



environmental service

by Papineau, R.E.A. 791

R 172

January 15, 2002

Mr. Jack Sumski, Jr.
Davis Realty Co., Inc.
5010 Geary Boulevard Suite 1
San Francisco, CA 94118

MAR 1 2 2002

**Subject: Ground Water Monitoring Event #3, January 7, 2002
for 1723 Fruitvale Avenue, Oakland, California (Project 2000-033.05)**

Dear Mr. Sumski:

This letter is to convey the results of ground water monitoring event #3, conducted on January 7, 2002, at 1723 Fruitvale Avenue, Oakland (see Figure 1, page 6). Work was conducted on behalf of Davis Realty Co., Inc., by Environmental Service, to comply with the directive of the Alameda County Health Care Services Agency to perform monitoring of the three existing wells. This work was authorized by Davis Realty Co., Inc., under contract 2000-033.05. Attachments A and B include the ground water monitoring logs, laboratory analytical reports, and Sample Chain-of-Custody.

Background

The Property was formerly Walt's Transmission Shop. Jack Sumski acquired the Property in 1993 and has no actual knowledge or constructive knowledge of any past storage or use of perchlorethylene (PCE) on the Property. In December 1999 a Phase II investigation report was prepared at the discretion of the owner prior to a contemplated sale of the Property. In July 2000 a Phase III remediation report was prepared to document work overseen by the city of Oakland, including 1) removal of one hydraulic hoist and 2) remedial excavation of presumed PCE-affected soil.

The presumption of PCE impact was erroneous, based upon clerical or interpretive error by the contractor who performed the Phase II investigation. Laboratory-determined concentrations in parts per billion ($\mu\text{g}/\text{kg}$) were incorrectly reported as parts per million (mg/kg). Remedial excavation probably would not have been performed had the PCE concentration been accurately reported in December 1999.

In November 2000 and March 2001 Specified Soil and Ground Water Sampling reports were prepared on behalf of Davis Realty Co., Inc., by Environmental Service, at the request of the Alameda County Health Care Services Agency. The latter pair of reports documented soil borings drilled inside the building close to the location of the former hoist and Phase III remedial excavations, soil and ground water sampling, installation of three monitoring wells, and laboratory analysis results. Monitoring of the three wells was performed previously on February 20, 2001, and June 27, 2001.



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Based upon the available data in the above-mentioned reports, there has been no discovery of an unauthorized release of a petroleum hydrocarbon or PCE from the Property which could warrant a clean-up response. Gasoline and BTEX concentrations in the ground water sample collected outside in front of the building were reported by the analytical laboratory to be 270 $\mu\text{g/L}$ as gasoline (with "no recognizable fuel pattern"); less than 0.5 $\mu\text{g/L}$ as benzene, ethyl benzene and toluene; and 0.51 $\mu\text{g/L}$ as xylenes. Detectable concentrations of PCE were found only in soil samples collected at locations SS-2, SB-4, and SB-5, all in parts per billion (see Figure 2, page 7). PCE concentrations in soil were reported as 24 $\mu\text{g/kg}$ at 5-10 feet bgs at location SB-4, 34 $\mu\text{g/kg}$ at 11 feet bgs at location SS-2, and 43 $\mu\text{g/kg}$ at 20-20.5 feet bgs at location SB-5. PCE concentrations were highest near the ground water and decreased near the concrete floor at the surface. Concentrations of PCE, or its decomposition products TCE and cis 1,2-DCE, were not detected in the soil samples collected farther away from the hydraulic hoist area, and specifically were not detected in the soil sample collected adjacent to the floor drain or in the soil samples collected from locations in front of the building.

