




HARTCROWSER

Earth and Environmental Technologies

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568


: MW result on alert in 1988 spring
+ verified contamination

June 16, 1993

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

Ref: Groundwater Sampling
625 Hegenberger Road
Oakland, California J-6092

Dear Mr. Chan:

At the request of our client, Diversified Investment, we are providing you with the results of groundwater sampling performed on **May 28, 1993** at the above-referenced site. All five existing groundwater monitoring wells were monitored for depth to water and sampled according to accepted professional practices. The samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, TPH as diesel, benzene, toluene, ethylbenzene, xylenes, oil and grease, and organic lead.

The measured depth to groundwater was used with the available well casing elevations to determine the groundwater elevations. There was no available data for the casing elevation for MW-16. The groundwater elevations showed a westerly groundwater gradient (see Figure 1).

We have attached the laboratory reports and chain-of-custody record for the May 28, 1993 sampling. Also, for your convenient reference, we have attached the tables of analytical data for the 1988 groundwater sampling conducted by Subsurface Consultants.

If you have any questions regarding work at this site, please contact our office at your earliest convenience.

Sincerely,

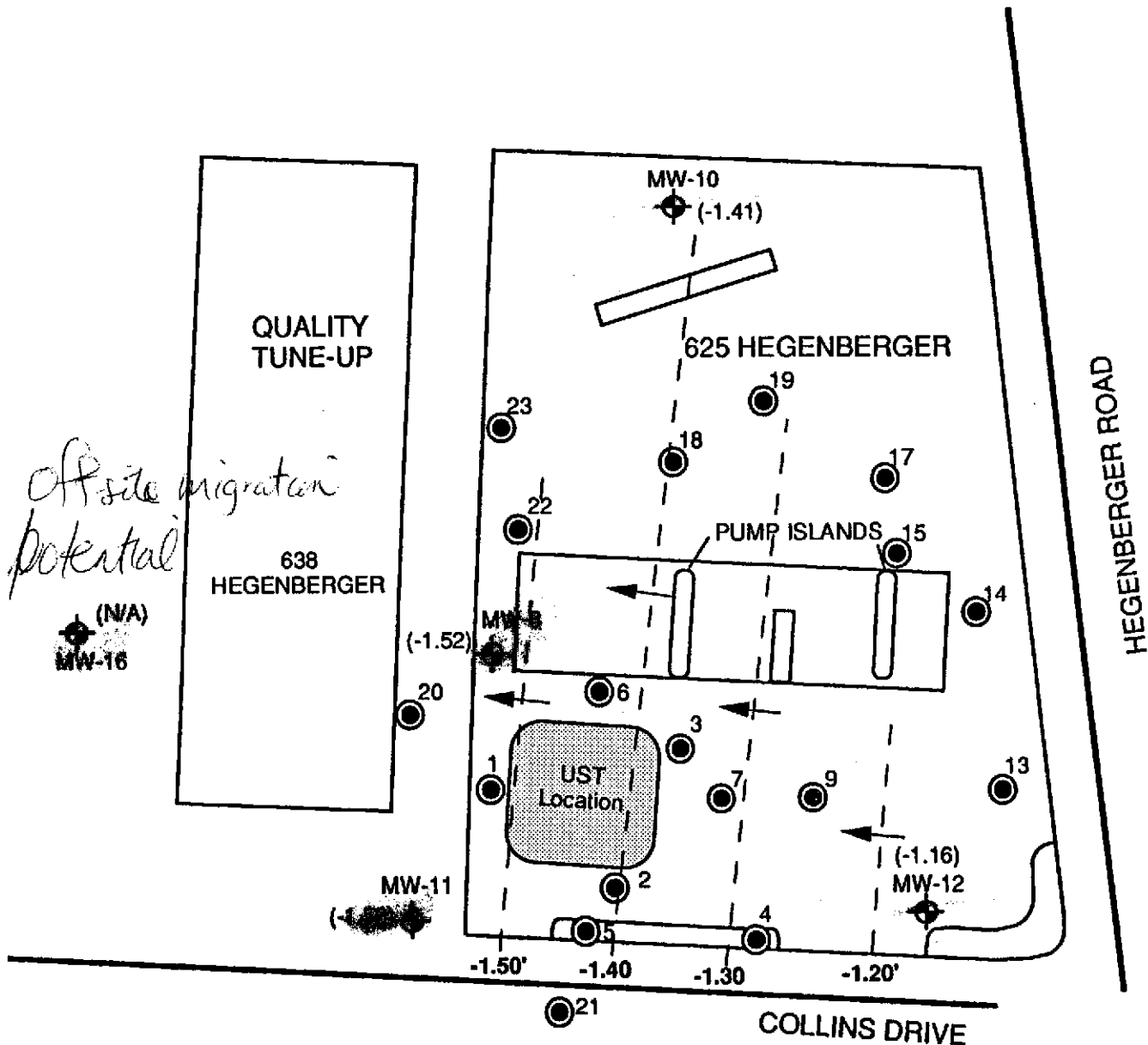
HART CROWSER, INC.

