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**Report of Semiannual Ground-Water Monitoring  
For the Period from  
July 1 through December 31, 1992  
The Sherwin-Williams Plant  
Emeryville, California**

**May 17, 1993  
1563.00-06**

**Prepared for  
The Sherwin-Williams Company  
1450 Sherwin Avenue  
Emeryville, California**



**LEVINE·FRICKE**



# LEVINE•FRICKE

ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

May 17, 1993

LF 1563.00-06

Mr. Lester Feldman  
Regional Water Quality Control Board  
2101 Webster Street, Suite 500  
Oakland, California 94612

Subject: Report of Semiannual Ground-Water Monitoring for  
the Period from July 1 through December 31, 1992  
The Sherwin-Williams Plant  
Emeryville, California

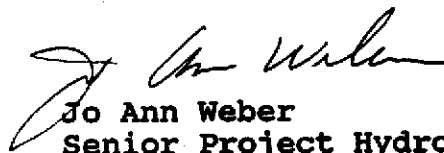
Dear Mr. Feldman:

The enclosed report presents the results of the semiannual ground-water monitoring program conducted in December 1992 for the Sherwin-Williams plant in Emeryville, California.

The semiannual monitoring program included measuring ground-water elevations and collecting and analyzing ground-water samples for volatile organic compounds using EPA Method 8240, total petroleum hydrocarbon compounds as diesel using EPA Method 3510, total petroleum hydrocarbon compounds as gasoline using EPA Method 5030, and inorganic compounds as eight metals (arsenic, barium, cadmium, total chromium, lead, mercury, selenium, and silver) using EPA Method 200/6000/7000 Series.

Please call me or Mark D. Knox, P.E., if you have any questions.

Sincerely,



Jo Ann Weber  
Senior Project Hydrogeologist

Enclosure

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**CERTIFICATION**

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



Donald T. Bradshaw  
Senior Associate Hydrogeologist  
California Registered Geologist (5300)

5/12/93

Date

May 17, 1993

LF 1563.00-06

**REPORT OF SEMIANNUAL GROUND-WATER MONITORING  
FOR THE PERIOD FROM JULY 1 THROUGH DECEMBER 31, 1992  
THE SHERWIN-WILLIAMS PLANT, EMERYVILLE, CALIFORNIA**

**1.0 INTRODUCTION AND SCOPE**

This semiannual ground-water monitoring report for the period from July 1 through December 31, 1992 has been prepared for submittal to the Regional Water Quality Control Board (RWQCB) as part of a continuing environmental investigation undertaken by The Sherwin-Williams Company for its manufacturing facility located at 1450 Sherwin Avenue, Emeryville, California ("the Site"; Figures 1 and 2). This work was conducted in accordance with the Sherwin-Williams Company's Self-Monitoring Plan for 1992-1993 (Levine·Fricke, 1992b).

The semiannual monitoring program for the period from July 1 through December 31, 1992 was conducted in December 1992. The program included measuring ground-water elevations and collecting samples for laboratory analysis from selected on-site and off-site perimeter monitoring wells.

The following activities were conducted for the 1992 semiannual monitoring event:

- Ground-water levels were measured in on-site and off-site monitoring wells (LF-1, LF-3, LF-4, LF-5, LF-7 through LF-16, LF-B1, LF-B3, and LF-B4) and in Temescal Creek.
- Ground-water samples were collected from 12 A-zone monitoring wells located in on-site perimeter and off-site perimeter areas (LF-8 through LF-16 and three B-zone monitoring wells [LF-B1, LF-B3, and LF-B4]).
- Ground-water samples were analyzed for volatile organic compounds (VOCs) using EPA Method 8240, for total petroleum hydrocarbons as diesel (TPHd) using EPA Extraction Method 3510, for total petroleum hydrocarbons as gasoline (TPHg) using EPA Extraction Method 5030, and for inorganic compounds as eight metals (arsenic, barium, cadmium, total chromium, lead, mercury, selenium, and silver) using EPA Method 200/6000/7000 Series.