Monitoring wells MW-1, MWP-2 and MWP-3 were installed in January 2001, inside former Walt's Transmission Shop, generally within 10 to 15 feet of detectable PCE concentrations found in soil adjacent to the former hydraulic hoist (see Figure 2). The monitoring wells are screened with approximately 6 to 8 feet of 0.010-inch machine slotted, 2-inch diameter casing and Lonestar 2/12 sand. The screened interval was selected to span the saturated zone of sandy clay, sandy clayey gravel, and sandy gravel with trace clay, logged between 18 feet and 23.5 feet bgs. Each bore hole was terminated at 25.5 or 26 feet in a yellowish-brown (10 YR 5/4) sandy highly plastic clay soil observed at 23.5 to 26 feet bgs. In November 2000 and January 2001 first ground water was logged at 19 to 20 feet bgs. Well construction, well elevation survey, and analytical results are subjects of the report titled *Specified Soil and Ground Water Sampling and Laboratory Analyses for 1723 Fruitvale Avenue, Oakland, California*, Project 2000-033.02, dated March 5, 2001, prepared by Environmental Service.

Well Purging and Sampling

On January 7, 2002, depth to ground water was measured relative to the tops of the well casings (TOC), to the nearest hundredth of a foot, using an Environmental Instruments water level meter. The depths to water surface from top of casing were 14.79 feet in well MW-1, 15.01 feet in well MWP-2, and 14.84 feet in well MWP-3, compared to 21.53 feet in well MW-1, 21.64 feet in well MWP-2, and 21.55 feet in well MWP-3, on June 27, 2001. Floating product and sheen were not present in any of the three wells on January 7, 2002, or previously on June 27, 2001, or February 20, 2001.

Prior to sampling, monitoring wells were purged with a submersible pump, until temperature, pH, and electrical conductivity had stabilized. At the end of purging, before sampling, the temperature, pH, and electrical conductivity were observed to stabilize at 66 degrees Fahrenheit ($^{\circ}\text{F}$), 6.8 pH, and approximately 400 $\mu\text{mhos/cm}$, on January 7, 2002. Refer to Attachment A, Ground Water Monitoring Logs.

Within one hour after purging on January 7, 2002, the water surface elevation had recovered to within 0.10 foot of the original measured depths. All wells then were hand bailed using disposable



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polyethylene bailers and twisted polypropylene line to collect ground water samples. Ground water was observed and noted to be slightly cloudy in wells MWP-2 and MWP-3, and cloudy with suspended silt or very fine sand in monitoring well MW-1. Each ground water sample was poured carefully into duplicate or triplicate 40-ml VOAs with 1:1 hydrochloric acid (HCl) preservative. VOAs were labeled immediately after collection and then placed in an ice chest with blue ice and water ice.

Sample Handling and Laboratory Analysis

Ground water samples were delivered to McCampbell Analytical Inc., a State of California certified laboratory, ELAP #1644, on the same day as sampling. Prior to delivery, the samples remained in the custody of Environmental Service, chilled in the ice chest. Sample Chain-of-Custody procedures were used throughout to document sample condition and transfer.

The three ground water samples collected on January 7, 2002, were analyzed for PCE and other halogenated volatile organic compounds, in accordance with U.S. EPA Method 8010/601. The Sample Chain-of-Custody and laboratory analytical report are provided in Attachment B.

Results

Table 1 (page 5) summarizes results for January 7, 2002, June 27, 2001, February 20, 2001, and previous grab ground water sampling events. On January 7, 2002, PCE concentrations were similar to those monitored previously in February and June 2001. On January 7, 2002, the ground water potentiometric surface sloped down toward the west southwest (see Figure 2, page 7). Previously, in June 2001, the ground water potentiometric surface sloped down toward the south southwest.

Interpretation

The shallow ground water impact zone is vertically confined within a thin lens between 18 and 24 feet bgs, which overlies yellowish-brown, sandy, clay logged from 23.5 feet bgs to the total depth in each bore hole. In January 2002 and February 2001 and the lens had ground water throughout the permeable layer, but in June 2001 the water column was only 2 feet thick. In June 2001 this lens is not capable of producing 2 gallons per minute without drawing down or de-watering.

The source of PCE potentially could be upgradient of SB-5, even off site. A vicinity drive-by indicated that dry cleaners are located at 1917 Fruitvale and 2210 Fruitvale. According to the Polk's reverse directories, Vale Cleaners (1917 Fruitvale Avenue) and Payless Cleaners (2210 Fruitvale Avenue) were present at the latter addresses in 1967 and 1969, and presumably for the entire intervening period through 2001. In 1967 there were additional dry cleaners at 2231 Fruitvale Avenue and 2683 Fruitvale Avenue, and also at 2621 Foothill Boulevard, 3666 Foothill Boulevard, and 3941 Foothill Boulevard. Old dry cleaners are potential off-site sources of PCE and, like all commercial and residential uses, have sewer connections to the municipal sewer. Flow in the sewer beneath Fruitvale Avenue is downslope, toward the south.

