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11:04 am, Jan 15, 2009

Alameda County  
Environmental Health

December 16, 2008

Mr. Jerry Wickham  
Alameda County Environmental Health Department  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502

SUBJECT: SENSITIVE RECEPTOR SURVEY REPORT CERTIFICATION  
County File # RO 387  
Mel Senna Brake Service  
2301 East 12<sup>th</sup> Street  
Oakland, CA

Dear Mr. Wickham:

P&D Environmental, Inc. has prepared the following document:

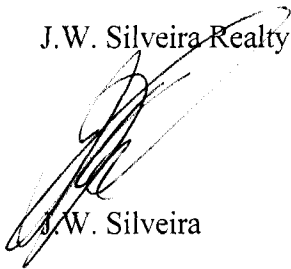
- Sensitive Receptor Survey Report dated December 8, 2008 (document 0404.R2).

I declare under penalty of perjury that the contents and conclusions in the document are true and correct to the best of my knowledge.

Should you have any questions, please do not hesitate to contact me at (510) 834-9811.

Sincerely,

J.W. Silveira Realty



J.W. Silveira

# P&D ENVIRONMENTAL, INC.

55 Santa Clara Ave, Suite 240  
Oakland, CA 94610  
(510) 658-6916

December 8, 2008  
Report 0404.R2

Mr. J.W. Silveira  
J.W. Silveira Realty  
499 Embarcadero  
Oakland, CA 94606

SUBJECT: SENSITIVE RECEPTOR SURVEY REPORT  
County File #RO 387  
Mel Senna Brake Service  
2301 East 12<sup>th</sup> Street  
Oakland, California

Dear Mr. Silveira:

P&D Environmental, Inc. (P&D) is pleased to present this report documenting the results of a well survey and sensitive receptor survey for a ½-mile radius for the subject site. This report is written in response to a request from Mr. Jerry Wickham of the Alameda County Department of Environmental Health (ACDEH) in a letter dated January 31, 2006. A U.S. Geological Survey topographic map showing the location of the subject site and a circle around the site with a ½-mile radius and showing wells identified during the well survey is attached with this report as Figure 1.

## BACKGROUND

The well survey was requested by the ACDEH as part of the investigation of a release from an Underground Storage Tank (UST) at the subject site. Documentation of the investigation of the UST release is presented in greater detail in other reports for the subject site. The presently known extent of impacted groundwater at and near the subject site associated with the UST release is shown in Figures 2, 3 and 4.

## WELL SURVEY

P&D submitted a request to Mr. James Yoo of the Alameda County Public Works Agency (ACPWA) for available well information within a ½-mile radius of the subject site. On October 9, 2008 Ms. Vicky Hamlin of ACPWA provided tables via e-mail to P&D that transmitted the findings of the ACPWA database search. Ms. Hamlin stated in her transmittal that the search area is in Township T2S, Range R3W, and included all or part of Section 6 Tracts E,F,G,H,J,K,L,M,N,P,Q,R, Section 7 Tracts A,B,C,D; and also in Township T2S, Range R4W, and included all or part of Section 1 Tracts I and R, and Section 12 Tract A. Ms. Hamlin also stated that there were no results for wells in the search area in the ACPWA database in the underlined Sections identified above.

A total of 78 well records in the study area were included in the spreadsheet provided by ACPWA. All wells identified by ACPWA within 1/2-mile of the site (including destroyed wells and abandoned but not destroyed wells) and associated well information are summarized in Table 1. Almost all of the wells were groundwater monitoring wells that extended to a maximum depth of 35 feet, with the exception of four wells that were identified as industrial wells with total depths ranging from 385 to 875 feet (all four wells are located at the same address, one of which is identified as having been destroyed), and two wells identified as abandoned and not being used but not having been destroyed through a permitted process. These two additional wells had reported depths of 345 feet and 166 feet. The locations of wells not identified as groundwater monitoring wells are shown on Figure 2. The locations of the wells identified from the ACPWA data that are shown on Figure 2 were located on Figure 2 by locating the site address provided by ACPWA using the internet services Mapquest and Google Earth. The wells at the Del Monte facility were included in Table 1 because a portion of the Del Monte property is located within the search area. The wells in Table 1 that are not identified as groundwater monitoring wells are high-lighted with bold. A legend provided by ACPWA for the well search that defines the various well search result abbreviations is also attached with Table 1.