Data were collected and are reported in accordance with the guidelines set forth in the Quality Assurance Project Plan



# LEVINE·FRICKE

(QAPP) prepared for this project by Levine·Fricke (Levine·Fricke, 1990a).

## 2.0 GROUND-WATER ELEVATIONS AND FLOW DIRECTIONS

Ground-water elevations were measured in A-zone monitoring wells LF-1, LF-3, LF-4, LF-5, and LF-7 through LF-16, and in B-zone monitoring wells LF-B1, LF-B3, and LF-B4 (Table 1) on December 30, 1992. The surface-water elevation of Temescal Creek was also measured on December 30, 1992. Ground-water elevation data were not collected for A-zone wells LF-2 or LF-6 and B-zone well LF-B2. In December, product thickness measurements were collected for well LF-2, but a depth to water measurement was inadvertently not recorded. Also in December, well LF-B2 was covered by surface water from the recent rainfall and was inaccessible. A-zone monitoring well LF-6 was abandoned by sealing it with cement bentonite grout on August 2, 1990 (Levine·Fricke, 1990b).

Ground-water elevations and directions of ground-water flow in the A zone and the B zone are illustrated in Figures 3 and 4, respectively. As shown in Figure 3, ground-water flow in the A zone is generally to the northwest. Ground-water flow in the B zone is also to the northwest. This is consistent with ground-water flow directions previously reported for the Site.

## 3.0 GROUND-WATER QUALITY SAMPLING

Levine·Fricke personnel collected ground-water samples for chemical analysis on December 30 and December 31, 1992, from A-zone monitoring wells LF-8 through LF-16, and from B-zone monitoring wells LF-B1, LF-B3, and LF-B4. No samples were collected from well LF-B2, since it was inaccessible, as described in Section 2.0.

Wells were generally sampled based on historical data in the order of increasing concentration of arsenic. Sampling order was controlled to minimize the potential for laboratory cross contamination of analyzed samples, particularly for arsenic.

A minimum of 3 well volumes of water was purged from each well before sampling. The wells were purged either by pumping with a centrifugal pump or by hand bailing with a disposable polyethylene bailer. Wells that recovered slowly were purged dry and were allowed to recover to 80 percent of the initial well volume before they were sampled. The hoses attached to the centrifugal pump were steam cleaned before each use. The

evacuated water was pumped into a 55-gallon drum and then transferred to a holding tank located in an on-site area, pending approved disposal. Field measurements of temperature, pH, and specific conductance of the evacuated water were recorded during purging; monitoring wells were sampled after these parameters had stabilized.

After each well had been purged, ground-water samples were collected for laboratory analysis using a new disposable polyethylene bailer for each well. Water samples for metals analysis were collected in plastic bottles without preservative and were filtered in the laboratory using 0.45-micron filters. All samples for chemical analysis were analyzed by Anametrix Laboratory of San Jose, California, a state-certified laboratory, according to EPA Method protocols.

Laboratory certificates are included in Appendix A. A review of the quality of the reported data is included in the quality assurance/quality control (QA/QC) discussion in Appendix B.

#### **4.0 GROUND-WATER QUALITY ANALYSIS RESULTS**

##### **4.1 A-Zone Water-Quality Results**

Analytical results for samples collected from A-zone wells are presented in Table 2 for VOCs, Table 3 for TPHd, Table 4 for TPHg, and Table 5 for inorganic compounds. Graphic illustrations of chemical concentrations detected in A-zone wells are presented in Figure 5 for VOCs, Figure 6 for TPHd, Figure 7 for TPHg, and Figure 8 for inorganic compounds.

##### **4.1.1 Volatile Organic Compounds**

VOC results in sampled ground-water monitoring wells were below the reported laboratory detection limits, with the exception of the detection of 0.005 parts per million (ppm) chlorobenzene and 0.007 ppm ethylbenzene in well LF-9.