Conclusions and Recommendations

No source of PCE in soil remains that could warrant a remedial action. The shallow ground water impact zone is vertically confined within the interval from 18 to 24 feet bgs. Concentrations of PCE



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in ground water are relatively low and vertically confined, such that remedial action is not warranted. The U.S. EPA's Maximum Contaminant Level for Drinking Water is 5 $\mu\text{g/L}$ as PCE, but the shallow ground water that has been affected is not a potential drinking water source.

A signed copy of this report should be forwarded by the Property Owner to Alameda County Health Care Services Agency, to the specialist named below:

Mr. Don Hwang
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway Suite 250
Alameda, CA 94502-6577

TEL (510) 567-6746 FAX (510) 337-9335

Thank you for this opportunity to serve Davis Realty Co., Inc. If you have any questions or require additional information, please contact me directly.

Sincerely,

FOR AND ON BEHALF OF ENVIRONMENTAL SERVICE

Marc Papineau
California Registered Environmental Assessor #791

R. Mark Armstrong
California Registered Geologist #6134

enclosures: Figures 1 and 2
Attachment A, Ground Water Monitoring Logs
Attachment B, Laboratory Analytical Report and Sample Chain-of-Custody



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 1723 Fruitvale Avenue, Oakland, California
 ES Project 2000-033.05

TABLE 1
ANALYTICAL RESULTS FOR GROUND WATER SAMPLES
 Date of Last Revision: 1/15/2002 All Results in Parts per Billion ($\mu\text{g/L}$)^a

