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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

April 28, 1993

LF 1649.02

Ms. Susan Hugo
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, California 94621

Subject: Quarterly Monitoring Report for the Period January 1 through March 31, 1993, Area A and the South-Central Portion of Area B, Yerba Buena Project Site, Emeryville and Oakland, California

Dear Ms. Hugo:

The enclosed quarterly monitoring report presents results of field activities conducted during the first quarter of 1993 (January through March) in Area A and the south-central portion of Area B of the Yerba Buena Project Site in Emeryville and Oakland, California. Ground-water monitoring was conducted and this report is submitted in accordance with the December 6, 1991 "Sampling and Analysis Plan for Quarterly Ground-Water Monitoring in Area A," prepared by Levine-Fricke, Inc., and submitted to the Alameda County Health Care Services Agency.

In addition to quarterly monitoring, monthly water-level measurements were collected from ground-water monitoring wells beginning in December 1992, as recommended in Levine-Fricke's fourth quarter ground-water monitoring report dated January 30, 1992. Also included in this report are analytical results for ground-water samples collected from three monitoring wells located along the northern border of Area C and submitted for analysis of volatile organic compounds.

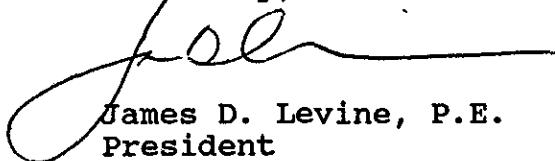
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If you have any questions or comments concerning this report,
please call either of the undersigned.

Sincerely,



James D. Levine, P.E.
President

Enclosure

cc: Kimberly Brandt, Catellus
Pat Cashman, Catellus
Lester Feldman, RWQCB



Jenifer J. Beatty
Project Hydrogeologist

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April 28, 1993

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QUARTERLY GROUND-WATER MONITORING REPORT
FOR THE PERIOD JANUARY 1 THROUGH MARCH 31, 1993
AREA A AND SOUTH-CENTRAL PORTION OF AREA B
YERBA BUENA PROJECT SITE
EMERYVILLE AND OAKLAND, CALIFORNIA

1.0 INTRODUCTION

This report presents results of quarterly ground-water monitoring activities conducted during the period January 1 through March 31, 1993, for Area A and the south-central portion of Area B of the Yerba Buena Project Site ("the Site") located in Emeryville and Oakland, California (Figure 1). This work was conducted on behalf of Catellus Development Corporation ("Catellus") in accordance with the December 6, 1991 "Sampling and Analysis Plan for Quarterly Ground-Water Monitoring in Area A" (SAP), prepared by Levine·Fricke and submitted to the Alameda County Health Care Services Agency (ACHA).

This report discusses monthly ground-water elevation measurements collected beginning in December 1992, summarizes results from the most recent ground-water sampling event, and presents historical ground-water elevation and ground-water quality data for Area A and the south-central portion of Area B.

1.1 Background

The site layout is presented in Figure 2. As illustrated, the Site was divided into Areas A, B, and C to aid in organizing the sampling and analysis program previously conducted for the Site.

The Site is currently vacant and covers approximately 51 acres. From the early 1900s to approximately 1990, the Site was used by a variety of industrial and commercial businesses. These businesses included warehouse storage of predominantly dry goods and limited quantities of hazardous materials (oxides and acids [a complete record of materials stored at the Site is not available]); metal foundries; truck maintenance and repair; an auto storage and wrecking yard; a construction yard; and several passenger and freight rail lines.

1.2 Previous Investigations and Shallow Ground-Water Remediation Activities

Environmental investigations at the Site were initiated in September 1989 by Levine·Fricke on behalf of Catellus and have continued over the past four years (Levine·Fricke 1990, 1991a, b,c, 1992a,b,c, 1993a). Results of ground-water sampling and analyses conducted in Area A of the Site indicated concentrations of 1,1-dichloroethane (1,1-DCA) and 1,1-dichloroethene (1,1-DCE) in several wells above Cal-EPA Department of Toxic Substances Control (DTSC) Recommended Action Levels for Drinking Water of 0.005 ppm and 0.006 ppm, respectively.

To reduce the potential for off-site migration of ground water affected by volatile organic compounds (VOCs), a shallow ground-water collection trench (french drain) was installed during December 1991 and January 1992 along the western boundary of Area A (generally downgradient with respect to ground-water flow) to intercept VOC-affected ground water from Area A. Ground water entering the trench will be pumped and treated on site using an activated carbon filtration system. It is anticipated that the treatment system will be installed in conjunction with development activities in the western portion of Area A (approximately September or October 1993).

A sampling and analysis plan for quarterly monitoring in Area A and the south-central portion of Area B was developed to monitor the effectiveness of the shallow ground-water extraction trench and to monitor the presence of VOCs in ground water in Area A and the south-central portion of Area B (Levine·Fricke 1991d). The quarterly monitoring program was implemented at the Site in January 1992. Results of the most recent monitoring event (January through March 1993) are presented in this report.

In addition to quarterly monitoring, Catellus authorized Levine·Fricke to collect ground-water elevation measurements on a monthly basis for at least six months (beginning in December 1992), to further evaluate ground-water flow direction at the Site. This was proposed because the apparent ground-water flow direction in the western portion of Area A shifted from west, as measured in February and April 1990, to northwest, as measured since August 1991. The timing of this apparent shift in ground-water flow direction corresponds with dewatering activities conducted by the East Bay Municipal Utility District (EBMUD) in conjunction with installation of a sanitary sewer interceptor pipe beneath Yerba Buena Avenue.

2.0 ACTIVITIES CONDUCTED DURING THE QUARTERLY MONITORING PERIOD

2.1 Monthly Water-Level Measurements

Water levels were measured in all on- and off-site monitoring wells on December 24, 1992, and January 26, February 9, and March 8, 1993. Depth to water was measured to the nearest 0.01 foot using an electric water-level sounding probe and recorded in the field. Depth-to-water measurements are presented in Table 1 and are discussed in Section 3.0.

2.2 Ground-Water Sampling

Ground-water samples were collected for chemical analyses between February 9 and 12, 1993, from on-site monitoring wells LF-3, LF-4, LF-4D, LF-4Z, LF-5, LF-5D, LF-6, LF-17, LF-18, LF-19, LF-19D, LF-20, and LF-21, and off-site wells LF-22, LF-23, and LF-30.

Before ground-water samples were collected from the wells, 3 to 5 well volumes of water were purged from each well in accordance with procedures described in Appendix A. After the wells had been purged, ground-water samples were collected using a clean Teflon bailer and sample containers were filled to overflowing by pouring ground water directly from the bailer. Water-quality sampling sheets are included in Appendix B.

Ground-water samples were submitted to Anametrix, a state-certified laboratory, under strict chain-of-custody procedures. For quality assurance/quality control measures, field blanks were collected for wells LF-4 and LF-17 and duplicate samples were collected from wells LF-17 and LF-30 (labeled LF-117 and LF-130, respectively). All ground-water samples, including the field blank and duplicate samples, were analyzed for VOCs using EPA Method 8010. Ground-water samples collected from wells LF-3, LF-4, LF-5, and LF-19 also were analyzed for total petroleum hydrocarbons as diesel (TPHd; carbon chain length C₁₂ to C₂₂) and TPH as oil (TPHo; carbon chain length C₂₂ to C₃₆). Laboratory certificates are included in Appendix C. Results of chemical analyses are discussed in Section 5.0.

2.3 Area C Wells

In addition to quarterly monitoring conducted in Areas A and B, ground-water samples were collected from Area C wells LF-10, LF-11, and LF-12, located along the northern border of

Area C, on February 10, 1993. The ground-water samples were submitted to the analytical laboratory for analysis of VOCs using EPA Method 8010. This sampling and analysis was conducted to monitor concentrations of VOCs present in shallow ground water in this area, as discussed in Section 4.3.

3.0 GROUND-WATER ELEVATIONS AND FLOW DIRECTION

Table 1 summarizes depth-to-water and ground-water elevation data collected at the Site. Ground-water elevations in shallow sediments are presented in Figures 2 through 5.

Monthly ground-water level measurements collected beginning in December 1992 indicate that ground-water elevations have increased at the Site, apparently in response to increased rainfall in recent months. Specifically, ground-water elevation measurements collected in January 1993 indicate that ground-water elevations throughout the Site increased significantly (up to 10.49 feet in well LF-21) relative to measurements collected in October 1992. Depth to ground water measured in shallow wells on January 26, 1993, ranged from 1.37 feet below ground surface (bgs) (well LF-11) to 11.51 feet bgs (well LF-12). Depth-to-water measurements collected in February and March 1993 indicated a slight decrease in ground-water elevations relative to the January 1993 measurements.

As presented in Figures 2 through 5, ground-water elevation data collected in all four months indicate that the general direction of shallow ground-water flow beneath the Site is consistently toward the west-southwest in the northern portion of the Site (north of Yerba Buena Avenue) and varies from the southwest to northwest in the southern portion of the Site (south of Yerba Buena Avenue). These results are consistent with ground-water flow directions previously reported for the Site during 1992. The average hydraulic gradient for December 1992 through March 1993 ranged from 0.009 ft/ft to 0.010 ft/ft between wells LF-8 and LF-12, and from 0.010 ft/ft to 0.012 ft/ft between wells LF-1 and LF-6.

As discussed previously, it has not been determined whether the apparent shift in ground-water flow direction in Area A (from the west in February and April 1990 to the northwest since August 1991) could be a result of an apparent regional decrease in ground-water elevation beneath the Site. However, ground-water elevations measured in January 1993 are similar to ground-water elevations measured at the Site in February and April 1990, and the apparent shallow ground-water flow

direction in the western portion of Area A continues to be toward the northwest. Therefore, the apparent change in ground-water flow direction observed in the western portion of Area A since August 1991 does not appear to be related to a regional decrease in ground-water elevations but likely are related to the presence of the EBMUD interceptor trench and pipe located beneath Yerba Buena Avenue.

4.0 GROUND-WATER QUALITY

Analytical results for ground-water samples collected in February 1993 are presented in Figure 6. Historical ground-water quality data collected at the Site are summarized in Table 2. Laboratory data sheets and chain-of-custody forms are presented in Appendix C.

4.1 Shallow Monitoring Wells

Analytical results for ground-water samples collected from shallow monitoring wells (less than 25 feet bgs) in Area A and vicinity in February 1993 were similar to previous results reported for the Site during 1992.

No VOCs were detected in ground-water samples collected from four of the 12 shallow wells sampled: well LF-3, LF-18, LF-20, and LF-21. 1,1,1-Trichloroethane (1,1,1-TCA) and 1,1-DCE were detected in the remaining wells at concentrations ranging from 0.00069 ppm (well LF-30 duplicate) to 0.06 ppm (well LF-5) and from 0.0034 ppm (well LF-23) to 0.38 ppm (well LF-5), respectively.

Analytical results of TPH analysis conducted for samples collected from selected wells do not indicate the presence of TPHd or TPHo in ground-water samples collected from wells LF-3, LF-4, and LF-5. TPHd and TPHo (carbon chain length C₂₂ to C₃₆) were detected in the ground-water samples collected from well LF-19 at concentrations of 0.094 ppm and 0.380 ppm, respectively. Concentrations of petroleum hydrocarbons detected in this well will be monitored further during future sampling events. TPHd previously had been detected in this well in January 1992 at a concentration of 0.120 ppm, but was not detected during semiannual analysis for this compound in July 1992. TPHo was not detected in this well in January 1992, but was detected at a concentration of 0.200 ppm in July 1992.

Very low concentrations of tetrachloroethene (PCE), trichloroethene (TCE), and 1,2-dichloroethene (1,2-DCE) have generally been detected in off-site wells LF-22 and LF-23 since the wells were installed in July 1991 and only recently in on-site well LF-6 (since the apparent shift in ground-water flow direction noted in this area in August 1991). TCE and 1,2-DCE have also been detected in off-site well LF-30 at concentrations of 0.0015 ppm or less. The presence of these compounds in ground-water samples collected from these wells may indicate an unknown source of these compounds, potentially off site. The low concentrations detected, however, do not raise a significant concern.

4.2 Deeper Monitoring Wells

Analytical results for samples collected from deeper monitoring wells are consistent with results reported previously for the Site. Monitoring wells LF-4D, LF-5D, and LF-19D are screened in intermediate-depth sediments, generally between 29 and 43 feet bgs (Table 1). Monitoring well LF-4Z is screened in deeper sediments, from 52 to 62 feet bgs. No VOCs were detected in intermediate-depth well LF-5D. 1,1-DCE, 1,1,1-TCA, and 1,1-DCA were detected in the ground-water sample collected from well LF-4D at concentrations of 0.14 ppm, 0.017 ppm, and 0.0035 ppm, respectively. These concentrations are similar to those reported for the ground-water sample collected from shallow well LF-4, located within 10 feet of well LF-4D and screened in shallow sediments (9.5 to 19.5 feet bgs). These results indicate possible hydraulic communication between the sediments encountered in wells LF-4 and LF-4D, at depths between 10 and 43 feet bgs. No VOCs were detected in deeper well LF-4Z, located within 10 feet of well LF-4D, indicating that VOC-affected ground water in the vicinity of well LF-4D has not migrated to deeper sediments. Trace concentrations (0.0009 ppm or less) of 1,1-DCE and 1,1-DCA were detected in the ground-water samples collected from intermediate-depth well LF-19D

4.3 Area C Wells

Analytical results for recent sampling of wells LF-10, LF-11, and LF-12 are presented in Table 3, along with a historical summary of VOC concentrations detected in these wells since February 1990. 1,2-DCE and TCE were detected in the samples

collected from all three wells. 1,2-DCE and TCE were detected at concentrations ranging from 0.0358 ppm (well LF-12) to 0.368 ppm (well LF-10), and from 0.002 ppm (well LF-12) to 1.6 ppm (well LF-10), respectively. These results and previous results indicate that concentrations of VOCs detected in this area have generally decreased since 1990.

The likely source of VOCs in shallow ground water in Area C wells is the upgradient Electro Coatings, Inc. (ECI) site, located north of the Site at 1401 Park Avenue, Emeryville. TCE was detected in ground water (up to 19 ppm) in monitoring wells owned by ECI during sampling of ECI's wells by American Environmental Management Corporation (AEMC), ECI's consultant, in November 1991. AEMC submitted the results of the sampling to the Regional Water Quality Control Board in a report dated January 27, 1992. Semiannual monitoring for the ECI site was recommended in that report. Since that time, we do not have any documentation that ground-water monitoring of the ECI site has occurred.

5.0 SUMMARY AND DISCUSSION OF RESULTS

Ground-water elevations have increased significantly in response to increased rainfall in recent months. Results of monthly water-level monitoring indicate that shallow ground-water flow direction in the western portion of Area A continues to be toward the northwest. It appears that ground-water flow direction at the Site has been influenced by the presence of the EBMUD interceptor trench beneath Yerba Buena Avenue.

Analytical results for ground-water samples collected in February 1993 are similar to results previously reported for the Site during 1992 and indicate that the width of the VOC plume appears to have expanded northward in the vicinity of well LF-17 as compared to analytical results for ground-water samples collected in 1990 (Figure 7). The concentration of 1,1-DCE in ground-water samples collected from well LF-17 appears to have increased between April 1990 (0.009 ppm) and January 1992 (0.490 ppm). Analytical results for ground-water samples collected from well LF-17 in February 1993 (0.260 ppm, 1,1-DCE) were similar to results previously reported during 1992.

It is likely that the increase in VOC concentrations detected in samples collected from well LF-17 is attributable to the apparent shift in ground-water flow direction in the northern portion of Area A. Based on the apparent shift in ground-



Quarterly Monitoring Report for the Period
January 1 through March 31, 1993
Area A and the South-Central Portion of Area B
Yerba Buena Project Site
Emeryville and Oakland, California

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Catellus Development Corporation
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San Francisco, California 94105



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water flow direction in Area A, it appears that operation of the existing ground-water extraction trench may not be sufficient by itself to hydraulically control shallow VOC-affected ground water in this area. Therefore, one or two ground-water extraction wells will be installed to provide greater hydraulic control in Area A. Extracted VOC-affected ground water will be treated on site using an activated carbon filtration system. It is anticipated that extraction wells and the treatment system will be installed in conjunction with development activities (approximately September or October 1993).

6.0 ACTIVITIES PROPOSED FOR THE PERIOD APRIL THROUGH JUNE 1993

The following activities will be conducted during the second quarter of 1993:

- Collect ground-water level measurements from all on- and off-site wells on a monthly basis until June 1993.
- Collect ground-water samples from wells LF-4, LF-4D, LF-4Z, LF-5, LF-5D, LF-6, LF-17, LF-18, LF-19, LF-19D, LF-20, LF-21, LF-22, LF-23, and LF-30 for chemical analysis for VOCs.

REFERENCES

- Levine·Fricke, Inc. 1990. Phase I and phase II environmental investigation, Yerba Buena Project Site, Emeryville and Oakland, California. August 15 (REVISED October 26, 1990).
- . 1991a. Phase III environmental investigation, Yerba Buena Project Site, Emeryville and Oakland, California. February 6.
- . 1991b. Site remedial plan, Yerba Buena Project Site, Emeryville and Oakland, California. February 11.
- . 1991c. Additional ground-water investigation, Yerba Buena Project Site, Emeryville and Oakland, California. September 6.
- . 1991d. Sampling and analysis plan for quarterly ground-water monitoring in Area A and the south-central portion of Area B of the Yerba Buena Project Site, Emeryville and Oakland, California. December 6.
- . 1992a. Quarterly ground-water monitoring report for the period January through March 1992, Area A and south-central portion of Area B, Yerba Buena Project Site, Emeryville and Oakland, California. April 30.
- . 1992b. Quarterly ground-water monitoring report for the period April through June 1992, Area A and south-central portion of Area B, Yerba Buena Project Site, Emeryville and Oakland, California. July 31.
- . 1992c. Quarterly ground-water monitoring report for the period July 1 through September 30, 1992, Area A and south-central portion of Area B, Yerba Buena Project Site, Emeryville and Oakland, California. October 23.
- . 1993a. Quarterly monitoring report for the period October 1 through December 31, 1992, Area A and south-central portion of Area B, Yerba Buena Project Site, Emeryville and Oakland, California. January 29.