##### **4.1.2 Total Petroleum Hydrocarbons as Diesel**

Relatively low hydrocarbon concentrations (less than 0.6 ppm) measured as TPHd were detected in ground-water samples from wells LF-8 through LF-11 and LF-14 (see Table 3, Figure 6, and Appendix A). Concentrations of TPHd for wells LF-12, LF-13, LF-15, and LF-16 did not exceed the detection limit of 0.050 ppm.

#### 4.1.3 Total Petroleum Hydrocarbons as Gasoline

Relatively low hydrocarbon concentrations (less than 0.6 ppm) measured as TPHg were detected in ground-water samples from wells LF-8 through LF-11, LF-14, and LF-16 (see Table 4, Figure 7, and Appendix A). Concentrations of TPHg for wells LF-12, LF-13, and LF-15 did not exceed the detection limit of 0.050 ppm.

#### 4.1.4 Inorganic Compounds

The only metal detected in ground-water samples from monitoring wells LF-8 through LF-12 and LF-14 was arsenic, which ranged in concentration from 0.014 ppm (well LF-12) to 0.552 ppm (well LF-10). Additionally, a relatively low concentration (less than 0.2 ppm) of barium was detected in monitoring well LF-8 (Table 5).

### 4.2 B-Zone Water-Quality Results

Analytical results for samples collected from B-zone wells are presented in Table 2 for VOCs, Table 3 for TPHd, Table 4 for TPHg, and Table 5 for inorganic compounds. Graphic illustrations of chemical concentrations detected in B-zone wells are presented in Figure 6 for TPHd, Figure 7 for TPHg, Figure 9 for VOCs, and Figure 10 for inorganic compounds.

#### 4.2.1 Volatile Organic Compounds

VOC results for B-zone monitoring wells (LF-B1, LF-B3, and LF-B4) indicated 1,2-dichloroethane (1,2-DCA) concentrations of 0.140 ppm in samples from well LF-B1 and 0.110 ppm in samples from well LF-B3.

#### 4.2.2 Total Petroleum Hydrocarbons as Diesel

The results of TPHd analysis of ground-water samples collected from B-zone monitoring wells (LF-B1, LF-B3, and LF-B4) were less than the detection limit of 0.050 ppm (Table 3, Figure 6, and Appendix A).

#### 4.2.3 Total Petroleum Hydrocarbons as Gasoline

The results of TPHg analysis of ground-water samples collected from B-zone monitoring wells indicated relatively low TPHg concentrations (less than 0.3 ppm) in wells LF-B1, LF-B3, and LF-B4 (see Table 4, Figure 7, and Appendix A).

**4.2.4 Inorganic Compounds**

Of the metals analyzed, only barium was detected in ground-water samples from wells LF-B4 (0.110 ppm) and LF-B3 (0.112 ppm). The results for all other analyzed metals in B-zone wells were below detection limits, which ranged from 0.0002 ppm to 0.040 ppm (see Table 5, Figure 10, and Appendix A).

**5.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROCEDURES AND RESULTS**

QA and QC measures were implemented for the purpose of maintaining data quality and minimizing the potential for field and/or laboratory cross contamination of samples. QA/QC procedures included collecting trip blank and bailer rinsate blank samples, controlling sampling order, using disposable bailers, and daily steam cleaning of pump hoses before and after use.

The results for the QA/QC samples are reported in Appendix B and in Table B-1. These results indicate that the QA/QC controls were effective in eliminating field and/or laboratory cross contamination of samples.

REFERENCES

- Levine-Fricke, Inc. 1990a. Quality Assurance Project Plan for Sherwin-Williams Plant, Emeryville, California. November 29 (unpublished report).
- . 1990b. Quarterly Report of Ground-Water Monitoring for the Period of July 1 through September 30, 1990, Sherwin-Williams Plant, Emeryville, California. November 29.
- . 1991. Report of Annual Ground-Water Monitoring, June through August 1991, The Sherwin-Williams Plant, Emeryville, California. November 7.
- . 1992a. Semiannual Ground-Water Monitoring Report, December 1991, The Sherwin-Williams Plant, Emeryville, California. March 19.
- . 1992b. Self-Monitoring Plan for 1992-1993: Annual and Semiannual Ground-Water Monitoring Program, The Sherwin-Williams Plant, Emeryville, California. May 18.
- . 1992c. Report of Annual Ground-Water Monitoring Conducted in July 1992, The Sherwin-Williams Plant, Emeryville, California. December 16.