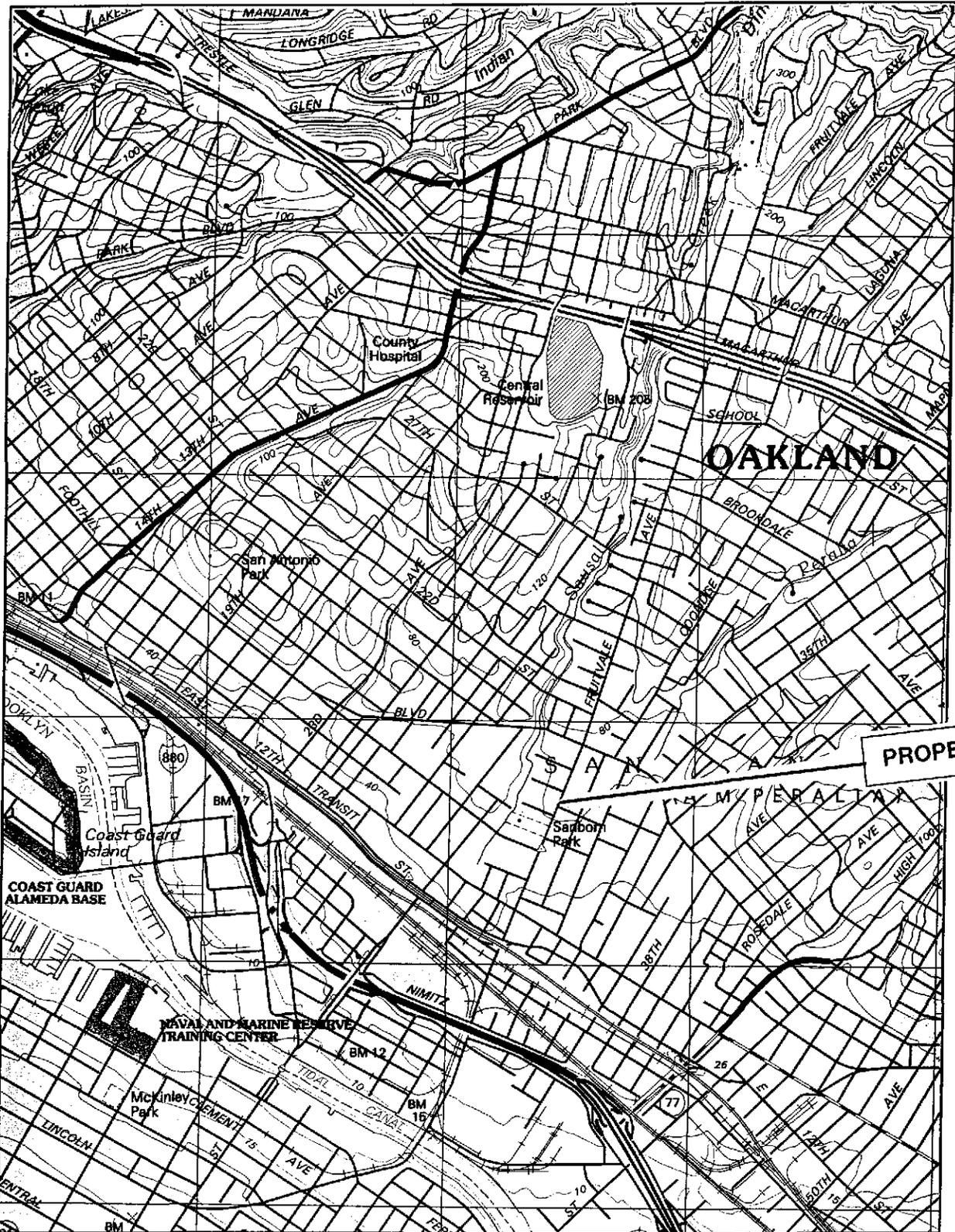
Sample or Well Number	Date of Sample Collection	Ground Water		Volatile Halocarbons ^b PCE	Specified Petroleum Hydrocarbons			
		Depth (Feet)	Elevation (Feet, msl)		Gasoline ^c	BTEX ^d	MtBE ^e	Total Petroleum Hydrocarbons ^e
MW-1	1/7/2002	14.79	45.15	160	nt	nt	nt	nt
	6/27/2001	21.53	38.41	130	nt	nt	nt	nt
	2/20/2001	16.69	43.25	160	68 ^g	ND	ND	ND
MWP-2	1/7/2002	15.01	45.03	150	nt	nt	nt	nt
	6/27/2001	21.64	38.40	120	nt	nt	nt	nt
	2/20/2001	16.89	43.15	140	62 ^g	ND	ND	ND
MWP-3	1/7/2002	14.84	45.15	110	nt	nt	nt	nt
	6/27/2001	21.55	38.44	130	nt	nt	nt	nt
	2/20/2001	16.75	43.24	140	64 ^g	ND	ND	ND
SB6-GW	11/14/2000	20	40	290	65 ^g	ND	nt	ND (<74) ^{f,DL} ND (<368) ^{f,HO}
SB1-GW-1	12/10/1999	23.5	35	42	270 ^h	0.51(X)	ND	2,100
Detection Limits				2.5	50	0.5	5.0	1,000 ^e

NOTES:

- PCE Tetrachloroethene, also perchloroethylene or PCE
- nt Not tested for the stated parameter or not available
- ND None detected at or above the Detection Limits reported by the laboratory either in the bottom row of Table 1 or in parentheses "()" if different.
- a Laboratory results for Volatile Halocarbons (HVOCs), and also for gasoline; benzene, toluene, ethyl benzene, and xylenes (BTEX); methyl tertiary butyl ether (MtBE); and Total Petroleum Hydrocarbons are all stated in parts per billion ($\mu\text{g/L}$) for consistency.
- b HVOCs were analyzed in accordance with U.S. EPA Method 601/8010.
- c Gasoline was analyzed in accordance with U.S. EPA method 5030/8015M.
- d Benzene, toluene, ethyl benzene, and xylenes (BTEX), and methyl tertiary butyl ether (MtBE) were analyzed in accordance with U.S. EPA Method 8020.
- e Total petroleum hydrocarbons were analyzed as Total Recoverable Petroleum Hydrocarbons in accordance with U.S. EPA Method 418.1, unless noted specifically otherwise.
- f Tested in accordance with U.S. EPA Method 3550/8015M as diesel (DL) and also as hydraulic oil (HO).
- g Laboratory flagged the result and/or noted "one or more individual peaks."
- h Laboratory flagged result and noted "no recognizable pattern."

