MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RF %
TPH - Semivolatile Hydrocarbons						
Dilution Factor	08.15.89	77	1	1	Times	
C12 to C25 Hydrocarbons	08.15.89	77	0.7	0.9	mg/L	
TPH - Semivolatile Hydrocarbons						
Dilution Factor	08.16.89	77	1	1	Times	
C12 to C25 Hydrocarbons	08.16.89	77	1.2	1.3	mg/L	
TPH - Semivolatile Hydrocarbons						
Dilution Factor	08.15.89	77	1	1	Times	
C12 to C25 Hydrocarbons	08.15.89	77	0.4	0.6	mg/L	

BROWN AND CALDWELL LABORATORIES

BATCH QC REPORT
 ORDER E8907711

DATE REPORTED : 08/18/89

Page 1

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE VALUE	UNIT	PERC RECO
TPH - Semivolatile Hydrocarbons						
Dilution Factor	08.15.89	77	1	1	Times	
C12 to C25 Hydrocarbons	08.15.89	77	0.8	0.9	mg/L	
TPH - Semivolatile Hydrocarbons						
Dilution Factor	08.16.89	77	1	1	Times	
C12 to C25 Hydrocarbons	08.16.89	77	1.25	1.0	mg/L	
TPH - Semivolatile Hydrocarbons						
Dilution Factor	08.15.89	77	1	1	Times	
C12 to C25 Hydrocarbons	08.15.89	77	0.5	0.9	mg/L	



BROWN AND CALDWELL ANALYTICAL LABORATORIES

BATCH QC REPORT Definitions and Terms

- Accuracy:** The ability of a procedure to determine the "true" concentration of an analyte.
- Batch:** A group of samples analyzed sequentially using the same calibration curve, reagents, and instrument.
- Laboratory Control Standard (LCS):** Laboratory reagent water spiked with known compounds and subjected to the same procedures as the samples. The LCS thus indicates the accuracy of the analytical method and, because it is prepared from a different source than the standard used to calibrate the instrument, it also serves to double-check the calibration.
- LC Result:** Laboratory result of an LCS analysis.
- LT Result:** Expected result, or true value, of the LCS analysis.
- Matrix QC:** Quality control tests performed on actual client samples. For most inorganic analyses, the laboratory uses a pair of duplicate samples and a spiked sample. For most organic analyses, the laboratory uses a pair of spiked samples (duplicate spikes).
- Percent Recovery:** The percentage of analyte recovered.
For LCS, the percent recovery calculation is
$$LC \div LT \times 100.$$

For spike recoveries, the percent recovery calculation is
$$\frac{(\bar{S} - \text{Sample Concentration})}{\text{Spike Amount}} \times 100$$
- Precision:** The reproducibility of a procedure demonstrated by the agreement between analyses performed on either duplicates of the same sample or a pair of duplicate spikes.
- R1, R2 Result:** Result of the analysis of replicate aliquots of a sample, with R1 indicating the first analysis of the sample and R2 its corresponding duplicate; used to determine precision.
- Relative Percent Difference (RPD):** Calculated using one of the following:
$$\frac{(R1 - R2) \times 100}{(R1 + R2) \div 2} \quad \frac{(S1 - S2) \times 100}{(S1 + S2) \div 2}$$
- S Bar Result:** The average of spike analysis results.
- S1, S2 Result:** Result of the analysis of replicate spiked aliquots, with S1 indicating one spike of the sample and S2 the second spike; used to determine precision and accuracy.
- True value:** The theoretical, or expected, result of a spike sample analysis.

GEOMATRIX CONSULTANTS

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SPEAR STREET TOWER SUITE 717
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(415) 957-9557

Chain of Custody Record

204 # 890771

00579

DATE 7-31-1989

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PROJECT NO. 1382 B			ANALYSES								REMARKS (SAMPLE PRESERVATION, HANDLING PROCEDURES, OBSERVATIONS, ETC.)	
SAMPLERS: (SIGNATURE) <i>[Signature]</i>			GENERAL MINERAL	PRIORITY POLLUTANT METALS	EPA METHOD 624	EPA METHOD 625	EPA METHOD 601	EPA METHOD 602	EPA METHOD 608	PETROLEUM HYDROCARBONS C15 Mod. D excl.		NUMBER OF CONTAINERS
DATE	TIME	SAMPLE NUMBER										
7-31	1435	G.E 0731-1									1	Normal Turnaround Time, Send Results to Matt Turner

TOTAL NUMBER OF CONTAINERS 1

RELINQUISHED BY:	DATE	RECEIVED BY:	RELINQUISHED BY:	DATE	RECEIVED BY: (LAB)
SIGNATURE		SIGNATURE	SIGNATURE		SIGNATURE
PRINTED NAME	TIME	PRINTED NAME	PRINTED NAME	TIME	PRINTED NAME
COMPANY		COMPANY	COMPANY		LABORATORY
RELINQUISHED BY:	DATE	RECEIVED BY:	METHOD OF SHIPMENT:		
SIGNATURE		SIGNATURE	LABORATORY COMMENTS/OBSERVATIONS		
PRINTED NAME	TIME	PRINTED NAME			
COMPANY		COMPANY			