TABLE 1

GROUND-WATER ELEVATION DATA  
DECEMBER 1992

Well Number	Date	Well Elevation (feet, msl)	Measured Depth to Ground Water (feet)	Ground-Water Elevation (feet, msl)
LF-1	Dec-30-92	16.92	8.22	8.70
LF-2	Dec-30-92	12.24	NM *	--
LF-3	Dec-30-92	11.98	4.08	7.90
LF-4	Dec-30-92	13.05	5.84	7.21
LF-5	Dec-30-92	10.25	1.96	8.29
LF-6	Sealed August 2, 1990			
LF-7	Dec-30-92	11.08	3.10	7.98
LF-8	Dec-30-92	12.75	5.85	6.90
LF-9	Dec-30-92	10.44	3.65	6.79
LF-10	Dec-30-92	10.32	2.70	7.62
LF-11	Dec-30-92	10.08	2.33	7.75
LF-12	Dec-30-92	14.97	6.26	8.71
LF-13	Dec-30-92	14.76	5.93	8.83
LF-14	Dec-30-92	10.03	4.38	5.65
LF-15	Dec-30-92	9.80	3.44	6.36
LF-16	Dec-30-92	10.10	3.46	6.64
LF-B1	Dec-30-92	17.11	9.54	7.57
LF-B2	Dec-30-92	9.72	NM **	9.72
LF-B3	Dec-30-92	10.35	3.03	7.32
LF-B4	Dec-30-92	14.54	6.17	8.37

## Notes:

msl = mean sea level

\* = The depth to water measurement was inadvertently not recorded;  
0.06 foot of produce was measured on top of the water table.\*\* = Well LF-B2 was covered with surface water and was not accessible  
at the time of measurement.

Well elevations for LF-B1, LF-B2, LF-B3, LF-B4, and LF-5 were resurveyed by Nolte Associates of San Jose, California, on August 6, 1991.

Surface-water elevation of Temescal Creek was 0.88 foot above mean sea level.