SOURCE:

McC Campbell Analytical Inc, (Cal/EPA ELAP # 1644), January 14, 2002
 McC Campbell Analytical Inc, (Cal/EPA ELAP # 1644), June 29, 2001;
 McC Campbell Analytical Inc, (Cal/EPA ELAP # 1644), February 26, 2001;
 Entech Analytical Labs, Inc. (Cal/EPA ELAP #2346), November 20, 2000;
 McC Campbell Analytical Inc., (Cal/EPA ELAP #1644), December 17, 1999



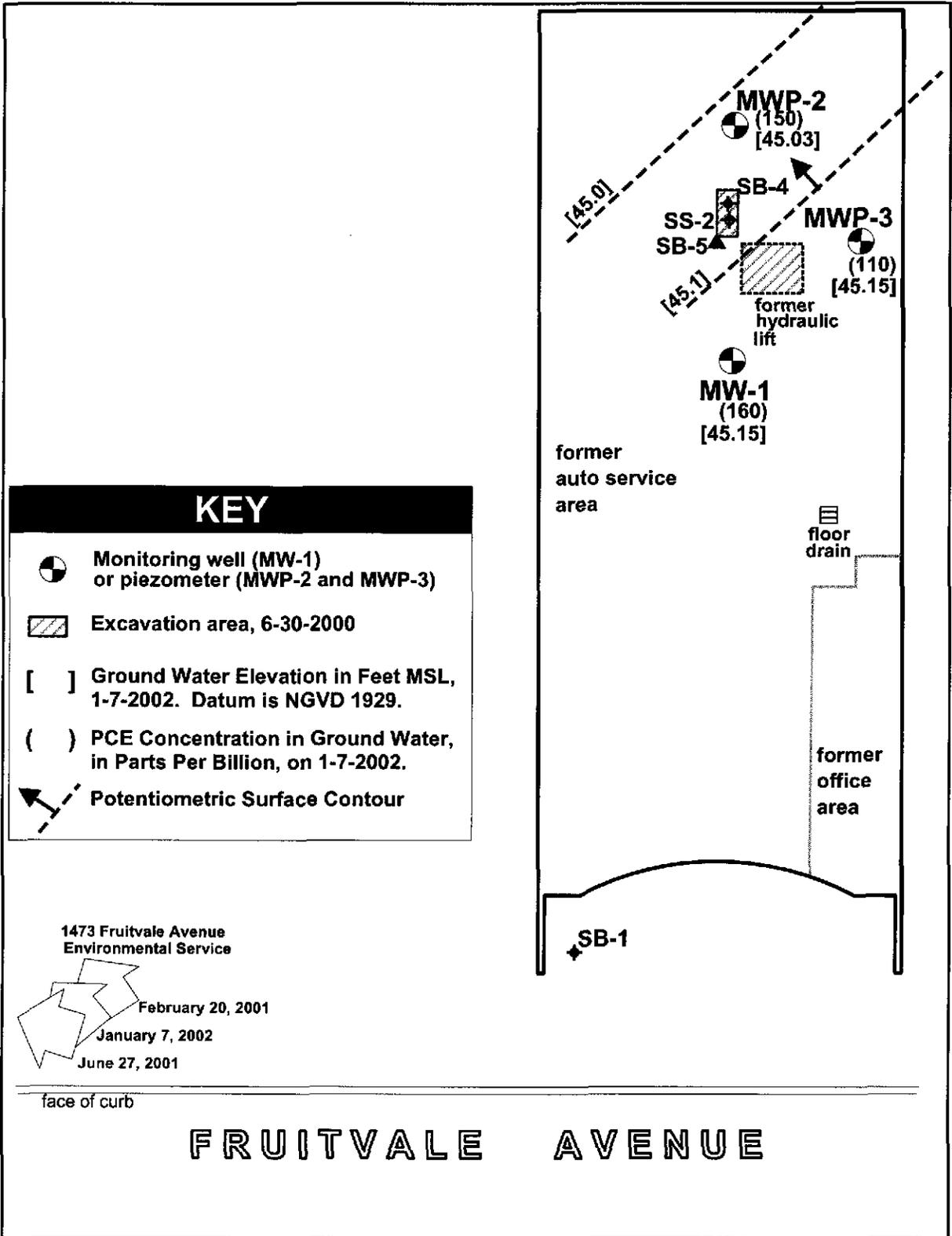
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1:24,000