P&D also submitted a request to Ms. Ann Roth of the California Department of Water Resources (DWR) for available well information within a 1/2-mile radius of the subject site. On October 2, 2008 Ms. Roth provided a total of 409 tif images on a compact disk, some of which consisted of multiple images. Review of these images showed that a total of 52 wells were identified within a 1/2-mile radius of the subject site. Information regarding the wells from the DWR database that are located within 1/2-mile of the subject site is summarized in Table 2. The majority of the wells are groundwater monitoring wells. A total of four of the wells were identified as not being groundwater monitoring wells and have a use identified in Table 2 as "OTHER." Two of these four wells were not identified in the ACPWA database, and had reported depths of 168 feet and 681 feet. One of the four wells was identified as having been destroyed. The locations of wells not identified as groundwater monitoring wells are shown on Figure 2. The locations of the wells identified from the DWR data that are shown on Figure 2 were located on Figure 2 by locating the site address provided by the DWR using the internet service Mapquest and Google Earth. The wells in Table 2 that are not identified as monitoring wells are high-lighted with bold.

Information regarding the wells shown in Figure 1 is summarized in Table 3.

## HYDROGEOLOGY

Review of Figure 1 shows that the Brooklyn Basin (connected to San Francisco Bay by way of a Tidal Canal to the south and the Oakland Inner Harbor to the north) is located approximately 1,800 feet to the west of the subject site, and Sausal Creek is located approximately 2,900 feet to the east of the subject site.

The measured depth to water in groundwater monitoring wells at the subject site have historically ranged from approximately 5 to 9 feet below the ground surface. The groundwater flow direction at

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the subject site has historically been calculated to be to the northwest. However, the calculated groundwater flow direction at the site on June 4, 2007 was to the west-southwest. Review of groundwater flow direction information for nearby sites with groundwater monitoring wells shows that the groundwater flow direction at 2200 East 12<sup>th</sup> Street (located approximately 800 feet northwest of the subject site) has historically been to the west-southwest, and the groundwater flow direction at 2345 International Boulevard (located approximately 500 feet northeast of the subject site) has historically been to the southwest.

### SENSITIVE RECEPTORS

Internet searches were performed using the search functions at the internet services Mapquest, Yahoo, and Yellow Pages for sensitive receptor facilities in the vicinity of 2301 East 12<sup>th</sup> Street, Oakland. Once the subject site address had been entered and a site vicinity map was obtained for each website, the “search nearby” field was used to search for each of the following types of facility: day care, daycare, nursery school, child care, childcare, preschool, pre-school, school, recreation center, hospital, convalescent home, nursing home. The distance between the sites identified during the internet search and the subject site was measured using the internet service Google Earth by entering the facility addresses into the location search field and using the measuring tool to measure the distance from each facility to the subject site. Facilities located within ½ mile of the subject site that were identified during the internet search and the associated distances to the subject site are summarized in Table 4. A total of ten facilities were identified within ½ mile of the subject site.

### DISCUSSION AND RECOMMENDATIONS

The closest well to the subject site that is not a groundwater monitoring well that was identified during the well search is located at 1091 Calcot Street (T2S/R3W-6P1). The location of the well at the site is unknown. The well at 1091 Calcot Street is the only well identified in the well survey that is located to the west-southwest of the subject site. Based on groundwater flow direction information obtained from sites in the vicinity of the subject site that have groundwater monitoring wells and from the groundwater monitoring wells at the subject site, the well at 1091 Calcot Street is downgradient of the subject site.