TABLE 2  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab		Acetone	Benzene	Ethyl-Benzene	Methyl		2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
		Lab	I.D. Number				Ethyl-Ketone	Total Xylenes									
LF-1	01-Jun-89	B&C	89060194	30.000	<0.200	0.900	20.000	3.600	15.000	6.000	<0.200	<0.200	<0.200	<0.200	<0.200	75.500	
LF-1	07-Dec-89	B&C	12-212-1	<0.010	<0.001	<0.001	<0.020	0.040	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	0.042	
LF-1	20-Jul-90	B&C	07-506-7	0.450	0.002	<0.001	0.200	0.160	<0.001	0.018	<0.001	<0.001	0.005	0.004	<0.001	0.840	#2
LF-1	21-Jun-91	ANA	9106274-08	<0.020	<0.005	0.019	<0.020	0.010	<0.010	<0.005	<0.005	<0.005	0.002	<0.005	<0.005	0.032	
LF-1	09-Jul-92	ANA	9207119-16	<0.020	<0.005	0.008	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	
LF-2	02-Jun-89	B&C	89060501	<0.050	0.015	0.015	<0.100	0.300	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.330	
LF-2	07-Dec-89	B&C	12-212-3	0.350	<0.020	<0.020	<0.400	0.840	<0.020	0.029	<0.020	<0.020	<0.020	<0.020	<0.020	1.219	
LF-2	20-Jul-90	B&C	07-506-5	<0.500	<0.050	0.066	8.800	0.910	12.000	0.051	<0.050	<0.050	<0.050	<0.050	0.050	21.827	
LF-3	02-Jun-89	B&C	89060502	<1.000	<0.100	2.500	<2.000	12.000	<0.100	17.000	<0.100	<0.100	<0.100	<0.100	<0.100	31.500	
LF-3	07-Dec-89	B&C	12-212-4	<5.000	<0.500	6.300	<10.000	32.000	<0.500	77.000	<0.500	<0.500	<0.500	<0.500	<0.500	115.300	
LF-3	20-Jul-90	B&C	07-506-6	10.000	0.110	5.000	7.700	22.000	1.900	52.000	<0.050	<0.050	<0.050	<0.050	<0.050	98.710	
LF-3	21-Jun-91	ANA	9106274-07	9.900	<1.000	7.500	8.200	44.000	<2.000	62.000	<1.000	<1.000	<1.000	<1.000	<1.000	131.600	
LF-3	09-Jul-92	ANA	9207119-13	<10.000	<2.500	8.900	<10.000	43.000	<5.000	92.000	<2.500	<2.500	<2.500	<2.500	<2.500	143.900	
DUP	09-Jul-92	ANA	9207119-14	<20.000	<5.000	8.800	<20.000	45.000	<10.000	100.000	<5.000	<5.000	<5.000	<5.000	<5.000	153.800	
LF-4	02-Jun-89	B&C	89060503	1.300	<0.200	1.300	4.700	3.800	0.260	<0.200	<0.020	<0.020	<0.020	<0.020	<0.020	11.360	
Dup	02-Jun-89	B&C	89060504	1.300	<0.200	1.700	4.700	4.100	0.280	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	12.080	
LF-4	06-Dec-89	B&C	12-174-1	<0.020	<0.020	0.200	<0.040	0.650	<0.002	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.850	
DUP	06-Dec-89	B&C	12-174-6	<0.050	<0.005	0.250	<0.100	0.750	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.000	
LF-4	20-Jul-90	B&C	07-506-3	<1.000	<1.000	<0.100	<2.000	0.380	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.380	
LF-4	21-Jun-91	ANA	9106274-02	0.079	0.039	0.058	<0.040	0.350	<0.020	0.007	<0.010	<0.010	<0.010	<0.010	0.005	0.556	
DUP	21-Jun-91	ANA	9106274-03	<0.040	0.040	0.140	<0.040	0.380	<0.020	0.008	<0.010	<0.010	<0.010	<0.010	0.006	0.594	#4
LF-4	09-Jul-92	ANA	9207119-10	<0.020	0.016	0.015	<0.020	0.069	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	0.008	0.108	
LF-5	01-Jun-89	B&C	89060192	220.000	<2.000	2.000	390.000	8.000	<2.000	300.000	<1.000	<1.000	<1.000	<2.000	<1.000	920.000	
LF-5	06-Dec-89	B&C	12-174-4	51.000	<1.000	<1.000	320.000	<1.000	<1.000	310.000	<1.000	<1.000	<1.000	<1.000	<1.000	681.000	
LF-5	20-Jul-90	B&C	07-506-2	<10.000	<1.000	1.100	170.000	2.600	6.700	170.000	<1.000	<1.000	<1.000	<1.000	<1.000	350.400	
LF-5	21-Jun-91	ANA	9108069-05	<20.000	<5.000	<5.000	<20.000	5.400	<10.000	>200.00	<5.000	<5.000	<5.000	<5.000	<5.000	5.400	