Figure 1
Topographic Map
1723 Fruitvale Avenue
Oakland, California

U. S. Geological Survey, 7.5-Minute Series (Topographic),
Oakland East, 1997



KEY

-  Monitoring well (MW-1) or piezometer (MWP-2 and MWP-3)
-  Excavation area, 6-30-2000
- [] Ground Water Elevation in Feet MSL, 1-7-2002. Datum is NGVD 1929.
- () PCE Concentration in Ground Water, in Parts Per Billion, on 1-7-2002.
-  Potentiometric Surface Contour

1473 Fruitvale Avenue
Environmental Service

February 20, 2001
January 7, 2002
June 27, 2001

face of curb

FRUITVALE AVENUE

 <p>environmental service by Papineau, R.E.A. 791</p>	  5.0 ft 10.0 ft	<p>Figure 2 Potentiometric Surface Map for January 7, 2002 1723 Fruitvale Avenue Oakland, California</p>
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Ground Water Monitoring Log Well and Sampling Information



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Site Location 1723 Fruitvale Av. Oakland, CA
 Client Davis Realty Co.
 Well Number MW-1
 Project No. 2000-033.05

Date 1/7/2002
 Time 1238
 Weather Cloudy, not raining
 Sampler M. Papineau

WELL INFORMATION

Casing Type PVC
 Casing Diameter 2-inch
 Water Level (Pre-Purge) 14.79 ft
 Total Depth 25.5 ft
 Measuring Instrument Env. Instru.
 Datum TOC

Well Condition

Sediment Suspended
 Casing O.K.
 Cover Present
 Cap Present
 Lock Present, locked

PURGING INFORMATION

Method Submersible pump
 Bailer or Tubing Material
 Polyethylene
 1/2-In. Braided PVC X
 Teflon
 Braided Nylon
 Stainless
 Rope None
 Nylon Braided
 Polypropylene Twist
 Polypropylene Braided

Cleaning Procedure

Downhole tape, line, tubing, and electrical line were washed with TSP and water and rinsed in a 19-gallon bucket. MWP-3 was purged first, then MWP-2 & MW-1.

Pump Rate 1 gpm
 Elapsed Time 7 min
 Volume Pumped 7 gallons
 Number of Casing 4
 Volumes Purged
 Start Time 1345 End Time 1352

TIME SERIES DATA

Measurement	1	2	3	4	5	6	7	8
Number of Casing Volumes	0.6	1.4	2.3	3.4	4			
Water Temp. (°C)	18.2	18.7	18.8	18.8	18.9	NOTE: Temperature may be affected by pump and hose.		
pH	6.92	6.77	6.81	6.81	6.79			
Dissolved Oxygen (mg/L)	5.45	5.28	5.27	5.45	5.35			
Turbidity (NTUs)	120	117	117	116	113			
Specific Conductance (µmhos/cm)	418	417	415	416	416			

SAMPLING INFORMATION

Method Hand Bail
 Material (X Bailer Tubing)
 Polyethylene X
 Tygon
 Teflon
 Stainless
 Cleaning Procedure Clean dedicated bailer.

