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Levine-Fricke-Recon
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

**Quarterly Monitoring Report for
July 1 through September 30, 1996
East Baybridge Center
Emeryville and Oakland, California
October 31, 1996
LF 1649.96-002**

Prepared for
Catellus Development Corporation
201 Mission Street
San Francisco, California 94105

 **Levine-Fricke-Recon**
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS



Printed on recycled paper

October 31, 1996

LF 1649.96-002

Ms. Susan Hugo
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Second Floor
Alameda, California 94502

Subject: Quarterly Monitoring Report for July 1 through September 30, 1996, East Baybridge Center, Emeryville and Oakland, California

Dear Ms. Hugo:

The enclosed report presents the results of quarterly groundwater monitoring by Levine·Fricke·Recon Inc. (LFR; formerly Levine·Fricke and Recon Environmental) on behalf of Catellus Development Corporation for July 1 through September 30, 1996, at the Yerba Buena/East Baybridge Center in Emeryville and Oakland, California.

Monitoring was conducted in accordance with Levine·Fricke, Inc.'s "Groundwater Monitoring Plan for the East Baybridge Center, Emeryville and Oakland, California," dated December 19, 1994 and submitted to the Alameda County Health Care Services Agency.

If you have any questions or comments concerning this report, please call me.

Sincerely,



Ron Goloubow
Senior Project Geologist

Enclosure

cc: James Adams, Catellus Development
Sumadhu Arigala, Regional Water Quality Control Board

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CERTIFICATION

All hydrogeologic and geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by a Levine·Fricke·Recon California Registered Geologist.



10/31/96

Date

Donald T. Bradshaw
Principal Hydrogeologist
California Registered Geologist (5300)

1.0 INTRODUCTION

This report presents the results of groundwater monitoring conducted by Levine·Fricke·Recon Inc. (LFR; formerly Levine·Fricke, Inc. and Recon Environmental) during the quarterly period from July 1 through September 30, 1996, at the East Baybridge Center in Emeryville and Oakland, California ("the Site"; Figure 1). The Site covers approximately 51 acres and is partially developed and undergoing further development. To aid in organizing environmental investigation, remediation, and monitoring activities, the Site has been divided into Areas A, B, and C (Figure 2).

LFR has completed monitoring activities and is submitting this report on behalf of the Catellus Development Corporation ("Catellus") in accordance with the December 19, 1994 groundwater monitoring plan (Levine·Fricke 1994a) that was submitted to the Alameda County Health Care Services Agency (ACHA). Quarterly monitoring activities included measuring water levels in accessible wells and collecting groundwater samples from selected wells. Groundwater monitoring is being conducted to monitor volatile organic compound (VOC) concentrations in groundwater and assess the effectiveness of a groundwater extraction system installed at the Site during the summer of 1994. In addition, soils affected with total petroleum hydrocarbons (TPH) have been contained on site beneath building pads. Monitoring data are being collected to assess possible effects on groundwater quality beneath the Site from the contained soils.

2.0 BACKGROUND

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.

In preparation for site development, Levine·Fricke initiated environmental investigations at the Site on behalf of Catellus in September 1989. Site investigation and remediation activities continued for approximately five years. Results of the Phase I and Phase II Investigations indicated that VOCs were present in shallow groundwater beneath the Site. During site development activities, underground storage tanks (USTs) were excavated at several locations across the Site. Groundwater monitoring wells were installed in the vicinity of those former UST locations (Figure 2) to monitor groundwater quality in accordance with agency guidelines.

2.1 Areas A and B

As illustrated on Figure 2, Area A and a portion of Area B have been developed for commercial use, including a large retail store, several smaller retail stores, and two large parking areas. Areas north of the parking lots and west of Emery Street have not yet been developed.

A groundwater monitoring program was implemented at the Site in January 1992 to monitor VOC concentrations in groundwater in Area A. To reduce the potential for off-site migration of shallow VOC-affected groundwater, a groundwater extraction and treatment system was installed in Area A (Figure 2). This extraction system began operation in August 1994. Details regarding the operation of the extraction and treatment system are presented in an LFR quarterly self-monitoring report, which is submitted to the East Bay Municipal Utilities District on a quarterly basis.

Approximately 25,000 cubic yards of petroleum hydrocarbon-affected soil were excavated from Area B and contained beneath building pads in Areas A and B in accordance with Levine·Fricke's Containment Plan (Levine·Fricke 1992a). Details regarding the removal of soil from this area of the Site were presented in Levine·Fricke's Soil Remediation Activities Report (Levine·Fricke 1992b). To assess groundwater quality in Areas A and B, five monitoring wells were installed and sampled on a quarterly basis for over a year. In response to a request from the Regional Water Quality Control Board (RWQCB), Levine·Fricke prepared a Soils Management Plan for the contained soils (Levine·Fricke 1994b). The plan outlined periodic groundwater monitoring to evaluate the possible effects on groundwater from soils contained at the Site.

2.2 Area C

Area C (the area west of Hollis Street) is currently being developed for commercial use, including construction of two retail stores, one smaller retail store, and large parking areas.

VOCs have been detected in groundwater samples collected in Area C of the Site. Based on the distribution of VOCs detected, it appears that the VOCs have migrated from an off-site source. The RWQCB concurs with this conclusion, according to the RWQCB's letter to Catellus and others dated May 11, 1994.

Several USTs were identified at various locations within Area C during environmental investigations and site grading activities. Groundwater monitoring wells were installed following the excavation of some of these USTs. These groundwater monitoring wells (LF-31 and LF-32, installed at the former Bashland and Bay Area Warehouse properties, respectively) were monitored on a quarterly basis until they were destroyed during site development activities in June 1994, along with all other wells located west of Hollis Street (except well LF-13).

Replacement wells for those wells (MW-31R and MW-32R) were installed during this quarterly monitoring period. In addition, well MW-12R was installed downgradient from (west of) USTs formerly located along Beach Street, to monitor groundwater quality in that area. Wells MW-10R and MW-34R were installed, in locations presented on Figure 2, to monitor possible on-site migration of VOCs from a known source located north of the property. Details regarding the installation of these wells will be presented in a report to be prepared during the first quarter of 1996.

3.0 GROUNDWATER ELEVATIONS AND FLOW DIRECTION

On September 3, 1996, depth to water was measured in all accessible on- and off-site wells to the nearest 0.01 foot using an electric water-level sounding probe. Table 1 summarizes the depth-to-water and groundwater elevation data collected. As shown, depth to groundwater in shallow wells (less than 25 feet deep) ranged from 6.50 feet below ground surface (bgs) in well MW-10 to 19.12 feet bgs in well MW-9.

3.1 Areas A and B

Figure 3 is a groundwater elevation contour map for water levels measured on September 3, 1996. As illustrated, the direction of shallow groundwater flow beneath Areas A and B of the Site is toward the west-southwest, in the direction of the groundwater extraction wells (EX-3 and EX-4) and interceptor trench. The hydraulic gradient across this portion of the Site is 0.016 foot per foot (ft/ft), as measured between wells MW-2 and MW-9. The direction and gradient are consistent with the groundwater flow direction previously reported at the Site (LFR 1996).

The influence of pumping from the shallow extraction wells and trench on the groundwater flow pattern is illustrated in Figure 3 by depressions in the groundwater surface and deflection of contour lines in the vicinity of the extraction wells and trench.

3.2 Area C

As illustrated on Figure 3, the direction of shallow groundwater flow beneath Area C of the Site is toward the west. The hydraulic gradient across this portion of the Site is 0.008 foot per foot (ft/ft), as measured between wells MW-31R and MW-12R. The direction and gradient are consistent with the groundwater flow direction previously reported at the Site (LFR 1996).

4.0 GROUNDWATER SAMPLING AND ANALYSIS

Groundwater samples were collected on September 3, 4, and 5, 1996 for chemical analysis. A total of 17 samples were collected from 16 shallow groundwater monitoring wells (less than 25 feet bgs; MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-7,

MW-8, MW-9, MW-31R, MW-32R, LF-22, and LF-23), two shallow extraction wells (less than 25 feet bgs; EX-3 and EX-4), and the extraction trench (EXTR). A total of four samples were collected from three intermediate-depth wells (30 to 45 feet bgs; MW-6D, MW-7D, and MW-9D) and one deeper well (50 to 65 feet bgs; MW-7Z).

Before groundwater samples were collected, three to four well volumes of water were purged from each well in accordance with field procedures for quarterly groundwater sampling described in Appendix A. During purging, indicator parameters such as pH, temperature, and specific conductance were recorded on water-quality sampling sheets, copies of which are included in Appendix B.

After collection, samples were submitted to American Environmental Network, Inc., a state-certified laboratory, under strict chain-of-custody procedures.

All groundwater samples collected from wells MW-3, MW-5, MW-6, MW-7, MW-7D, MW-7Z, MW-8, MW-9, MW-9D, LF-22, LF-23, EX-3, EX-4, and the extraction trench were analyzed for VOCs using EPA Method 8010. In addition, MW-1, MW-3, W-4, MW-5, MW-6, MW-7, MW-31R, MW32R, EX-3, EX-4, and the extraction trench were analyzed for TPH as diesel (TPHd; carbon chain length C₁₂ to C₂₂), and TPH as oil (TPHo; carbon chain length C₂₂ to C₃₆) in accordance with the Soils Management Plan (Levine·Fricke 1994b). The sample from MW-2 was analyzed for TPHd. Samples from wells MW-1 and MW-2 also were analyzed for TPH as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) to monitor whether TPHg-affected groundwater is migrating onto the Site. Results of chemical analyses are discussed in Section 5.0.

For QA/QC purposes, a duplicate sample was collected from well LF-9 and analyzed for VOCs. Results of the duplicate sample were similar to results of the primary sample.

5.0 GROUNDWATER QUALITY

Table 2 summarizes the analytical results for groundwater samples collected. Appendix C presents laboratory data sheets and chain-of-custody forms for the samples analyzed.

5.1 Volatile Organic Compounds

In general, the concentration of VOCs detected in samples collected during this monitoring period are within the same order of magnitude as samples previously collected at the Site (Table 2). No VOCs were detected at concentrations above method detection limits in groundwater samples collected from shallow wells LF-22, MW-3 and MW-8, or from deeper wells MW-6D, MW-9D, and MW-7Z.

1,1-Dichloroethene (1,1-DCE) was detected in samples collected from four shallow wells at concentrations ranging from 0.005 parts per million (ppm) (well MW-5) to 0.330 ppm (well MW-6). 1,1-DCE was detected at a concentration of 0.001 ppm in the sample from one deeper well (MMW-7D), at concentrations of 0.120 ppm and 0.150 ppm in shallow extraction wells EX-3 and EX-4, respectively, and at 0.063 ppm in the sample from the extraction trench.

Trichloroethene (TCE) was detected in the sample collected from shallow monitoring well LF-23 at a concentration of 0.0014 ppm. TCE was not detected in the other samples collected from shallow or deeper wells sampled during the current monitoring event.

Tetrachloroethene (PCE) was detected in samples collected from shallow monitoring well MW-5 at a concentration of 0.001 ppm and the off-site well LF-23 at 0.0032 ppm. Higher concentrations of PCE were detected in the samples collected from shallow extraction wells EX-3 (0.029 ppm) and EX-4 (0.009 ppm). The sample from the extraction trench contained PCE at a concentration of 0.0031. PCE was not detected in the samples collected from remaining shallow or deeper wells sampled during the current monitoring event.

1,1,1-Trichloroethane (1,1,1-TCA) was detected at concentrations ranging from 0.008 ppm (MW-9, EX-3, EX-4, and EXTR) to 0.033 ppm (MW-6) in samples collected from six shallow wells (MW-6, MW-7, MW-9, EX-3, EX-4, and the extraction trench). 1,1,1-TCA was not detected in deeper wells.

5.2 Total Petroleum Hydrocarbons

TPHd was detected in samples collected from 12 wells analyzed this period at concentrations ranging from 0.54 ppm (MW-31R) to 0.11 ppm (MW-3 and MW-4).

TPHo was not present above the detection limit (0.200 ppm) in the samples analyzed during this monitoring period.

TPHg was detected at 0.54 ppm in samples collected from well MW-2.

BTEX was not present above method detection limits (0.0005 ppm) in samples collected from well MW-1. The sample collected from well MW-2 contained benzene (0.0024 ppm), ethylbenzene (0.018 ppm), and total xylenes (0.045 ppm).

5.2.1 Former Bashland Company Property

Well LF-31 was replaced by well LF-31R in November 1995. Based on survey information, the replacement well was installed within 20 feet of its original location. Samples are collected from this well to monitor groundwater quality in the vicinity of a UST formerly located at the former Bashland property. Analytical results for the

sample collected from this well were similar to historical analytical results samples (see Table 3). Following the next quarterly monitoring conducted for this well, the data will be evaluated and a request for case closure may be requested.

5.2.2 Former Bay Area Warehouse Property

Well LF-32 was replaced by well LF-32R in November 1995. Based on survey information, the replacement well was installed within 20 feet of its original location. The samples are collected from this well to monitor groundwater quality in the vicinity of a UST formerly located at the former Bay Area Warehouse property. Analytical results for the sample collected from this well were similar to historical analytical results samples (see Table 4). Following the next quarterly monitoring for this well, the data will be evaluated and a request for case closure may be requested.

6.0 SUMMARY

Groundwater gradient and flow direction measured in September 1996 are consistent with the groundwater flow direction previously reported for the Site (LFR 1996). Additionally, the direction of shallow groundwater flow beneath the western portion of the Site is being influenced by the groundwater extraction wells and extraction trench at the Site, as shown in Figure 3.

Analytical results for groundwater samples collected in September 1996 are similar to results previously reported for the Site (Table 2). Results indicate that the plume of VOC-affected groundwater likely extends to the north between wells MW-3 and MW-6 and to the south between wells MW-7 and MW-8. The plume extends approximately 800 feet southwest (downgradient) from well MW-6 toward the extraction wells and trench, and is approximately 300 feet wide. Analytical results for samples from well MW-2 indicate that TPHg-affected groundwater is migrating onto the property from the east.

Based on groundwater elevations in area wells, the extraction system is effectively capturing VOC-affected groundwater and inhibiting off-site migration of affected groundwater.

7.0 ACTIVITIES PROPOSED FROM OCTOBER TO DECEMBER 1996

Groundwater monitoring activities planned for October through December 1996 include water-level measurements and quarterly groundwater sampling. The sampling schedule is summarized in Table 5. It is anticipated that a report summarizing those activities will be submitted to the ACHA by January 31, 1997.