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TABLE 1
WELL CONSTRUCTION AND GROUND-WATER ELEVATION DATA
AREA A AND AREA C, YERBA BUENA PROJECT SITE, EMERYVILLE, CALIFORNIA
(all elevations in feet above mean sea level)

Well Number	Well Elevation (surveyed prior to Nov. 1992**)	Well Elevation (surveyed in Dec. 1992 by Nolte Associates)	Well Depth (feet)	Screened Interval (feet)	Date Measured	Depth to Water	Ground-Water Elevation
							(based on Dec. 1992 survey data)
LF-1	29.74	29.70	21	11-21	23-Feb-90 23-Apr-90 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	8.89 9.57 9.56 8.74 10.71 12.28 13.18 8.27 3.97 4.87 5.10	20.81 20.13 20.14 20.96 18.99 17.42 16.52 21.43 25.73 24.83 24.60
LF-2	30.36	NS	22	11.5-21.5	23-Feb-90 23-Apr-90	4.26 4.52	26.10 25.84
LF-3	25.29	25.25	25	14.5-24.5	23-Feb-90 23-Apr-90 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	10.10 11.50 13.03 10.71 12.51 14.02 15.49 10.23 7.12 7.86 7.85	15.15 13.75 12.22 14.54 12.74 11.23 9.76 15.02 18.13 17.39 17.40
LF-4	26.09	26.02	20	9.5-19.5	23-Feb-90 23-Apr-90 12-Jul-91 07-Aug-91 17-Dec-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	11.11 12.20 13.04 14.48 16.01 12.50 11.64 13.50 15.23 16.46 11.21 7.48 8.40 8.62	14.91 13.82 12.98 11.54 10.01 13.52 14.38 12.52 10.79 9.56 14.81 18.54 17.62 17.40
LF-4D	26.20	26.13	39	29-39	23-Apr-90 07-Aug-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	12.38 14.87 12.80 12.25 13.89 15.56 16.76 11.59 7.91 8.81 9.09	13.75 11.26 13.33 13.88 12.24 10.57 9.37 14.54 18.22 17.32 17.04
LF-4Z	26.05	26.01	62	52-62	07-Aug-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	13.48 13.02 11.42 12.48 13.62 14.44 11.52 9.24 9.81 9.79	12.53 12.99 14.59 13.53 12.39 11.57 14.49 16.77 16.20 16.22

TABLE 1
WELL CONSTRUCTION AND GROUND-WATER ELEVATION DATA
AREA A AND AREA C, YERBA BUENA PROJECT SITE, EMERYVILLE, CALIFORNIA
(all elevations in feet above mean sea level)

Well Number	Well Elevation (surveyed prior to Nov. 1992**)	Well Elevation (surveyed in Dec. 1992 by Nolte Associates)	Well Depth (feet)	Screened Interval (feet)	Date Measured	Depth to Water	Ground-Water Elevation (based on Dec. 1992 survey data)
LF-5	27.01	26.97	25	10-25	23-Feb-90 23-Apr-90 07-Aug-91 17-Dec-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	10.86 12.32 14.20 15.02 13.32 10.68 12.74 14.61 15.65 10.68 6.77 7.50 7.41	16.11 14.65 12.77 11.95 13.65 16.29 14.23 12.36 11.32 16.29 20.20 19.47 19.56
LF-5D	27.09	27.04	44	34-44	23-Feb-90 23-Apr-90 07-Aug-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	10.61 10.61 11.42 10.66 8.63 10.09 11.47 12.41 9.02 6.06 6.75 6.68	16.43 16.43 15.62 16.38 18.41 16.95 15.57 14.63 18.02 20.98 20.29 20.36
LF-6	18.12	18.08	19.5	9.5-19.5	23-Feb-90 23-Apr-90 12-Jul-91 07-Aug-91 17-Dec-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	7.55 8.66 9.90 12.85 14.60 9.71 12.24 12.15 13.30 14.11 9.44 7.82 8.22 4.41	10.53 9.42 8.18 5.23 3.48 8.37 5.84 5.93 4.78 3.97 8.64 10.26 9.86 13.67
LF-7	37.94	37.90	22	8-18	23-Feb-90 23-Apr-90 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	7.21 8.22 10.33 12.15 6.98 5.38 5.47 7.77	30.69 29.68 27.57 25.75 30.92 32.52 32.43 30.13
LF-8	29.70	29.63	18	7.5-17.5	23-Feb-90 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	6.05 5.04 6.51 8.54 10.19 11.24 5.96 2.60 3.59 4.41	23.58 24.59 23.12 21.09 19.44 18.39 23.67 27.03 26.04 25.22
LF-9*	14.59	NS	15.5	5.5-15.5	23-Feb-90	2.82	11.77

TABLE 1
WELL CONSTRUCTION AND GROUND-WATER ELEVATION DATA
AREA A AND AREA C, YERBA BUENA PROJECT SITE, EMERYVILLE, CALIFORNIA
(all elevations in feet above mean sea level)

Well Number	Well Elevation (surveyed prior to Nov. 1992**)	Well Elevation (surveyed in Dec. 1992 by Nolte Associates)	Well Depth Interval (feet)	Screened Interval (feet)	Date Measured	Depth to Water	Ground-Water Elevation (based on Dec. 1992 survey data)
					23-Apr-90	3.10	11.49
LF-10	14.09	14.03	22.5	7.5-22.5	23-Feb-90 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	4.09 4.04 5.55 5.81 6.15 6.43 4.54 3.76 4.00 4.62	9.94 9.99 8.48 8.22 7.88 7.60 9.49 10.27 10.03 9.41
LF-11	10.06	9.99	20.5	10.5-20.5	23-Feb-90 23-Apr-90 15-Apr-92 14-May-92 28-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	1.88 2.50 2.30 4.71 4.94 5.64 6.25 2.44 1.37 1.53 2.70	8.11 7.49 7.69 5.28 5.05 4.35 3.74 7.55 8.62 8.46 7.29
LF-12	8.18	8.14	16	5.5-15.5	23-Feb-90 23-Apr-90 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	5.64 6.63 6.70 7.41 7.13 7.48 8.12 5.58 4.52 5.09 5.68	2.50 1.51 1.44 0.73 1.01 0.66 0.02 2.56 3.62 3.05 2.46
LF-13	9.19	9.14	20	5-20	23-Feb-90 23-Apr-90 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	4.10 6.20 4.54 7.25 6.81 7.52 8.25 4.14 2.40 2.82 4.26	5.04 2.94 4.60 1.89 2.33 1.62 0.89 5.00 6.74 6.32 4.88
LF-14	14.56	NS	18	5.5-15.5	23-Feb-90 23-Apr-90	6.30 7.40	8.26 7.16
LF-16	17.56	17.47	20	5-20	23-Feb-90 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	5.98 6.04 6.40 6.46 6.68 7.43 5.90 5.20 5.65 5.85	11.49 11.43 11.07 11.01 10.79 10.04 11.57 12.27 11.82 11.62
LF-17	25.60	25.52	20.5	10-20	23-Apr-90	13.71	11.81

TABLE 1
WELL CONSTRUCTION AND GROUND-WATER ELEVATION DATA
AREA A AND AREA C, YERBA BUENA PROJECT SITE, EMERYVILLE, CALIFORNIA
(all elevations in feet above mean sea level)

Well Number	Well Elevation (surveyed prior to Nov. 1992**)	Well Elevation (surveyed in Dec. 1992 by Nolte Associates)	Well Depth Interval (feet)	Screened (feet)	Date Measured	Depth to Water	Ground-Water Elevation (based on Dec. 1992 survey data)
LF-18	28.48	28.41	20.5	10-20	12-Jul-91	14.62	10.90
					07-Aug-91	17.72	7.80
					17-Dec-91	18.90	6.62
					06-Jan-92	16.67	8.85
					15-Apr-92	16.03	9.49
					14-May-92	16.82	8.70
					22-Jul-92	18.12	7.40
					20-Oct-92	18.92	6.60
					24-Dec-92	14.47	11.05
					26-Jan-93	11.17	14.35
					09-Feb-93	12.44	13.08
					08-Mar-93	12.83	12.69
					23-Apr-90	15.63	12.78
					12-Jul-91	16.40	12.01
LF-19	20.88	20.84	20.5	10-20	07-Aug-91	17.73	10.68
					17-Dec-91	19.24	9.17
					06-Jan-92	16.28	12.13
					15-Apr-92	15.50	12.91
					14-May-92	16.86	11.55
					22-Jul-92	18.43	9.98
					20-Oct-92	19.83	8.58
					24-Dec-92	14.82	13.59
					26-Jan-93	11.51	16.90
					09-Feb-93	12.47	15.94
					08-Mar-93	12.70	15.71
LF-19D	23.87	23.83	43	33-43	23-Apr-90	11.18	9.66
					12-Jul-91	11.86	8.98
					07-Aug-91	14.06	6.78
					17-Dec-91	16.19	4.65
					06-Jan-92	11.86	8.98
					15-Apr-92	12.69	8.15
					14-May-92	12.82	8.02
					22-Jul-92	14.14	6.70
					20-Oct-92	14.93	5.91
					24-Dec-92	10.92	9.92
					26-Jan-93	9.72	11.12
					09-Feb-93	9.40	11.44
					08-Mar-93	10.54	10.30
LF-20	33.24	33.19	20.5	7-22	07-Aug-91	17.53	6.30
					06-Jan-92	16.94	6.89
					15-Apr-92	16.87	6.96
					14-May-92	17.40	6.43
					22-Jul-92	18.36	5.47
					20-Oct-92	19.11	4.72
					24-Dec-92	15.76	8.07
					26-Jan-93	13.56	10.27
					09-Feb-93	14.41	9.42
					08-Mar-93	14.90	8.93
					23-Apr-90	11.18	22.01
					07-Aug-91	12.67	20.52
					06-Jan-92	8.91	24.28
					15-Apr-92	8.86	24.33
					28-May-92	11.05	22.14
					22-Jul-92	13.07	20.12
					20-Oct-92	14.07	19.12
					24-Dec-92	8.52	24.67
					26-Jan-93	4.04	29.15
					09-Feb-93	5.61	27.58
					08-Mar-93	6.27	26.92

TABLE 1
WELL CONSTRUCTION AND GROUND-WATER ELEVATION DATA
AREA A AND AREA C, YERBA BUENA PROJECT SITE, EMERYVILLE, CALIFORNIA
(all elevations in feet above mean sea level)

Well Number	Well Elevation (surveyed prior to Nov. 1992**)	Well Elevation (surveyed in Dec. 1992 by Nolte Associates)	Well Depth (feet)	Screened Interval (feet)	Date Measured	Depth to Water	Ground-Water Elevation
							(based on Dec. 1992 survey data)
LF-21	31.68	31.70	23.5	8-23	07-Aug-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	12.57 11.18 8.92 11.30 14.07 15.25 9.31 4.76 5.81 6.09	19.13 20.52 22.78 20.40 17.63 16.45 22.39 26.94 25.89 25.61
LF-22	18.02	17.99	20	10-20	12-Jul-91 07-Aug-91 17-Dec-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	9.64 11.49 13.62 10.76 11.07 10.90 12.36 13.25 9.95 8.19 8.55 9.19	8.35 6.50 4.37 7.23 6.92 7.09 5.63 4.74 8.04 9.80 9.44 8.80
LF-23	18.05	17.99	20	10-20	12-Jul-91 07-Aug-91 17-Dec-91 06-Jan-92 15-Apr-92 14-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	9.70 11.97 14.35 10.58 1.80 11.71 12.96 13.92 9.40 8.20 8.71 9.12	8.29 6.02 3.64 7.41 16.19 6.28 5.03 4.07 8.59 9.79 9.28 8.87
LF-24	21.97	21.97	20	7-20	14-May-92 28-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	9.75 9.86 10.13 10.91 9.11 8.63 8.90 9.03	12.22 12.11 11.84 11.06 12.86 13.34 13.07 12.94
LF-25	23.01	23.00	15	5-15	14-May-92 28-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	7.02 7.34 8.38 9.11 4.11 2.67 3.13 3.38	15.98 15.66 14.62 13.89 18.89 20.33 19.87 19.62
LF-26	26.84	26.82	20	8-20	14-May-92 28-May-92 22-Jul-92 20-Oct-92 24-Dec-92 26-Jan-93 09-Feb-93 08-Mar-93	10.55 10.87 11.70 12.67 8.26 5.94 6.87 7.19	16.27 15.95 15.12 14.15 18.56 20.88 19.95 19.63

TABLE 1
WELL CONSTRUCTION AND GROUND-WATER ELEVATION DATA
AREA A AND AREA C, YERBA BUENA PROJECT SITE, EMERYVILLE, CALIFORNIA
(all elevations in feet above mean sea level)

Well Number	Well Elevation	Well Elevation	Well Depth (feet)	Screened Interval (feet)	Date Measured	Depth to Water	Ground-Water Elevation
	(surveyed prior to Nov. 1992**)	(surveyed in Dec. 1992 by Nolte Associates)					(based on Dec. 1992 survey data)
LF-27	22.77	22.76	20	8-20	14-May-92	12.87	9.89
					28-May-92	13.10	9.66
					22-Jul-92	13.55	9.21
					20-Oct-92	14.40	8.36
					24-Dec-92	11.40	11.36
					26-Jan-93	9.37	13.39
					09-Feb-93	10.31	12.45
					08-Mar-93	10.73	12.03
LF-28	20.55	20.54	20	7-20	14-May-92	9.00	11.54
					28-May-92	9.02	11.52
					22-Jul-92	9.41	11.13
					20-Oct-92	10.04	10.50
					24-Dec-92	8.41	12.13
					26-Jan-93	8.44	12.10
					09-Feb-93	8.34	12.20
					08-Mar-93	8.42	12.12
LF-29	29.86	29.82	20	8-20	20-Oct-92	14.40	15.42
					24-Dec-92	10.08	19.74
					26-Jan-93	7.66	22.16
					09-Feb-93	8.48	21.34
					08-Mar-93	8.85	20.97
LF-30	17.40	17.39	20	8-20	20-Oct-92	15.70	1.69
					24-Dec-92	12.09	5.30
					26-Jan-93	10.10	7.29
					09-Feb-93	10.66	6.73
					08-Mar-93	12.00	5.39
LF-31		17.03			09-Feb-93	4.85	12.18
					08-Mar-93	5.42	11.61

Notes:

* Well abandoned on June 18, 1991.

** Wells were surveyed by Moran Engineering of Berkeley, California, and Nolte Associates of San Jose, California, before November 1992.

NS = Not surveyed

Data entered by MEK/22-Mar-93. Data proofed by MEK/22-Mar-93.

TABLE 2
GROUND-WATER QUALITY DATA SUMMARY
CHEMICAL COMPOUNDS DETECTED IN SHALLOW GROUND WATER
AREA A AND AREA C AND VICINITY
EMERYVILLE, CALIFORNIA
YERBA BUENA PROJECT SITE
(concentrations in milligrams per liter [mg/l])

Sample Location	Date Sampled	1,1-DCE	1,1-DCA	1,2-DCE	TCE	1,1,1-TCA	PCE	Oil	Diesel
LF-3	06-Feb-90	ND	ND	ND	ND	ND	ND	NA	NA
	07-Jan-92	ND	ND	ND	ND	ND	ND	ND	ND
	23-Jul-92	ND	ND	ND	ND	ND	ND	NA	NA
	10-Feb-93	ND	ND	ND	ND	ND	ND	ND	ND
LF-4	07-Feb-90	0.49	0.008	ND	ND	0.082	ND	NA	NA
	06-Jan-92	0.43	0.006	ND *	ND *	0.078	ND *	ND	ND
	duplicate	0.41	0.004	ND *	ND *	0.075	ND *	ND	ND
	15-Apr-92	0.25	ND	ND	ND	0.025	ND	NA	NA
	24-Jul-92	0.22	ND	ND	ND	0.024	ND	0.042	ND
	21-Oct-92	0.19	ND	ND	ND	0.02	ND	NA	NA
LF-4D	09-Feb-93	0.19	0.0041	ND +	ND +	0.022	ND +	ND	ND
	25-Apr-90	0.43	0.007	ND	ND	0.087	ND	NA	NA
	06-Jan-92	0.39	0.006	ND **	ND **	0.074	ND **	NA	NA
	16-Apr-92	0.16	ND	ND	ND	0.020	ND	NA	NA
	23-Jul-92	0.15	ND	ND	ND	0.018	ND	NA	NA
	21-Oct-92	0.15	ND	ND	ND	0.013	ND	NA	NA
LF-4Z	10-Feb-93	0.14	0.0035	ND +	ND +	0.017	ND +	NA	NA
	21-Nov-90	ND	ND	ND	ND	ND	ND	NA	NA
	06-Jan-92	ND	ND	ND	ND	ND	ND	NA	NA
	16-Apr-92	ND	ND	ND	ND	ND	ND	NA	NA
	23-Jul-92	ND	ND	ND	ND	ND	ND	NA	NA
	21-Oct-92	ND	ND	ND	ND	ND	ND	NA	NA
LF-5	10-Feb-93	ND	ND	ND	ND	ND	ND	NA	NA
	06-Feb-90	0.73	0.014	ND	ND	0.27	ND	ND	ND
	06-Jan-92	0.88	0.011	ND ***	ND ***	0.010	ND ***	ND	ND
	16-Apr-92	0.44	ND	ND	ND	0.10	ND	NA	NA
	23-Jul-92	0.47	ND	ND	ND	0.08	ND	0.0058	ND
	21-Oct-92	0.39	ND	ND	ND	0.042	ND	NA	NA
LF-5D	10-Feb-93	0.38	ND ++	ND ++	ND ++	0.06	ND ++	ND	ND
	26-Apr-90	ND	ND	ND	ND	ND	ND	NA	NA
	29-Nov-90	ND	ND	ND	ND	ND	ND	NA	NA
	06-Jan-92	ND	ND	ND	ND	ND	ND	NA	NA
	16-Apr-92	ND	ND	ND	ND	ND	ND	NA	NA
	23-Jul-92	ND	ND	ND	ND	ND	ND	NA	NA
LF-6	21-Oct-92	ND	ND	ND	ND	ND	ND	NA	NA
	10-Feb-93	ND	ND	ND	ND	ND	ND	NA	NA
	07-Feb-90	ND	0.018	ND	ND	ND	ND	ND	ND
	duplicate	ND	0.018	ND	ND	ND	ND	ND	ND
	29-Nov-90	ND	ND	ND	ND	ND	ND	NA	NA
	07-Jan-92	0.0048	0.011	0.0005	0.0026	0.0044	0.018	NA	NA
LF-10	15-Apr-92	0.004	0.0032	0.0025	0.0026	0.001	0.0065	NA	NA
	23-Jul-92	(5)	0.0082	0.0033	0.0094	0.0071	0.0014	0.0094	NA
	20-Oct-92	(5)	0.0051	0.0026	0.016	0.0046	0.0015	0.0025	NA
	09-Feb-93	0.010	0.0025	0.0029	0.0031	0.002	0.0079	NA	NA
	10-Feb-93	ND +++	ND +++	0.368	1.600	ND +++	ND +++	NA	NA
LF-11	10-Feb-93	ND +	ND +	0.0359	0.140	ND +	ND +	NA	NA
LF-12	10-Feb-93	ND	ND	0.0358	0.002	ND	ND	NA	NA
LF-17	25-Apr-90	0.009	0.001	ND	ND	0.003	ND	NA	NA
	duplicate	ND	ND	ND	ND	ND	ND	NA	NA
	07-Jan-92	0.490	0.012	ND **	ND **	0.092	ND **	NA	NA
	16-Apr-92	0.350	ND	ND	ND	0.047	ND	NA	NA
	duplicate	0.360	ND	ND	ND	0.049	ND	NA	NA
	24-Jul-92	0.320	ND	ND	ND	0.035	ND	NA	NA

TABLE 2
GROUND-WATER QUALITY DATA SUMMARY
CHEMICAL COMPOUNDS DETECTED IN SHALLOW GROUND WATER
AREA A AND AREA C AND VICINITY
EMERYVILLE, CALIFORNIA
YERBA BUENA PROJECT SITE
(concentrations in milligrams per liter [mg/l])