The distance between the property boundaries for the subject site and 1091 Calcot Street is identified in Table 3 as approximately 235 feet. The presently known extent of TPH-G, TPH-D and HVOCs in groundwater at and near the subject site is shown in figures 2, 3 and 4, respectively. Based on the presently known extent of impacted groundwater, TPH-G and TPH-D concentrations exceeding 100 ug/L and detectable concentrations of HVOCs in groundwater extend to the west and southwest of the subject site UST pit approximately 75 feet. Proposed boreholes SB-9 and SB-10 are located to the southwest and west of the subject site (see figures 2, 3, and 4) to verify that the extent of impacted groundwater has been adequately defined, and that there is not an unacceptable level of risk from impacted groundwater or associated vapors originating from the subject site for the property at 1091 Calcot Street.

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Review of Table 4 shows that the only sensitive receptor facility identified during the sensitive receptor search that is located to the west or southwest of the subject site is the Beacon Day School, located approximately 900 feet from the site. Based on the presently known extent of impacted groundwater for the subject site, the Beacon Day School is not at risk from impacted groundwater or associated soil vapors originating from the subject site.

P&D recommends that the proposed boreholes shown on figures 2, 3 and 4 be drilled to confirm that the extent of impacted groundwater in the vicinity of the subject site has been defined.

### LIMITATIONS

This report was prepared solely for the use of J.W. Silveria Realty. The content and conclusions provided by P&D in this assessment are based on information collected during our investigation, which may include, but not be limited to, visual site inspections; interviews with the site owner, regulatory agencies and other pertinent individuals; review of available public documents; subsurface exploration and our professional judgment based on said information at the time of preparation of this document. Any subsurface sample results and observations presented herein are considered to be representative of the area of investigation; however, geological conditions may vary between borings and may not necessarily apply to the general site as a whole. If future subsurface or other conditions are revealed which vary from these findings, the newly revealed conditions must be evaluated and may invalidate the findings of this report.

This report is issued with the understanding that it is the responsibility of the owner, or his representative, to ensure that the information contained herein is brought to the attention of the appropriate regulatory agencies, where required by law. Additionally, it is the sole responsibility of the owner to properly dispose of any hazardous materials or hazardous wastes left onsite, in accordance with existing laws and regulations.

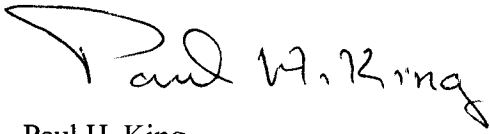
This report has been prepared in accordance with generally accepted practices using standards of care and diligence normally practiced by recognized consulting firms performing services of a similar nature. P&D is not responsible for the accuracy or completeness of information provided by other individuals or entities that is used in this report. This report presents our professional judgment based upon data and findings identified in this report and interpretation of such data based upon our experience and background, and no warranty, either express or implied, is made. The conclusions presented are based upon the current regulatory climate and may require revision if future regulatory changes occur.

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Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.



Paul H. King  
Professional Geologist # 5901  
Expires: 12/31/09



Attachments:

- Table 1 – Alameda County Public Works Agency Well Summary Information
- Table 2 – Department of Water Resources Well Summary Information
- Table 3 – Non-Groundwater Monitoring Well Summary Information
- Table 4 – Sensitive Receptors Located Within ½ Mile of 2302 East 12<sup>th</sup> Street, Oakland, CA
- Figure 1 – Well Location Map
- Figure 2 - Site Vicinity Map Showing TPH-G Groundwater Isoconcentration Contours
- Figure 3 - Site Vicinity Map Showing TPH-D Groundwater Isoconcentration Contours
- Figure 4 - Site Vicinity Map Showing TCE and DCE Groundwater Isoconcentration Contours

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# **TABLES**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**



**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

**STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)**

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

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**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

Sensitive Receptors Located Within 1/2 Mile of 2301 East 12th Street, Oakland, CA