REFERENCES

- Levine·Fricke, Inc. 1992a. Containment Plan for Total Petroleum Hydrocarbon-Affected Soils, Yerba Buena Project Site, Emeryville and Oakland, California. March 10.
- _____. 1992b. Soil Remediation Activities Report, Former Ransome Property, Yerba Buena Project Site, Emeryville, California. March 21.
- _____. 1994a. Groundwater Monitoring Plan, East Baybridge Center, Emeryville and Oakland, California. March 19.
- _____. 1994b. Soils Management Plan for Petroleum Hydrocarbon-Affected Soils, Yerba Buena/East Baybridge Center, Emeryville and Oakland, California. November 30.
- Levine·Fricke·Recon 1996. Quarterly Monitoring Report for April 1 through June 30, 1996, East Baybridge Center, Emeryville and Oakland, California. July 31.

Table 1
Well Construction and Groundwater Elevation Data
East Baybridge Center
Emeryville and Oakland, California

Well Number	Well Elevation (1)	Well Depth (2)	Screened Interval (2)	Date Measured	Depth to Water	Groundwater Elevation (3)
Shallow Wells						
MW-1	27.47	30	15-30	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	14.88 14.61 14.73 14.55 14.62 13.38 14.27 14.69 14.70	12.59 12.86 12.74 12.92 12.85 14.09 13.20 12.78 12.77
MW-2	37.23	18	8-18	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	8.00 6.84 6.84 7.08 9.03 6.95 6.62 7.92 8.10	29.23 30.39 30.39 30.15 28.20 30.28 30.61 29.31 29.13
MW-3	32.05	25	14-25	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	9.88 9.96 9.24 9.82 11.75 9.65 8.80 10.66 10.51	22.17 22.09 22.81 22.23 20.30 22.40 23.25 21.39 21.54
MW-4	24.28	25	12-25	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	17.01 16.15 16.38 16.27 16.32 14.52 13.29 15.08 14.70	7.27 8.13 7.90 8.01 7.96 9.76 10.99 9.20 9.58
MW-5	22.19	21.5	11.5-21.5	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	17.15 15.94 16.45 16.08 15.79 13.81 12.69 14.49 14.11	5.04 6.25 5.74 6.11 6.40 8.38 9.50 7.70 8.08
MW-6	28.54	21.5	11.5-21.5	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	12.58 12.75 12.17 12.75 14.22 13.17 11.37 12.95 12.67	15.96 15.79 16.37 15.79 14.32 15.37 17.17 15.59 15.87

Table 1
Well Construction and Groundwater Elevation Data
East Baybridge Center
Emeryville and Oakland, California

Well Number	Well Elevation (1)	Well Depth (2)	Screened Interval (2)	Date Measured	Depth to Water	Groundwater Elevation (3)
MW-7	26.29	23.5	13.5-23.5	12-Sep-94	11.60	14.69
				30-Nov-94	11.53	14.76
				16-Feb-95	10.82	15.47
				08-May-95	11.84	14.45
				30-Aug-95	12.81	13.48
				19-Dec-95	11.77	14.52
				26-Feb-96	10.04	16.25
				29-Apr-96	11.55	14.74
				03-Sep-96	11.32	14.97
MW-8	24.40	20.5	10.5-20.5	12-Sep-94	9.96	14.44
				30-Nov-94	9.96	14.44
				16-Feb-95	9.68	14.72
				08-May-95	10.06	14.34
				30-Aug-95	11.10	13.30
				19-Dec-95	10.22	14.18
				26-Feb-96	8.78	15.62
				29-Apr-96	10.05	14.35
				03-Sep-96	9.67	14.73
MW-9	24.17	26	14-26	12-Sep-94	19.70	4.47
				30-Nov-94	17.65	6.52
				16-Feb-95	18.85	5.32
				08-May-95	19.47	4.70
				30-Aug-95	19.65	4.52
				19-Dec-95	18.43	5.74
				26-Feb-96	16.46	7.71
				29-Apr-96	18.91	5.26
				03-Sep-96	19.12	5.05
MW-10	13.21			19-Dec-95	6.31	6.90
				26-Feb-96	6.09	7.12
				29-Apr-96	6.73	6.48
				03-Sep-96	6.50	6.71
MW-12	10.42			19-Dec-95	10.69	-0.27
				26-Feb-96	9.66	0.76
				29-Apr-96	10.98	-0.56
				03-Sep-96	11.05	-0.63
MW-31	19.14			19-Dec-95	6.92	12.22
				26-Feb-96	6.99	12.15
				29-Apr-96	7.54	11.60
				03-Sep-96	7.55	11.59
MW-32	15.52			19-Dec-95	8.92	6.60
				26-Feb-96	8.48	7.04
				29-Apr-96	9.46	6.06
				03-Sep-96	9.20	6.32
MW-34	11.97			19-Dec-95	11.20	0.77
				26-Feb-96	12.12	-0.15
				29-Apr-96	12.47	-0.50
				03-Sep-96	12.21	-0.24
LF-13	9.19			19-Dec-95	2.86	6.33
				26-Feb-96	2.55	6.64
				29-Apr-96	6.13	3.06
				03-Sep-96	6.58	2.61

Table 1
Well Construction and Groundwater Elevation Data
East Baybridge Center
Emeryville and Oakland, California

Well Number	Well Elevation (1)	Well Depth (2)	Screened Interval (2)	Date Measured	Depth to Water	Groundwater Elevation (3)
LF-22	17.99	20	10-20	12-Sep-94	11.96	6.03
				30-Nov-94	9.69	8.30
				16-Feb-95	10.45	7.54
				08-May-95	11.40	6.59
				30-Aug-95	13.03	4.96
				19-Dec-95	9.42	8.57
				26-Feb-96	8.84	9.15
				29-Apr-96	10.29	7.70
				03-Sep-96	11.20	6.79
LF-23	17.99	20	10-20	12-Sep-94	12.24	5.75
				30-Nov-94	10.05	7.94
				16-Feb-95	11.10	6.89
				08-May-95	11.88	6.11
				30-Aug-95	13.38	4.61
				19-Dec-95	10.01	7.98
				26-Feb-96	8.97	9.02
				29-Apr-96	10.84	7.15
				03-Sep-96	11.35	6.64
Extraction Wells						
EX-1 (LF-1)	23.51	NA	NA	12-Sep-94	24.83	-1.32
				30-Nov-94	19.16	4.35
				08-May-95	23.45	0.06
				30-Aug-95	23.45	0.06
				19-Dec-95	23.50	0.01
				26-Feb-96	18.38	5.13
				29-Apr-96	NM	NM
				03-Sep-96	22.15	1.36
EX-2 (LF-2)	20.03	NA	NA	12-Sep-94	20.11	-0.08
				30-Nov-94	15.68	4.35
				08-May-95	20.70	-0.67
				30-Aug-95	20.68	-0.65
				19-Dec-95	20.40	-0.37
				26-Feb-96	14.91	5.12
				29-Apr-96	20.47	-0.44
				03-Sep-96	18.80	1.23
EX-3	20.96	24	7.5-24	12-Sep-94	22.33	-1.37
				30-Nov-94	15.50	5.46
				16-Feb-95	17.80	3.16
				08-May-95	19.80	1.16
				30-Aug-95	19.86	1.10
				19-Dec-95	17.00	3.96
				26-Feb-96	15.10	5.86
				29-Apr-96	16.21	4.75
EX-4	24.40	25	8-25	12-Sep-94	22.61	1.79
				30-Nov-94	20.70	3.70
				16-Feb-95	20.55	3.85
				08-May-95	20.85	3.55
				30-Aug-95	20.88	3.52
				19-Dec-95	19.41	4.99
				26-Feb-96	20.40	4.00
				29-Apr-96	19.75	4.65
				03-Sep-96	20.65	3.75

Table 1
Well Construction and Groundwater Elevation Data
East Baybridge Center
Emeryville and Oakland, California

Well Number	Well Elevation (1)	Well Depth (2)	Screened Interval (2)	Date Measured	Depth to Water	Groundwater Elevation (3)
Deeper Wells						
MW-6D	28.48	45	32-40	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	11.09 11.46 10.67 11.58 12.93 13.14 10.14 11.57 11.48	17.39 17.02 17.81 16.90 15.55 15.34 18.34 16.91 17.00
MW-7D	26.27	40	27-40	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	11.32 11.30 11.01 11.35 12.65 11.61 9.84 11.38 11.18	14.95 14.97 15.26 14.92 13.62 14.66 16.43 14.89 15.09
MW-9D	24.17	45	32-45	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	18.38 16.35 16.43 16.96 18.28 16.50 14.68 16.85 17.61	5.79 7.82 7.74 7.21 5.89 7.67 9.49 7.32 6.56
Deep Well						
MW-7Z	25.96	65	50-65	12-Sep-94 30-Nov-94 16-Feb-95 08-May-95 30-Aug-95 19-Dec-95 26-Feb-96 29-Apr-96 03-Sep-96	11.78 10.76 9.16 9.85 11.85 10.89 8.62 9.91 11.01	14.18 15.20 16.80 16.11 14.11 15.07 17.34 16.05 14.95

Data entered by Deb, Proofed by JCK

Notes

- (1) Well elevation is in feet mean sea level as surveyed by Nolte and Associates in August 1994.
- (2) Well depth and screened interval are in feet below ground surface as measured at the time of well installation.
- (3) Water level elevation is in feet mean sea level.

NA Not applicable, well associated with extraction trench.
 NM Water level not measured.

Table 2
Quarterly Summary of Groundwater Quality Data
East Baybridge Center
Emeryville and Oakland, California
(concentrations expressed in parts per million [ppm])

Well ID	Notes	Date Sampled	Lab	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,1,1-TCA	PCE	1,1-DCE	1,1-DCA	1,2-DCA
Shallow Wells (20 to 25 feet below grade)																
MW-1		13-Sep-94	AEN	<0.005	0.30	<0.5	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA	NA	NA	NA	NA
		30-Nov-94	AEN	NA	0.10	<0.2	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		17-Feb-95	AEN	<0.05	0.08	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		09-May-95	AEN	<0.05	0.20	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		31-Aug-95	AEN	<0.05	0.30	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		27-Dec-95	AEN	<0.05	0.10	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		27-Feb-96	AEN	<0.05	0.18	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		01-May-96	AEN	<0.05	0.10	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		04-Sep-96	AEN	<0.05	0.25	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
MW-2		01-Dec-94	AEN	7.10	NA	NA	0.065	<0.01	0.13	0.47	NA	NA	NA	NA	NA	NA
		17-Feb-95	AEN	3.50	0.30	<0.2	0.045	0.005	0.11	0.35	NA	NA	NA	NA	NA	NA
		09-May-95	AEN	3.50	0.20	<0.2	0.025	0.009	0.085	0.25	NA	NA	NA	NA	NA	NA
		31-Aug-95	AEN	0.90	0.20	NA	0.011	<0.0005	0.032	0.072	NA	NA	NA	NA	NA	NA
		20-Dec-95	AEN	2.60	<0.05	<0.2	0.016	0.002	0.079	0.24	NA	NA	NA	NA	NA	NA
		27-Feb-96	AEN	4.10	0.20	NA	0.076	0.0095	0.21	0.62	NA	NA	NA	NA	NA	NA
		01-May-96	AEN	2.40	0.23	NA	0.039	0.0047	0.098	0.26	NA	NA	NA	NA	NA	NA
		04-Sep-96	AEN	0.54	0.22	NA	0.0024	<0.0005	0.018	0.045	NA	NA	NA	NA	NA	NA
MW-3		12-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		01-Dec-94	AEN	NA	0.07	<0.2	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		08-May-95	AEN	NA	0.07	<0.2	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		20-Dec-95	AEN	NA	<0.05	<0.2	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		30-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		04-Sep-96	AEN	NA	0.11	<0.2	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-4		01-Dec-94	AEN	NA	0.09	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		08-May-95	AEN	NA	0.10	<0.2	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	0.004	<0.0005
		20-Dec-95	AEN	NA	0.09	<0.2	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	0.001	<0.0005
		30-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	0.0022	<0.0005
		04-Sep-96	AEN	NA	0.14	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Table 2
Quarterly Summary of Groundwater Quality Data
East Baybridge Center
Emeryville and Oakland, California
(concentrations expressed in parts per million [ppm])

Well ID	Notes	Date Sampled	Lab	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,1,1-TCA	PCE	1,1-DCE	1,1-DCA	1,2-DCA
MW-5		13-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.001	0.0007	0.003	0.002	<0.0005
		01-Dec-94	AEN	NA	0.05	<0.2	NA	NA	NA	NA	<0.0005	0.0007	0.0005	0.004	0.003	<0.0005
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.001	0.002	0.008	0.003	<0.0005
		08-May-95	AEN	NA	0.09	<0.2	NA	NA	NA	NA	0.0005	0.002	0.002	0.016	0.005	<0.0005
		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	0.0007	0.002	0.002	0.013	0.004	<0.0005
		20-Dec-95	AEN	NA	0.1	<0.2	NA	NA	NA	NA	<0.0005	0.001	0.0008	0.009	0.002	<0.0005
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.0008	0.0024	0.010	0.0029	<0.0005
		30-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	0.001	0.0051	0.0021	<0.0005
		04-Sep-96	AEN	NA	0.24	<0.2	NA	NA	NA	NA	<0.0005	<0.0005	0.0010	0.0051	0.0022	<0.0005
MW-6	(2)	13-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	0.0005	0.041	<0.0005	0.280	0.005	0.001
	(6)	01-Dec-94	AEN	NA	0.08	NA	NA	NA	NA	NA	0.0006	0.041	<0.0005	0.300	0.004	<0.0005
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.039	<0.003	0.280	0.003	<0.003
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.045	<0.003	0.290	0.004	<0.003
		09-May-95	AEN	NA	0.20	<0.2	NA	NA	NA	NA	<0.003	0.031	<0.003	0.260	0.003	<0.003
		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.032	<0.003	0.270	0.004	<0.003
		28-Dec-95	AEN	NA	0.1	<0.2	NA	NA	NA	NA	<0.003	0.040	<0.003	0.280	0.004	<0.003
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.005	0.031	<0.005	0.270	<0.005	<0.005
		01-May-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.026	<0.003	<0.200	0.003	<0.003
		04-Sep-96	AEN	NA	0.17	<0.2	NA	NA	NA	NA	<0.003	0.033	<0.003	0.330	0.005	<0.003
MW-7		12-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.017	<0.0005	0.160	0.003	0.0009
		30-Nov-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.016	<0.0005	0.170	0.003	<0.0005
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.011	<0.003	0.120	<0.003	<0.003
		09-May-95	AEN	NA	0.09	<0.2	NA	NA	NA	NA	<0.0005	0.015	<0.0005	0.180	0.004	<0.0005
		30-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.012	<0.003	0.140	0.003	<0.003
		20-Dec-95	AEN	NA	<0.05	<0.2	NA	NA	NA	NA	<0.003	0.011	<0.003	0.170	<0.003	<0.003
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.018	<0.003	0.210	0.0035	<0.003
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.017	<0.003	0.210	0.003	<0.003
		30-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.016	<0.003	0.220	0.003	<0.003
		03-Sep-96	AEN	NA	0.11	<0.2	NA	NA	NA	NA	<0.003	0.021	<0.003	0.290	0.004	<0.003
MW-8	(3)	13-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	0.0005	<0.0005
		02-Dec-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