Sample Location	Date Sampled	1,1-DCE	1,1-DCA	1,2-DCE	TCE	1,1,1-TCA	PCE	Oil	Diesel
	duplicate	0.460	ND	ND	ND	0.053	ND	NA	NA
	21-Oct-92	0.380	ND	ND	ND	0.04	ND	NA	NA
	duplicate	0.320	ND	ND	ND	0.033	ND	NA	NA
	09-Feb-93	0.260	0.0059	ND ***	ND ***	0.035	ND ***	NA	NA
	duplicate	0.240	ND ***	ND ***	ND ***	0.031	ND ***	NA	NA
LF-18	25-Apr-90	0.003	ND	ND	ND	ND	ND	NA	NA
	07-Jan-92	0.0013	ND	ND	ND	ND	ND	NA	NA
	16-Apr-92	0.0017	ND	ND	ND	ND	ND	NA	NA
	23-Jul-92	ND	ND	ND	ND	ND	ND	NA	NA
	21-Oct-92	ND	ND	ND	ND	ND	ND	NA	NA
	09-Feb-93	ND	ND	ND	ND	ND	ND	NA	NA
LF-19	25-Apr-90	0.15	0.006	ND	ND	0.034	ND	NA	NA
	06-Jan-92	0.100	0.0087	ND	ND	0.018	ND	ND	0.120
	15-Apr-92	0.064	0.0028	ND	ND	0.008	ND	NA	NA
	24-Jul-92	0.032	0.0032	ND	ND	0.0039	ND	0.200	ND
	20-Oct-92	(4) 0.0052	0.003	ND	ND	0.0011	ND	NA	NA
	09-Feb-93	0.018	0.0016	ND	ND	0.0022	ND	0.380	0.094
LF-19D	12-Jul-91	ND	ND	ND	ND	ND	ND	NA	NA
	06-Jan-92	ND	ND	ND	ND	ND	ND	ND	ND
	15-Apr-92	ND	ND	ND	ND	ND	ND	NA	NA
	23-Jul-92	ND	0.0007	ND	ND	ND	ND	NA	NA
	20-Oct-92	ND	ND	ND	ND	ND	ND	NA	NA
	09-Feb-93	0.00057	0.00097	ND	ND	ND	ND	NA	NA
LF-20	26-Apr-90	ND	ND	ND	ND	ND	ND	NA	NA
	duplicate	ND	ND	ND	ND	ND	ND	NA	NA
	07-Jan-92	ND	ND	ND	ND	ND	ND	NA	NA
	16-Apr-92	ND	ND	ND	ND	ND	ND	NA	NA
	24-Jul-92	ND	ND	ND	ND	ND	ND	NA	NA
	21-Oct-92	ND	ND	ND	ND	ND	ND	NA	NA
	11-Feb-93	ND	ND	ND	ND	ND	ND	NA	NA
LF-21	29-Nov-90	ND	ND	ND	ND	ND	ND	NA	NA
	07-Jan-92	ND	ND	ND	ND	ND	ND	NA	NA
	16-Apr-92	ND	ND	ND	ND	ND	ND	NA	NA
	24-Jul-92	ND	ND	ND	ND	ND	ND	NA	NA
	21-Oct-92	ND	ND	ND	ND	ND	ND	NA	NA
	11-Feb-93	ND	ND	ND	ND	ND	ND	NA	NA
LF-22	12-Jul-91	0.053	0.0063	0.0016	0.0007	0.012	0.0017	NA	NA
	07-Jan-92	0.041	0.0054	0.0011	ND	0.009	0.0037	NA	NA
	16-Apr-92	0.015	0.0021	ND	ND	0.0026	0.0018	NA	NA
	23-Jul-92	(3) 0.027	0.0052	ND	ND	0.0034	0.0014	NA	NA
	20-Oct-92	0.014	0.004	ND	0.00078	0.0013	0.00066	NA	NA
	09-Feb-93	0.0081	0.0028	ND	0.00051	0.0013	0.0007	NA	NA
LF-23	12-Jul-91	0.0012	0.011	0.0009	0.0039	0.0009	0.027	NA	NA
	07-Jan-92	0.0034	0.012	0.0013	0.007	0.0023	0.056	NA	NA
	16-Apr-92	0.0044	0.0044	0.0011	0.0036	0.00068	0.020	NA	NA
	23-Jul-92	0.0061	0.0044	0.0014	0.0038	0.0013	0.029	NA	NA
	20-Oct-92	0.0047	0.002	0.0015	0.0033	0.00054	0.023	NA	NA
	09-Feb-93	0.0034	0.003	0.0018	0.0037	0.00083	0.020	NA	NA
LF-30	22-Oct-92	0.00079	0.0058	0.0015	0.00065	0.001	ND	NA	NA
	duplicate	0.00081	0.0053	0.0013	0.00051	0.00056	ND	NA	NA
	12-Feb-93	ND	0.0029	0.00093	0.00069	0.00076	ND	NA	NA
	duplicate	ND	0.0029	0.00089	0.00071	0.00069	ND	NA	NA
Field Blanks:									
LF1-7503	05-Feb-90	ND	ND	ND	ND	ND	ND	NA	NA

TABLE 2
GROUND-WATER QUALITY DATA SUMMARY
CHEMICAL COMPOUNDS DETECTED IN SHALLOW GROUND WATER
AREA A AND AREA C AND VICINITY
EMERYVILLE, CALIFORNIA
YERBA BUENA PROJECT SITE
(concentrations in milligrams per liter [mg/l])

Sample Location	Date Sampled	1,1-DCE	1,1-DCA	1,2-DCE	TCE	1,1,1-TCA	PCE	Oil	Diesel
LF-4FB	06-Jan-92	ND	ND	ND	ND	ND	ND	ND	ND
LF-17FB	16-Apr-92 (1)	ND	ND	ND	ND	ND	ND	NA	NA
LF-17FB	24-Jul-92	ND	ND	ND	ND	ND	ND	NA	NA
LF-17-BB	20-Oct-92 (6)	ND	ND	ND	ND	ND	ND	NA	NA
LF-17FB	09-Feb-93	ND	ND	ND	ND	ND	ND	NA	NA
LF-4Z-FB	10-Feb-93	ND	ND	ND	ND	ND	ND	NA	NA

Detection Limit: 0.0005 0.0005 0.0005 0.0005 0.0005 0.0005 0.05 0.05

Data entered by MEK/22-Mar-93. Data proofed by MEK/22-Mar-93. QA/QC by _____

mg/l - milligrams per liter, equivalent to parts per million.

NA - not analyzed

ND - not detected

* Detection limit 0.003 ppm.

** Detection limit 0.002 ppm.

*** Detection limit 0.005 ppm.

+ Detection limit 0.0025 ppm.

++ Detection limit 0.010 ppm.

+++ Detection limit 0.025 ppm.

1,1-DCE - 1,1-Dichloroethene

1,1-DCA - 1,1-Dichloroethane

1,2-DCE - 1,2-Dichloroethene

TCE - Trichloroethene

1,1,1-TCA - 1,1,1-Trichloroethane

PCE - Tetrachloroethene

(1) 0.0011 ppm methylene chloride detected;

methylene chloride is a common laboratory contaminant.

(2) 0.0015 ppm vinyl chloride detected.

(3) 0.00081 ppm vinyl chloride detected.

(4) 0.0012 ppm vinyl chloride detected.

(5) 0.0023 ppm vinyl chloride detected.

(6) 0.0016 ppm methylene chloride (a common laboratory contaminant) detected within normal laboratory background concentrations.

TABLE 3
 VOLATILE ORGANIC COMPOUNDS DETECTED IN GROUND-WATER SAMPLES
 COLLECTED FROM MONITORING WELLS IN AREA C
 YERBA BUENA PROJECT SITE, EMERYVILLE, CALIFORNIA
 (concentrations in milligrams per liter [mg/l])

Sample Location	Date Sampled	Lab	Sample Method	1,1-DCE	1,2-DCE	TCE	PCE	1,1,2-TCA	VC
LF10	08-Feb-90	MED	8240	0.031	3.2	7.6	0.041	0.007	1.0
	29-Nov-90	BCA	8010	<0.0005	4.7	5.9	<0.005	<0.005	0.29
	10-Feb-93	ANA	8010	<0.025	0.368	1.6	<0.025	<0.025	<0.025
LF11	09-Feb-90	MED	8240	<0.005	0.051	0.31	<0.005	<0.005	<0.01
	10-Feb-93	ANA	8010	<0.0025	0.0359	0.14	<0.0025	<0.0025	<0.0025
LF12	09-Feb-90	MED	8240	<0.005	0.067	0.008	<0.005	<0.005	<0.01
	10-Feb-93	ANA	8010	<0.0005	0.0358	0.002	<0.0005	<0.0005	<0.0005
MCL (mg/l) (1)				0.006	0.006*	0.005	0.005	0.006**	0.0005

Data entered by MEK/19-Mar-93. Data proofed by MEK/19-Mar-93. QA/QC by _____

Milligrams per liter is equivalent to parts per million.

ANA - Anametrix, Inc. of San Jose, California

BCA - BC Analytical of Emeryville, California

MED - Med-Tox Associates of Pleasant Hill, California

* MCL for cis-1,2-DCE (MCL for trans-1,2-DCE is 0.010 mg/l).

** Effective January 1994.

(1) MCL = Maximum Contaminant Level for drinking water (California Department of Health Services)

Key to Abbreviations:

1,1-DCE = 1,1-Dichloroethene

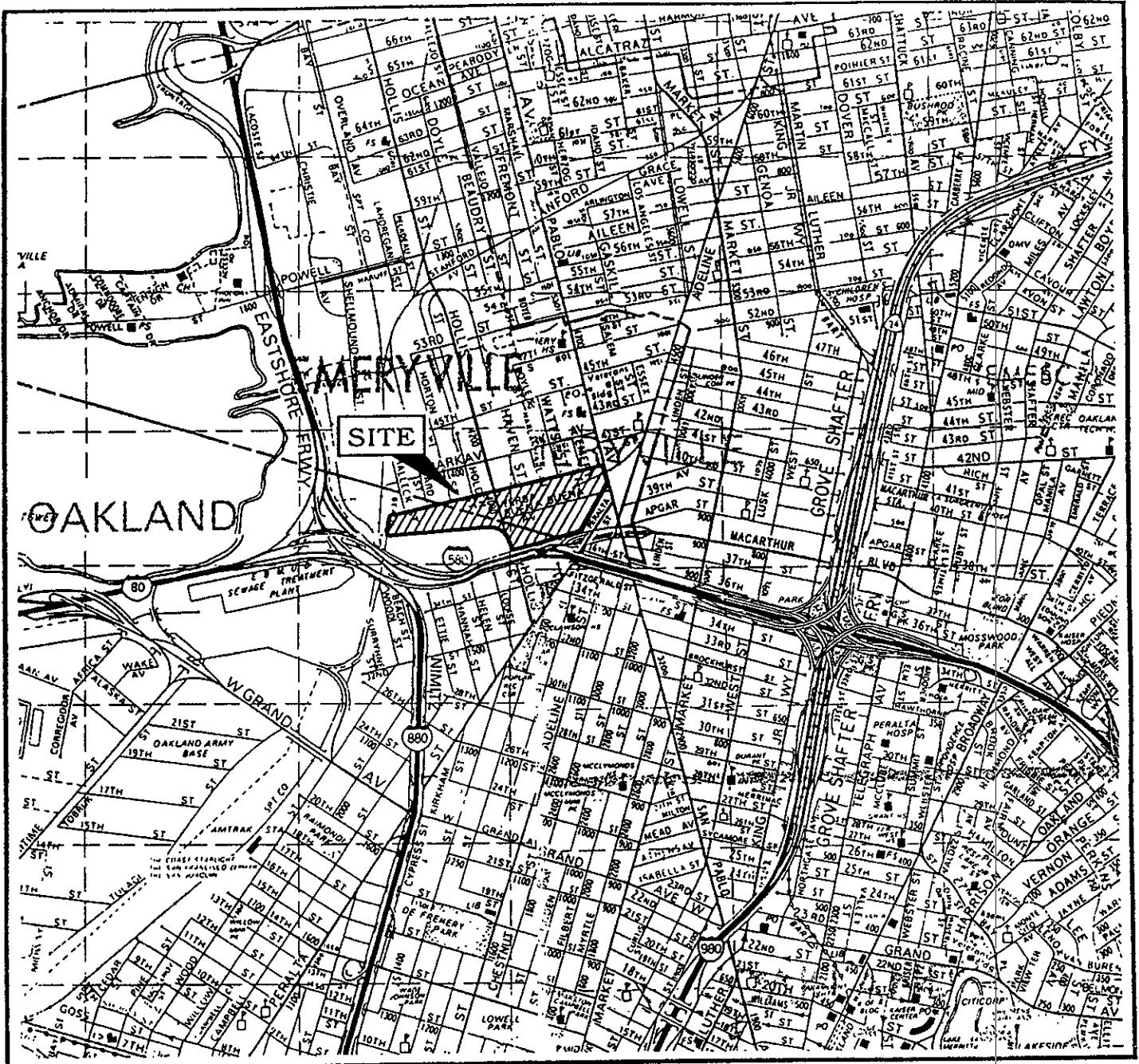
1,2-DCE = 1,2-Dichloroethene

TCE = Trichlorethene

PCE = Tetrachloroethene

1,1,2-TCA = 1,1,2-Trichloroethane

VC = Vinyl Chloride



MAP SOURCE:

Alameda & Contra Costa Counties,
Thomas Bros. map, 1990 Edition

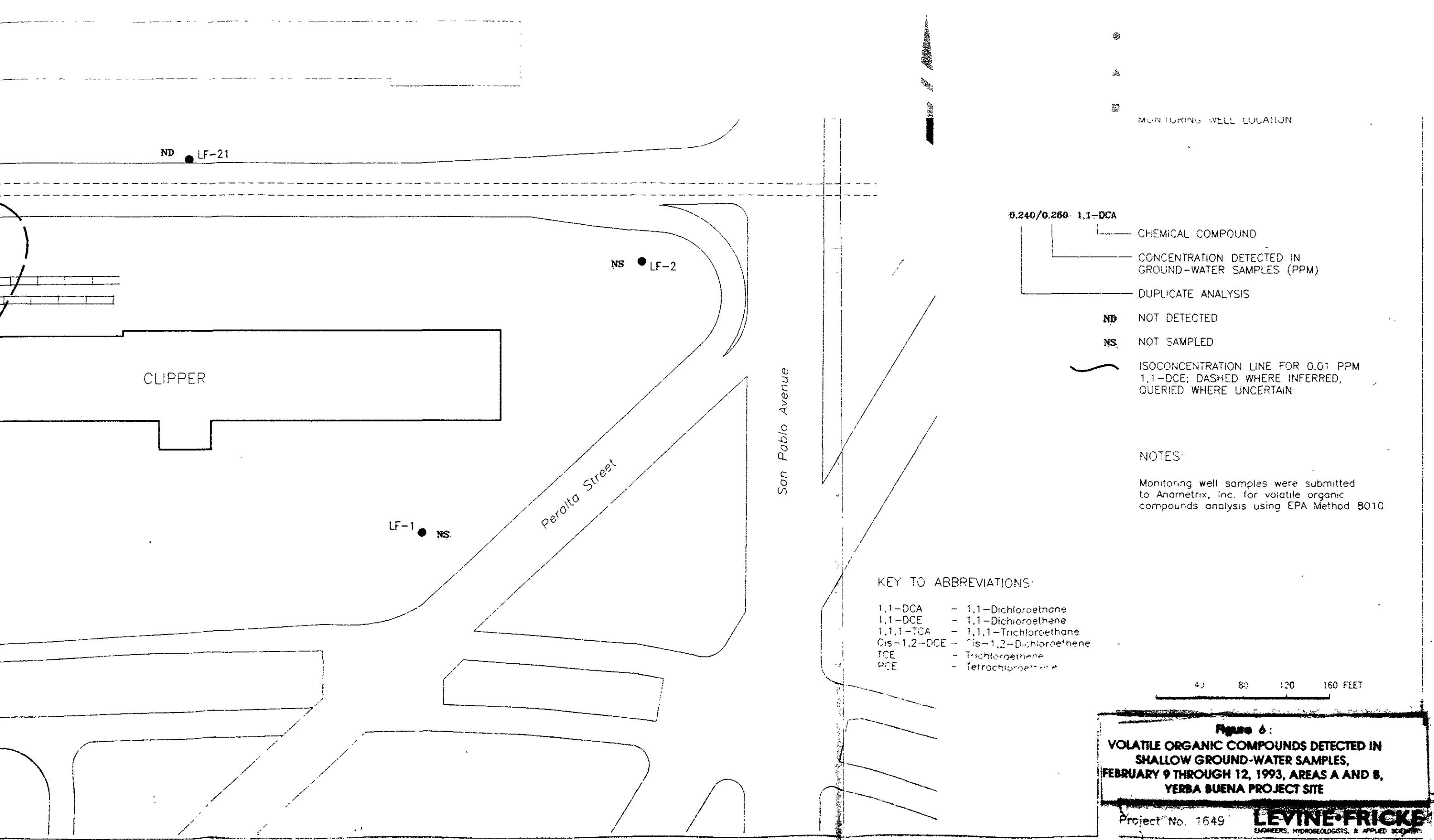


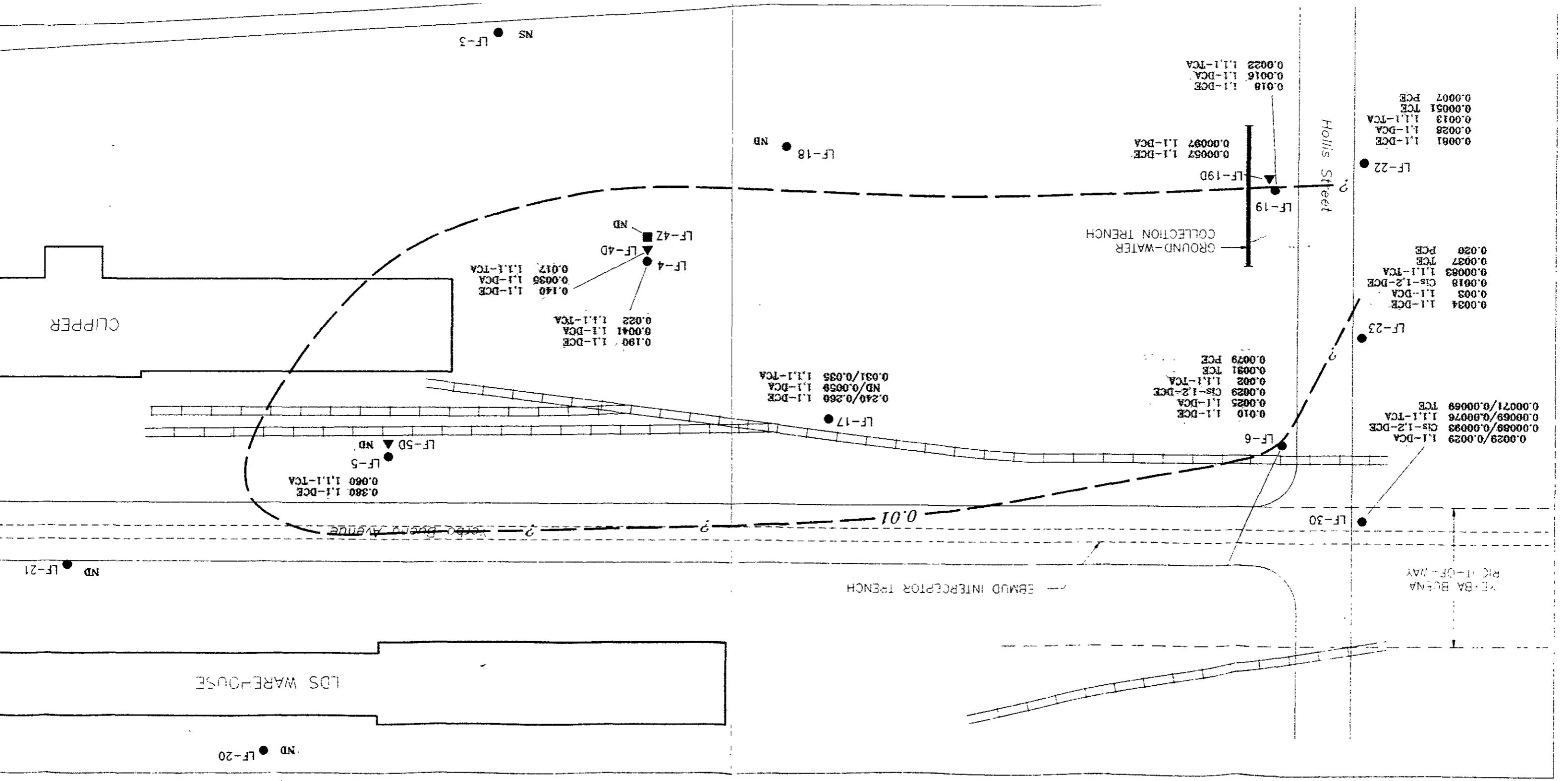
0 1/2 1 MILE

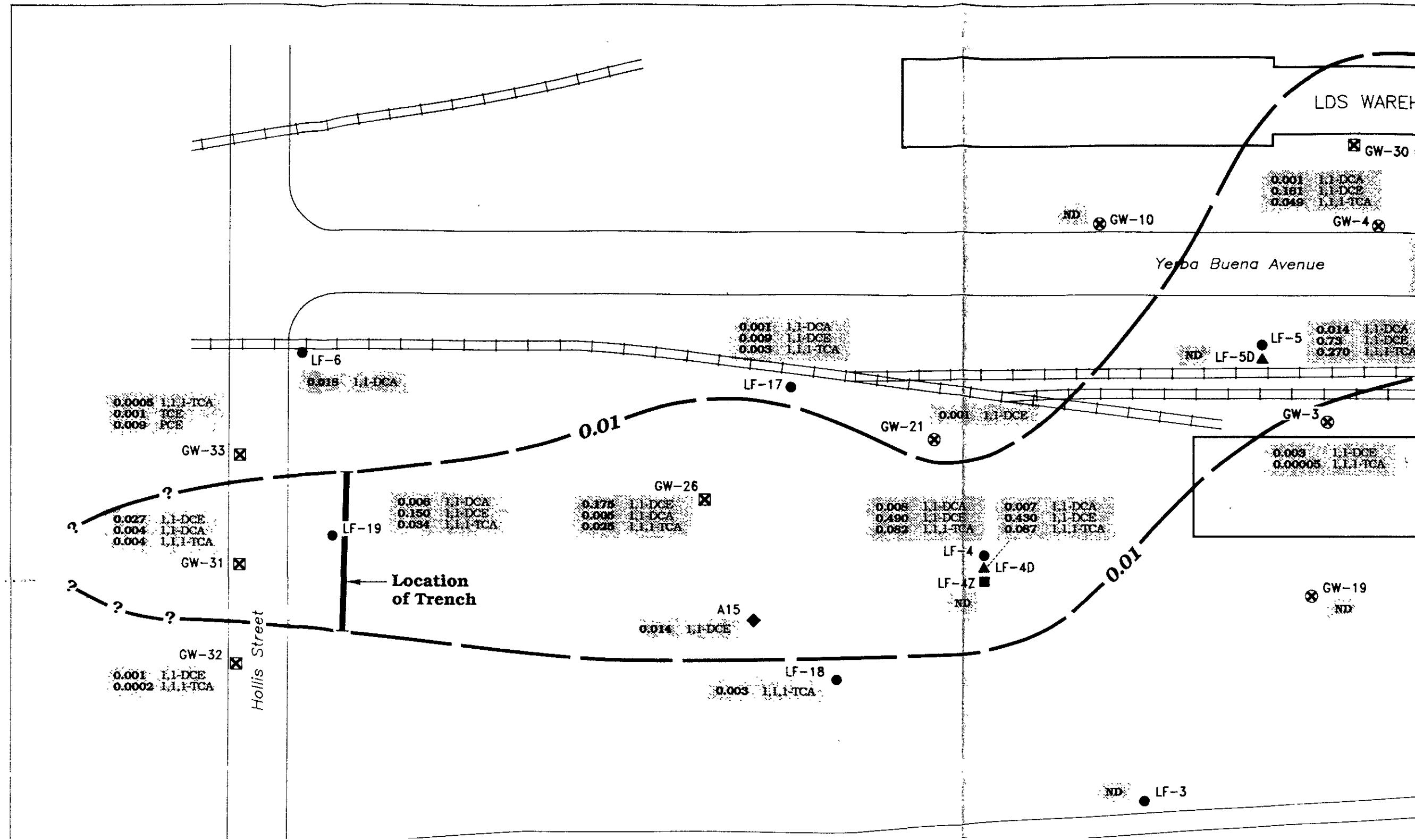
**Figure 1 : SITE LOCATION MAP
YERBA BUENA PROJECT SITE**

Project No. 1649

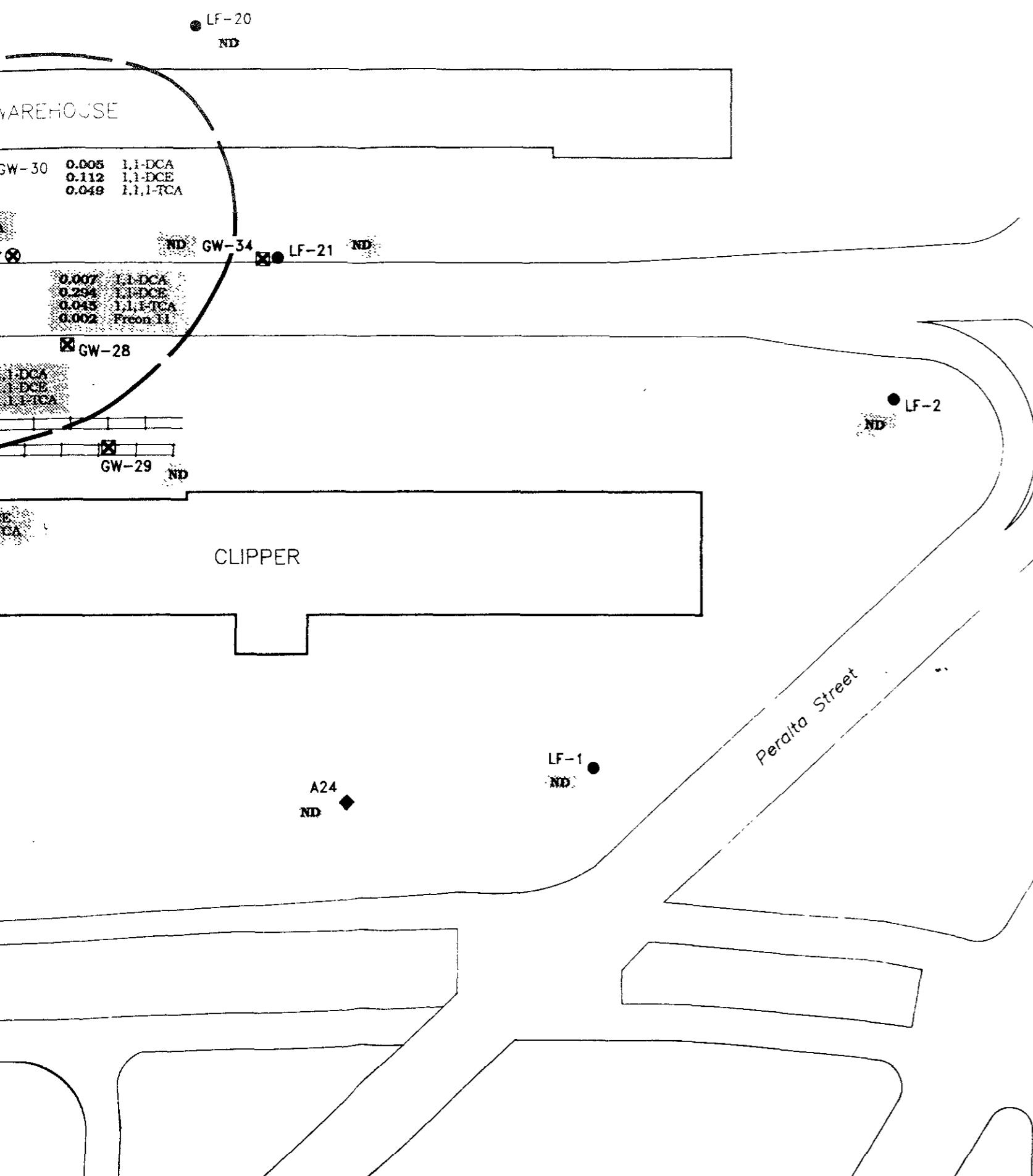
LEVINE • FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS







Note: VOC's were not detected in well LF-14, located approximately 400 feet west (down gradient) of GW-31



EXPLANATION

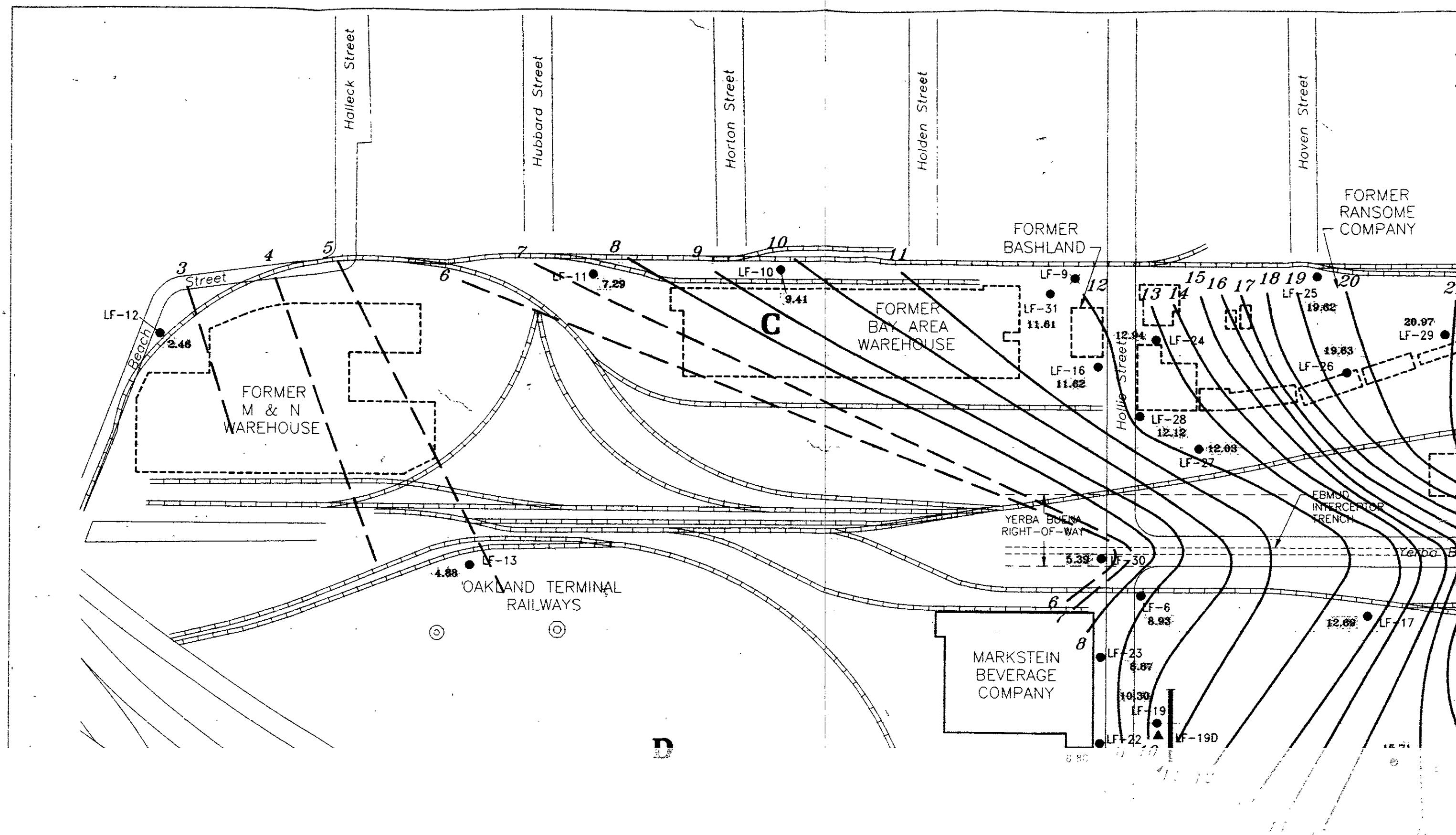
- SHALLOW (LESS THAN 25 FEET) MONITORING WELL LOCATION
- ▲ INTERMEDIATE (35 TO 45 FEET) MONITORING WELL LOCATION
- DEEPER (62 FEET) MONITORING WELL LOCATION
- ◆ PHASE I INVESTIGATION DEEPER SOIL SAMPLING LOCATION (13 TO 18 FEET) AND GRAB GROUND-WATER SAMPLE LOCATION
- SHALLOW GROUND-WATER RECONNAISSANCE SAMPLING LOCATION (PHASE II)
- SHALLOW GROUND-WATER RECONNAISSANCE SAMPLING LOCATION (PHASE III)
- SHALLOW EXTRACTION TRENCH LOCATION
- 0.01** — 0.01 ppm ISOCONTOUR LINE FOR 1,1-DCE
- CHEMICAL COMPOUND
- CONCENTRATION DETECTED IN GROUND-WATER SAMPLES (PPM)
- ND NOT DETECTED

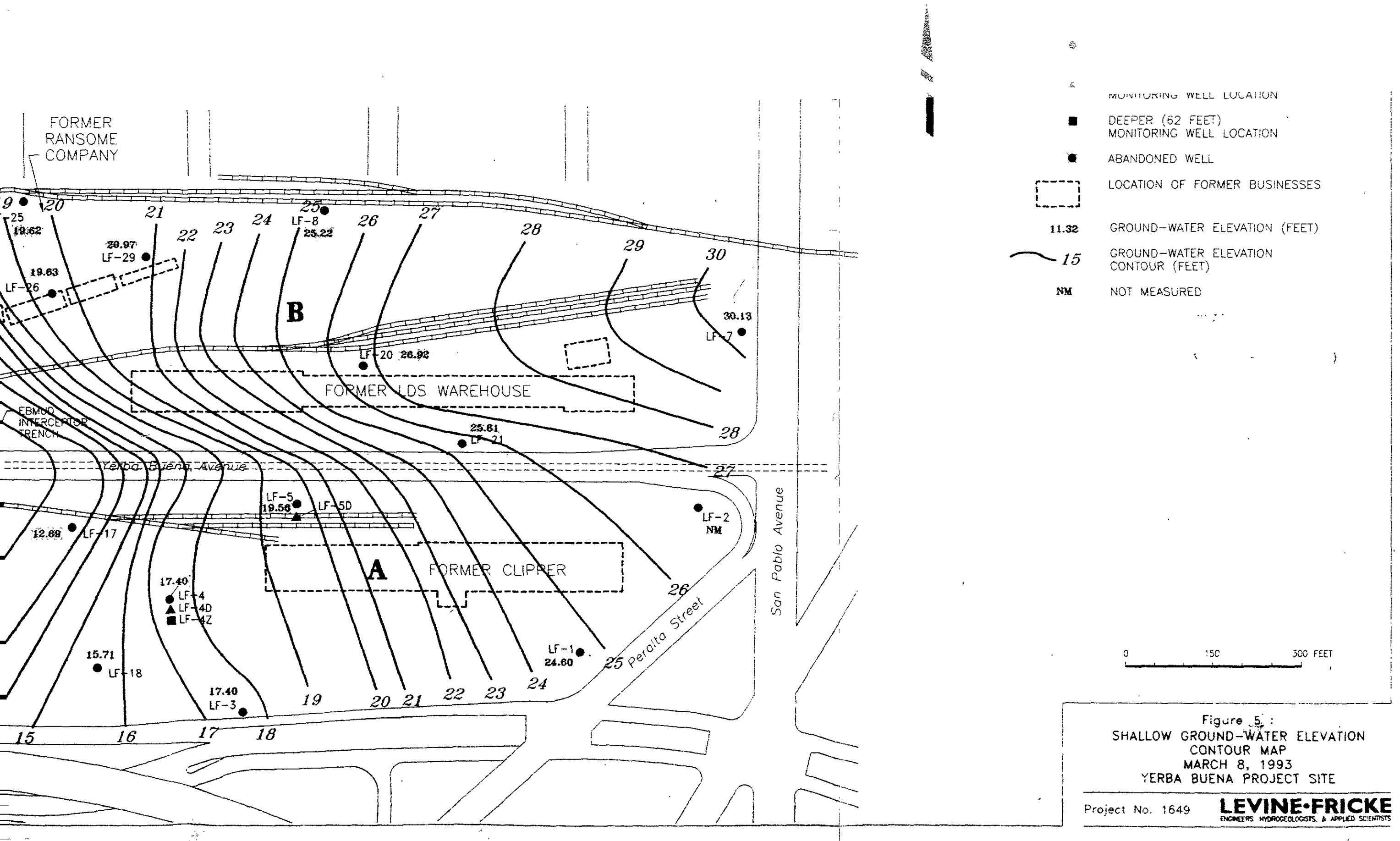
NOTES:

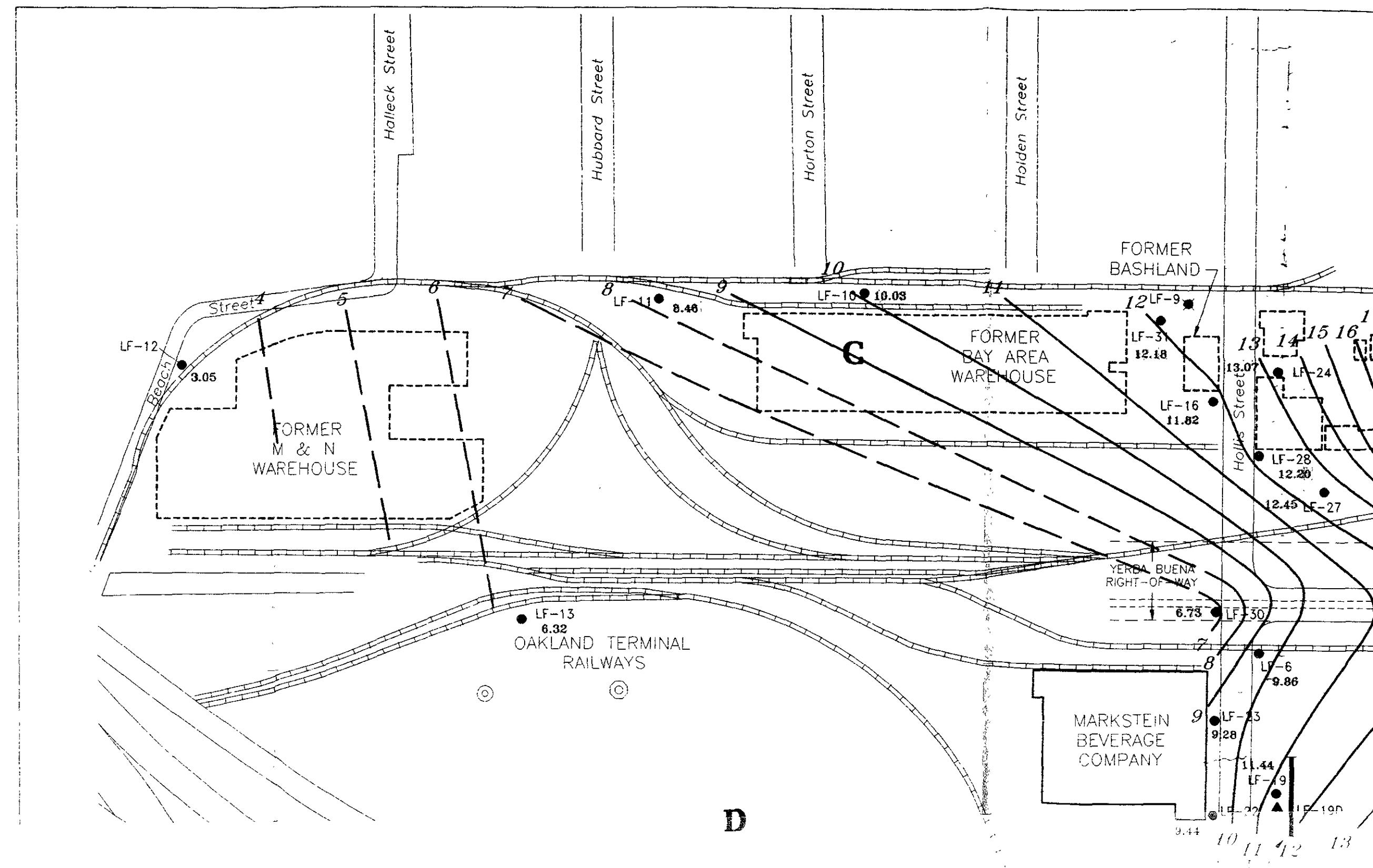
- Monitoring well samples were submitted to Med-Tox Associates for volatile organic compounds analysis using EPA Method 8010.
- Results indicated for wells LF-1, LF-2, LF-3, LF-4, LF-5, and LF-6 are from the Phase I investigation (February 1990); results indicated for wells LF-4D, LF-5D, LF-17, LF-18, LF-19, and LF-20 are from Phase II investigation (April 1990); results indicated for wells LF-21 and LF-4Z are from Phase III investigation (November 1990).
- Ground-water wells LF-19D, LF-22 and LF-23 were not installed at the time this figure was prepared.

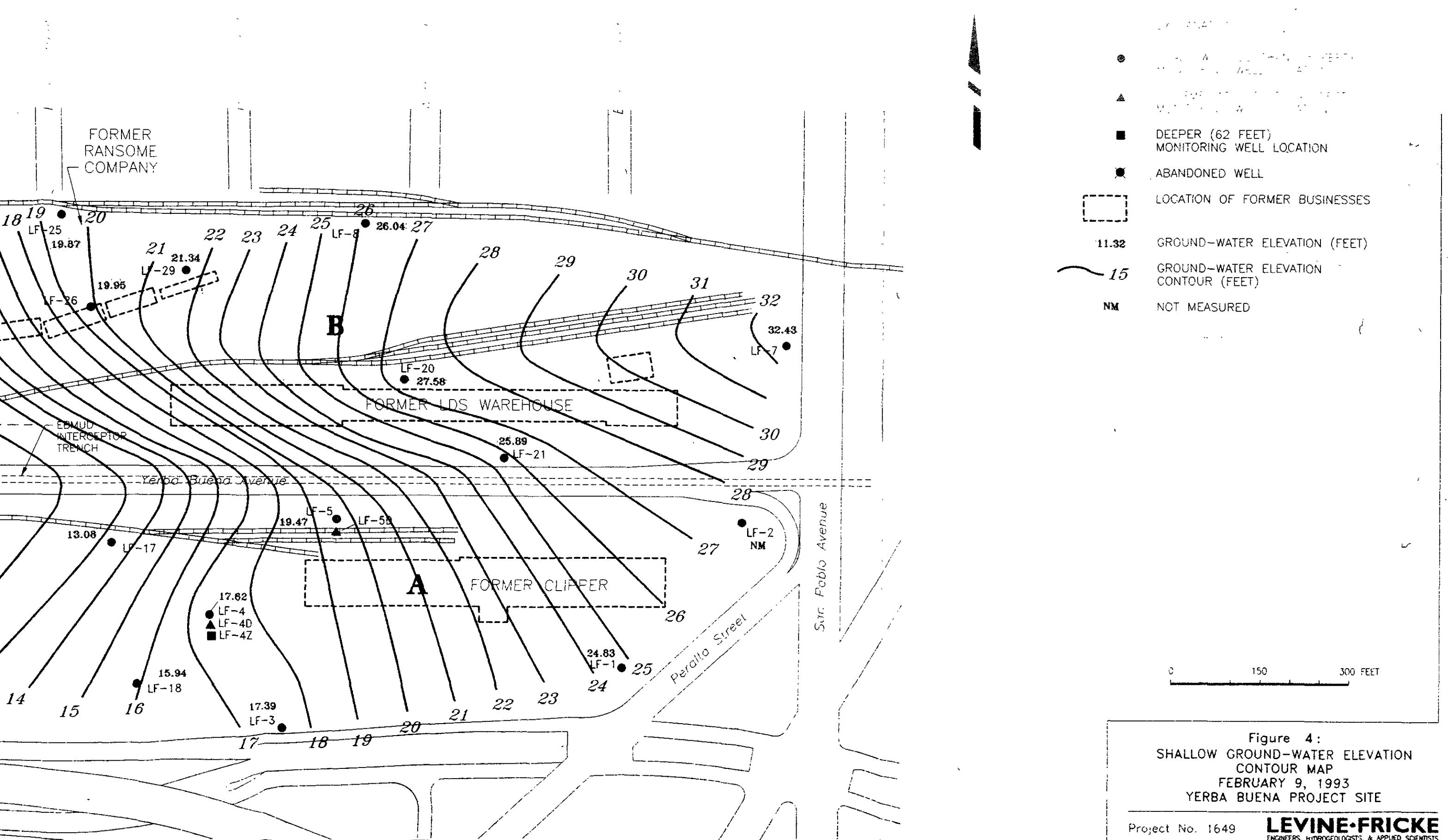
0 40 80 120 160 FEET

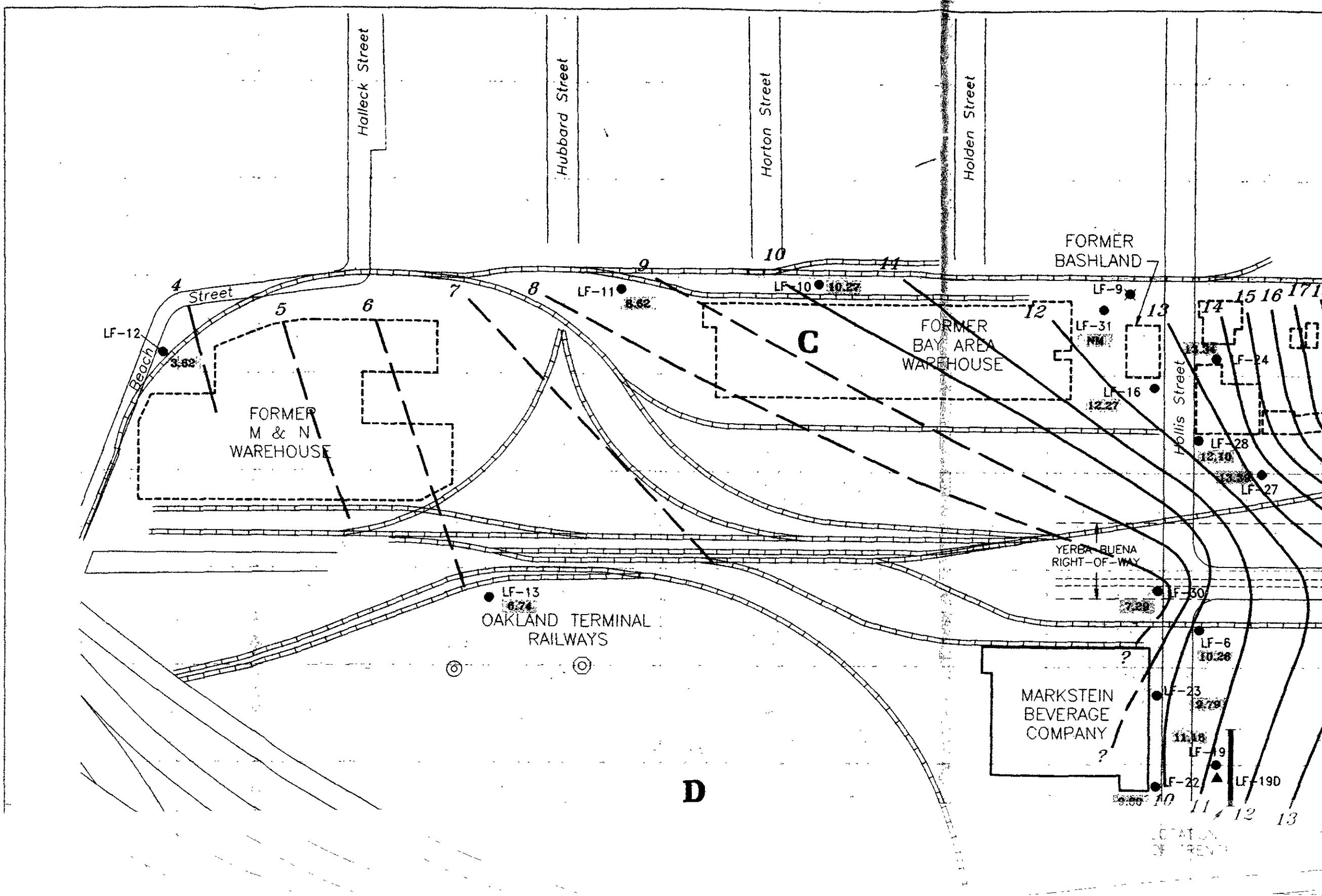
Figure 7 :
VOLATILE ORGANIC COMPOUNDS DETECTED IN
SHALLOW GROUND-WATER SAMPLES (ppm) IN
AREA A IN 1990