<b><u>Category</u></b>	<b><u>Facility Name</u></b>	<b><u>Facility Address</u></b>	<b><u>Notes</u></b>	<b><u>Approximate Distance and Direction from Site</u></b>
Schools	Youth Employment Partnership	2300 International Blvd., Oakland	Ages 14-24	500 to 600 feet north-northeast of site
Schools	Agnes Memorial Christian Academy	2372 International Blvd., Oakland	Pre-Kindergarden through 12th grade	650 to 750 feet east-northeast of site
Day Care	Advance Day Care Center	2236 International Blvd., Oakland		700 feet north of site
Schools	Life Academy High School	2111 International Blvd., Oakland	Public High School	900 feet north-northwest of site
Schools/Day Care	Beacon Day Schools	2101 Livingston St., Oakland	Ages 3 through 8th grade	900 feet southwest of site
Day Care	Twenty Sixth Avenue Early Head Start	1266 26th Ave., Oakland		1,100 feet east-southeast of site
Schools	Garfield Elementary School	1640 22nd Ave., Oakland	Public Elementary School	1,400 feet east-northeast
Schools	International Community School	2825 International Blvd., Oakland	Pre-Kindergarden through 5th grade	1,700 to 1,800 feet east-southeast of site
Schools	Centro Infantil Early Childhood	2660 East 16th St., Oakland		1,900 to 2,000 feet east of site
Hospitals	Garfield Geropsychiatric Hospital	1451 28th Ave., Oakland		2,000 feet east-southeast of site

# FIGURES

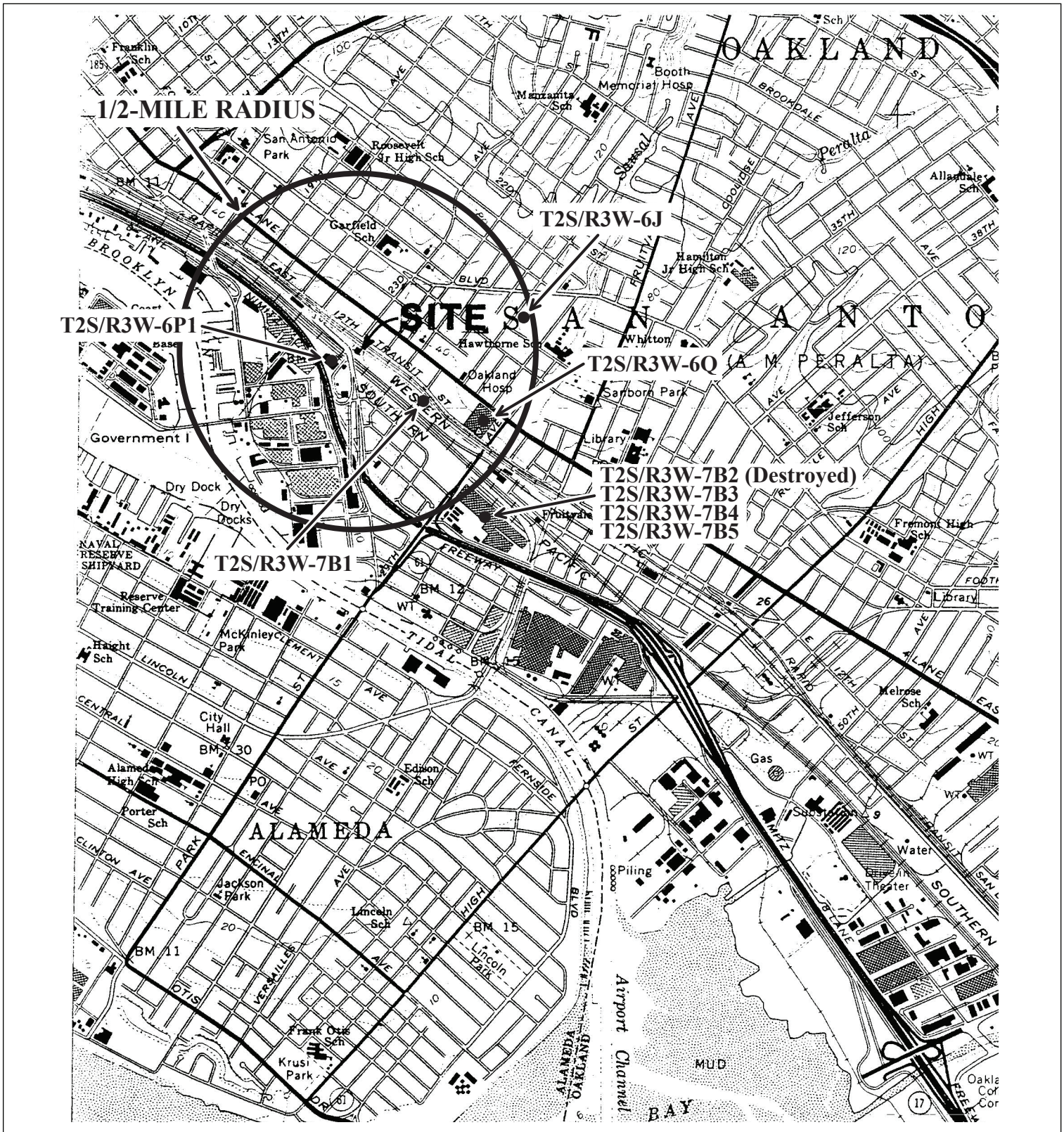
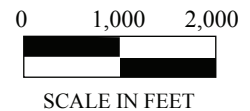