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Well ID	Notes	Date Sampled	Lab	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,1,1-TCA	PCE	1,1-DCE	1,1-DCA	1,2-DCA
		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		29-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		04-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-9	duplicate	12-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.017	<0.0005	0.120	0.0005	0.006
		12-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.015	<0.0005	0.120	0.0005	0.009
	duplicate	30-Nov-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.016	<0.0005	0.150	0.0005	<0.0005
		30-Nov-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.016	<0.0005	0.160	0.0005	<0.0005
	duplicate	16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.014	<0.003	0.120	<0.003	<0.003
		08-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.013	<0.0005	0.110	0.005	<0.0005
	duplicate	31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.013	<0.003	0.130	0.004	<0.003
		20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.003	0.009	<0.003	0.092	<0.003	<0.003
	duplicate	27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.0099	<0.0005	0.087	0.0035	<0.0005
		03-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.0083	<0.0005	0.099	0.0030	<0.0005
		03 Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.0078	<0.0005	0.097	0.0026	<0.0005
MW-10R	(16)	20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	0.910	<0.005	0.007	<0.005	<0.005	<0.005
	(19)	29-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	0.650	<0.005	<0.005	<0.005	<0.005	<0.005
MW-12R	(12)	27-Dec-95	AEN	NA	0.2	<0.2	NA	NA	NA	NA	0.003	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	(20)	27-Feb-96	AEN	<0.05	0.36	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		30-Apr-96	AEN	<0.05	0.23	<0.2	<0.0005	<0.0005	<0.0005	<0.002	0.0025	<0.0005	<0.0005	<0.0005	0.0024	<0.0005
MW-31R	(13)	27-Dec-95	AEN	NA	0.3	<0.2	NA	NA	NA	NA	0.018	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	(21)	27-Feb-96	AEN	<0.05	0.37	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		30-Apr-96	AEN	NA	0.19	<0.2	NA	NA	NA	NA	0.015	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		05-Sep-96	AEN	NA	0.54	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-32R	(15)	22-Dec-95	AEN	NA	0.2	<0.2	NA	NA	NA	NA	0.058	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
	(22)	27-Feb-96	AEN	<0.05	0.26	<0.2	<0.0005	<0.0005	<0.0005	<0.002	NA	NA	NA	NA	NA	NA
		01-May-96	AEN	NA	0.17	<0.2	NA	NA	NA	NA	0.074	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		05-Sep-96	AEN	NA	0.34	<0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-34R		27-Dec-95	AEN	NA	0.3	<0.2	NA	NA	NA	NA	0.009	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

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Well ID	Notes	Date Sampled	Lab	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,1,1-TCA	PCE	1,1-DCE	1,1-DCA	1,2-DCA
	(23)	29-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	0.035	0.0011	<0.0005	<0.0005	<0.0005	<0.0005
LF-13		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	0.006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		28-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	0.006	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		30-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	0.0031	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
duplicate		30-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	0.0031	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
LF-22		12-Jul-91	ANA	NA	NA	NA	NA	NA	NA	NA	0.0007	0.012	0.0017	0.053	0.0063	0.0016
		07-Jan-92	ANA	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.009	0.0037	0.041	0.0054	0.0011
		16-Apr-92	ANA	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.0026	0.0018	0.015	0.0021	<0.0005
(1)		23-Jul-92	ANA	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.0034	0.0014	0.027	0.0052	<0.0005
		20-Oct-92	ANA	NA	NA	NA	NA	NA	NA	NA	0.0008	0.0013	0.0007	0.014	0.004	<0.0005
		25-May-93	ANA	NA	NA	NA	NA	NA	NA	NA	<0.0005	0.0008	0.0006	0.0061	0.0024	<0.0005
		13-Jul-93	ANA	NA	NA	NA	NA	NA	NA	NA	0.0007	0.001	0.0009	0.0077	0.0033	<0.0005
		13-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	0.004	<0.0005	0.008	0.003	0.001	0.0007
(4)		01-Dec-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.0006	0.0009	<0.0005
		17-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	0.0006	0.0007	0.001	<0.0005
		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.0007	0.0007	<0.0005
		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.0005	0.0006	<0.0005
		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.0005	0.0006	<0.0005
duplicate		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.001	0.001	<0.0005
		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.001	0.001	<0.0005
duplicate		20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
(24)		29-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		04-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
LF-23		12-Jul-91	ANA	NA	NA	NA	NA	NA	NA	NA	0.0039	0.0009	0.027	0.0012	0.011	0.0009
		07-Jan-92	ANA	NA	NA	NA	NA	NA	NA	NA	0.007	0.0023	0.056	0.0034	0.012	0.0013
		16-Apr-92	ANA	NA	NA	NA	NA	NA	NA	NA	0.0036	0.0007	0.020	0.0044	0.0044	0.0011
		23-Jul-92	ANA	NA	NA	NA	NA	NA	NA	NA	0.0038	0.0013	0.029	0.0061	0.0044	0.0014
		20-Oct-92	ANA	NA	NA	NA	NA	NA	NA	NA	0.0033	0.0005	0.023	0.0047	0.002	0.0015
		25-May-93	ANA	NA	NA	NA	NA	NA	NA	NA	0.0042	0.0007	0.016	0.0035	0.0017	0.0019
		13-Jul-93	ANA	NA	NA	NA	NA	NA	NA	NA	0.0081	0.0015	0.018	0.0074	0.0033	0.0051
		13-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	0.0006	0.002	0.003	0.0007
		01-Dec-94	AEN	NA	NA	NA	NA	NA	NA	NA	0.004	<0.0005	0.008	0.0006	<0.0005	<0.0005
		17-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	0.003	<0.0005	0.006	<0.0005	<0.0005	<0.0005

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Well ID	Notes	Date Sampled	Lab	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,1,1-TCA	PCE	1,1-DCE	1,1-DCA	1,2-DCA
	(9)	09-May-95	AEN	NA	NA	NA	NA	NA	NA	0.002	<0.0005	0.005	<0.0005	<0.0005	<0.0005	<0.0005
	(10)	31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	0.002	<0.0005	0.007	0.0007	0.0007	<0.0005	<0.0005
	(14)	20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	0.001	<0.0005	0.006	<0.0005	<0.0005	<0.0005	<0.0005
	(18)	27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	0.0008	<0.0005	0.0038	<0.0005	<0.0005	<0.0005	<0.0005
	(25)	29-Apr-96	AEN	NA	NA	NA	NA	NA	NA	0.0006	<0.0005	0.0028	<0.0005	<0.0005	<0.0005	<0.0005
	(26)	04-Sep-96	AEN	NA	NA	NA	NA	NA	NA	0.0014	<0.0005	0.0032	<0.0005	<0.0005	<0.0005	<0.0005
Shallow Extraction Wells (20 to 30 feet below grade)																
EX-3	(5)	14-Sep-94	AEN	NA	NA	NA	NA	NA	NA	0.004	0.014	0.042	0.100	0.005	0.001	
		02-Dec-94	AEN	NA	0.10	<0.2	NA	NA	NA	0.004	0.015	0.045	0.140	0.005	<0.0005	
		17-Feb-95	AEN	NA	<0.05	<0.2	NA	NA	NA	0.003	0.014	0.037	0.096	0.005	<0.0005	
		09-May-95	AEN	NA	0.10	<0.2	NA	NA	NA	0.003	0.012	0.031	0.120	0.005	<0.0005	
		31-Aug-95	AEN	NA	0.10	<0.2	NA	NA	NA	<0.003	0.012	0.027	0.120	0.005	<0.003	
		28-Dec-95	AEN	NA	0.10	<0.2	NA	NA	NA	<0.003	0.009	0.036	0.160	0.004	<0.003	
		27-Feb-96	AEN	NA	0.12	<0.2	NA	NA	NA	<0.003	0.0077	0.030	0.120	0.0032	<0.004	
		30-Apr-96	AEN	NA	0.08	<0.2	NA	NA	NA	<0.003	0.008	0.026	0.120	0.003	<0.003	
		05-Sep-96	AEN	NA	0.14	<0.2	NA	NA	NA	<0.003	0.008	0.029	0.140	0.004	<0.003	
EX-4		14-Sep-94	AEN	NA	NA	NA	NA	NA	NA	<0.0005	0.025	0.010	0.220	0.006	0.001	
		02-Dec-94	AEN	NA	0.09	<0.2	NA	NA	NA	<0.0005	0.020	0.011	0.240	0.006	<0.0005	
		17-Feb-95	AEN	NA	<0.05	<0.2	NA	NA	NA	<0.003	0.017	0.011	0.210	0.004	<0.003	
		09-May-95	AEN	NA	0.10	<0.2	NA	NA	NA	<0.003	0.020	0.011	0.210	0.004	<0.003	
		31-Aug-95	AEN	NA	0.20	<0.2	NA	NA	NA	<0.003	0.016	0.010	0.200	0.005	<0.003	
		28-Dec-95	AEN	NA	0.10	<0.2	NA	NA	NA	<0.003	0.014	0.014	0.210	0.004	<0.003	
		27-Feb-96	AEN	NA	0.13	<0.2	NA	NA	NA	<0.0005	0.0086	0.012	0.150	<0.0005	<0.0005	
		30-Apr-96	AEN	NA	0.06	<0.2	NA	NA	NA	<0.003	0.010	0.010	0.150	<0.003	<0.003	
		05-Sep-96	AEN	NA	0.14	<0.2	NA	NA	NA	<0.003	0.008	0.009	0.140	0.003	<0.003	
EXTR		27-Feb-96	AEN	NA	0.15	<0.2	NA	NA	NA	<0.0005	0.0069	0.0013	0.066	0.0028	<0.0005	
		30-Apr-96	AEN	NA	0.11	NA	NA	NA	NA	<0.0005	0.0055	0.0012	0.063	0.0024	<0.0005	
		05-Sep-96	AEN	NA	0.12	<0.2	NA	NA	NA	<0.0005	0.0082	0.0031	0.099	0.0031	<0.0005	
Deeper Wells (40 to 45 feet below grade)																
MW-6D		13-Sep-94	AEN	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.003	<0.0005	0.0005	
		01-Dec-94	AEN	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	

Table 2
Quarterly Summary of Groundwater Quality Data
East Baybridge Center
Emeryville and Oakland, California
(concentrations expressed in parts per million [ppm])

Well ID	Notes	Date Sampled	Lab	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,1,1-TCA	PCE	1,1-DCE	1,1-DCA	1,2-DCA
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		28-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		01-May-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		03-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-7D		13-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.003	<0.0005	<0.0005
		30-Nov-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.003	<0.0005	<0.0005
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.003	<0.0005	<0.0005
		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		30-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.002	<0.0005	<0.0005
		20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
duplicate		20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		30-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		03-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	0.0010	<0.0005	<0.0005
MW-9D		12-Sep-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		30-Nov-94	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		16-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		08-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		26-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		01-May-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		03-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Deep Well (65 feet below grade)

MW-7Z	13-Sep-94	AEN	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005							
	30-Nov-94	AEN	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005							
	16-Feb-95	AEN	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005							
	30-Aug-95	AEN	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005							
	28-Dec-95	AEN	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005							

Table 2
Quarterly Summary of Groundwater Quality Data
East Baybridge Center
Emeryville and Oakland, California
(concentrations expressed in parts per million [ppm])

Well ID	Notes	Date Sampled	Lab	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,1,1-TCA	PCE	1,1-DCE	1,1-DCA	1,2-DCA
		27-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		30-Apr-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		03-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Trip Blanks																
		17-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		10-May-95	AEN	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		31-Aug-95	AEN	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		28-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		27-Feb-96	AEN	<0.05	NA	NA	<0.0005	<0.0005	<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
		03-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
Field Blanks																
LF-22		17-Feb-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
LF-22		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-7Z		09-May-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
LF-22-FB		31-Aug-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-7D-FB		20-Dec-95	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-7-FB		26-Feb-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
MW-9-FB		03-Sep-96	AEN	NA	NA	NA	NA	NA	NA	NA	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005

Data entered by DEB. Data proofed by SCK and QA/QC by JCK.

Key to abbreviations:

TPHg = Total petroleum hydrocarbons as gasoline

TPHd = Total petroleum hydrocarbons as diesel

TPHo = Total petroleum hydrocarbons as oil

TCE = Trichloroethene

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

PCE = Tetrachloroethene

1,1-DCE = 1,1-Dichloroethene

1,1-DCA = 1,1-Dichloroethane

1,2-DCA = 1,2-Dichloroethane

AEN = American Environmental Network in Pleasant Hill, California

Table 2
Quarterly Summary of Groundwater Quality Data
East Baybridge Center
Emeryville and Oakland, California
(concentrations expressed in parts per million [ppm])

Well ID	Notes	Date Sampled	Lab	TPHg	TPHd	TPHo	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,1,1-TCA	PCE	1,1-DCE	1,1-DCA	1,2-DCA
---------	-------	--------------	-----	------	------	------	---------	---------	---------------	---------------	-----	-----------	-----	---------	---------	---------

ANA = Inchcape Testing Anametrix, Inc., in San Jose, California

NA = parameter not analyzed

Notes:

- (1) 0.00081 ppm vinyl chloride detected.
- (2) 0.002 ppm chloroform detected
- (3) 0.0008 ppm chloroform detected.
- (4) 0.002 ppm chloroform detected.
- (5) 0.0008 ppm cis-1,2-DCE detected
- (6) 0.002 ppm chloroform detected.
- (7) 0.0002 ppm chloroform, 0.002 ppm cis-1,2-DCE detected
- (8) 0.002 ppm chloroform, 0.002 ppm cis-1,2-DCE detected.
- (9) 0.014 ppm chloroform, 0.001 ppm cis-1,2-DCE detected
- (10) Chloroform = 0.004, cis 1,2 DCE = 0.001
- (11) Chloroform = 0.0006.
- (12) Cis-1,2-DCE = 0.002.
- (13) Cis-1,2-DCE = 0.009
- (14) Chloroform = 0.006.
- (15) Bromodichloroethane = 0.010 ppm, cis-1,2 DCE = 0.051, trans-1,2 DCE = 0.004, vinyl chloride = 0.017.
- (16) Cis-1,2 DCE = 0.200 ppm, trans-1,2 DCE = 0.022 ppm.
- (17) Chloroform = 0.0012.
- (18) Chloroform = 0.010, Bromodichloromethane = 0.0011.
- (19) 1,2-DCE = 0.194.
- (20) 1,2-DCE = 0.0024.
- (21) 1,2-DCE = 0.011.
- (22) Vinyl chloride = 0.025, 1,2-DCE = 0.087, Bromodichloromethane = 0.004.
- (23) 1,1,2-Trichlorotrifluoroethane = 0.0021.
- (24) Chloroform = 0.0015.
- (25) Bromodichloromethane = 0.001, Chloroform = 0.013
- (26) Chloroform = 0.002

Table 3
Chemical Analysis Results for Monitoring Well LF-31
Former Bashland Company Property
(results in parts per million [ppm])

Date Sampled	Lab	Notes	TRPH	TPHd	TPHo	THPg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TCE	1,2-DCE
12-Feb-93	ANA	(1)	<5	<0.05	NA	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
26-May-93 duplicate	ANA		<5	0.200	NA	NA	NA	NA	NA	NA	0.020	0.0039
			<5	0.310	NA	NA	NA	NA	NA	NA	0.020	0.0034
14-Jul-93 duplicate	ANA	(2)	<5	0.150	NA	NA	NA	NA	NA	NA	0.0073	0.0024
	AEN		<1	0.400	NA	NA	NA	NA	NA	NA	0.010	0.002
09-Dec-93	ANA		<5	0.200	0.100	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	NA	NA
11-Mar-94 duplicate	ANA	(3)	NA	0.110	0.210	NA	NA	NA	NA	NA	0.0054	0.003
	ANA	(4)	NA	NA	NA	NA	NA	NA	NA	NA	0.006	0.0034
21-Jun-94	AEN		NA	0.400	0.200	<0.05	<0.0005	<0.0005	<0.0005	<0.002	0.005	0.002
27-Dec-95	AEN		NA	0.300	<0.200	NA	NA	NA	NA	NA	0.018	0.009
27-Feb-96	AEN		NA	0.370	<0.2	<0.05	<0.0005	<0.0005	<0.0005	<0.002	NA	NA
30-Apr-96	AEN		NA	0.190	<0.2	NA	NA	NA	NA	NA	0.015	0.017
05-Sep-96	AEN		NA	0.540	<0.2	NA	NA	NA	NA	NA	NA	NA

Data entered by DJB Data proofed by JCK.