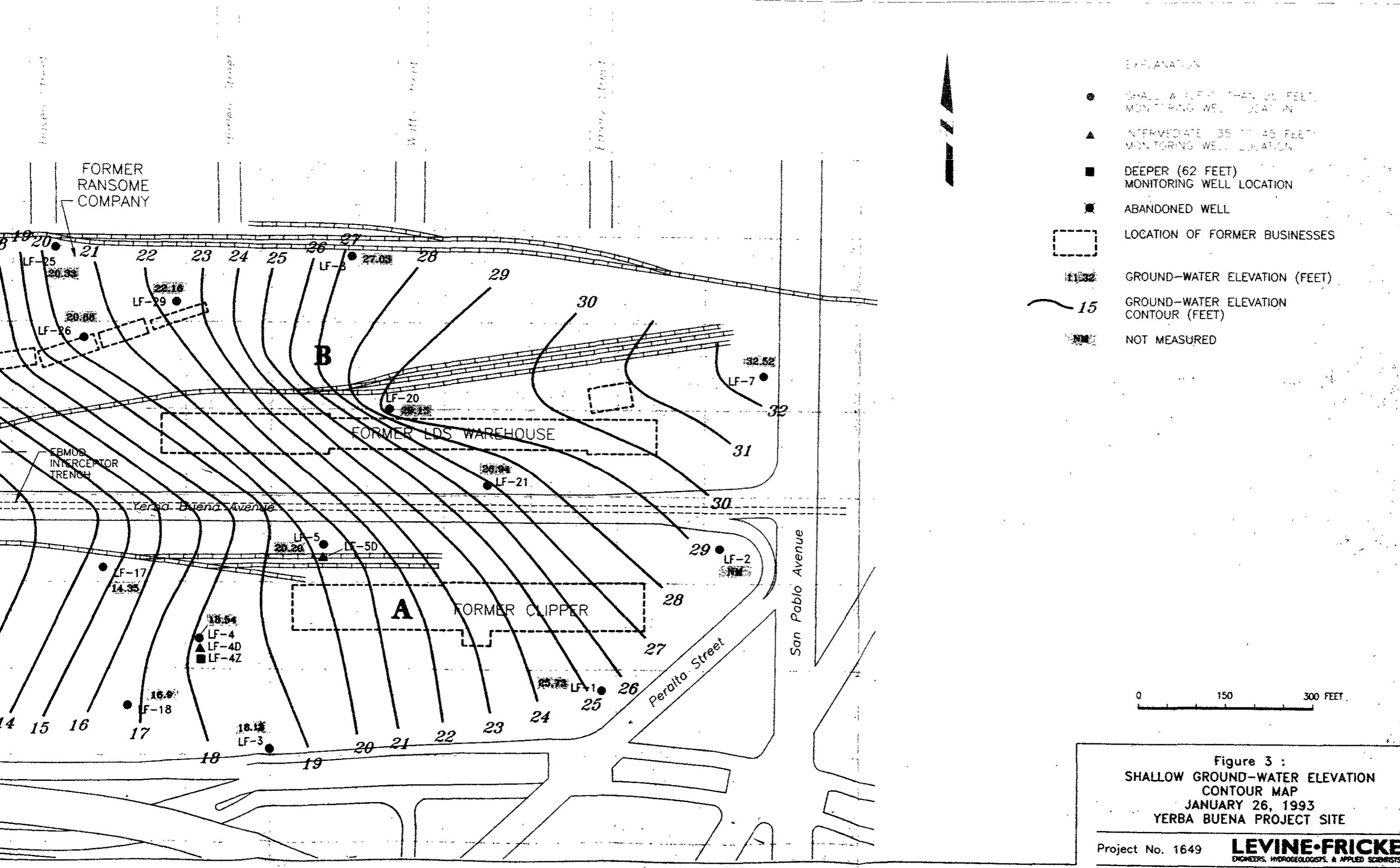


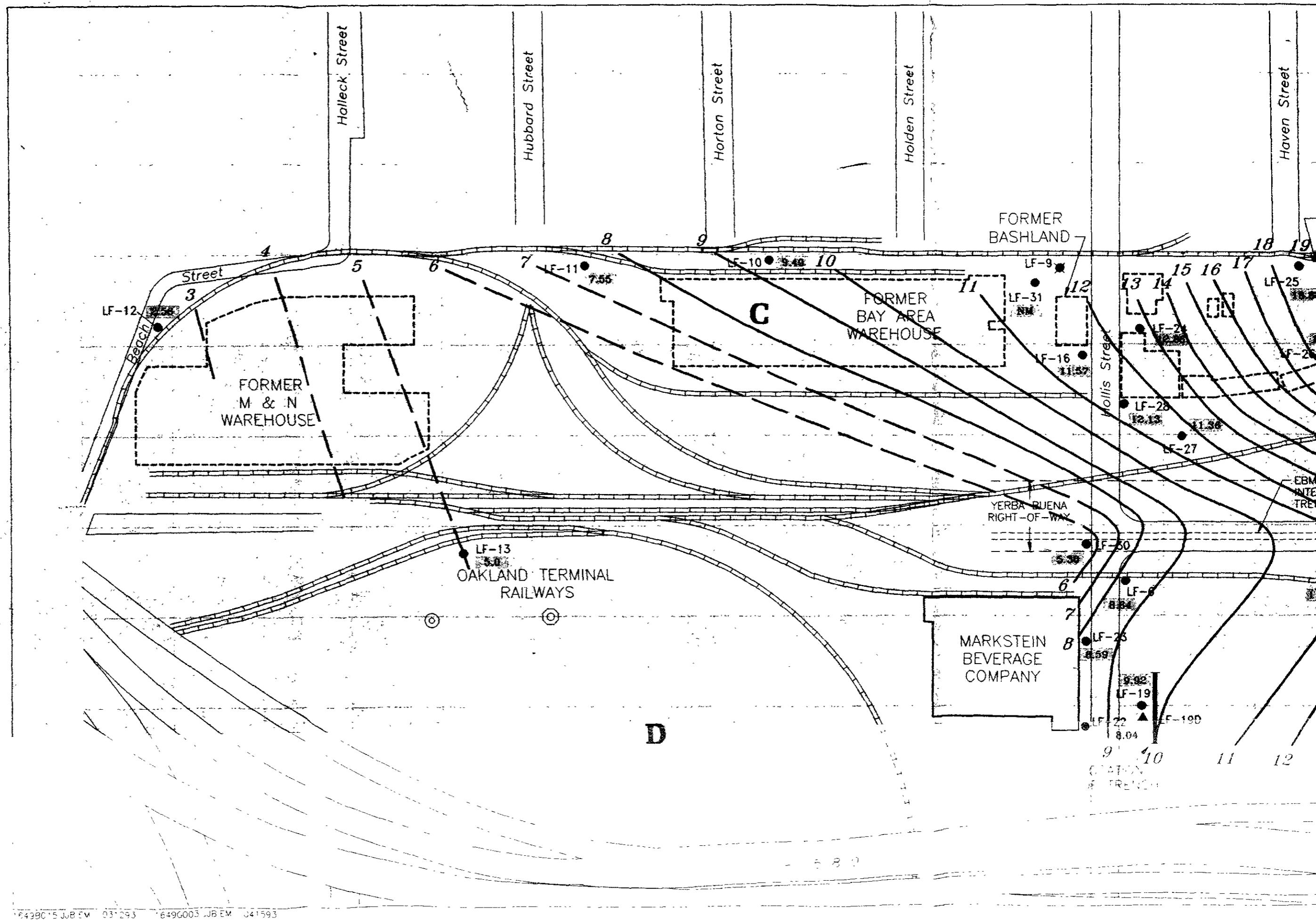


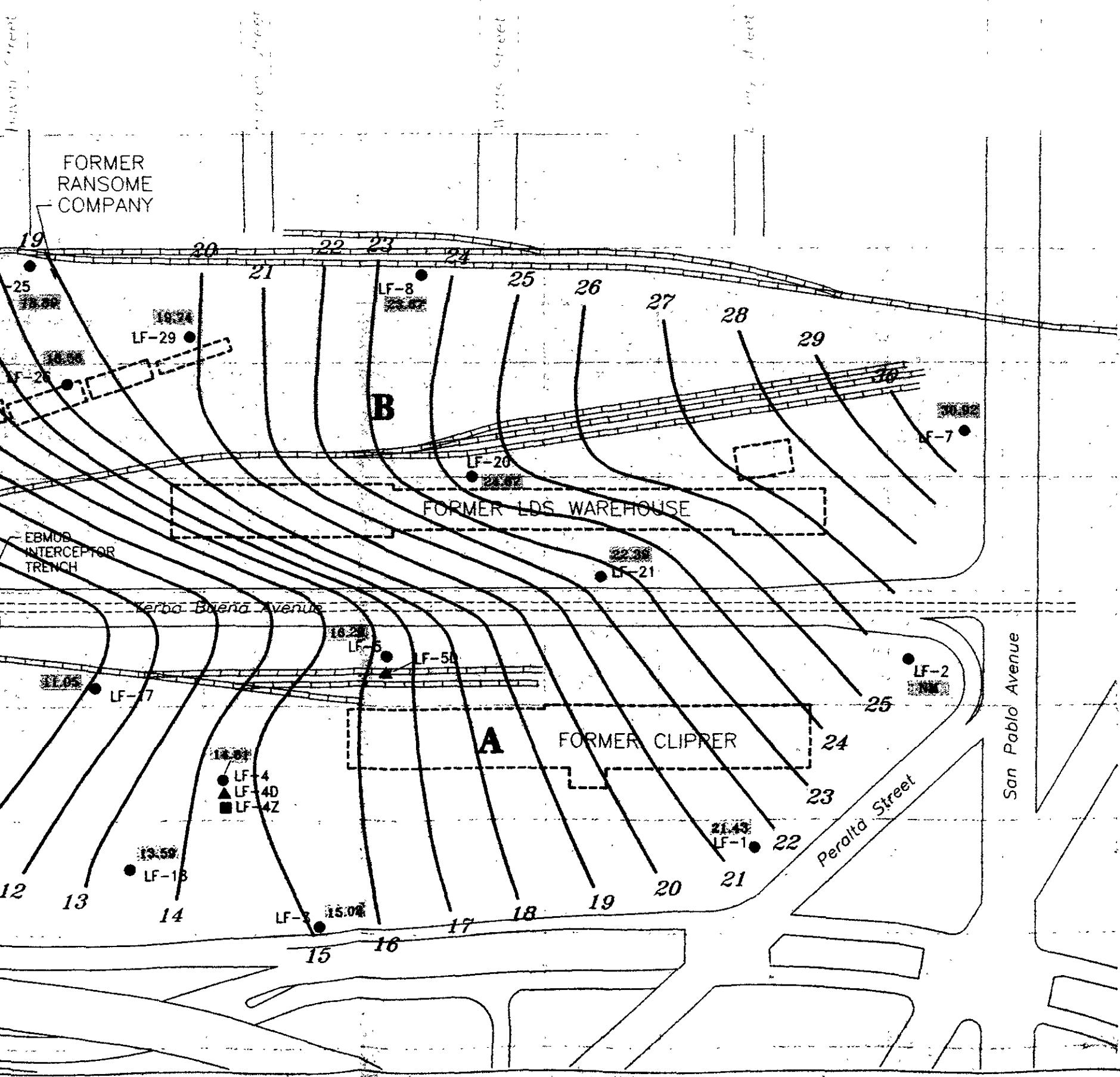












• PLANATION

■ SHALLOW (LESS THAN 15 FEET)
MONITORING WELL LOCATION

▲ DEEPER (15 TO 30 FEET)
MONITORING WELL LOCATION

■ DEEPER (62 FEET)
MONITORING WELL LOCATION

● ABANDONED WELL

□ LOCATION OF FORMER BUSINESSES

■ GROUND-WATER ELEVATION (FEET)

— GROUND-WATER ELEVATION
CONTOUR (FEET)

■ NOT MEASURED

Figure 2 :
SHALLOW GROUND-WATER ELEVATION
CONTOUR MAP

DECEMBER 24, 1992

YERBA BUENA PROJECT SITE

APPENDIX A
GROUND-WATER SAMPLING PROCEDURES

LEVINE·FRICKE

GROUND-WATER SAMPLING PROCEDURES

Before ground-water samples were collected, depth to static water was measured in each well and the volume of water in the well casing was calculated. Three to five well casing volumes of ground-water were then purged from each well using a submersible or centrifugal pump until indicator parameter readings (pH, specific conductance, and temperature) stabilized. Indicator parameters were measured using portable field instruments and measurements were recorded on water-quality sampling forms. Purging and sampling equipment was steam cleaned before use at each well.

After the well had been purged, ground-water samples were collected using a clean Teflon bailer. Samples were collected in containers appropriate for the laboratory analysis to be performed. Samples collected for VOC analyses were collected by pouring ground water directly from the bailer into laboratory-supplied, 40-milliliter volatile organic analysis (VOA) glass vials. Vials were gently filled to overflowing, capped, and then inverted to check for trapped air. If an air bubble was observed, the vial was discarded and a new vial filled. Samples were immediately capped and placed in an ice-chilled cooler for transportation to the analytical laboratory.

Ground-water samples were submitted to Anametrix, a state-certified laboratory, under strict chain-of-custody protocol. For quality assurance/quality control measures, field blanks were collected for wells LF-17 and LF-23 and duplicate samples were collected from wells LF-17, LF-19, and LF-30. All ground-water samples, including the field blank sample collected for well LF-17 and the duplicate samples collected from wells LF-17 and LF-30 (labelled LF-117 and LF-130, respectively) were analyzed for VOCs using EPA Method 8010. In addition, samples collected from monitoring wells LF-3, LF-4, LF-5, and LF-19 were analyzed for TPHd and TPHo (carbon chain length C₂₂-C₃₆) using GCFID and EPA Method 3510. Laboratory certificates are included in Appendix C.

APPENDIX B
WATER-QUALITY SAMPLING SHEETS

~~10-30~~ LEVINE • FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name YERBA BUENA
Date 2-10-93
Samplers Name SCH JCK
Sampling Location EMERYVILLE
Sampling Method SUB. PUMP / TEFLON BAILER
Analyses Requested EPA 8010

Project No. 1649-02
Sample No. LF-4Z
LF-4Z-FB

GROUND WATER	SURFACE WATER
Well No. <u>LF-4Z</u>	Stream Width _____
Well Diameter (in.) <u>4 in</u>	Stream Depth _____
Depth to Water, Static (ft) <u>9.75</u>	Stream Velocity _____
Water in Well Box _____	Rained recently? _____
Well Depth (ft) <u>62.99</u>	Other _____
Height of Water Column in Well <u>53.24</u>	<p>2-inch casing = 0.16 gal/ft</p> <p>4-inch casing = 0.65 gal/ft</p> <p>5-inch casing = 1.02 gal/ft</p> <p>6-inch casing = 1.47 gal/ft</p>
Water Volume in Well <u>34.61 ≈ 35</u>	
Pump set near bottom.	

62.99
<u>9.75</u>
53.24
<u>65</u>
26620
319440
<u>3461</u>

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
0830								pH, Cond. Calibr.
0940								Start
0944	35	18.9	7.20	729				Clear
0950	70	19.0	7.19	737				sl. Turbid
0956	Inlet	105	19.1	7.07	735			Clear
1002	Inlet	140	19.3	7.08	737			Clear / stop
1025								LF-42-FB
1030								Sample LF-42
1035	18.20							

Suggested Method for Purging Well Sub. pump at bottom

10-304
LEVINE-FRICKE**WATER-QUALITY SAMPLING INFORMATION**Project Name YERBA BUENAProject No. 1649.02Date 2/10/93Sample No. LF-11Samplers Name JCK SCHSampling Location LF-11Sampling Method CENT PUMP/TEFLON BAILERAnalyses Requested EPA 8010Number and Types of Sample Bottles used 3 VOAMethod of Shipment COURIER**GROUND WATER****SURFACE WATER**Well No. LF-11 Stream Width _____Well Diameter (in.) 4 Stream Depth _____Depth to Water.
Static (ft) 1.51 Stream Velocity _____Water in Well Box Yes Rained recently? _____Well Depth (ft) 20.54 Other _____Height of Water
Column in Well 19.03 2-inch casing = 0.16 gal/ftWater Volume in Well 12.37 4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

20.54
1.51
19.03
.65
95/5
11 418
12-3695

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
13:38								START
13:41		13	17.6	7.38	918			CLEAR
13:45		26	18.1	7.28	949			CLEAR
13:48		39	18.2	7.24	994			CLEAR
13:51		52	18.3	7.15	1038			CLEAR
13:54		65	18.4	7.25	1058			CLEAR
13:55		69						OFF
14:00								SA-PLC
14:03	3.15							

Suggested Method for Purging Well _____

LEVINE-FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name YERBA BUENAProject No. 1649.02Date 2-9-93Sample No. LF 17Samplers Name JGB, SCHLF-117Sampling Location EMERYVILLELF-17-FBSampling Method HAND BAIL (TEFLON BAILET)21.54Analyses Requested EPA 801012.44Number and Types of Sample Bottles used 3 VOAs w/HCl9.10Method of Shipment COURIER.65

GROUND WATER

SURFACE WATER

Well No. LF-17

Stream Width

Well Diameter (in.) 4 in

Stream Depth

Depth to Water, Static (ft) 12.44

Stream Velocity

Water in Well Box

Rained recently?

Well Depth (ft) 21.54

Other

Height of Water Column in Well 9.10

2-inch casing = 0.16 gal/ft

Water Volume in Well 9.92 ± 6

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

21.54
12.44
9.10
.65
4550
5460
59150

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1415								Sample FB
1420								Start
1425	6	18.4	7.08	1274				sl. turbid
1432	12	18.6	7.24	1218				sl. turbid
	18	18.6	6.75*	1150				sl. turbid
1450								sample 17
1550								sample 117
1500	12.59							
1447		20	16*	6.75*	—	←	Cond meter not working	
1449		23	16*	6.75*				

* pH meter not working - opt wet. used pH paper.

Suggested Method for Purging Well

* Thermometer

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WATER-QUALITY SAMPLING INFORMATION

Project Name YERBA BUENA
Date 2-9-93

Project No. 1649.02
Sample No. LF-22

Samplers Name JGB, SCH
EUREXVILLE

Sampling Location EMERYVILLE
CONT. ON PAGE
WATERFALL / TEEFON BAILER

HANDHELD / TEFON BAILET

Analyses Requested EPA 8010

Analyses Requested _____
Number and Types of Sample Bottles used 3 VOA's w/HCl

Number and Types of Sample Bottles used

Method of Shipment COURIER

GROUND WATER

Well No. LF-22

Well Diameter (in.) 4 in

Depth to Water,
Static (ft) 8.55

Water in Well Box _____

Well Depth (ft) 19.50

Height of Water Column in Well 10.95

Column in well 3-13-8

SURFACE WATER

Stream Width _____

Stream Depth _____ /

Stream Velocity _____

Rained recently? _____

Other _____

2-inch casting = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

$$\begin{array}{r}
 19.50 \\
 8.55 \\
 \hline
 10.95 \\
 .65 \\
 \hline
 5475 \\
 65700 \\
 \hline
 71175
 \end{array}$$

LOCATION MAP

Suggested Method for Purging Well

APPENDIX C
LABORATORY CERTIFICATES



MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9302152
Date Received : 02/11/93
Project ID : 1649.02
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9302152- 1	LF-19
9302152- 2	LF-19D
9302152- 3	LF-18
9302152- 4	LF-17-FB
9302152- 5	LF-17
9302152- 6	LF-117
9302152- 7	LF-23
9302152- 8	LF-22
9302152- 9	LF-6
9302152-10	LF-4
9302152-11	LF-4Z-FB
9302152-12	LF-4Z
9302152-13	LF-4D
9302152-14	LF-5
9302152-15	LF-3
9302152-16	LF-5D
9302152-17	LF-11
9302152-18	LF-10
9302152-19	LF-12
9302152-21	TRIP 9

This report consists of 40 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.

Sarah Schoen

Sarah Schoen, Ph.D.
Laboratory Director

04-26-93
Date

ANAMETRIX REPORT DESCRIPTION GC

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anametrix uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- ♦ Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- ♦ Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9302152
Date Received : 02/11/93
Project ID : 1649.02
Purchase Order: N/A
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302152- 1	LF-19	WATER	02/09/93	8010
9302152- 2	LF-19D	WATER	02/09/93	8010
9302152- 3	LF-18	WATER	02/09/93	8010
9302152- 4	LF-17-FB	WATER	02/09/93	8010
9302152- 5	LF-17	WATER	02/09/93	8010
9302152- 6	LF-117	WATER	02/09/93	8010
9302152- 7	LF-23	WATER	02/09/93	8010
9302152- 8	LF-22	WATER	02/09/93	8010
9302152- 9	LF-6	WATER	02/09/93	8010
9302152-10	LF-4	WATER	02/09/93	8010
9302152-11	LF-4Z-FB	WATER	02/10/93	8010
9302152-12	LF-4Z	WATER	02/10/93	8010
9302152-13	LF-4D	WATER	02/10/93	8010
9302152-14	LF-5	WATER	02/10/93	8010
9302152-15	LF-3	WATER	02/10/93	8010
9302152-16	LF-5D	WATER	02/10/93	8010
9302152-17	LF-11	WATER	02/10/93	8010
9302152-18	LF-10	WATER	02/10/93	8010
9302152-19	LF-12	WATER	02/10/93	8010
9302152-21	TRIP 9	WATER	02/10/93	8010

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9302152
Date Received : 02/11/93
Project ID : 1649.02
Purchase Order: N/A
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- The amount of methylene chloride in sample Trip 9 is within normal laboratory background levels.

Michelle Young 2/25/93
Department Supervisor Date

Kamel G. Kamel 2/25/93
Chemist Date

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED
EPA METHOD 601/8010

<u>CAS #</u>	<u>COMPOUND NAME</u>	<u>ABBREVIATED NAME</u>
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlorofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB
352-33-0	p-Chlorofluorobenzene	Chlorofluoraben

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	:	1649.02	Anametrix ID	:	9302152-01
Sample ID	:	LF-19	Analyst	:	KK
Matrix	:	WATER	Supervisor	:	<i>my</i>
Date Sampled	:	2/ 9/93	Dilution Factor	:	1.0
Date Analyzed	:	2/19/93	Conc. Units	:	ug/L
Instrument ID	:	HP15			

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	18.	
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	1.6	
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	2.2	
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
0061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02
Sample ID : LF-19D
Matrix : WATER
Date Sampled : 2/ 9/93
Date Analyzed : 2/22/93
Instrument ID : HP14

Anametrix ID : 9302152-02
Analyst : KK
Supervisor : *m*
Dilution Factor : 1.0
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	.57	
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	.97	
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	:	1649.02	Anametrix ID	:	9302152-03
Sample ID	:	LF-18	Analyst	:	mf KK
Matrix	:	WATER	Supervisor	:	
Date Sampled	:	2/ 9/93	Dilution Factor	:	1.0
Date Analyzed	:	2/19/93	Conc. Units	:	ug/L
Instrument ID	:	HP15			

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-04
Sample ID	: LF-17-FB	Analyst	: KK
Matrix	: WATER	Supervisor	: my
Date Sampled	: 2/ 9/93	Dilution Factor	: 1.0
Date Analyzed	: 2/22/93	Conc. Units	: ug/L
Instrument ID	: HP14		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	UU
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	UU
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-05
Sample ID	: LF-17	Analyst	: KK
Matrix	: WATER	Supervisor	: mt
Date Sampled	: 2/ 9/93	Dilution Factor	: 10.0
Date Analyzed	: 2/19/93	Conc. Units	: ug/L
Instrument ID	: HP15		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	10.	ND	U
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl Chloride	5.0	ND	U
74-83-9	Bromomethane	5.0	ND	U
75-00-3	Chloroethane	5.0	ND	U
75-69-4	Freon 11	5.0	ND	U
76-13-1	Freon 113	5.0	ND	U
75-35-4	1,1-DCE	5.0	260.	
75-09-2	Methylene Chlor	10.	ND	U
156-60-5	Trans-1,2-DCE	5.0	ND	U
75-34-3	1,1-DCA	5.0	5.9	
156-59-2	Cis-1,2-DCE	5.0	ND	U
67-66-3	Chloroform	5.0	ND	U
71-55-6	1,1,1-TCA	5.0	35.	
56-23-5	Carbon Tet	5.0	ND	U
107-06-2	1,2-DCA	5.0	ND	U
79-01-6	Trichloroethene	5.0	ND	U
78-87-5	1,2-DCPA	5.0	ND	U
75-27-4	Bromodichlorome	5.0	ND	U
110-75-8	Chloroethylvinl	10.	ND	U
0061-01-5	Cis-1,3-DCPE	5.0	ND	U
10061-02-6	Trans-1,3-DCPE	5.0	ND	U
79-00-5	1,1,2-TCA	5.0	ND	U
127-18-4	PCE	5.0	ND	U
124-48-1	Dibromochlorome	5.0	ND	U
108-90-7	Chlorobenzene	5.0	ND	U
75-25-2	Bromoform	5.0	ND	U
79-34-5	1,1,2,2-PCA	5.0	ND	U
541-73-1	1,3-DCB	10.	ND	U
106-46-7	1,4-DCB	10.	ND	U
95-50-1	1,2-DCB	10.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-06
Sample ID	: LF-117	Analyst	: <i>m</i> KK
Matrix	: WATER	Supervisor	
Date Sampled	: 2/ 9/93	Dilution Factor	: 10.0
Date Analyzed	: 2/19/93	Conc. Units	: ug/L
Instrument ID	: HP15		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	10.	ND	U
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl Chloride	5.0	ND	U
74-83-9	Bromomethane	5.0	ND	U
75-00-3	Chloroethane	5.0	ND	U
75-69-4	Freon 11	5.0	ND	U
76-13-1	Freon 113	5.0	ND	U
75-35-4	1,1-DCE	5.0	240.	U
75-09-2	Methylene Chlor	10.	ND	U
156-60-5	Trans-1,2-DCE	5.0	ND	U
75-34-3	1,1-DCA	5.0	ND	U
156-59-2	Cis-1,2-DCE	5.0	ND	U
67-66-3	Chloroform	5.0	ND	U
71-55-6	1,1,1-TCA	5.0	31.	U
56-23-5	Carbon Tet	5.0	ND	U
107-06-2	1,2-DCA	5.0	ND	U
79-01-6	Trichloroethene	5.0	ND	U
78-87-5	1,2-DCPA	5.0	ND	U
75-27-4	Bromodichlorome	5.0	ND	U
110-75-8	Chloroethylvinl	10.	ND	U
10061-01-5	Cis-1,3-DCPE	5.0	ND	U
10061-02-6	Trans-1,3-DCPE	5.0	ND	U
79-00-5	1,1,2-TCA	5.0	ND	U
127-18-4	PCE	5.0	ND	U
124-48-1	Dibromochlorome	5.0	ND	U
108-90-7	Chlorobenzene	5.0	ND	U
75-25-2	Bromoform	5.0	ND	U
79-34-5	1,1,2,2-PCA	5.0	ND	U
541-73-1	1,3-DCB	10.	ND	U
106-46-7	1,4-DCB	10.	ND	U
95-50-1	1,2-DCB	10.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02 Anametrix ID : 9302152-07
 Sample ID : LF-23 Analyst :
 Matrix : WATER Supervisor : *mf KK*
 Date Sampled : 2/ 9/93 Dilution Factor : 1.0
 Date Analyzed : 2/22/93 Conc. Units : ug/L
 Instrument ID : HP14