Figure 1  
 Well Location Map  
 Mel Senna Brake Service  
 2301 East 12th Street  
 Oakland, California

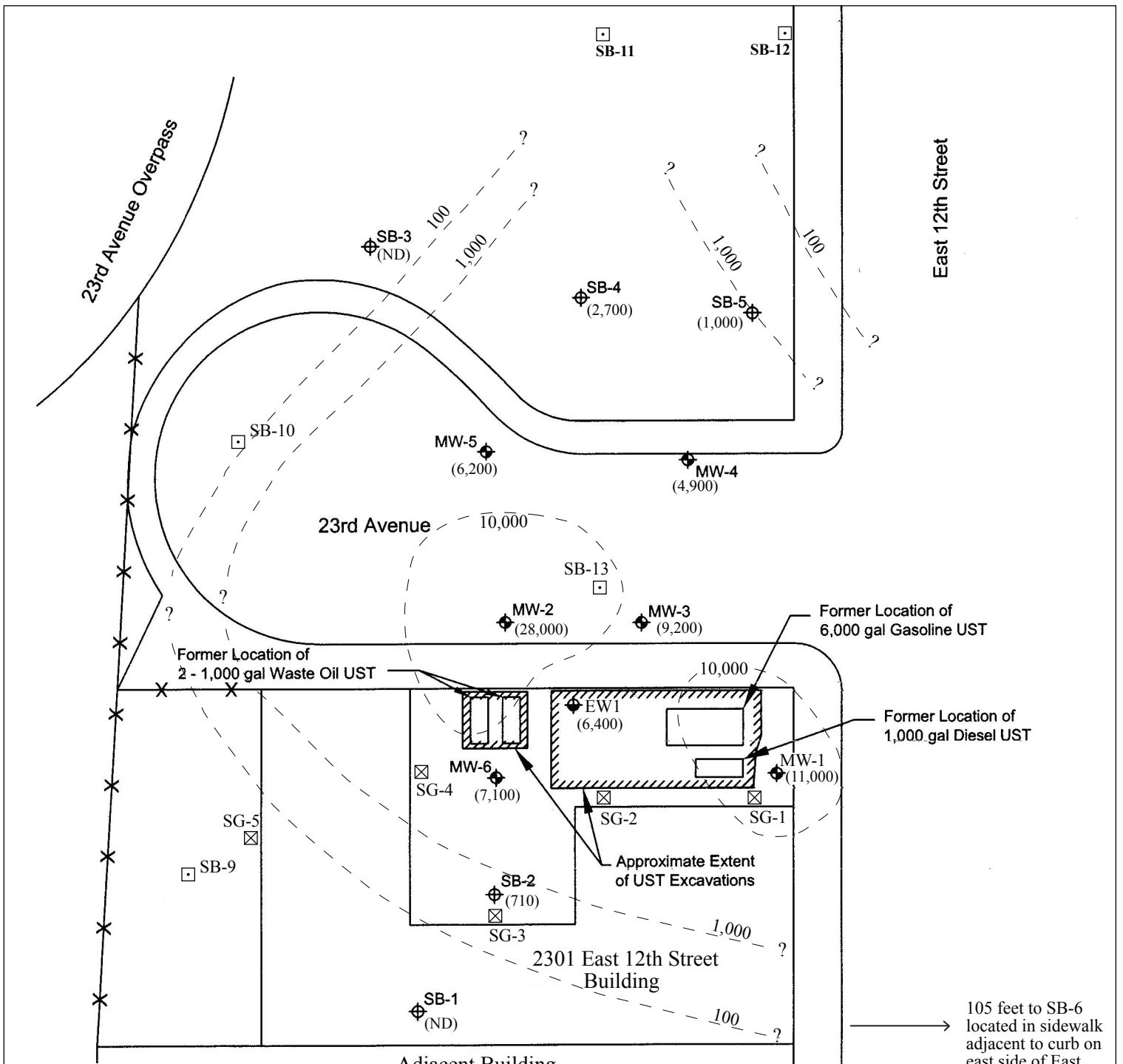


Base Map From:  
 U.S. Geological Survey  
 Oakland East, California  
 7.5 Minute Quadrangle  
 Photorevised 1980

P&D Environmental, Inc.  
 55 Santa Clara Ave., Suite 240  
 Oakland, CA 94610







**LEGEND**

- ◆ MW-6 Existing Monitoring Well
- ◆ EW-1 Existing Extraction Well
- ⊕ SB-6 Existing Soil Boring
- SB-13 Proposed Soil Boring