Eric Schniewind
Eric Schniewind
Project Hydrogeologist

R. Craig Holland
R. Craig Holland, P.E.
Regional Manager

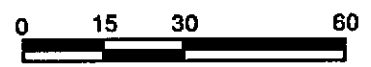
ETS/RCH:pr

Attachments: Figure 1. Groundwater Gradient Map 5/28/93
Tables 6 and 7. Previous Groundwater Results
Certified Analytical Reports and Chain-of-Custody Record 5/28/93



Legend

- Approximate Boring Location
- ⊕ Approximate Monitoring Well Location
- (-1.41) Groundwater elevation as measured on May 28, 1993
- ↖ Approximate groundwater elevation contour with gradient directional arrow.



Base Map: Subsurface Consultants 5/9/90



J-6092 6/93
Figure 1

GROUNDWATER GRADIENT MAP

Diversified Investments
625,638 Hegenberger Road
Oakland, California



Superior Precision Analytical, Inc.

1555 Burke, Unit I • San Francisco, California 94124 • (415) 647-2081 / fax (415) 821-7123

HARTCROWSER Inc
Attn: Eric Schniewind

Project J6092
Reported 06/07/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
56527- 1	MW-8	05/28/93	06/01/93 Water
56527- 2	MW-10	05/28/93	06/01/93 Water
56527- 3	MW-11	05/28/93	06/01/93 Water
56527- 4	MW-12	05/28/93	06/01/93 Water
56527- 5	MW-16	05/28/93	06/01/93 Water
56527- 6	TRIP BLANK	05/28/93	06/01/93 Water

RESULTS OF ANALYSIS

Laboratory Number: 56527- 1 56527- 2 56527- 3 56527- 4 56527- 5

Gasoline:	19000	ND<50	1200	ND<50	81
Benzene:	6400	ND<0.3	450	ND<0.3	2.8
Toluene:	28	ND<0.3	1.7	ND<0.3	ND<0.3
Ethyl Benzene:	160	ND<0.3	1.5	ND<0.3	0.7
Xylenes:	36	ND<0.9	2.1	ND<0.9	ND<0.9
Oil and Grease:	ND<5000	ND<5000	ND<5000	ND<5000	ND<5000
Diesel:	1000	54	ND<50	ND<50	ND<50
Concentration:	ug/L	ug/L	ug/L	ug/L	ug/L

Laboratory Number: 56527- 6

Gasoline:	ND<50
Benzene:	ND<0.3
Toluene:	ND<0.3
Ethyl Benzene:	ND<0.3
Xylenes:	ND<0.9
Oil and Grease:	NA
Diesel:	NA
Concentration:	ug/L



C E R T I F I C A T E O F A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 56527

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.3ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	98/99	1%	72-113
Benzene:	87/87	0%	71-106
Toluene:	93/94	1%	69-116
Ethyl Benzene:	98/101	3%	66-121
Xylenes:	94/96	2%	67-108
Oil and Grease:	78/72	8%	58-109
Diesel:	89/90	1%	34-131

Richard Srna, Ph.D.

Richard A. Srna
Laboratory Director



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 88776
CLIENT: HARTCROWSER Inc.
CLIENT JOB NO.: J6092

DATE RECEIVED: 05/28/93
DATE REPORTED: 06/04/93
DATE SAMPLED : 05/28/93

ANALYSIS FOR TOTAL ORGANIC LEAD by DHS METHOD (LUFT MANUAL)

LAB #	Sample Identification	Concentration (mg/L)
1	MW-8	ND<4
2	MW-10	ND<4
3	MW-11	ND<4
4	MW-12	ND<4
5	MW-16	ND<4

mg/L - parts per million (ppm)

Method Detection Limit for Organic Lead in Water: 4 mg/L

QAQC Summary: MS/MSD Average Recovery : 96%
Duplicate RPD : 3%

Richard Srna, Ph.D.