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50		3.4
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50		3.0
156-59-2	Cis-1,2-DCE	.50		1.8
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50		.83
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50		3.7
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50		20.
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	:	1649.02	Anametrix ID	:	9302152-08
Sample ID	:	LF-22	Analyst	:	<i>KL</i>
Matrix	:	WATER	Supervisor	:	<i>m</i>
Date Sampled	:	2/ 9/93	Dilution Factor	:	1.0
Date Analyzed	:	2/22/93	Conc. Units	:	ug/L
Instrument ID	:	HP14			

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	8.1	
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	2.8	
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	1.3	
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	.51	
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	.70	
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-09
Sample ID	: LF-6	Analyst	: m KK
Matrix	: WATER	Supervisor	
Date Sampled	: 2/ 9/93	Dilution Factor	: 1.0
Date Analyzed	: 2/22/93	Conc. Units	: ug/L
Instrument ID	: HP14		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	10.0	
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	2.5	
156-59-2	Cis-1,2-DCE	.50	2.9	
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	2.0	
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	3.1	
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinyl	1.0	ND	U
0061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	7.9	
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 1649.02 Anametrix ID : 9302152-10
 Sample ID : LF-4 Analyst : my KK
 Matrix : WATER Supervisor :
 Date Sampled : 2/ 9/93 Dilution Factor : 5.0
 Date Analyzed : 2/19/93 Conc. Units : ug/L
 Instrument ID : HP15

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	5.0	ND	U
74-87-3	Chloromethane	5.0	ND	U
75-01-4	Vinyl Chloride	2.5	ND	U
74-83-9	Bromomethane	2.5	ND	U
75-00-3	Chloroethane	2.5	ND	U
75-69-4	Freon 11	2.5	ND	U
76-13-1	Freon 113	2.5	ND	U
75-35-4	1,1-DCE	2.5	190.	
75-09-2	Methylene Chlor	5.0	ND	U
156-60-5	Trans-1,2-DCE	2.5	ND	U
75-34-3	1,1-DCA	2.5	4.1	
156-59-2	Cis-1,2-DCE	2.5	ND	U
67-66-3	Chloroform	2.5	ND	U
71-55-6	1,1,1-TCA	2.5	22.	
56-23-5	Carbon Tet	2.5	ND	U
107-06-2	1,2-DCA	2.5	ND	U
79-01-6	Trichloroethene	2.5	ND	U
78-87-5	1,2-DCPA	2.5	ND	U
75-27-4	Bromodichlorome	2.5	ND	U
110-75-8	Chloroethylvinl	5.0	ND	U
0061-01-5	Cis-1,3-DCPE	2.5	ND	U
10061-02-6	Trans-1,3-DCPE	2.5	ND	U
79-00-5	1,1,2-TCA	2.5	ND	U
127-18-4	PCE	2.5	ND	U
124-48-1	Dibromochlorome	2.5	ND	U
108-90-7	Chlorobenzene	2.5	ND	U
75-25-2	Bromoform	2.5	ND	U
79-34-5	1,1,2,2-PCA	2.5	ND	U
541-73-1	1,3-DCB	5.0	ND	U
106-46-7	1,4-DCB	5.0	ND	U
95-50-1	1,2-DCB	5.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02 Anametrix ID : 9302152-11
 Sample ID : LF-4Z-FB Analyst : *MJ KK*
 Matrix : WATER Supervisor :
 Date Sampled : 2/10/93 Dilution Factor : 1.0
 Date Analyzed : 2/22/93 Conc. Units : ug/L
 Instrument ID : HP14

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	:	1649.02	Anametrix ID	:	9302152-12
Sample ID	:	LF-4Z	Analyst	:	<i>KK</i>
Matrix	:	WATER	Supervisor	:	<i>mf</i>
Date Sampled	:	2/10/93	Dilution Factor	:	1.0
Date Analyzed	:	2/22/93	Conc. Units	:	ug/L
Instrument ID	:	HP14			

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-13
Sample ID	: LF-4D	Analyst	: my KK
Matrix	: WATER	Supervisor	
Date Sampled	: 2/10/93	Dilution Factor	: 5.0
Date Analyzed	: 2/19/93	Conc. Units	: ug/L
Instrument ID	: HP15		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	5.0	ND	U
74-87-3	Chloromethane	5.0	ND	U
75-01-4	Vinyl Chloride	2.5	ND	U
74-83-9	Bromomethane	2.5	ND	U
75-00-3	Chloroethane	2.5	ND	U
75-69-4	Freon 11	2.5	ND	U
76-13-1	Freon 113	2.5	ND	U
75-35-4	1,1-DCE	2.5	140.	
75-09-2	Methylene Chlor	5.0	ND	U
156-60-5	Trans-1,2-DCE	2.5	ND	U
75-34-3	1,1-DCA	2.5	3.5	
156-59-2	Cis-1,2-DCE	2.5	ND	U
67-66-3	Chloroform	2.5	ND	U
71-55-6	1,1,1-TCA	2.5	17.	
56-23-5	Carbon Tet	2.5	ND	U
107-06-2	1,2-DCA	2.5	ND	U
79-01-6	Trichloroethene	2.5	ND	U
78-87-5	1,2-DCPA	2.5	ND	U
75-27-4	Bromodichlorome	2.5	ND	U
110-75-8	Chloroethylvinl	5.0	ND	U
10061-01-5	Cis-1,3-DCPE	2.5	ND	U
10061-02-6	Trans-1,3-DCPE	2.5	ND	U
79-00-5	1,1,2-TCA	2.5	ND	U
127-18-4	PCE	2.5	ND	U
124-48-1	Dibromochlorome	2.5	ND	U
108-90-7	Chlorobenzene	2.5	ND	U
75-25-2	Bromoform	2.5	ND	U
79-34-5	1,1,2,2-PCA	2.5	ND	U
541-73-1	1,3-DCB	5.0	ND	U
106-46-7	1,4-DCB	5.0	ND	U
95-50-1	1,2-DCB	5.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	:	1649.02	Anametrix ID	:	9302152-14
Sample ID	:	LF-5	Analyst	:	KK
Matrix	:	WATER	Supervisor	:	<i>[initials]</i>
Date Sampled	:	2/10/93	Dilution Factor	:	20.0
Date Analyzed	:	2/19/93	Conc. Units	:	ug/L
Instrument ID	:	HP15			

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	20.	ND	U
74-87-3	Chloromethane	20.	ND	U
75-01-4	Vinyl Chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	UU
75-00-3	Chloroethane	10.	ND	UU
75-69-4	Freon 11	10.	ND	U
76-13-1	Freon 113	10.	ND	U
75-35-4	1,1-DCE	10.	380.	
75-09-2	Methylene Chlor	20.	ND	U
156-60-5	Trans-1,2-DCE	10.	ND	U
75-34-3	1,1-DCA	10.	ND	U
156-59-2	Cis-1,2-DCE	10.	ND	UU
67-66-3	Chloroform	10.	ND	U
71-55-6	1,1,1-TCA	10.	60.	
56-23-5	Carbon Tet	10.	ND	U
107-06-2	1,2-DCA	10.	ND	U
79-01-6	Trichloroethene	10.	ND	U
78-87-5	1,2-DCPA	10.	ND	U
75-27-4	Bromodichlorome	10.	ND	U
110-75-8	Chloroethylvinl	20.	ND	U
10061-01-5	Cis-1,3-DCPE	10.	ND	U
10061-02-6	Trans-1,3-DCPE	10.	ND	U
79-00-5	1,1,2-TCA	10.	ND	U
127-18-4	PCE	10.	ND	U
124-48-1	Dibromochlorome	10.	ND	U
108-90-7	Chlorobenzene	10.	ND	U
75-25-2	Bromoform	10.	ND	U
79-34-5	1,1,2,2-PCA	10.	ND	U
541-73-1	1,3-DCB	20.	ND	U
106-46-7	1,4-DCB	20.	ND	U
95-50-1	1,2-DCB	20.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-15
Sample ID	: LF-3	Analyst	: <i>[Signature]</i> KK
Matrix	: WATER	Supervisor	: <i>[Signature]</i>
Date Sampled	: 2/10/93	Dilution Factor	: 1.0
Date Analyzed	: 2/19/93	Conc. Units	: ug/L
Instrument ID	: HP10		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
0061-01-5	Cis-1,3-DCPE	.50	ND	U
0061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-16
Sample ID	: LF-5D	Analyst	: KK
Matrix	: WATER	Supervisor	: my
Date Sampled	: 2/10/93	Dilution Factor	: 1.0
Date Analyzed	: 2/19/93	Conc. Units	: ug/L
Instrument ID	: HP10		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-18
Sample ID	: LF-10	Analyst	: <i>kk</i>
Matrix	: WATER	Supervisor	: <i>mf</i>
Date Sampled	: 2/10/93	Dilution Factor	: 50.0
Date Analyzed	: 2/19/93	Conc. Units	: ug/L
Instrument ID	: HP10		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	50.	ND	U
74-87-3	Chloromethane	50.	ND	U
75-01-4	Vinyl Chloride	25.	ND	U
74-83-9	Bromomethane	25.	ND	U
75-00-3	Chloroethane	25.	ND	U
75-69-4	Freon 11	25.	ND	U
76-13-1	Freon 113	25.	ND	U
75-35-4	1,1-DCE	25.	ND	U
75-09-2	Methylene Chlor	50.	ND	U
156-60-5	Trans-1,2-DCE	25.	68.	
75-34-3	1,1-DCA	25.	ND	U
156-59-2	Cis-1,2-DCE	25.	300.	
67-66-3	Chloroform	25.	ND	U
71-55-6	1,1,1-TCA	25.	ND	U
56-23-5	Carbon Tet	25.	ND	U
107-06-2	1,2-DCA	25.	ND	U
79-01-6	Trichloroethene	25.	1600.	
78-87-5	1,2-DCPA	25.	ND	U
75-27-4	Bromodichlorome	25.	ND	U
110-75-8	Chloroethylvinl	50.	ND	U
0061-01-5	Cis-1,3-DCPE	25.	ND	U
10061-02-6	Trans-1,3-DCPE	25.	ND	U
79-00-5	1,1,2-TCA	25.	ND	U
127-18-4	PCE	25.	ND	U
124-48-1	Dibromochlorome	25.	ND	U
108-90-7	Chlorobenzene	25.	ND	U
75-25-2	Bromoform	25.	ND	U
79-34-5	1,1,2,2-PCA	25.	ND	U
541-73-1	1,3-DCB	50.	ND	U
106-46-7	1,4-DCB	50.	ND	U
95-50-1	1,2-DCB	50.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-17
Sample ID	: LF-11	Analyst	: KK
Matrix	: WATER	Supervisor	: my
Date Sampled	: 2/10/93	Dilution Factor	: 5.0
Date Analyzed	: 2/19/93	Conc. Units	: ug/L
Instrument ID	: HP10		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	5.0	ND	U
74-87-3	Chloromethane	5.0	ND	U
75-01-4	Vinyl Chloride	2.5	ND	U
74-83-9	Bromomethane	2.5	ND	U
75-00-3	Chloroethane	2.5	ND	U
75-69-4	Freon 11	2.5	ND	U
76-13-1	Freon 113	2.5	ND	U
75-35-4	1,1-DCE	2.5	ND	U
75-09-2	Methylene Chlor	5.0	ND	U
156-60-5	Trans-1,2-DCE	2.5	2.9	
75-34-3	1,1-DCA	2.5	ND	U
156-59-2	Cis-1,2-DCE	2.5	33.	
67-66-3	Chloroform	2.5	ND	U
71-55-6	1,1,1-TCA	2.5	ND	U
56-23-5	Carbon Tet	2.5	ND	U
107-06-2	1,2-DCA	2.5	ND	U
79-01-6	Trichloroethene	2.5	140.	
78-87-5	1,2-DCPA	2.5	ND	U
75-27-4	Bromodichlorome	2.5	ND	U
110-75-8	Chloroethylvinl	5.0	ND	U
0061-01-5	Cis-1,3-DCPE	2.5	ND	U
10061-02-6	Trans-1,3-DCPE	2.5	ND	U
79-00-5	1,1,2-TCA	2.5	ND	U
127-18-4	PCE	2.5	ND	U
124-48-1	Dibromochlorome	2.5	ND	U
108-90-7	Chlorobenzene	2.5	ND	U
75-25-2	Bromoform	2.5	ND	U
79-34-5	1,1,2,2-PCA	2.5	ND	U
541-73-1	1,3-DCB	5.0	ND	U
106-46-7	1,4-DCB	5.0	ND	U
95-50-1	1,2-DCB	5.0	ND	U

ORGANIC ANALYSIS DATA SHEET --- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-19
Sample ID	: LF-12	Analyst	: <i>[Signature]</i> KK
Anametrix	: WATER	Supervisor	
Date Sampled	: 2/10/93	Dilution Factor	: 1.0
Date Analyzed	: 2/19/93	Conc. Units	: ug/L
Instrument ID	: HP10		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	3.8	
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	32.	
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	2.0	
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
961-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302152-21
Sample ID	: TRIP 9	Analyst	
Matrix	: WATER	Supervisor	: my KK
Date Sampled	: 2/10/93	Dilution Factor	: 1.0
Date Analyzed	: 2/22/93	Conc. Units	: ug/L
Instrument ID	: HP14		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	1.3	
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.0 Anametrix ID : 10B0219H01
 Sample ID : BLK219 Analyst :
 Matrix : WATER Supervisor : my KK
 Date Sampled : 0/ 0/ 0
 Date Analyzed : 2/19/93 Dilution Factor : 1.0
 Instrument ID : HP10 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.0 Anametrix ID : 15B0219H01
 Sample ID : BLK219 Analyst : *mf KK*
 Matrix : WATER Supervisor :
 Date Sampled : 0/0/0
 Date Analyzed : 2/19/93 Dilution Factor : 1.0
 Instrument ID : HP15 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.0 Anametrix ID : 14B0222H01
 Sample ID : BLK22 Analyst : KK
 Matrix : WATER Supervisor : m
 Date Sampled : 0/ 0/ 0 Dilution Factor : 1.0
 Date Analyzed : 2/22/93 Conc. Units : ug/L
 Instrument ID : HP14

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinyl	1.0	ND	U
0061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02
Matrix : LIQUID

Anametrix ID : 9302152
Analyst : KK
Supervisor : *[Signature]*

	SAMPLE ID	SU1	SU2	SU3
1	BLK219	99		
2	LF-3	94		
3	LF-5D	94		
4	LF-11	99		
5	LF-10	102		
6	LF-12	96		
7				
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QC LIMITS

SU1 = CHLOROFLUOROBEN (51-136)

* Values outside of Anametrix QC limits

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010
ANAMETRIX, INC. (408)432-8192

Project ID : 1649.02
Matrix : LIQUID

Anametrix ID : 9302152
Analyst : *mf*
Supervisor : *KK*

	SAMPLE ID	SU1	SU2	SU3
1	BLK219	122		
2	LF-18	100		
3	LF-19	101		
4	LF-18MS	91		
5	LF-18MSD	103		
6	LF-17	111		
7	LF-117	101		
8	LF-4	104		
9	LF-4D	101		
10	LF-5	103		
11				
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QC LIMITS

SU1 = CHLOROFLUOROBEN (51-136)

* Values outside of Anametrix QC limits

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02
Matrix : LIQUID

Anametrix ID : 9302152
Analyst :
Supervisor : my KK

	SAMPLE ID	SU1	SU2	SU3
1	BLK222	95		
2	LF-19D	97		
3	LF-17-FB	98		
4	LF-23	102		
5	LF-19MS	103		
6	LF-19MSD	99		
7	LF-22	94		
8	LF-6	101		
9	LF-4Z-FB	100		
10	LF-4Z	94		
11	TRIP 9	96		
12				
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QC LIMITS

SU1 = CHLOROFLUOROBEN (51-136)

* Values outside of Anametrix QC limits

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8010
 ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02
 Sample ID : LF-19D
 Matrix : WATER
 Date Sampled : 2/ 9/93
 Date Analyzed : 2/22/93
 Instrument ID : HP14

Anametrix ID : 9302152-02
 Analyst : *[Signature]* KK
 Supervisor : *[Signature]*

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	%REC LIMITS
Freon 113	10.0	.0	12.1	121	28-127
1,1-DCE	10.0	.0	9.5	95	47-119
Trans-1,2-DCE	10.0	.0	9.9	99	46-112
1,1-DCA	10.0	.0	10.6	106	57-124
Cis-1,2-DCE	10.0	.0	10.0	100	70-139
1,1,1-TCA	10.0	.0	10.7	107	57-125
Trichloroethene	10.0	.0	9.4	94	61-133
PCE	10.0	.0	9.0	90	61-132
Chlorobenzene	10.0	.0	10.0	100	81-120
1,3-DCB	10.0	.0	9.3	93	56-113
1,4-DCB	10.0	.0	9.2	92	62-119
1,2-DCB	10.0	.0	9.2	92	69-116

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
Freon 113	10.0	11.0	110	10	25	28-127
1,1-DCE	10.0	8.8	88	9	25	47-119
Trans-1,2-DCE	10.0	9.0	90	9	25	46-112
1,1-DCA	10.0	9.8	98	7	25	57-124
Cis-1,2-DCE	10.0	9.2	92	8	25	70-139
1,1,1-TCA	10.0	9.7	97	10	25	57-125
Trichloroethene	10.0	8.8	88	6	25	61-133
PCE	10.0	8.3	83	8	25	61-132
Chlorobenzene	10.0	9.7	97	3	25	81-120
1,3-DCB	10.0	8.6	86	7	25	56-113
1,4-DCB	10.0	8.9	89	3	25	62-119
1,2-DCB	10.0	9.2	92	1	25	69-116

Value is outside of Anametrix QC limits

RPD: 0 out of 12 outside limits
 Spike Recovery: 0 out of 24 outside limits

MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8010
 ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02
 Sample ID : LF-18
 Matrix : WATER
 Date Sampled : 2/ 9/93
 Date Analyzed : 2/19/93
 Instrument ID : HP15

Anametrix ID : 9302152-03
 Analyst : KK
 Supervisor : m

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	%REC LIMITS
Freon 113	10.0	.0	9.4	94	28-127
1,1-DCE	10.0	.0	6.9	69	47-119
trans-1,2-DCE	10.0	.0	7.5	75	46-112
1,1-DCA	10.0	.0	7.8	78	57-124
Cis-1,2-DCE	10.0	.0	8.4	84	70-139
1,1,1-TCA	10.0	.0	8.6	86	57-125
Trichloroethene	10.0	.0	7.5	75	61-133
PCE	10.0	.0	7.5	75	61-132
Chlorobenzene	10.0	.0	8.9	89	81-120
1,3-DCB	10.0	.0	8.0	80	56-113
1,4-DCB	10.0	.0	8.2	82	62-119
1,2-DCB	10.0	.0	8.5	85	69-116

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	%	RPD	%REC LIMITS
Freon 113	10.0	10.6	106	12	25	28-127
1,1-DCE	10.0	8.3	83	18	25	47-119
trans-1,2-DCE	10.0	8.6	86	14	25	46-112
1,1-DCA	10.0	8.9	89	13	25	57-124
Cis-1,2-DCE	10.0	9.5	95	12	25	70-139
1,1,1-TCA	10.0	9.4	94	9	25	57-125
Trichloroethene	10.0	9.0	90	17	25	61-133
PCE	10.0	8.3	83	10	25	61-132
Chlorobenzene	10.0	9.6	96	7	25	81-120
1,3-DCB	10.0	9.8	98	20	25	56-113
1,4-DCB	10.0	10.1	101	21	25	62-119
1,2-DCB	10.0	10.5	105	22	25	69-116