- ⊗ SG-5 Proposed Soil Gas Sample Location
- (28,000) TPH-G Concentration in Groundwater (ug/L)
- - - TPH-G Isoconcentration Contour (ug/L)

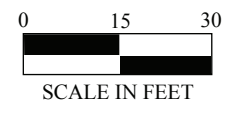
Figure 2  
 Site Vicinity Map Showing TPH-G  
 Groundwater Isoconcentration Contours  
 Mel Senna Brake Service  
 2301 East 12th Street  
 Oakland, California

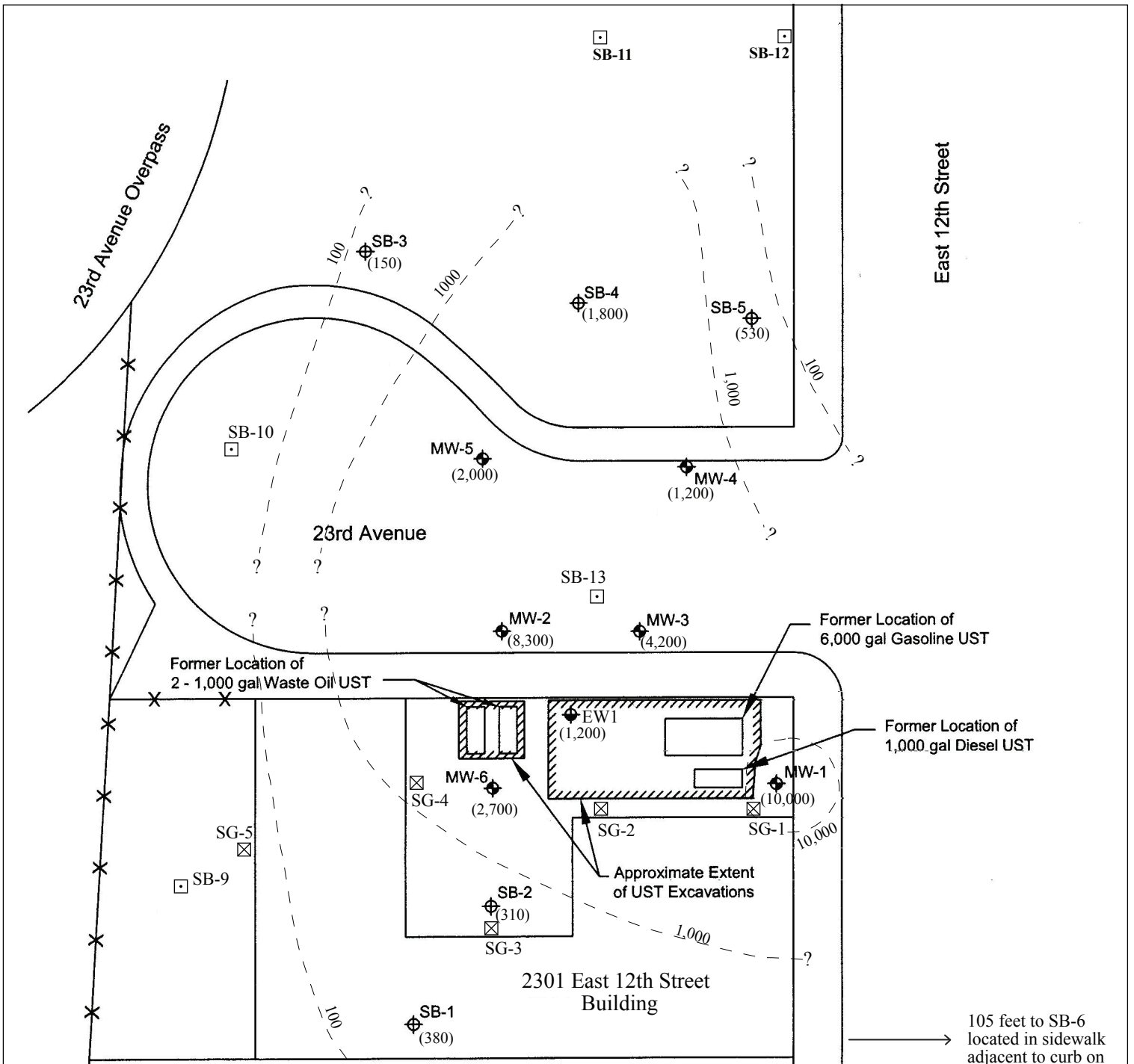
Note:  
 Groundwater concentrations  
 from 4/99 (SB samples)  
 and 6/07 (MW, EW samples).