NOTES:

TRPH - Total recoverable petroleum hydrocarbons as oil and grease, analyzed using Standard Methods 5520BF.

TPHd - Total petroleum hydrocarbons as diesel, analyzed using EPA Method 3510.

TPHo - Total petroleum hydrocarbons as oil, analyzed using EPA Method 3510.

THPg - Total petroleum hydrocarbons as gasoline, analyzed using EPA Method 3550.

TCE - Trichloroethene, analyzed using EPA Method 8010.

1,2-DCE - 1,2-dichloroethene, analyzed using EPA Method 8020.

Benzene, toluene, ethylbenzene, and total xylenes analyzed using EPA Method 8020.

ANA - Anametrix, Inc., of San Jose, California.

AEN - American Environmental Network of Pleasant Hill, California.

NA - Not analyzed.

(1) Groundwater samples also analyzed for cadmium, chromium, nickel, lead, and zinc, and semivolatile organic compounds using EPA Method 8270. None of these compounds were detected above laboratory detection limits.

(2) Tetrachloroethene detected at a concentration of 0.0063 ppm.

(3) Chloroform detected at 0.0012 ppm.

(4) Chloroform detected at 0.0014 ppm.

Table 4
Chemical Analysis Results for Monitoring Well LF-32
Former Bay Area Warehouse Property
(concentrations expressed in parts per million (ppm))

Date	Lab	Notes	TPHg	Benzene	Toluene	Ethyl -benzene	Total Xylenes	TPHd	TPHo	TCE	1,2-DCE
26-May-93	ANA		0.050	<0.0005	<0.0005	<0.0005	<0.0005	0.440	NA	NA	NA
14-Jul-93	AEN		<0.050	<0.0005	<0.0005	<0.0005	<0.002	<0.050	NA	NA	NA
14-Jul-93	ANA		<0.050	<0.0005	<0.0005	<0.0005	<0.005	0.230	NA	NA	NA
09-Dec-93	ANA	(1)	<0.050	<0.0005	<0.0005	<0.0005	<0.005	0.660	0.360	NA	NA
11-Mar-94	ANA	*	0.110	*	<0.0005	<0.0005	<0.0005	0.890	0.850	0.0025	0.0008
duplicate	ANA	*	0.110	*	<0.0005	<0.0005	<0.0005	NA	NA	0.0026	0.00088
27-Apr-94	ANA		<0.05	NA	NA	NA	NA	NA	NA	NA	NA
23-May-94	AEN	(2)	NA	NA	NA	NA	NA	NA	NA	0.005	0.005
21-Jun-94	AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.002	1.400	0.400	NA	NA
22-Dec-95	AEN	(3)	NA	NA	NA	NA	NA	0.200	<0.2	0.058	0.055
27-Feb-96	AEN		<0.05	<0.0005	<0.0005	<0.0005	<0.002	0.260	<0.2	NA	NA
01-May-96	AEN	(4)	NA	NA	NA	NA	NA	0.170	<0.2	0.074	0.087
05-Sep-96	AEN		NA	NA	NA	NA	NA	0.34	NA	NA	NA

Data entered by DBB. Data proofed by JCV.

TPHg = Total petroleum hydrocarbons as gasoline, analyzed using EPA Method 5030 GCFID

TPHd = Total petroleum hydrocarbons as diesel, analyzed using EPA Method 3510 GCFID

TPHo = Total petroleum hydrocarbons as motor oil, analyzed using EPA Method 3510

TCE = Trichloroethene, analyzed using EPA Method 8010

1,2-DCE = 1,2-Dichloroethene, analyzed using EPA Method 8010

NA = not analyzed

ANA = Ananetrix, Inc., of San Jose, California

AEN = American Environmental Network of Pleasant Hill, California

NOTES:

(1) Total petroleum hydrocarbons as oil and grease were not reported above the laboratory detection limit of 5 ppm.

(2) Vinyl chloride was present at 0.002 ppm and bromodichloromethane detected at 0.0006 ppm.

(3) Vinyl chloride was present at 0.017 ppm and bromodichloromethane detected at 0.010 ppm.

(4) Vinyl chloride was present at 0.025 ppm and bromodichloromethane detected at 0.0041 ppm.

* According to the laboratory QA/QC summary, the concentration reported as gasoline

is primarily due to the presence of a heavier petroleum product of hydrocarbon range C9-C14, possibly diesel fuel. However, it appears that the TPHg detected is a result of cross-contamination by the laboratory (see Section 3.3 in Levine-Fricke 1994).

Table 5
Groundwater Sampling Schedule
East Baybridge Center
Quarterly Period from October through December 1996
Emeryville and Oakland, California

Area	Well Depth	Well Identification	Analysis
Area A	20' to 25'	MW-2 MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, LF-22, LF-23 EXRACTION TRENCH, EX-3 & EX-4	TPHg, TPHd, BTEX VOCs, TPHd, TPHo VOCs TPHd, TPHo, VOCs
	40' to 45'	MW-6D, MW-7D, MW-9D	VOCs
	60'	MW-7Z	VOCs
	30'	MW-1	TPHg, BTEX, TPHd, TPHo
Area C	20' TO 25'	MW-10R, MW-34R, LF-13 MW-12R, MW-31R, MW-32R	VOCs VOCS, TPHd, TPHo

NOTES:

The sampling proposed is in accordance with Levine-Fricke's, December 19, 1994

"Groundwater Monitoring Plan, East Baybridge Center, Emeryville and Oakland, California."

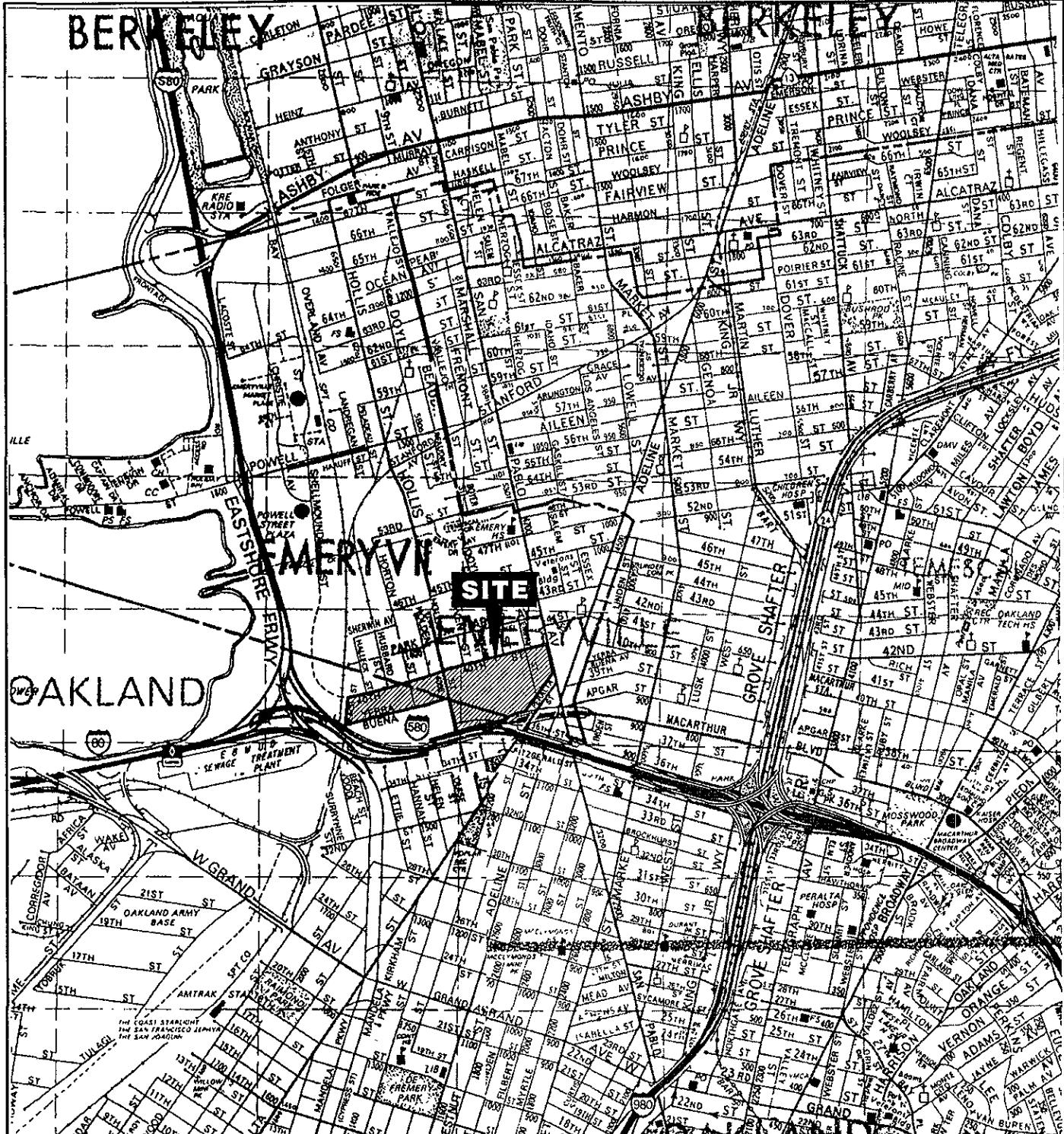
Analysis for total petroleum hydrocarbons as gasoline (TPHg) will use EPA Method 5030.

Analysis for benzene, toluene, ethylbenzene, and total xylenes (BTEX) will use EPA Method 8020.

Analysis for total petroleum hydrocarbons as diesel (TPHd) and as oil (TPHo) will use EPA Method 3510.

Analysis for volatile organic compounds (VOCs) will use EPA Method 8010.

One duplicate sample, a trip blank, and bailer rinsate blank will be analyzed for VOCs.



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EAST BAYBRIDGE CENTER

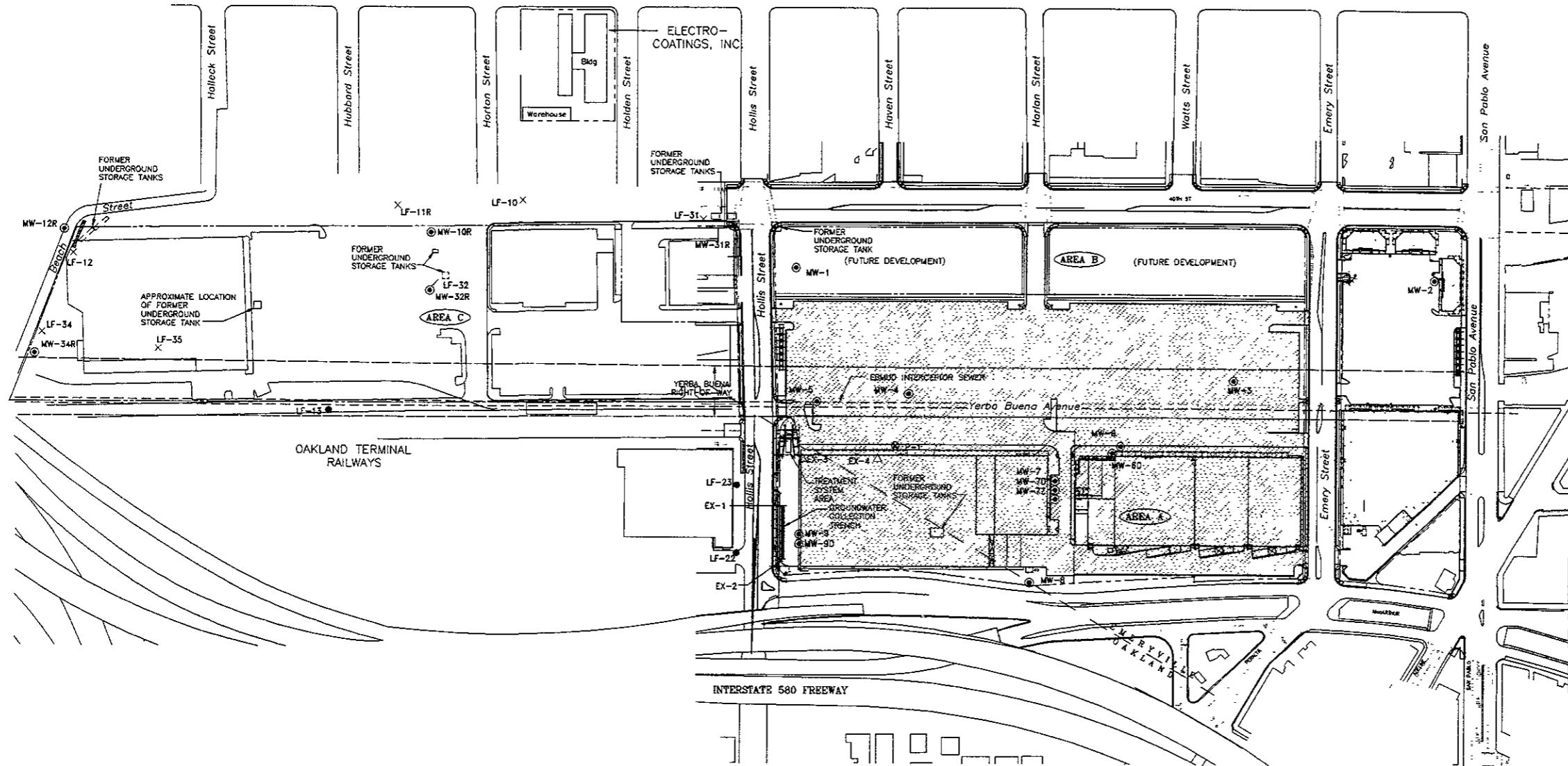
Site Location Map

0 1/2 1 MILE

Levine-Fricke-Recon

Project No. 1649

Figure 1



EXPLANATION

- MONITORING WELL LOCATION
- △ EXTRACTION WELL
- ⊗ PROPOSED MONITORING WELL LOCATION
- ✗ BURIED UNLINED MONITORING WELL
- APPROXIMATE LOCATION OF FORMER UNDERGROUND STORAGE TANK
- APPROXIMATE LOCATION OF EXISTING EXCAVATED TRENCH
- APPROXIMATE LOCATION OF EXCAVATED TRENCH
- APPROXIMATE LOCATION OF EXCAVATED TRENCH