Rope
 Polypropylene Twist
 Polypropylene Braided X
 Sample Time 1406
 pH 6.8
 Temp. °F 65
 Spec. Cond. (µmhos/cm) 415

Ground Water Monitoring Log Well and Sampling Information



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Site Location 1723 Fruitvale Av. Oakland, CA
Client Davis Realty Co., Inc.
Well Number MWP-2
Project No. 2000-033.05

Date 1/7/2002
Time 1240
Weather Cloudy, not raining
Sampler M. Papineau

WELL INFORMATION

Casing Type PVC
Casing Diameter 2-inch
Water Level (Pre-Purge) 15.01 ft
Total Depth 25.5 ft
Measuring Instrument Env. Instru.
Datum TOC

Well Condition

Sediment Clear
Casing O.K.
Cover Present
Cap Present
Lock Present, locked

PURGING INFORMATION

Method Submersible pump
Bailer or Tubing Material
Polyethylene
1/2-In. Braided PVC X
Teflon
Braided Nylon
Stainless
Rope None
Nylon Braided
Polypropylene Twist
Polypropylene Braided

Cleaning Procedure

The downhole tape, pump, line, tubing, and electrical line were washed with TSP and water and rinsed in a 19-gallon bucket. MWP-2 was purged first.

Pump Rate 0.9 gpm
Elapsed Time 8 min
Volume Pumped 7.5 gallons
Number of Casing 4
Volumes Purged
Start Time 1305 End Time 1313

TIME SERIES DATA

Measurement	1	2	3	4	5	6	7	8
Number of Casing Volumes	0.6	1.7	2.6	4				
Water Temp. (°C)	18.4	18.0	18.5	18.9		NOTE: Temperature may be affected by the pump.		
pH	6.83	6.82	6.83	6.85				
Dissolved Oxygen (mg/L)	5.48	5.28	5.33	5.29				
Turbidity (NTUs)	253	198	147	122				
Specific Conductance (µmhos/cm)	426	402	399	394				

SAMPLING INFORMATION

Method Hand Bail
Material (X Bailer Tubing)
Polyethylene X
Tygon
Teflon
Stainless
Cleaning Procedure Clean dedicated bailer.

Rope Polypropylene Twist
Polypropylene Braided X
Sample Time 1428
pH 6.8
Temp. °F 65
Spec. Cond. (µmhos/cm) 400



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Ground Water Monitoring Log Well and Sampling Information

Site Location 1723 Fruitvale Av. Oakland CA
Client Davis Realty Co., Inc.
Well Number MWP-3
Project No. 2000-033.05

Date 1/7/2002
Time 1241
Weather Cloudy, not raining
Sampler M. Papineau

WELL INFORMATION

Casing Type PVC
Casing Diameter 2-inch
Water Level (Pre-Purge) 14.84 ft
Total Depth 26 ft
Measuring Instrument Env. Instr.
Datum TOC

Well Condition

Sediment Suspended
Casing O.K.
Cover Present
Cap Present
Lock Present, locked

PURGING INFORMATION

Method Submersible pump
Bailer or Tubing Material
Polyethylene
1/2-In. Braided PVC X
Teflon
Braided Nylon
Stainless
Rope None
Nylon Braided
Polypropylene Twist
Polypropylene Braided

Cleaning Procedure

The downhole tape, pump, tubing, and electrical line were washed with TSP and water and rinsed with water.

Pump Rate 1 gpm
Elapsed Time 7 minutes
Volume Pumped 7 gallons
Number of Casing 4
Volumes Purged
Start Time 1328 **End Time** 1335

TIME SERIES DATA

Measurement	1	2	3	4	5	6	7	8
Number of Casing Volumes	0.5	1.4	2	3.3	4			
Water Temp. (°F)	18.4	18.8	19.0	18.9	19.0	NOTE: Temperature may be affected by pump & discharge hose.		
pH	6.93	6.83	6.80	6.86	6.80			
Dissolved Oxygen (mg/L)	5.51	5.50	5.42	5.36	5.51			
Turbidity (NTUs)	419	420	363	218	197			
Specific Conductance (µmhos/cm)	411	414	412	402	412			

SAMPLING INFORMATION

Method Hand Bail
Material (X Bailer Tubing)
Polyethylene X
Tygon
Teflon
Stainless
Cleaning Procedure Clean dedicated bailer.