Base Map From:  
 Tetra Tech EM, Inc., Draft Summary  
 Reports for Additional Site  
 Characterization Work, dated  
 November 10, 1999

P&D Environmental, Inc.  
 55 Santa Clara Ave., Suite 240  
 Oakland, CA 94610





**LEGEND**

- ◆ MW-6 Existing Monitoring Well
- ◆ EW-1 Existing Extraction Well
- ◆ SB-6 Existing Soil Boring
- SB-13 Proposed Soil Boring
- ⊠ SG-5 Proposed Soil Gas Sample Location
- (10,000) TPH-D Concentration in Groundwater (ug/L)
- - - TPH-D Isoconcentration Contour (ug/L)

**Figure 3**  
 Site Vicinity Map Showing TPH-D  
 Groundwater Isoconcentration Contours  
 Mel Senna Brake Service  
 2301 East 12th Street  
 Oakland, California



Base Map From:  
 Tetra Tech EM, Inc., Draft Summary  
 Reports for Additional Site  
 Characterization Work, dated  
 November 10, 1999

P&D Environmental, Inc.  
 55 Santa Clara Ave., Suite 240  
 Oakland, CA 94610

Note:  
 Groundwater concentrations  
 from 4/99 (SB samples)  
 and 6/07 (MW, EW samples).