233 OF 14 WATER ELL 17.0'

APPROXIMATE LOCATION OF EXCAVATED TRENCH

REVISION	DESIGN	DRAWN	CHECKED	DATE	SCALE
					DESIGN
					DRAWN
					CHECKED

Levine-Fricke-Recon
ENVIRONMENTAL HYDROGEOLOGISTS & APPLIED SCIENTISTS

Emeryville, California

**CATELLUS
DEVELOPMENT
CORPORATION**

YERBA BUENA/EAST BAYBRIDGE DEVELOPMENT
Figure 2
SITE PLAN SHOWING LOCATIONS OF
CONTAINED SOILS
AND UNDERGROUND STORAGE TANKS

Project No.
1649

Date
OCT. 96

Sheet
04

APPENDIX A

FIELD PROCEDURES

APPENDIX A

FIELD PROCEDURES, QUARTERLY GROUNDWATER SAMPLING

Before sample collection, 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 groundwater were then purged from each well using a centrifugal pump or a bailer 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 were steam cleaned before use at each well. Purged groundwater was pumped into the on-site treatment system.

After each well had been purged, groundwater 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 groundwater 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.

Groundwater samples were submitted to American Environmental Network, a state-certified laboratory, under strict chain-of-custody protocol. For quality assurance/quality control measures, a duplicate sample was collected from well LF-22 and analyzed for VOCs using EPA Method 8010. Laboratory certificates are presented in Appendix C.

APPENDIX B

WATER-QUALITY SAMPLING SHEETS

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02

Project Name: EAST BAY BRIDGE

Sample Location: MW-6

Samplers Name: JCK JWR

Sampling Plan Prepared By: JCK

Sampling Method: _____

- | | |
|---|---|
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Disposable Bailer |
| <input type="checkbox"/> Submersible Pump | <input checked="" type="checkbox"/> Teflon Bailer |
| <input checked="" type="checkbox"/> Hand Bail | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Extraction Well Port | (Other) _____ |

Analyses Requested

Number and Types of Bottle used

SPA 8010

3/10A

Method of Shipment

AEN
(Lab Name)

- Courier _____

- Hand Deliver:

Well Number: MW-6

Well Diameter:

Depth to Water: 12.66

- 2" (0.16 Gallon/Feet)

Well Depth: 21.40

- 4" (0.65 Gallon/Feet)

Height of Water Column: 3.74

- 5" (1.02 Gallon/Feet)

Volume in Well: 1.40

- 6" (1.47 Gallon/Feet)

Inlet Depth: _____

Comments:

(Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02
Project Name: EAST BAY BRIDGE
Sample Location: MW-6D
Samplers Name: JCK JLR
Sampling Plan Prepared By: JCK

Date: 9/4/96
Sample No.: MW-6D

- | | |
|--|---|
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Disposable Bailer |
| <input checked="" type="checkbox"/> Submersible Pump | <input checked="" type="checkbox"/> Teflon Bailer |
| <input type="checkbox"/> Hand Bail | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Estimating Wall Box | (Other) _____ |

Analyses Requested

Number and Types of Bottles used

FPA 8010

3VOA

Method of Shipment

AEN
(Lab Name)

Courier _____

Hand Deliver:

Well Number: MW-GD

Well Diameter:

Depth to Water: 11.37

✓ 2" (0.16 Gallon/Feet)

Well Depth: 39.80

4" (0.65 Gallon/Feet)

Height of Water Column: 28.43

5" (1.02 Gallon/Feet)

Volume in Well: 4.55

6" (1.47 Gallon/Feet)

Inlet Depth: _____

Comments:

Comments: _____
(Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02

Project Name: EAST BAY BRIDGE

Sample Location: MW-7

Samplers Name: JCK

Sampling Plan Prepared By: JCK

Sampling Method: _____

- | | |
|---|---|
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Disposable Bailer |
| <input type="checkbox"/> Submersible Pump | <input checked="" type="checkbox"/> Teflon Bailer |
| <input checked="" type="checkbox"/> Hand Bail | <input type="checkbox"/> _____
(Other) |
| <input type="checkbox"/> Extraction Well Port | |

Analyses Requested

Number and Types of Bottles used
2 L. 5 L. Ans 58

EPA 8010

3 vas

Method of Shipment

AEN
(Lab Name)

Courier _____

Hand Deliver:

Well Number: MW-7

Well Diameter: _____

Depth to Water: 11.36

2" (0.16 Gallon/Feet)

Well Depth: 23.30

4" (0.65 Gallon/Feet)

Height of Water Column: 11.94

5" (1.02 Gallon/Feet)

Volume in Well: 1.91

60% DTW

Inlet Depth: _____

Comments:

(Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02

Project Name: EAST BAY BRIDGE

Sample Location: MW-7Z

Samplers Name: JCK

Sampling Plan Prepared By: **JCK**

Sampling Method:

- | | |
|--|---|
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Disposable Bailer |
| <input checked="" type="checkbox"/> Submersible Pump Z " | <input checked="" type="checkbox"/> Teflon Bailer |
| <input type="checkbox"/> Hand Bail | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Extraction Well Port | (Other) _____ |

Analyses Requested

Number and Types of Bottle used
3 VOA

Method of Shipment

AEN

(Lab Name)

Courier

Hand Deliver:

Well Number: MN-72

Depth to Water: 10.48

Well Depth: 64.70

Height of Water Column: 53.72

Volume in Well: 8.60

Well Diameter:

- 2" (0.16 Gallon/Feet)
 - 4" (0.65 Gallon/Feet)
 - 5" (1.02 Gallon/Feet)
 - 6" (1.47 Gallon/Feet)

64.70
10.98
53.72
.16
2232
5372
35952

$$\begin{array}{r}
 53.72 \\
 - .8 \\
 \hline
 42.972
 \end{array}
 \quad
 \begin{array}{r}
 64.70 \\
 - 42.98 \\
 \hline
 21.72
 \end{array}$$

80% DTW 821.72

Inlet Depth: _____

Comments:

(Recommended Method For Punging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02

Project Name: EAST BAY BRIDGE

Sample Location: MW - 8'

Samplers Name: JCK JMR

Sampling Plan Prepared By: JCK

Sampling Method:

- | | |
|---|---|
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Disposable Bailer |
| <input type="checkbox"/> Submersible Pump | <input checked="" type="checkbox"/> Teflon Bailer |
| <input checked="" type="checkbox"/> Hand Bail | <input type="checkbox"/> _____ |
| <input type="checkbox"/> Extraction Well Port | (Other) _____ |

Analyses Requested

Number and Types of Bottles used

EPA 8010

308

Method of Shipment

AEN

(Lab Name)

- Courier _____

Hand Deliver:

Well Number: MW - 8

Depth to Water: 9.60

Well Depth: 20.10

Height of Water Column: 10.50

Volume in Well: 1.68

Well Diameter:

- 2" (0.16 Gallon/Feet)
 - 4" (0.65 Gallon/Feet)
 - 5" (1.02 Gallon/Feet)
 - 6" (1.47 Gallon/Feet)

20.10
9.60
<hr/>
10.50
.16
<hr/>
6300
1050
<hr/>
1.6800

$$\begin{array}{r} 10.50 \\ - .8 \\ \hline 9.400 \end{array} \quad \begin{array}{r} 20.10 \\ - 8.40 \\ \hline 11.70 \end{array}$$

80% DTW 11.70

Inlet Depth: _____

Comments:

Comments: _____
(Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02

Project Name: EAST BAY BRIDGE

Sample Location: MLW-31R

Samplers Name: JMR

Sampling Plan Prepared By: JCK

Sampling Method:

- | | |
|---|---|
| <input type="checkbox"/> Centrifugal Pump | <input checked="" type="checkbox"/> Disposable Bailer |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Teflon Bailer |
| <input checked="" type="checkbox"/> Hand Bail | <input type="checkbox"/> _____
(Other) |
| <input type="checkbox"/> Extraction Well Port | |

Analyses Requested

Number and Types of Bottles used
2 amber litres

Method of Shipment

AEN
Lab Name:

- Courier _____

Well Number: MW-31R

Well Diameter: _____

Depth to Water: 7.55

2" (0.16 Gallon/Feet)

Well Depth: 23.33

4" (0.65 Gallon/Feet)

Height of Water Column: 15.78

5" (1.02 Gallon/Feet)

Volume in Well: 2.5

6" (1.43 Gallon/Feet)

Inlet Depth: _____

Comments:

(Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02

Project Name: EAST BAY BRIDGE

Sample Location: LF-23

Samplers Name: Jex Jea

Sampling Plan Prepared By: JCK

Sampling Method:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Disposable Bailer |
| <input type="checkbox"/> Submersible Pump | <input checked="" type="checkbox"/> Teflon Bailer |
| <input type="checkbox"/> Hand Bail | <input type="checkbox"/> _____
(Other) |
| <input checked="" type="checkbox"/> Pump
Type | |

Analyses Requested

Number and Types of Bottles used

E94-8010

3yeA

Method of Shipment

AEN

(Lab Name)

☒ Courier

Hand Deliver:

Well Number: LF-23

Depth to Water: 11.48

Cell Depth: 18.50

Height of Water Column: 7.02

Volume in Well: 4.56

Well Diameter:

- 2" (0.16 Gallon/Feet)
 - 4" (0.65 Gallon/Feet)
 - 5" (1.02 Gallon/Feet)
 - 6" (1.47 Gallon/Feet)

18.50
 11.48
202
 .65
3510
 4212
4563.0
~~18.50~~
~~9.18~~
18.50
562
1292
 80% DTW 12.92

Inlet Depth: _____

Comments:

Comments: (Recommended Method For Purgung Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02

Date: 9-5-96

Project Name: EAST BAY BRIDGE

Sample No.: EX-3

Sample Location: Ex-3

FB:

Samplers Name: JMR

DUP.

Sampling Plan Prepared By: JCK

— 1 —

- | | |
|--|--|
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Disposable Bailer |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Teflon Bailer |
| <input type="checkbox"/> Hand Bail | <input type="checkbox"/> _____ |
| <input checked="" type="checkbox"/> Extraction Well Port | (Other) _____ |

Analyses Requested

IPHE, 1986

EPA 8010

Method of Shipment

AEN

(Lab Name)

Courier —

Hand Deliver:

Well Number: EX-3

Depth to Water:

Well Depth:

Height of Water Column:

Volume in Well:

Well Diameter:

- 3" (0.16 Gallon/Feet)
 - 4" (0.65 Gallon/Feet)
 - 5" (1.02 Gallon/Feet)
 - 6" (1.47 Gallon/Feet)

80% DTW.

Inlet Depth: _____

Comments:

(Recommended Method For Purging Well)

WATER-QUALITY SAMPLING INFORMATION

Project No.: 1649.96.02

Project Name: EAST BAY BRIDGE

Sample Location: EXTR

Samplers Name: JMR

Sampling Plan Prepared By: JCK

Sampling Method:

- | | |
|--|--|
| <input type="checkbox"/> Centrifugal Pump | <input type="checkbox"/> Disposable Bailer |
| <input type="checkbox"/> Submersible Pump | <input type="checkbox"/> Teflon Bailer |
| <input type="checkbox"/> Hand Bail | <input type="checkbox"/> _____ |
| <input checked="" type="checkbox"/> Extraction Well Port | (Other) _____ |

Analyses Requested

TPHC, TPH-O

EPA 8010

Number and Types of Bottles used

3. 1966

3VOA/1fcL

Method of Shipment

AEN

(Lab Name)

Courier

Hand Deliver:

Well Number: EXTR

Depth to Water:

Well Depth:

Height of Water Column:

Volume in Well:

Well Diameter: _____

- 2" (0.16 Gallon/Feet)
 - 4" (0.65 Gallon/Feet)
 - 5" (1.02 Gallon/Feet)
 - 6" (1.47 Gallon/Feet)

80% DTW

Inlet Depth: _____

Comments:

Comments: _____
(Recommended Method For Purging Well)

APPENDIX C

LABORATORY CERTIFICATES

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AFLA Accreditation: 11134

PAGE 1

LEVINE-FRICKE
1900 POWELL ST. 12TH FL.
EMERYVILLE, CA 94608

REPORT DATE: 09/20/96

ATTN: [REDACTED]
CLIENT PROJ. ID: 1649.96.02
CLIENT PROJ. NAME: E. BAY BRIDGE
C.O.C. NUMBER: 17619,17620

DATE(S) SAMPLED: 09/04/96-09/05/96

DATE RECEIVED: 09/06/96

AEN WORK ORDER: 9609048

PROJECT SUMMARY:

On September 6, 1996, this laboratory received 11 water sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Chery C. McNamee for
Larry Klein
Laboratory Director