Value is outside of Anametrix QC limits

RPD: 0 out of 12 outside limits

Spk Recovery: 0 out of 24 outside limits

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408)432-8192

Project/Case	:	LABORATORY CONTROL SAMPLE	Anametrix I.D. :	W0021993
Matrix	:	WATER	Analyst	<i>mj KK</i>
SDG/Batch	:	N/A	Supervisor	
Date analyzed	:	02/19/93	Instrument I.D.:	HP10

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	11.6	116%	34 - 128
1,1-DICHLOROETHENE	10	8.8	88%	63 - 133
trans-1,2-DICHLOROETHENE	10	9.1	91%	55 - 145
1,1-DICHLOROETHANE	10	9.2	92%	49 - 121
cis-1,2-DICHLOROETHENE	10	9.4	94%	66 - 168
1,1,1-TRICHLOROETHANE	10	9.9	99%	72 - 143
TRICHLOROETHENE	10	9.4	94%	63 - 147
TETRACHLOROETHENE	10	9.2	92%	60 - 133
CHLOROBENZENE	10	9.4	94%	70 - 148
1,3-DICHLOROBENZENE	10	8.7	87%	49 - 139
1,4-DICHLOROBENZENE	10	9.2	92%	70 - 133
1,2-DICHLOROBENZENE	10	9.0	90%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

LABORATORY CONTROL SAMPLE
 EPA METHOD 601/8010
 ANAMETRIX, INC. (408)432-8192

Project/Case	:	LABORATORY CONTROL SAMPLE	Anametrix I.D.	:	W0021993
Matrix	:	WATER	Analyst	:	<i>mf</i> KK
SDG/Batch	:	N/A	Supervisor	:	
Date analyzed	:	02/19/93	Instrument I.D.	:	HP15

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	11.4	114%	34 - 128
1,1-DICHLOROETHENE	10	9.1	91%	63 - 133
trans-1,2-DICHLOROETHENE	10	10.0	100%	55 - 145
1,1-DICHLOROETHANE	10	10.1	101%	49 - 121
cis-1,2-DICHLOROETHENE	10	10.7	107%	66 - 168
1,1,1-TRICHLOROETHANE	10	10.7	107%	72 - 143
TRICHLOROETHENE	10	10.3	103%	63 - 147
TETRACHLOROETHENE	10	9.9	99%	60 - 133
CHLOROBENZENE	10	10.9	109%	70 - 148
1,3-DICHLOROBENZENE	10	9.6	96%	49 - 139
1,4-DICHLOROBENZENE	10	10.1	101%	70 - 133
1,2-DICHLOROBENZENE	10	9.8	98%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

LABORATORY CONTROL SAMPLE
EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Project/Case	:	LABORATORY CONTROL SAMPLE	Anametrix I.D.	:	WO022293
Matrix	:	WATER	Analyst	:	<i>mf KK</i>
SDG/Batch	:	N/A	Supervisor	:	
Date analyzed	:	02/22/93	Instrument I.D.	:	HP14

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	11.6	116%	34 - 128
1,1-DICHLOROETHENE	10	9.1	91%	63 - 133
trans-1,2-DICHLOROETHENE	10	9.8	98%	55 - 145
1,1-DICHLOROETHANE	10	9.5	95%	49 - 121
cis-1,2-DICHLOROETHENE	10	10.1	101%	66 - 168
1,1,1-TRICHLOROETHANE	10	10.0	100%	72 - 143
TRICHLOROETHENE	10	9.5	95%	63 - 147
TETRACHLOROETHENE	10	9.0	90%	60 - 133
CHLOROBENZENE	10	9.9	99%	70 - 148
1,3-DICHLOROBENZENE	10	8.6	86%	49 - 139
1,4-DICHLOROBENZENE	10	9.0	90%	70 - 133
1,2-DICHLOROBENZENE	10	9.1	91%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.



MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9302188
Date Received : 02/12/93
Project ID : 1649.02
Purchase Order: N/A

The following samples were received at Anametrix, Inc. for analysis :

ANAMETRIX ID	CLIENT SAMPLE ID
9302188- 1	LF-30
9302188- 2	LF-130
9302188- 3	LF-20
9302188- 4	LF-21

This report consists of 11 pages not including the cover letter, and is organized in sections according to the specific Anametrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anametrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

Anametrix is certified by the California Department of Health Services (DHS) to perform environmental testing under Certificate Number 1234. A detailed list of the approved fields of testing can be obtained by calling our office, or the DHS Environmental Laboratory Accreditation Program at (415)540-2800.

If you have any further questions or comments on this report, please give us a call as soon as possible. Thank you for using Anametrix.


Sarah Schoen, Ph.D.
Laboratory Director

2-26-93

Date

COPY

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MAR 1 - 1993
LEVINE-FRICKE

ANAMETRIX REPORT DESCRIPTION GC

Organic Analysis Data Sheets (OADS)

OADS forms contain tabulated results for target compounds. The OADS are grouped by method and, within each method, organized sequentially in order of increasing Anametrix ID number.

Surrogate Recovery Summary (SRS)

SRS forms contain quality assurance data. An SRS form will be printed for each method, if the method requires surrogate compounds. They will list surrogate percent recoveries for all samples and any method blanks. Any surrogate recovery outside the established limits will be flagged with an "*", and the total number of surrogates outside the limits will be listed in the column labelled "Total Out".

Matrix Spike Recovery Form (MSR)

MSR forms contain quality assurance data. They summarize percent recovery and relative percent difference information for matrix spikes and matrix spike duplicates. This information is a statement of both accuracy and precision. Any percent recovery or relative percent difference outside established limits will be flagged with an "*", and the total number outside the limits will be listed at the bottom of the page. Not all reports will contain an MSR form.

Qualifiers

Anametrix uses several data qualifiers (Q) in its report forms. These qualifiers give additional information on the compounds reported. They should help a data reviewer to verify the integrity of the analytical results. The following is a list of qualifiers and their meanings:

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.

Absence of a qualifier indicates that the compound was detected at a concentration at or above the specified reporting limit.

REPORTING CONVENTIONS

- ♦ Due to a size limitation in our data processing step, only the first eight (8) characters of your project ID and sample ID will be printed on the report forms. However, the report cover letter and report summary pages display up to twenty (20) characters of your project and sample IDs.
- ♦ Amounts reported are gross values, i.e., not corrected for method blank contamination.

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9302188
Date Received : 02/12/93
Project ID : 1649.02
Purchase Order: N/A
Department : GC
Sub-Department: VOA

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302188- 1	LF-30	WATER	02/12/93	8010
9302188- 2	LF-130	WATER	02/12/93	8010
9302188- 3	LF-20	WATER	02/11/93	8010
9302188- 4	LF-21	WATER	02/11/93	8010

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9302188
Date Received : 02/12/93
Project ID : 1649.02
Purchase Order: N/A
Department : GC
Sub-Department: VOA

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Corinneham
Department Supervisor

2/26/93
Date

Michele Young
Chemist 2/26/93
Date

DESCRIPTIONS FOR SPECIFIC COMPOUNDS ANALYZED
EPA METHOD 601/8010

<u>CAS #</u>	<u>COMPOUND NAME</u>	<u>ABBREVIATED NAME</u>
74-87-3	Chloromethane	Chloromethane
74-83-9	Bromomethane	Bromoethane
75-71-8	Dichlorodifluoromethane	Freon 12
75-01-4	Vinyl Chloride	Vinyl Chloride
75-00-3	Chloroethane	Chloroethane
75-09-2	Methylene Chloride	Methylene Chlor
75-69-4	Trichlorofluoromethane	Freon 11
75-35-4	1,1-Dichloroethene	1,1-DCE
75-34-3	1,1-Dichloroethane	1,1-DCA
156-59-2	Cis-1,2-Dichloroethene	Cis-1,2-DCE
156-60-5	Trans-1,2-Dichloroethene	Trans-1,2-DCE
67-66-3	Chloroform	Chloroform
76-13-1	Trichlorotrifluoroethane	Freon 113
107-06-2	1,2-Dichloroethane	1,2-DCA
71-55-6	1,1,1-Trichloroethane	1,1,1-TCA
56-23-5	Carbon Tetrachloride	Carbon Tet
75-27-4	Bromodichloromethane	BromodichloroMe
78-87-5	1,2-Dichloropropane	1,2-DCPA
10061-02-6	Trans-1,3-Dichloropropene	Trans-1,3-DCPE
79-01-6	Trichloroethene	TCE
124-48-1	Dibromochloromethane	DibromochloroMe
79-00-5	1,1,2-Trichloroethane	1,1,2-TCA
10061-01-5	Cis-1,3-Dichloropropene	Cis-1,3-DCPE
110-75-8	2-Chloroethylvinylether	Chloroethylvinl
75-25-2	Bromoform	Bromoform
127-18-4	Tetrachloroethene	PCE
79-34-5	1,1,2,2-Tetrachloroethane	PCA
108-90-7	Chlorobenzene	Chlorobenzene
95-50-1	1,2-Dichlorobenzene	1,2-DCB
541-73-1	1,3-Dichlorobenzene	1,3-DCB
106-46-7	1,4-Dichlorobenzene	1,4-DCB
352-33-0	p-Chlorofluorobenzene	Chlorofluoroben

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302188-01
Sample ID	: LF-30	Analyst	: <i>[initials]</i>
Matrix	: WATER	Supervisor	: <i>[initials]</i>
Date Sampled	: 2/12/93	Dilution Factor	: 1.0
Date Analyzed	: 2/23/93	Conc. Units	: ug/L
Instrument ID	: HP15		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	2.9	
156-59-2	Cis-1,2-DCE	.50	.93	
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	.76	
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	.69	
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	:	1649.02	Anametrix ID	:	9302188-02
Sample ID	:	LF-130	Analyst	:	<i>M</i>
Matrix	:	WATER	Supervisor	:	<i>CJ</i>
Date Sampled	:	2/12/93	Dilution Factor	:	1.0
Date Analyzed	:	2/23/93	Conc. Units	:	ug/L
Instrument ID	:	HP15			

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	2.9	
156-59-2	Cis-1,2-DCE	.50	.89	
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	.69	
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	.71	
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
0061-01-5	Cis-1,3-DCPE	.50	ND	U
0061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	: 1649.02	Anametrix ID	: 9302188-03
Sample ID	: LF-20	Analyst	: <i>mh</i>
Matrix	: WATER	Supervisor	: <i>CP</i>
Date Sampled	: 2/11/93	Dilution Factor	: 1.0
Date Analyzed	: 2/23/93	Conc. Units	: ug/L
Instrument ID	: HP15		

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02 Anametrix ID : 9302188-04
 Sample ID : LF-21 Analyst : *mf*
 Matrix : WATER Supervisor : *CJ*
 Date Sampled : 2/11/93 Dilution Factor : 1.0
 Date Analyzed : 2/23/93 Conc. Units : ug/L
 Instrument ID : HP15

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID	:	1649.0	Anametrix ID	:	15B0223H01
Sample ID	:	BLK223	Analyst	:	<i>Mf</i>
Matrix	:	WATER	Supervisor	:	<i>CP</i>
Date Sampled	:	0/ 0/ 0	Dilution Factor	:	1.0
Date Analyzed	:	2/23/93	Conc. Units	:	ug/L
Instrument ID	:	HP15			

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
75-71-8	Freon 12	1.0	ND	U
74-87-3	Chloromethane	1.0	ND	U
75-01-4	Vinyl Chloride	.50	ND	U
74-83-9	Bromomethane	.50	ND	U
75-00-3	Chloroethane	.50	ND	U
75-69-4	Freon 11	.50	ND	U
76-13-1	Freon 113	.50	ND	U
75-35-4	1,1-DCE	.50	ND	U
75-09-2	Methylene Chlor	1.0	ND	U
156-60-5	Trans-1,2-DCE	.50	ND	U
75-34-3	1,1-DCA	.50	ND	U
156-59-2	Cis-1,2-DCE	.50	ND	U
67-66-3	Chloroform	.50	ND	U
71-55-6	1,1,1-TCA	.50	ND	U
56-23-5	Carbon Tet	.50	ND	U
107-06-2	1,2-DCA	.50	ND	U
79-01-6	Trichloroethene	.50	ND	U
78-87-5	1,2-DCPA	.50	ND	U
75-27-4	Bromodichlorome	.50	ND	U
110-75-8	Chloroethylvinl	1.0	ND	U
10061-01-5	Cis-1,3-DCPE	.50	ND	U
10061-02-6	Trans-1,3-DCPE	.50	ND	U
79-00-5	1,1,2-TCA	.50	ND	U
127-18-4	PCE	.50	ND	U
124-48-1	Dibromochlorome	.50	ND	U
108-90-7	Chlorobenzene	.50	ND	U
75-25-2	Bromoform	.50	ND	U
79-34-5	1,1,2,2-PCA	.50	ND	U
541-73-1	1,3-DCB	1.0	ND	U
106-46-7	1,4-DCB	1.0	ND	U
95-50-1	1,2-DCB	1.0	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8010
ANAMETRIX, INC. (408) 432-8192

Project ID : 1649.02
Matrix : LIQUID

Anametrix ID : 9302188
Analyst : CNP
Supervisor : CP

	SAMPLE ID	SU1	SU2	SU3
1	BLK223	104		
2	LF-30	104		
3	LF-130	103		
4	LF-20	101		
5	LF-21	92		
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
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17				
18				
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25				
26				
27				
28				
29				
30				

QC LIMITS

SU1 = CHLOROFLUOROBEN (51-136)

* Values outside of Anametrix QC limits

LABORATORY CONTROL SAMPLE
 EPA METHOD 601/8010
 ANAMETRIX, INC. (408) 432-8192

Project/Case	:	LABORATORY CONTROL SAMPLE	Anametrix I.D.	:	W0022393
Matrix	:	WATER	Analyst	:	<i>Chf</i>
SDG/Batch	:	N/A	Supervisor	:	<i>CPT</i>
Date analyzed	:	02/23/93	Instrument I.D.	:	HP15

COMPOUND	SPIKE AMOUNT (ug/L)	AMOUNT RECOVERED (ug/L)	PERCENT RECOVERY	%RECOVERY LIMITS
FREON 113	10	9.7	97%	34 - 128
1,1-DICHLOROETHENE	10	9.6	96%	63 - 133
trans-1,2-DICHLOROETHENE	10	10.8	108%	55 - 145
1,1-DICHLOROETHANE	10	10.2	102%	49 - 121
cis-1,2-DICHLOROETHENE	10	13.6	136%	66 - 168
1,1,1-TRICHLOROETHANE	10	11.2	112%	72 - 143
TRICHLOROETHENE	10	9.8	98%	63 - 147
TETRACHLOROETHENE	10	9.7	97%	60 - 133
CHLOROBENZENE	10	10.7	107%	70 - 148
1,3-DICHLOROBENZENE	10	10.1	101%	49 - 139
1,4-DICHLOROBENZENE	10	10.2	102%	70 - 133
1,2-DICHLOROBENZENE	10	10.2	102%	69 - 140

* Limits based on data generated by Anametrix, Inc., August, 1992.

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9302152
Date Received : 02/11/93
Project ID : 1649.02
Purchase Order: N/A
Department : GC
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9302152- 1	LF-19	WATER	02/09/93	TPHd
9302152-10	LF-4	WATER	02/09/93	TPHd
9302152-14	LF-5	WATER	02/10/93	TPHd
9302152-15	LF-3	WATER	02/10/93	TPHd

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

MS. JENIFER BEATTY
LEVINE-FRICKE
1900 POWELL STREET 12TH FLOOR
EMERYVILLE, CA 94608

Workorder # : 9302152
Date Received : 02/11/93
Project ID : 1649.02
Purchase Order: N/A
Department : GC
Sub-Department: TPH

QA/QC SUMMARY :

- No QA/QC problems encountered for these samples.

Cheryl Balmer
Department Supervisor

4/12/93
Date

Charles Burch
Chemist

4.12.93
Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS C12-C22
(DIESEL)
ANAMETRIX, INC. (408) 432-8192

Anametrix W.O.: 9302152
Matrix : WATER
Date Sampled : 02/09 & 10/93
Date Extracted: 02/16/93

Project Number : 1649.02
Date Released : 02/24/93
Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9302152-01	LF-19	02/21/93	50	94
9302152-10	LF-4	02/21/93	50	ND
9302152-14	LF-5	02/21/93	50	ND
9302152-15	LF-3	02/21/93	50	ND
DWBL021693	METHOD BLANK	02/21/93	50	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as C12-C22 is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Charles Burch 4.12.93
Analyst Date

Charles Burch 4.12.93
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS AS C22-C36
 (MOTOR OIL)
 ANAMETRIX, INC. (408) 432-8192

Anametrix W.O. : 9302152

Matrix : WATER

Date Sampled : 02/09 & 10/93

Date Extracted: 02/16/93

Project Number : 1649.02

Date Released : 02/24/93

Instrument I.D.: HP9

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9302152-01	LF-19	02/21/93	50	380
9302152-10	LF-4	02/21/93	50	ND
9302152-14	LF-5	02/21/93	50	ND
9302152-15	LF-3	02/21/93	50	ND
DWBL021693	METHOD BLANK	02/21/93	50	ND

Note : Reporting limit is obtained by multiplying the dilution factor times 50 ug/L.

ND - Not detected at or above the practical quantitation limit for the method.

TPHd - Total Petroleum Hydrocarbons as C22-C36 is determined by GCFID following sample extraction by EPA Method 3510.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

Charlene Burch 4.12.93
 Analyst Date

Cheryl Baumer 4/12/93
 Supervisor Date

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 3510 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Extracted: 02/16/93
Date Analyzed : 02/21/93

Anametrix I.D. : LCSW0216
Analyst : CMB
Supervisor : CB
Date Released : 02/24/93
Instrument I.D.: HP9

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	970	78%	970	78%	0%	47-130

*Quality control established by Anametrix, Inc.

BTEX LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 5030 WITH GC/PID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE Anametrix I.D.: LCSW0217
Matrix : WATER Analyst : IS
Date Sampled : N/A Supervisor : us
Date Analyzed : 02/17/93 Date Released : 02/25/93
Instrument ID : HP21

COMPOUND	SPIKE AMT. (ug/L)	LCS (ug/L)	REC LCS	%REC LIMITS
Benzene	10.0	10.0	100%	52-133
Toluene	10.0	10.5	105%	57-136
Ethylbenzene	10.0	10.9	109%	56-139
TOTAL Xylenes	10.0	11.5	115%	56-141
P-BFB			99%	61-139

* Limits established by Anametrix, Inc.

TOTAL EXTRACTABLE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT
EPA METHOD 3510 WITH GC/FID
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE
Matrix : WATER
Date Sampled : N/A
Date Extracted: 02/16/93
Date Analyzed : 02/21/93

Anametrix I.D. : LCSW0216
Analyst : JS
Supervisor : CB
Date Released : 02/24/93
Instrument I.D.: HP9

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	970	78%	970	78%	0%	47-130

*Quality control established by Anametrix, Inc.