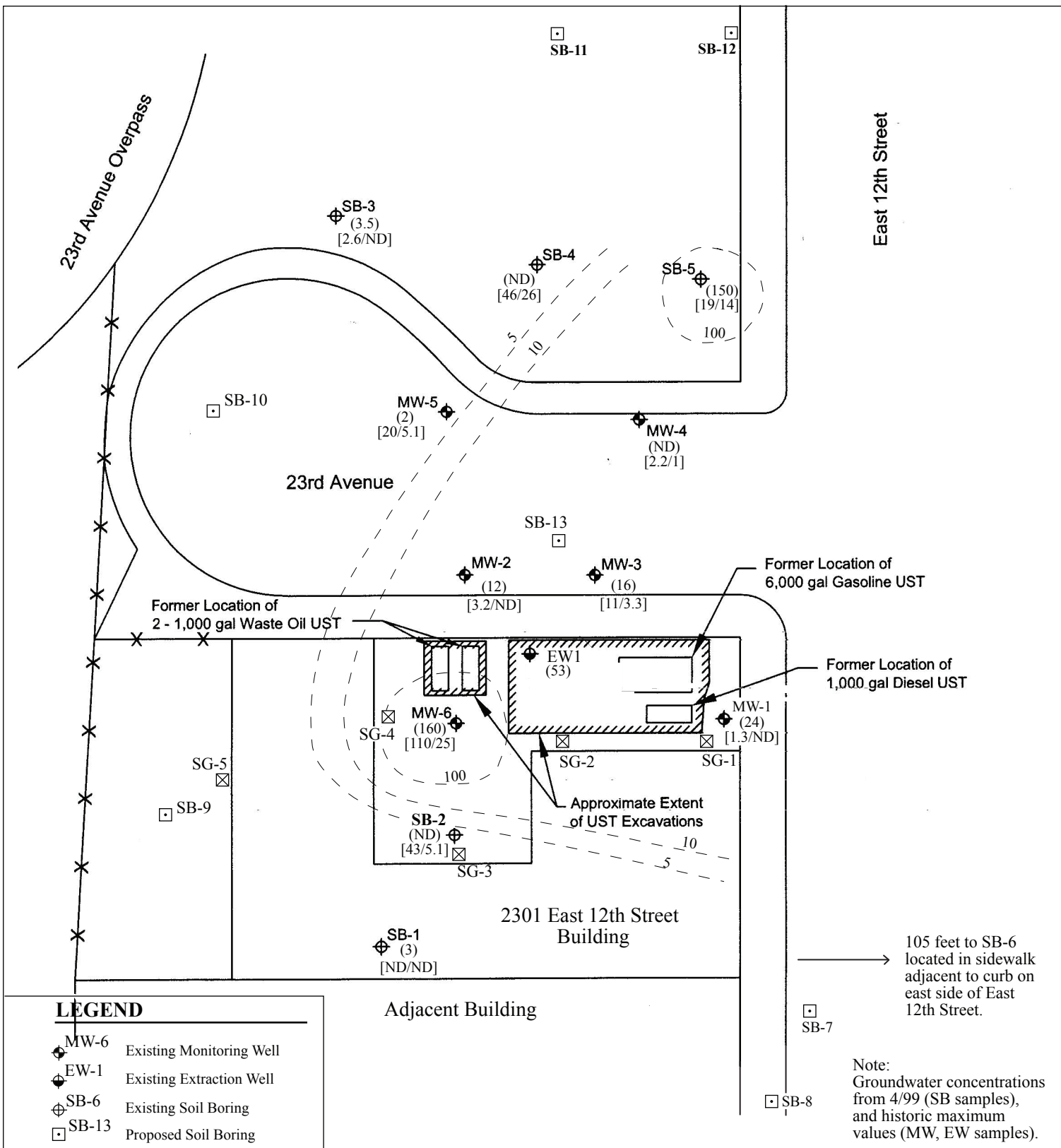
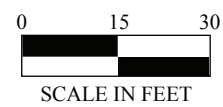


Figure 4  
 Site Vicinity Map Showing TCE and DCE  
 Groundwater Isoconcentration Contours  
 Mel Senna Brake Service  
 2301 East 12th Street  
 Oakland, California



**LEGEND**

- ◆ MW-6 Existing Monitoring Well
- ◆ EW-1 Existing Extraction Well
- ◆ SB-6 Existing Soil Boring
- SB-13 Proposed Soil Boring
- ⊠ SG-5 Proposed Soil Gas Sample Location

TCE and DCE Concentrations  
 in Groundwater (ug/L)

(160) (TCE)  
 [110/25] [cis-1,2-DCE/trans-1,2-DCE]

- - - TCE Isoconcentration  
 Contour (ug/L)

Base Map From:  
 Tetra Tech EM, Inc., Draft Summary  
 Reports for Additional Site  
 Characterization Work, dated  
 November 10, 1999

P&D Environmental, Inc.  
 55 Santa Clara Ave., Suite 240  
 Oakland, CA 94610

Note:  
 Groundwater concentrations  
 from 4/99 (SB samples),  
 and historic maximum  
 values (MW, EW samples).