PAGE 2

LEVINE-FRICKE

SAMPLE ID: MW-1
AEN LAB NO: 9609048-01
AEN WORK ORDER: 9609048
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/10/96
Toluene	108-88-3	ND	0.5	ug/L	09/10/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/10/96
Xylenes, Total	1330-20-7	ND	2	ug/L	09/10/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	09/10/96
#Extraction for TPH	EPA 3510	-		Extrn Date	09/10/96
TPH as Diesel	GC-FID	0.25 *	0.05	mg/L	09/11/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/11/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-23
 AEN LAB NO: 9609048-02
 AEN WORK ORDER: 9609048
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L	09/10/96	
Bromoform	75-25-2	ND	0.5 ug/L	09/10/96	
Bromomethane	74-83-9	ND	2 ug/L	09/10/96	
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L	09/10/96	
Chlorobenzene	108-90-7	ND	0.5 ug/L	09/10/96	
Chloroethane	75-00-3	ND	2 ug/L	09/10/96	
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L	09/10/96	
Chloroform	67-66-3	2.0 *	0.5 ug/L	09/10/96	
Chloromethane	74-87-3	ND	2 ug/L	09/10/96	
Dibromochloromethane	124-48-1	ND	0.5 ug/L	09/10/96	
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L	09/10/96	
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L	09/10/96	
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L	09/10/96	
Dichlorodifluoromethane	75-71-8	ND	2 ug/L	09/10/96	
1,1-Dichloroethane	75-34-3	ND	0.5 ug/L	09/10/96	
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L	09/10/96	
1,1-Dichloroethene	75-35-4	ND	0.5 ug/L	09/10/96	
cis-1,2-Dichloroethene	156-59-2	1.1 *	0.5 ug/L	09/10/96	
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L	09/10/96	
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L	09/10/96	
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L	09/10/96	
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L	09/10/96	
Methylene Chloride	75-09-2	ND	2 ug/L	09/10/96	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L	09/10/96	
Tetrachloroethene	127-18-4	3.2 *	0.5 ug/L	09/10/96	
1,1,1-Trichloroethane	71-55-6	ND	0.5 ug/L	09/10/96	
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L	09/10/96	
Trichloroethene	79-01-6	1.4 *	0.5 ug/L	09/10/96	
Trichlorofluoromethane	75-69-4	ND	2 ug/L	09/10/96	
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L	09/10/96	
Vinyl Chloride	75-01-4	ND	2 ug/L	09/10/96	

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-22
 AEN LAB NO: 9609048-03
 AEN WORK ORDER: 9609048
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5	ug/L	09/10/96
Bromoform	75-25-2	ND	0.5	ug/L	09/10/96
Bromomethane	74-83-9	ND	2	ug/L	09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5	ug/L	09/10/96
Chlorobenzene	108-90-7	ND	0.5	ug/L	09/10/96
Chloroethane	75-00-3	ND	2	ug/L	09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5	ug/L	09/10/96
Chloroform	67-66-3	ND	0.5	ug/L	09/10/96
Chloromethane	74-87-3	ND	2	ug/L	09/10/96
Dibromochloromethane	124-48-1	ND	0.5	ug/L	09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5	ug/L	09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5	ug/L	09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5	ug/L	09/10/96
Dichlorodifluoromethane	75-71-8	ND	2	ug/L	09/10/96
1,1-Dichloroethane	75-34-3	ND	0.5	ug/L	09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5	ug/L	09/10/96
1,1-Dichloroethene	75-35-4	ND	0.5	ug/L	09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5	ug/L	09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5	ug/L	09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5	ug/L	09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5	ug/L	09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5	ug/L	09/10/96
Methylene Chloride	75-09-2	ND	2	ug/L	09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5	ug/L	09/10/96
Tetrachloroethene	127-18-4	ND	0.5	ug/L	09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5	ug/L	09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5	ug/L	09/10/96
Trichloroethene	79-01-6	ND	0.5	ug/L	09/10/96
Trichlorofluoromethane	75-69-4	ND	2	ug/L	09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5	ug/L	09/10/96
Vinyl Chloride	75-01-4	ND	2	ug/L	09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-5
 AEN LAB NO: 9609048-04
 AEN WORK ORDER: 9609048
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/10/96
TPH as Diesel	GC-FID	0.24 *	0.05	mg/L	09/11/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/11/96
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5	ug/L	09/10/96
Bromoform	75-25-2	ND	0.5	ug/L	09/10/96
Bromomethane	74-83-9	ND	2	ug/L	09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5	ug/L	09/10/96
Chlorobenzene	108-90-7	ND	0.5	ug/L	09/10/96
Chloroethane	75-00-3	ND	2	ug/L	09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5	ug/L	09/10/96
Chloroform	67-66-3	ND	0.5	ug/L	09/10/96
Chloromethane	74-87-3	ND	2	ug/L	09/10/96
Dibromochloromethane	124-48-1	ND	0.5	ug/L	09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5	ug/L	09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5	ug/L	09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5	ug/L	09/10/96
Dichlorodifluoromethane	75-71-8	ND	2	ug/L	09/10/96
1,1-Dichloroethane	75-34-3	2.2 *	0.5	ug/L	09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5	ug/L	09/10/96
1,1-Dichloroethene	75-35-4	5.1 *	0.5	ug/L	09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5	ug/L	09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5	ug/L	09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5	ug/L	09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5	ug/L	09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5	ug/L	09/10/96
Methylene Chloride	75-09-2	ND	2	ug/L	09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5	ug/L	09/10/96
Tetrachloroethene	127-18-4	1.0 *	0.5	ug/L	09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5	ug/L	09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5	ug/L	09/10/96
Trichloroethene	79-01-6	ND	0.5	ug/L	09/10/96
Trichlorofluoromethane	75-69-4	ND	2	ug/L	09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5	ug/L	09/10/96
Vinyl Chloride	75-01-4	ND	2	ug/L	09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-4
AEN LAB NO: 9609048-05
AEN WORK ORDER: 9609048
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/11/96
TPH as Diesel	GC-FID	0.14 *	0.05	mg/L	09/11/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/11/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-8
 AEN LAB NO: 9609048-06
 AEN WORK ORDER: 9609048
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L	ug/L	09/10/96
Bromoform	75-25-2	ND	0.5 ug/L	ug/L	09/10/96
Bromomethane	74-83-9	ND	2 ug/L	ug/L	09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L	ug/L	09/10/96
Chlorobenzene	108-90-7	ND	0.5 ug/L	ug/L	09/10/96
Chloroethane	75-00-3	ND	2 ug/L	ug/L	09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L	ug/L	09/10/96
Chloroform	67-66-3	ND	0.5 ug/L	ug/L	09/10/96
Chloromethane	74-87-3	ND	2 ug/L	ug/L	09/10/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L	ug/L	09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L	ug/L	09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L	ug/L	09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L	ug/L	09/10/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L	ug/L	09/10/96
1,1-Dichloroethane	75-34-3	ND	0.5 ug/L	ug/L	09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L	ug/L	09/10/96
1,1-Dichloroethene	75-35-4	ND	0.5 ug/L	ug/L	09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L	ug/L	09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L	ug/L	09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L	ug/L	09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L	ug/L	09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L	ug/L	09/10/96
Methylene Chloride	75-09-2	ND	2 ug/L	ug/L	09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L	ug/L	09/10/96
Tetrachloroethene	127-18-4	ND	0.5 ug/L	ug/L	09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5 ug/L	ug/L	09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L	ug/L	09/10/96
Trichloroethene	79-01-6	ND	0.5 ug/L	ug/L	09/10/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L	ug/L	09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L	ug/L	09/10/96
Vinyl Chloride	75-01-4	ND	2 ug/L	ug/L	09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

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LEVINE-FRICKE

SAMPLE ID: MW-32R
AEN LAB NO: 9609048-07
AEN WORK ORDER: 9609048
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/05/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/11/96
TPH as Diesel	GC-FID	0.34 *	0.05	mg/L	09/11/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/11/96

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-31R
AEN LAB NO: 9609048-08
AEN WORK ORDER: 9609048
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/05/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/11/96
TPH as Diesel	GC-FID	0.54 *	0.05	mg/L	09/11/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/11/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: EX-4
 AEN LAB NO: 9609048-09
 AEN WORK ORDER: 9609048
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/05/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/11/96
TPH as Diesel	GC-FID	0.14 *	0.05	mg/L	09/11/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/11/96
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	3	ug/L	09/11/96
Bromoform	75-25-2	ND	3	ug/L	09/11/96
Bromomethane	74-83-9	ND	10	ug/L	09/11/96
Carbon Tetrachloride	56-23-5	ND	3	ug/L	09/11/96
Chlorobenzene	108-90-7	ND	3	ug/L	09/11/96
Chloroethane	75-00-3	ND	10	ug/L	09/11/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	3	ug/L	09/11/96
Chloroform	67-66-3	ND	3	ug/L	09/11/96
Chloromethane	74-87-3	ND	10	ug/L	09/11/96
Dibromochloromethane	124-48-1	ND	3	ug/L	09/11/96
1,2-Dichlorobenzene	95-50-1	ND	3	ug/L	09/11/96
1,3-Dichlorobenzene	541-73-1	ND	3	ug/L	09/11/96
1,4-Dichlorobenzene	106-46-7	ND	3	ug/L	09/11/96
Dichlorodifluoromethane	75-71-8	ND	10	ug/L	09/11/96
1,1-Dichloroethane	75-34-3	3 *	3	ug/L	09/11/96
1,2-Dichloroethane	107-06-2	ND	3	ug/L	09/11/96
1,1-Dichloroethene	75-35-4	140 *	3	ug/L	09/11/96
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	09/11/96
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	09/11/96
1,2-Dichloropropane	78-87-5	ND	3	ug/L	09/11/96
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	09/11/96
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	09/11/96
Methylene Chloride	75-09-2	ND	10	ug/L	09/11/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	09/11/96
Tetrachloroethene	127-18-4	9 *	3	ug/L	09/11/96
1,1,1-Trichloroethane	71-55-6	8 *	3	ug/L	09/11/96
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	09/11/96
Trichloroethene	79-01-6	ND	3	ug/L	09/11/96
Trichlorofluoromethane	75-69-4	ND	10	ug/L	09/11/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	3	ug/L	09/11/96
Vinyl Chloride	75-01-4	ND	10	ug/L	09/11/96

LEVINE-FRICKE

SAMPLE ID: EX-4
AEN LAB NO: 9609048-09
AEN WORK ORDER: 9609048
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/05/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
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RLs elevated for EPA 8010 due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: EXTR
 AEN LAB NO: 9609048-10
 AEN WORK ORDER: 9609048
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/05/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/11/96
TPH as Diesel	GC-FID	0.12 *	0.05 mg/L		09/11/96
TPH as Oil	GC-FID	ND	0.2 mg/L		09/11/96
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L		09/11/96
Bromoform	75-25-2	ND	0.5 ug/L		09/11/96
Bromomethane	74-83-9	ND	2 ug/L		09/11/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L		09/11/96
Chlorobenzene	108-90-7	ND	0.5 ug/L		09/11/96
Chloroethane	75-00-3	ND	2 ug/L		09/11/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L		09/11/96
Chloroform	67-66-3	ND	0.5 ug/L		09/11/96
Chloromethane	74-87-3	ND	2 ug/L		09/11/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L		09/11/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L		09/11/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L		09/11/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L		09/11/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L		09/11/96
1,1-Dichloroethane	75-34-3	3.1 *	0.5 ug/L		09/11/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L		09/11/96
1,1-Dichloroethene	75-35-4	99 *	0.5 ug/L		09/11/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L		09/11/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L		09/11/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L		09/11/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L		09/11/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L		09/11/96
Methylene Chloride	75-09-2	ND	2 ug/L		09/11/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L		09/11/96
Tetrachloroethene	127-18-4	3.1 *	0.5 ug/L		09/11/96
1,1,1-Trichloroethane	71-55-6	8.2 *	0.5 ug/L		09/11/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L		09/11/96
Trichloroethene	79-01-6	ND	0.5 ug/L		09/11/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L		09/11/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L		09/11/96
Vinyl Chloride	75-01-4	ND	2 ug/L		09/11/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: EX-3
 AEN LAB NO: 9609048-11
 AEN WORK ORDER: 9609048
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/05/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/11/96
TPH as Diesel	GC-FID	0.14 *	0.05	mg/L	09/11/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/11/96
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	3	ug/L	09/12/96
Bromoform	75-25-2	ND	3	ug/L	09/12/96
Bromomethane	74-83-9	ND	10	ug/L	09/12/96
Carbon Tetrachloride	56-23-5	ND	3	ug/L	09/12/96
Chlorobenzene	108-90-7	ND	3	ug/L	09/12/96
Chloroethane	75-00-3	ND	10	ug/L	09/12/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	3	ug/L	09/12/96
Chloroform	67-66-3	ND	3	ug/L	09/12/96
Chloromethane	74-87-3	ND	10	ug/L	09/12/96
Dibromochloromethane	124-48-1	ND	3	ug/L	09/12/96
1,2-Dichlorobenzene	95-50-1	ND	3	ug/L	09/12/96
1,3-Dichlorobenzene	541-73-1	ND	3	ug/L	09/12/96
1,4-Dichlorobenzene	106-46-7	ND	3	ug/L	09/12/96
Dichlorodifluoromethane	75-71-8	ND	10	ug/L	09/12/96
1,1-Dichloroethane	75-34-3	4 *	3	ug/L	09/12/96
1,2-Dichloroethane	107-06-2	ND	3	ug/L	09/12/96
1,1-Dichloroethene	75-35-4	140 *	3	ug/L	09/12/96
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	09/12/96
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	09/12/96
1,2-Dichloropropane	78-87-5	ND	3	ug/L	09/12/96
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	09/12/96
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	09/12/96
Methylene Chloride	75-09-2	ND	10	ug/L	09/12/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	09/12/96
Tetrachloroethene	127-18-4	29 *	3	ug/L	09/12/96
1,1,1-Trichloroethane	71-55-6	8 *	3	ug/L	09/12/96
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	09/12/96
Trichloroethene	79-01-6	ND	3	ug/L	09/12/96
Trichlorofluoromethane	75-69-4	ND	10	ug/L	09/12/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	3	ug/L	09/12/96
Vinyl Chloride	75-01-4	ND	10	ug/L	09/12/96

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LEVINE-FRICKE

SAMPLE ID: EX-3
AEN LAB NO: 9609048-11
AEN WORK ORDER: 9609048
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/05/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
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RLs elevated for EPA 8010 due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9609048

CLIENT PROJECT ID: 1649.96.02

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9609048
AEN LAB NO: 0910-BLANK
DATE EXTRACTED: 09/10/96
DATE ANALYZED: 09/10/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

Analyte	Result (mg/L)	Reporting Limit (mg/L)
Diesel Oil	ND	0.05
	ND	0.2

AEN LAB NO: 0911-BLANK
DATE EXTRACTED: 09/11/96
DATE ANALYZED: 09/11/96
INSTRUMENT: C

Method Blank

Analyte	Result (mg/L)	Reporting Limit (mg/L)
Diesel Oil	ND	0.05
	ND	0.2

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9609048
 DATE(S) EXTRACTED: 09/10/96; 09/11/96
 INSTRUMENT: C
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery
			n-Pentacosane
09/11/96	MW-1	01	84
09/11/96	MW-5	04	88
09/11/96	MW-4	05	94
09/11/96	MW-32R	07	89
09/11/96	MW-31R	08	91
09/11/96	EX-4	09	115
09/11/96	EXTR	10	105
09/11/96	EX-3	11	107
QC Limits:			65-125

DATE EXTRACTED: 09/09/96
 DATE ANALYZED: 09/10/96
 SAMPLE SPIKED: 9608315-10
 INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	QC Limits		
			RPD	Percent Recovery	RPD
Diesel	4.00	98	1	60-110	15

QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9609048
DATE ANALYZED: 09/10/96
AEN LAB NO: 0910-BLANK
INSTRUMENT: G
MATRIX: WATER

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	2
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	2
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	2
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	2
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-59-2	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	2
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	2
1,1,2-Trichloro-			
1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	2

QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9609048
 DATE ANALYZED: 09/11/96
 AEN LAB NO: 0911-BLANK
 INSTRUMENT: G
 MATRIX: WATER

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	2
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	2
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	2
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	2
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-59-2	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	2
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	2
1,1,2-Trichloro-			
1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	2

QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9609048
DATE ANALYZED: 09/12/96
AEN LAB NO: 0912-BLANK
INSTRUMENT: G
MATRIX: WATER

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	2
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	2
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	2
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	2
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-59-2	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	2
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	2
1,1,2-Trichloro-			
1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	2

QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9609048

INSTRUMENT: G

MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Bromochloro-methane	Percent Recovery	1-Bromo-3-chloro-propane
09/10/96	LF-23	02	99		87
09/10/96	LF-22	03	103		98
09/10/96	MW-5	04	105		101
09/10/96	MW-8	06	103		99
09/11/96	EX-4	09	106		99
09/11/96	EXTR	10	100		97
09/12/96	EX-3	11	105		105
QC Limits:			70-130		70-130

DATE ANALYZED: 09/10/96

SAMPLE SPIKED: 9608431-02

INSTRUMENT: G

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	Percent Recovery	RPD	QC Limits
1,1-Dichloroethene	50	95	4	37-156	20	
Trichloroethene	50	88	3	54-122	20	
Chlorobenzene	50	93	1	54-141	20	

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9609048
AEN LAB NO: 0910-BLANK
DATE ANALYZED: 09/10/96
INSTRUMENT: F
MATRIX: WATER

Method Blank

	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

LEVINE-FRICKE

SAMPLE ID: TRIP BLANK
 AEN LAB NO: 9609047-01
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L		09/10/96
Bromoform	75-25-2	ND	0.5 ug/L		09/10/96
Bromomethane	74-83-9	ND	2 ug/L		09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L		09/10/96
Chlorobenzene	108-90-7	ND	0.5 ug/L		09/10/96
Chloroethane	75-00-3	ND	2 ug/L		09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L		09/10/96
Chloroform	67-66-3	ND	0.5 ug/L		09/10/96
Chloromethane	74-87-3	ND	2 ug/L		09/10/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L		09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L		09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L		09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L		09/10/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L		09/10/96
1,1-Dichloroethane	75-34-3	ND	0.5 ug/L		09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L		09/10/96
1,1-Dichloroethene	75-35-4	ND	0.5 ug/L		09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L		09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L		09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L		09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L		09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L		09/10/96
Methylene Chloride	75-09-2	ND	2 ug/L		09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L		09/10/96
Tetrachloroethene	127-18-4	ND	0.5 ug/L		09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5 ug/L		09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L		09/10/96
Trichloroethene	79-01-6	ND	0.5 ug/L		09/10/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L		09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L		09/10/96
Vinyl Chloride	75-01-4	ND	2 ug/L		09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-7Z
 AEN LAB NO: 9609047-02
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L		09/10/96
Bromoform	75-25-2	ND	0.5 ug/L		09/10/96
Bromomethane	74-83-9	ND	2 ug/L		09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L		09/10/96
Chlorobenzene	108-90-7	ND	0.5 ug/L		09/10/96
Chloroethane	75-00-3	ND	2 ug/L		09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L		09/10/96
Chloroform	67-66-3	ND	0.5 ug/L		09/10/96
Chloromethane	74-87-3	ND	2 ug/L		09/10/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L		09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L		09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L		09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L		09/10/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L		09/10/96
1,1-Dichloroethane	75-34-3	ND	0.5 ug/L		09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L		09/10/96
1,1-Dichloroethene	75-35-4	ND	0.5 ug/L		09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L		09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L		09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L		09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L		09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L		09/10/96
Methylene Chloride	75-09-2	ND	2 ug/L		09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L		09/10/96
Tetrachloroethene	127-18-4	ND	0.5 ug/L		09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5 ug/L		09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L		09/10/96
Trichloroethene	79-01-6	ND	0.5 ug/L		09/10/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L		09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L		09/10/96
Vinyl Chloride	75-01-4	ND	2 ug/L		09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-7D
 AEN LAB NO: 9609047-03
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L	09/10/96	
Bromoform	75-25-2	ND	0.5 ug/L	09/10/96	
Bromomethane	74-83-9	ND	2 ug/L	09/10/96	
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L	09/10/96	
Chlorobenzene	108-90-7	ND	0.5 ug/L	09/10/96	
Chloroethane	75-00-3	ND	2 ug/L	09/10/96	
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L	09/10/96	
Chloroform	67-66-3	ND	0.5 ug/L	09/10/96	
Chloromethane	74-87-3	ND	2 ug/L	09/10/96	
Dibromochloromethane	124-48-1	ND	0.5 ug/L	09/10/96	
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L	09/10/96	
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L	09/10/96	
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L	09/10/96	
Dichlorodifluoromethane	75-71-8	ND	2 ug/L	09/10/96	
1,1-Dichloroethane	75-34-3	ND	0.5 ug/L	09/10/96	
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L	09/10/96	
1,1-Dichloroethene	75-35-4	1.0 *	0.5 ug/L	09/10/96	
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L	09/10/96	
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L	09/10/96	
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L	09/10/96	
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L	09/10/96	
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L	09/10/96	
Methylene Chloride	75-09-2	ND	2 ug/L	09/10/96	
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L	09/10/96	
Tetrachloroethene	127-18-4	ND	0.5 ug/L	09/10/96	
1,1,1-Trichloroethane	71-55-6	ND	0.5 ug/L	09/10/96	
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L	09/10/96	
Trichloroethene	79-01-6	ND	0.5 ug/L	09/10/96	
Trichlorofluoromethane	75-69-4	ND	2 ug/L	09/10/96	
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L	09/10/96	
Vinyl Chloride	75-01-4	ND	2 ug/L	09/10/96	

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-7
 AEN LAB NO: 9609047-04
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/10/96
TPH as Diesel	GC-FID	0.11 *	0.05	mg/L	09/10/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/10/96
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	3	ug/L	09/12/96
Bromoform	75-25-2	ND	3	ug/L	09/12/96
Bromomethane	74-83-9	ND	10	ug/L	09/12/96
Carbon Tetrachloride	56-23-5	ND	3	ug/L	09/12/96
Chlorobenzene	108-90-7	ND	3	ug/L	09/12/96
Chloroethane	75-00-3	ND	10	ug/L	09/12/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	3	ug/L	09/12/96
Chloroform	67-66-3	ND	3	ug/L	09/12/96
Chloromethane	74-87-3	ND	10	ug/L	09/12/96
Dibromochloromethane	124-48-1	ND	3	ug/L	09/12/96
1,2-Dichlorobenzene	95-50-1	ND	3	ug/L	09/12/96
1,3-Dichlorobenzene	541-73-1	ND	3	ug/L	09/12/96
1,4-Dichlorobenzene	106-46-7	ND	3	ug/L	09/12/96
Dichlorodifluoromethane	75-71-8	ND	10	ug/L	09/12/96
1,1-Dichloroethane	75-34-3	4 *	3	ug/L	09/12/96
1,2-Dichloroethane	107-06-2	ND	3	ug/L	09/12/96
1,1-Dichloroethene	75-35-4	290 *	3	ug/L	09/12/96
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	09/12/96
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	09/12/96
1,2-Dichloropropane	78-87-5	ND	3	ug/L	09/12/96
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	09/12/96
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	09/12/96
Methylene Chloride	75-09-2	ND	10	ug/L	09/12/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	09/12/96
Tetrachloroethene	127-18-4	ND	3	ug/L	09/12/96
1,1,1-Trichloroethane	71-55-6	21 *	3	ug/L	09/12/96
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	09/12/96
Trichloroethene	79-01-6	ND	3	ug/L	09/12/96
Trichlorofluoromethane	75-69-4	ND	10	ug/L	09/12/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	3	ug/L	09/12/96
Vinyl Chloride	75-01-4	ND	10	ug/L	09/12/96

LEVINE-FRICKE

SAMPLE ID: MW-7
AEN LAB NO: 9609047-04
AEN WORK ORDER: 9609047
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
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Reporting limits elevated for EPA 8010 due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-9D
 AEN LAB NO: 9609047-05
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L		09/10/96
Bromoform	75-25-2	ND	0.5 ug/L		09/10/96
Bromomethane	74-83-9	ND	2 ug/L		09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L		09/10/96
Chlorobenzene	108-90-7	ND	0.5 ug/L		09/10/96
Chloroethane	75-00-3	ND	2 ug/L		09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L		09/10/96
Chloroform	67-66-3	ND	0.5 ug/L		09/10/96
Chloromethane	74-87-3	ND	2 ug/L		09/10/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L		09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L		09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L		09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L		09/10/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L		09/10/96
1,1-Dichloroethane	75-34-3	ND	0.5 ug/L		09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L		09/10/96
1,1-Dichloroethene	75-35-4	ND	0.5 ug/L		09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L		09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L		09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L		09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L		09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L		09/10/96
Methylene Chloride	75-09-2	ND	2 ug/L		09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L		09/10/96
Tetrachloroethene	127-18-4	ND	0.5 ug/L		09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5 ug/L		09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L		09/10/96
Trichloroethene	79-01-6	ND	0.5 ug/L		09/10/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L		09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L		09/10/96
Vinyl Chloride	75-01-4	ND	2 ug/L		09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-9
 AEN LAB NO: 9609047-06
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L		09/10/96
Bromoform	75-25-2	ND	0.5 ug/L		09/10/96
Bromomethane	74-83-9	ND	2 ug/L		09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L		09/10/96
Chlorobenzene	108-90-7	ND	0.5 ug/L		09/10/96
Chloroethane	75-00-3	ND	2 ug/L		09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L		09/10/96
Chloroform	67-66-3	ND	0.5 ug/L		09/10/96
Chloromethane	74-87-3	ND	2 ug/L		09/10/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L		09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L		09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L		09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L		09/10/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L		09/10/96
1,1-Dichloroethane	75-34-3	3.0 *	0.5 ug/L		09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L		09/10/96
1,1-Dichloroethene	75-35-4	99 *	0.5 ug/L		09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L		09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L		09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L		09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L		09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L		09/10/96
Methylene Chloride	75-09-2	ND	2 ug/L		09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L		09/10/96
Tetrachloroethene	127-18-4	ND	0.5 ug/L		09/10/96
1,1,1-Trichloroethane	71-55-6	8.3 *	0.5 ug/L		09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L		09/10/96
Trichloroethene	79-01-6	ND	0.5 ug/L		09/10/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L		09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L		09/10/96
Vinyl Chloride	75-01-4	ND	2 ug/L		09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-9-FB
 AEN LAB NO: 9609047-07
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L		09/10/96
Bromoform	75-25-2	ND	0.5 ug/L		09/10/96
Bromomethane	74-83-9	ND	2 ug/L		09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L		09/10/96
Chlorobenzene	108-90-7	ND	0.5 ug/L		09/10/96
Chloroethane	75-00-3	ND	2 ug/L		09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L		09/10/96
Chloroform	67-66-3	ND	0.5 ug/L		09/10/96
Chloromethane	74-87-3	ND	2 ug/L		09/10/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L		09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L		09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L		09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L		09/10/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L		09/10/96
1,1-Dichloroethane	75-34-3	ND	0.5 ug/L		09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L		09/10/96
1,1-Dichloroethene	75-35-4	ND	0.5 ug/L		09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L		09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L		09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L		09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L		09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L		09/10/96
Methylene Chloride	75-09-2	ND	2 ug/L		09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L		09/10/96
Tetrachloroethene	127-18-4	ND	0.5 ug/L		09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5 ug/L		09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L		09/10/96
Trichloroethene	79-01-6	ND	0.5 ug/L		09/10/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L		09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L		09/10/96
Vinyl Chloride	75-01-4	ND	2 ug/L		09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-109
 AEN LAB NO: 9609047-08
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/03/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L		09/10/96
Bromoform	75-25-2	ND	0.5 ug/L		09/10/96
Bromomethane	74-83-9	ND	2 ug/L		09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L		09/10/96
Chlorobenzene	108-90-7	ND	0.5 ug/L		09/10/96
Chloroethane	75-00-3	ND	2 ug/L		09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L		09/10/96
Chloroform	67-66-3	ND	0.5 ug/L		09/10/96
Chloromethane	74-87-3	ND	2 ug/L		09/10/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L		09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L		09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L		09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L		09/10/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L		09/10/96
1,1-Dichloroethane	75-34-3	2.6 *	0.5 ug/L		09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L		09/10/96
1,1-Dichloroethene	75-35-4	97 *	0.5 ug/L		09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L		09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L		09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L		09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L		09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L		09/10/96
Methylene Chloride	75-09-2	ND	2 ug/L		09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L		09/10/96
Tetrachloroethene	127-18-4	ND	0.5 ug/L		09/10/96
1,1,1-Trichloroethane	71-55-6	7.8 *	0.5 ug/L		09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L		09/10/96
Trichloroethene	79-01-6	ND	0.5 ug/L		09/10/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L		09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L		09/10/96
Vinyl Chloride	75-01-4	ND	2 ug/L		09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-6D
 AEN LAB NO: 9609047-09
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5 ug/L		09/10/96
Bromoform	75-25-2	ND	0.5 ug/L		09/10/96
Bromomethane	74-83-9	ND	2 ug/L		09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5 ug/L		09/10/96
Chlorobenzene	108-90-7	ND	0.5 ug/L		09/10/96
Chloroethane	75-00-3	ND	2 ug/L		09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5 ug/L		09/10/96
Chloroform	67-66-3	ND	0.5 ug/L		09/10/96
Chloromethane	74-87-3	ND	2 ug/L		09/10/96
Dibromochloromethane	124-48-1	ND	0.5 ug/L		09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5 ug/L		09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5 ug/L		09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5 ug/L		09/10/96
Dichlorodifluoromethane	75-71-8	ND	2 ug/L		09/10/96
1,1-Dichloroethane	75-34-3	ND	0.5 ug/L		09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5 ug/L		09/10/96
1,1-Dichloroethene	75-35-4	ND	0.5 ug/L		09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5 ug/L		09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5 ug/L		09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5 ug/L		09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5 ug/L		09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5 ug/L		09/10/96
Methylene Chloride	75-09-2	ND	2 ug/L		09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5 ug/L		09/10/96
Tetrachloroethene	127-18-4	ND	0.5 ug/L		09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5 ug/L		09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5 ug/L		09/10/96
Trichloroethene	79-01-6	ND	0.5 ug/L		09/10/96
Trichlorofluoromethane	75-69-4	ND	2 ug/L		09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5 ug/L		09/10/96
Vinyl Chloride	75-01-4	ND	2 ug/L		09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-6
 AEN LAB NO: 9609047-10
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/10/96
TPH as Diesel	GC-FID	0.17 *	0.05	mg/L	09/10/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/10/96
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	3	ug/L	09/12/96
Bromoform	75-25-2	ND	3	ug/L	09/12/96
Bromomethane	74-83-9	ND	10	ug/L	09/12/96
Carbon Tetrachloride	56-23-5	ND	3	ug/L	09/12/96
Chlorobenzene	108-90-7	ND	3	ug/L	09/12/96
Chloroethane	75-00-3	ND	10	ug/L	09/12/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	3	ug/L	09/12/96
Chloroform	67-66-3	ND	3	ug/L	09/12/96
Chloromethane	74-87-3	ND	10	ug/L	09/12/96
Dibromochloromethane	124-48-1	ND	3	ug/L	09/12/96
1,2-Dichlorobenzene	95-50-1	ND	3	ug/L	09/12/96
1,3-Dichlorobenzene	541-73-1	ND	3	ug/L	09/12/96
1,4-Dichlorobenzene	106-46-7	ND	3	ug/L	09/12/96
Dichlorodifluoromethane	75-71-8	ND	10	ug/L	09/12/96
1,1-Dichloroethane	75-34-3	5 *	3	ug/L	09/12/96
1,2-Dichloroethane	107-06-2	ND	3	ug/L	09/12/96
1,1-Dichloroethene	75-35-4	330 *	3	ug/L	09/12/96
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	09/12/96
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	09/12/96
1,2-Dichloropropane	78-87-5	ND	3	ug/L	09/12/96
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	09/12/96
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	09/12/96
Methylene Chloride	75-09-2	ND	10	ug/L	09/12/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	09/12/96
Tetrachloroethene	127-18-4	ND	3	ug/L	09/12/96
1,1,1-Trichloroethane	71-55-6	33 *	3	ug/L	09/12/96
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	09/12/96
Trichloroethene	79-01-6	ND	3	ug/L	09/12/96
Trichlorofluoromethane	75-69-4	ND	10	ug/L	09/12/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	3	ug/L	09/12/96
Vinyl Chloride	75-01-4	ND	10	ug/L	09/12/96