Rope
Polypropylene Twist
Polypropylene Braided X
Sample Time 1437
pH 6.8
Temp. °F 65
Spec. Cond. (µmhos/cm) 410

**LABORATORY ANALYTICAL REPORT
AND
SAMPLE CHAIN-OF-CUSTODY**



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Environmental Services 5789 Gold Creek Drive Castro Valley, CA 94552	Client Project ID:#2000-033.05	Date Sampled: 01/07/02
		Date Received: 01/07/02
	Client Contact: Marc Papinean	Date Extracted: 01/07/02
	Client P.O:	Date Analyzed: 01/07/02

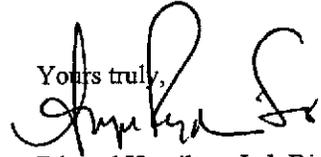
01/14/02

Dear Marc:

Enclosed are:

- 1). the results of 3 samples from your #2000-033.05 project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

Environmental Services 5789 Gold Creek Drive Castro Valley, CA 94552	Client Project ID:#2000-033.05	Date Sampled: 01/07/02
		Date Received: 01/07/02
	Client Contact: Marc Papinean	Date Extracted: 01/07-01/09/02
	Client P.O:	Date Analyzed: 01/07-01/09/02

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	87845	87846	87847
Client ID	MW-1	MWP-2	MWP-3
Matrix	W	W	W
Compound	Concentration		
Bromodichloromethane	ND<12.5	ND<12.5	ND<10
Bromoform ^(b)	ND<12.5	ND<12.5	ND<10
Bromomethane	ND<12.5	ND<12.5	ND<10
Carbon Tetrachloride ^(c)	ND<12.5	ND<12.5	ND<10
Chlorobenzene	ND<12.5	ND<12.5	ND<10
Chloroethane	ND<12.5	ND<12.5	ND<10
2-Chloroethyl Vinyl Ether ^(d)	ND<12.5	ND<12.5	ND<10
Chloroform ^(c)	ND<12.5	ND<12.5	ND<10
Chloromethane	ND<12.5	ND<12.5	ND<10
Dibromochloromethane	ND<12.5	ND<12.5	ND<10
1,2-Dichlorobenzene	ND<12.5	ND<12.5	ND<10
1,3-Dichlorobenzene	ND<12.5	ND<12.5	ND<10
1,4-Dichlorobenzene	ND<12.5	ND<12.5	ND<10
Dichlorodifluoromethane	ND<12.5	ND<12.5	ND<10
1,1-Dichloroethane	ND<12.5	ND<12.5	ND<10
1,2-Dichloroethane	ND<12.5	ND<12.5	ND<10
1,1-Dichloroethene	ND<12.5	ND<12.5	ND<10
cis 1,2-Dichloroethene	ND<12.5	ND<12.5	ND<10
trans 1,2-Dichloroethene	ND<12.5	ND<12.5	ND<10
1,2-Dichloropropane	ND<12.5	ND<12.5	ND<10
cis 1,3-Dichloropropene	ND<12.5	ND<12.5	ND<10
trans 1,3-Dichloropropene	ND<12.5	ND<12.5	ND<10
Methylene Chloride ^(f)	ND<20	ND<20	ND<20
1,1,2,2-Tetrachloroethane	ND<12.5	ND<12.5	ND<10
Tetrachloroethene	160	150	110
1,1,1-Trichloroethane	ND<12.5	ND<12.5	ND<10
1,1,2-Trichloroethane	ND<12.5	ND<12.5	ND<10
Trichloroethene	ND<12.5	ND<12.5	ND<10
Trichlorofluoromethane	ND<12.5	ND<12.5	ND<10
Vinyl Chloride ^(g)	ND<12.5	ND<12.5	ND<10
% Recovery Surrogate	96	95	98
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.

DHS Certification No. 1644

Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Ave. South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
<http://www.mccampbell.com> E-mail: main@mccampbell.com

QC REPORT

EPA 8010/8020

Date: 01/09/02

Extraction: EPA 5030

Matrix: Water

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	MS	MSD	

SampleID: 10402

Instrument: GC-1

Surrogate1	ND	96.0	96.0	100.00	96	96	0.0
Chlorobenzene	ND	10.7	10.9	10.00	107	109	1.9
Trichloroethene	ND	10.9	11.4	10.00	109	114	4.5
1,1-DCE	ND	10.5	10.9	10.00	105	109	3.7

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation



environmental service

by Papineau, R.E.A. 791

5789 Gold Creek Drive Castro Valley, California 94552

(510) 881-8574