Sayed Syed ^{For}
Laboratory Director

HC
ES

50527

88776

Sample Custody Record

DATE 5/28/93

PAGE 1 OF 1



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Hart Crowser, Inc.
353 Sacramento Street, Suite 1140
San Francisco, California 94111

JOB NUMBER <u>J6092</u> LAB NUMBER _____					TESTING										NO. OF CONTAINERS	OBSERVATIONS/COMMENTS/ COMPOSITING INSTRUCTIONS		
PROJECT MANAGER <u>ERIC SCHNIEWIND</u>					TPH-GAS/BTEX	TPH-DIESEL	Oil & Grease	ORGANIC LEAD										
PROJECT NAME <u>DIV INV. 625 HEGENBERGER</u>																		
SAMPLED BY: _____																		
LAB NO.	SAMPLE	TIME	STATION	MATRIX														
	MW-8	in		H ₂ O	X	X	X	X										
	MW-10				X	X	X	X										
	MW-11				X	X	X	X										
	MW-12				X	X	X	X										
	MW-16				X	X	X	X										
	THU BURN				X													
<div style="border: 1px solid black; padding: 5px;"> Please Sample Approve Sample Verify Comments <div style="text-align: right;"> </div> </div>																		
RELINQUISHED BY <u>Eric Schniewind</u>				DATE <u>5/28/93</u>	RECEIVED BY _____				DATE _____	TOTAL NUMBER OF CONTAINERS <u>27</u>				METHOD OF SHIPMENT <u>HAND DELIVERED</u>				
SIGNATURE <u>ERIC SCHNIEWIND</u>				TIME _____	SIGNATURE _____				TIME _____	SPECIAL SHIPMENT/HANDLING OR STORAGE REQUIREMENTS								
PRINTED NAME <u>HART CROWSER</u>				COMPANY <u>HART CROWSER</u>	PRINTED NAME _____				COMPANY _____									
RELINQUISHED BY _____				DATE _____	RECEIVED BY <u>Nancy Pettit</u>				DATE <u>5/28/93</u>	DISTRIBUTION:								
SIGNATURE _____				TIME _____	SIGNATURE <u>Nancy Pettit</u>				TIME _____	1. PROVIDE WHITE AND YELLOW COPIES TO LABORATORY								
PRINTED NAME _____				COMPANY _____	PRINTED NAME <u>DEPT</u>				COMPANY <u>Empire</u>	2. RETURN PINK COPY TO PROJECT MANAGER								
										3. LABORATORY TO FILL IN SAMPLE NUMBER AND SIGN FOR RECEIPT								
										4. LABORATORY TO RETURN WHITE COPY TO HART CROWSER								

Table 6. Petroleum Hydrocarbon, Lead and Ethylene Dibromide Concentrations in Groundwater

<u>Sample Description</u>	<u>TVH¹ (ppb)⁷</u>	<u>THP² (ppm)⁸</u>	<u>TOG³ (ppm)</u>	<u>Organic Lead (ppm)</u>	<u>Total⁴ Lead (ppm)</u>	<u>Ethylene⁵ Dibromide (ppm)</u>
MW 8	18000 ⁶	ND ⁹	ND	ND	ND	ND
MW10	ND	ND	ND	ND	ND	ND
MW11	240	ND	ND	ND	ND	ND
MW12	ND	ND	ND	ND	0.21	ND
MW16	380	ND	ND	ND	ND	ND

TNR¹⁰

Table 7. BTEX Concentrations in Groundwater

<u>Sample Description</u>	<u>Benzene^{1,1} (ppb)</u>	<u>Toluene^{1,1} (ppb)</u>	<u>Xylene^{1,1} (ppb)</u>	<u>Ethylbenzene^{1,1} (ppb)</u>
MW 8	3700	ND	690	290
MW10	1.7	ND	ND	ND
MW11	53	ND	ND	ND
MW12	ND	ND	ND	ND
MW15	ND	ND	ND	ND

- 1 As determined by EPA Method 8015 modified after purge and trap extraction (EPA 5030)
- 2 As determined by EPA Method 8015 modified after sonication extraction (EPA 3550)
- 3 As determined by SMWW17:5520F
- 4 As determined by EPA Method 7420
- 5 As determined by DHS Method presented in Luft Manual
- 6 As determined by EPA Method 504
- 7 ppb = parts per billion = micrograms per Liter = ug/L
- 8 ppm = parts per million = milligrams per Liter = mg/L
- 9 ND = None detected, chemicals not present at concentrations above detection limits presented on test reports
- 10 TNR = Test not requested
- 11