LEVINE-FRICKE

SAMPLE ID: MW-6
AEN LAB NO: 9609047-10
AEN WORK ORDER: 9609047
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
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Reporting limits elevated for EPA 8010 due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-3
 AEN LAB NO: 9609047-11
 AEN WORK ORDER: 9609047
 CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
 DATE RECEIVED: 09/06/96
 REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	09/10/96
TPH as Diesel	GC-FID	0.11 *	0.05	mg/L	09/11/96
TPH as Oil	GC-FID	ND	0.2	mg/L	09/11/96
EPA 8010 - Water matrix	EPA 8010				
Bromodichloromethane	75-27-4	ND	0.5	ug/L	09/10/96
Bromoform	75-25-2	ND	0.5	ug/L	09/10/96
Bromomethane	74-83-9	ND	2	ug/L	09/10/96
Carbon Tetrachloride	56-23-5	ND	0.5	ug/L	09/10/96
Chlorobenzene	108-90-7	ND	0.5	ug/L	09/10/96
Chloroethane	75-00-3	ND	2	ug/L	09/10/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5	ug/L	09/10/96
Chloroform	67-66-3	ND	0.5	ug/L	09/10/96
Chloromethane	74-87-3	ND	2	ug/L	09/10/96
Dibromochloromethane	124-48-1	ND	0.5	ug/L	09/10/96
1,2-Dichlorobenzene	95-50-1	ND	0.5	ug/L	09/10/96
1,3-Dichlorobenzene	541-73-1	ND	0.5	ug/L	09/10/96
1,4-Dichlorobenzene	106-46-7	ND	0.5	ug/L	09/10/96
Dichlorodifluoromethane	75-71-8	ND	2	ug/L	09/10/96
1,1-Dichloroethane	75-34-3	ND	0.5	ug/L	09/10/96
1,2-Dichloroethane	107-06-2	ND	0.5	ug/L	09/10/96
1,1-Dichloroethene	75-35-4	ND	0.5	ug/L	09/10/96
cis-1,2-Dichloroethene	156-59-2	ND	0.5	ug/L	09/10/96
trans-1,2-Dichloroethene	156-60-5	ND	0.5	ug/L	09/10/96
1,2-Dichloropropane	78-87-5	ND	0.5	ug/L	09/10/96
cis-1,3-Dichloropropene	10061-01-5	ND	0.5	ug/L	09/10/96
trans-1,3-Dichloropropene	10061-02-6	ND	0.5	ug/L	09/10/96
Methylene Chloride	75-09-2	ND	2	ug/L	09/10/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5	ug/L	09/10/96
Tetrachloroethene	127-18-4	ND	0.5	ug/L	09/10/96
1,1,1-Trichloroethane	71-55-6	ND	0.5	ug/L	09/10/96
1,1,2-Trichloroethane	79-00-5	ND	0.5	ug/L	09/10/96
Trichloroethene	79-01-6	ND	0.5	ug/L	09/10/96
Trichlorofluoromethane	75-69-4	ND	2	ug/L	09/10/96
1,1,2-Trichlorotrifluoroethane	76-13-1	ND	0.5	ug/L	09/10/96
Vinyl Chloride	75-01-4	ND	2	ug/L	09/10/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

LEVINE-FRICKE

SAMPLE ID: MW-2
AEN LAB NO: 9609047-12
AEN WORK ORDER: 9609047
CLIENT PROJ. ID: 1649.96.02

DATE SAMPLED: 09/04/96
DATE RECEIVED: 09/06/96
REPORT DATE: 09/20/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	2.4 *	0.5	ug/L	09/10/96
Toluene	108-88-3	ND	0.5	ug/L	09/10/96
Ethylbenzene	100-41-4	18 *	0.5	ug/L	09/10/96
Xylenes, Total	1330-20-7	45 *	2	ug/L	09/10/96
Purgeable HCs as Gasoline	5030/GCFID	0.54 *	0.05	mg/L	09/10/96
#Extraction for TPH	EPA 3510	-		Extrn Date	09/10/96
TPH as Diesel	GC-FID	0.22 *	0.05	mg/L	09/11/96

ND = Not detected at or above the reporting limit

* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9609047

CLIENT PROJECT ID: 1649.96.02

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9609047
AEN LAB NO: 0910-BLANK
DATE EXTRACTED: 09/10/96
DATE ANALYZED: 09/10/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

Analyte	Result (mg/L)	Reporting Limit (mg/L)
Diesel Oil	ND ND	0.05 0.2

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9609047
 DATE EXTRACTED: 09/10/96
 INSTRUMENT: C
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery
		n-Pentacosane	
09/10/96	MW-7	04	84
09/10/96	MW-6	10	86
09/11/96	MW-3	11	86
09/11/96	MW-2	12	89
QC Limits:			65-125

DATE EXTRACTED: 09/09/96
 DATE ANALYZED: 09/10/96
 SAMPLE SPIKED: 9608315-10
 INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits	Percent Recovery	RPD
Diesel	4.00	98	1	60-110	15	

QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9609047
DATE ANALYZED: 09/10/96
AEN LAB NO: 0910-BLANK
INSTRUMENT: G
MATRIX: WATER

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	2
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	2
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	2
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	2
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-59-2	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	2
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	2
1,1,2-Trichloro- 1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	2

QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9609047
 DATE ANALYZED: 09/12/96
 AEN LAB NO: 0912-BLANK
 INSTRUMENT: G
 MATRIX: WATER

Method Blank

Analyte	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Bromodichloromethane	75-27-4	ND	0.5
Bromoform	75-25-2	ND	0.5
Bromomethane	74-83-9	ND	2
Carbon Tetrachloride	56-23-5	ND	0.5
Chlorobenzene	108-90-7	ND	0.5
Chloroethane	75-00-3	ND	2
2-Chloroethyl Vinyl Ether	110-75-8	ND	0.5
Chloroform	67-66-3	ND	0.5
Chloromethane	74-87-3	ND	2
Dibromochloromethane	124-48-1	ND	0.5
1,2-Dichlorobenzene	95-50-1	ND	0.5
1,3-Dichlorobenzene	541-73-1	ND	0.5
1,4-Dichlorobenzene	106-46-7	ND	0.5
Dichlorodifluoromethane	75-71-8	ND	2
1,1-Dichloroethane	75-34-3	ND	0.5
1,2-Dichloroethane	107-06-2	ND	0.5
1,1-Dichloroethene	75-35-4	ND	0.5
cis-1,2-Dichloroethene	156-59-2	ND	0.5
trans-1,2-Dichloroethene	156-60-5	ND	0.5
1,2-Dichloropropane	78-87-5	ND	0.5
cis-1,3-Dichloropropene	10061-01-5	ND	0.5
trans-1,3-Dichloropropene	10061-02-6	ND	0.5
Methylene Chloride	75-09-2	ND	2
1,1,2,2-Tetrachloroethane	79-34-5	ND	0.5
Tetrachloroethene	127-18-4	ND	0.5
1,1,1-Trichloroethane	71-55-6	ND	0.5
1,1,2-Trichloroethane	79-00-5	ND	0.5
Trichloroethene	79-01-6	ND	0.5
Trichlorofluoromethane	75-69-4	ND	2
1,1,2-Trichloro-			
1,2,2-trifluoroethane	76-13-1	ND	0.5
Vinyl Chloride	75-01-4	ND	2

QUALITY CONTROL DATA

METHOD: EPA 8010

AEN JOB NO: 9609047
 INSTRUMENT: G
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Bromochloro-methane	Percent Recovery	1-Bromo-3-chloro-propane
09/10/96	TRIP BLANK	01	99	95	
09/10/96	MW-7Z	02	93	94	
09/10/96	MW-7D	03	98	94	
09/12/96	MW-7	04	98	96	
09/10/96	MW-9D	05	93	90	
09/10/96	MW-9	06	96	93	
09/10/96	MW-9-FB	07	100	96	
09/10/96	MW-109	08	87	94	
09/10/96	MW-6D	09	98	96	
09/12/96	MW-6	10	103	99	
09/10/96	MW-3	11	97	97	
QC Limits:			70-130		70-130

DATE ANALYZED: 09/04/96
 SAMPLE SPIKED: 9608381-17
 INSTRUMENT: G

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
1,1-Dichloroethene	50	92	5	37-156	20
Trichloroethene	50	85	4	54-122	20
Chlorobenzene	50	90	2	54-141	20

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9609047
AEN LAB NO: 0910-BLANK
DATE ANALYZED: 09/10/96
INSTRUMENT: F
MATRIX: WATER

Method Blank

	CAS #	Result (ug/L)	Reporting Limit (ug/L)
Benzene	71-43-2	ND	0.5
Toluene	108-88-3	ND	0.5
Ethylbenzene	100-41-4	ND	0.5
Xylenes, Total	1330-20-7	ND	2
HCs as Gasoline		ND mg/L	0.05 mg/L

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9609047

INSTRUMENT: F

MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
09/10/96	MW-2	12	83
QC Limits:			70-130

DATE ANALYZED: 09/09/96

SAMPLE SPIKED: 9609008-06

INSTRUMENT: F

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	RPD
Benzene	18.6	92	1	85-109	17
Toluene	61.4	102	1	87-111	16
Hydrocarbons as Gasoline	500	93	<1	66-117	19

END OF REPORT

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9609047

Project No.: 1649, 96-02		Field Logbook No.:			Date: 9-5-96		Serial No.: No 17619						
Project Name: East Bay Bridge		Project Location: Emeryville											
Sampler (Signature): Jeff M. Rodger		ANALYSES					Samplers: JMR JCK						
SAMPLES													
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 8010	TPH J	TPH S	TPH G	BTEX	HOLD	RUSH	REMARKS
Trip Blank	9-3-96	14:00	01AB	2	H ₂ O	X							STD TAT
MW-7Z	1	13:45	02ABC	3		X							
MW-7D		14:20	03ABC	3		X							Results to Ron
MW-7		14:50	04A-E	5		X	X	X					Colorboxed
MW-9D		15:45	05A-C	3		X							
MW-9		16:10	06A-C	3		X							
MW-9-FB		15:55	07A-C	3		X							
MW-109	V	17:10	08A-C	3		X							
MW-6D	9-4-96	9:20	09A-C	3		X							
MW-6		9:30	10A-E	5		X	X	X					
MW-3		10:15	11A-E	5		X	X	X					
MW-2		10:40	12A-E	5			X		X	X			
MW-1		11:20	13A-E	5			X	X	X	X			
LF-23		12:50	14A-E	3		X							
LF-22		13:25	15A-E	3		X							
MW-5	V	14:25	16A-E	5		V	X	X	X				
RELINQUISHED BY: (Signature)	Jeff M. Rodger		DATE	TIME	RECEIVED BY: (Signature)	Michael E. Schelle		DATE	TIME				
RELINQUISHED BY: (Signature)	Michael E. Schelle		9-5-96	14:00	RECEIVED BY: (Signature)	Donald C. Jensen		9-6-96	10:35				
RELINQUISHED BY: (Signature)			DATE	TIME	RECEIVED BY: (Signature)			DATE	TIME				
METHOD OF SHIPMENT:				DATE	TIME	LAB COMMENTS:							
Sample Collector:		LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500				Analytical Laboratory: AEN							

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Lab Copy (Green)

File Copy (Yellow)

Field Copy (Pink)

FORM NO. 86/OC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9609047

Project No.: 1649.96.02		Field Logbook No.:			Date: 9-5-96	Serial No.: NO 17620
Project Name: East Bay Bridge		Project Location: Emeryville				
Sampler (Signature): Jeff M. Rohr		ANALYSES			Samplers: JMR JCR	
SAMPLES						
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	REMARKS
MW-4	9-4-96	14:40		2	H ₂ O	X X
MW-8	✓	15:05		3	X	STD TAT
MW-32R	9-5-96	12:35		2		X X
MW-31R		13:05		2		X X
EX-4		13:20		5	X X X	
EXTR		13:30	6	5	X X X	
EX-3	✓	13:40	7	5	V X X X	
Results to Ron Goldsbow						
RELINQUISHED BY (Signature)	DATE 9-5-96		TIME	RECEIVED BY: (Signature)	DATE 9/6/96 TIME 10:35	
RELINQUISHED BY (Signature)	DATE 9/6/96 TIME 14:00		RECEIVED BY: (Signature)	DATE 9/6/96 TIME 14:00		
RELINQUISHED BY: (Signature)	DATE		TIME	RECEIVED BY: (Signature)	DATE	
METHOD OF SHIPMENT:		DATE	TIME	LAB COMMENTS:		
Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500				Analytical Laboratory: FEN		