TABLE 2  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab		Acetone	Benzene	Ethyl-Benzene	Methyl		Total Xylenes	2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
		I.D. Number	Lab				Ethyl-Ketone	Total										
LF-5	09-Jul-92	ANA	9207119-11	<20.000	<5.000	<5.000	<20.000	<5.000	<10.000	150.000	<5.000	<5.000	<5.000	<5.000	<5.000	<5.000	150.000	
LF-6	01-Jun-89	B&C	89060193	280.000	<1.000	6.000	470.000	210.000	<1.000	22.000	<0.200	<0.200	<0.200	<1.000	<0.200	<1.000	988.000	
LF-6	05-Dec-89	B&C	12-128-3	64.000	<1.000	5.000	320.000	17.000	<1.000	59.000	<1.000	<1.000	<1.000	<1.000	<1.000	<1.000	465.000	
LF-6	20-Jul-90	B&C	07-506-4	200.000	<1.000	4.000	720.000	13.000	24.000	45.000	<1.000	<1.000	45.000	<1.000	<1.000	<1.000	1051.000	
LF-6	Sealed August 2, 1990																	
LF-7	01-Jun-89	B&C	89060191	<0.005	0.050	<0.005	<0.005	0.580	<0.005	0.270	<0.001	<0.001	<0.001	<0.005	<0.001	<0.001	0.900	
LF-7	06-Dec-89	B&C	12-174-3	<0.010	0.031	0.052	<0.020	0.150	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.007	0.243	
LF-7	19-Jul-90	B&C	07-485-4	<0.010	<0.001	0.007	<0.020	0.044	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.052	
LF-7	20-Jun-91	ANA	9106251-06	<0.020	0.061	0.045	<0.020	0.120	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.007	0.233	
LF-7	09-Jul-92	ANA	9207119-03	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
DUP	09-Jul-92	ANA	9207119-04	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-8	05-Dec-89	B&C	12-128-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	
LF-8	19-Jul-90	B&C	07-485-5	<0.010	<0.001	0.007	<0.020	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.010	
LF-8	21-Dec-90	B&C	12-529-3	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-8	20-Jun-91	ANA	9106251-07	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-8	09-Jul-92	ANA	9207119-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-8	30-Dec-92	ANA	9212380-09	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-9	05-Dec-89	B&C	12-128-1	<0.010	<0.001	0.022	<0.020	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	0.030	
LF-9	19-Jul-90	B&C	07-485-6	<0.010	<0.001	0.011	<0.020	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.017	
LF-9	21-Dec-90	B&C	12-529-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-9	21-Jun-91	ANA	9106274-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.006	0.006	
LF-9	09-Jul-92	ANA	9207119-09	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.005	
LF-9	30-Dec-92	ANA	9212380-10	<0.020	<0.005	0.007	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.005	<0.020	
LF-10	07-Dec-89	B&C	12-212-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-10	19-Jul-90	B&C	07-485-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	



TABLE 2  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240  
 (All concentrations expressed in parts per million (ppm))

Well Number	Date Sampled	Lab		Acetone	Benzene	Ethyl-Benzene	Methyl		2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
		Lab	I.D. Number				Ethyl-Ketone	Total Xylenes									
LF-10	19-Dec-90	B&C	12-529-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
DUP	19-Dec-90	B&C	12-529-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-10	21-Jun-91	ANA	9106274-06	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-10	21-Jun-91	ANA	9106274-06	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-10	09-Jul-92	ANA	9207119-12	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-10	31-Dec-92	ANA	9212395-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
DUP	31-Dec-92	ANA	9212395-06	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-11	05-Dec-89	B&C	12-128-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	
DUP	05-Dec-89	B&C	12-128-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.023	<0.001	<0.001	<0.001	<0.001	<0.001	0.000	
LF-11	19-Jul-90	B&C	07-485-3	0.015	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.016	
LF-11	21-Dec-90	B&C	12-529-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-11	21-Jun-91	ANA	9106069-03	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
DUP	21-Jun-91	ANA	9106251-04	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-11	09-Jul-92	ANA	9207119-06	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-11	31-Dec-92	ANA	9212395-03	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-12	06-Dec-89	B&C	12-174-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	
LF-12	18-Jul-90	B&C	07-444-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.002	<0.001	0.003	
LF-12	19-Dec-90	B&C	12-474-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.003	<0.001	0.005	
LF-12	19-Jun-91	ANA	9106245-04	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	0.002	<0.005	0.002	
LF-12	08-Jul-92	ANA	9207088-03	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-12	30-Dec-92	ANA	9212380-04	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-13	06-Dec-89	B&C	12-174-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	0.029	<0.001	<0.001	<0.001	<0.001	0.031	
LF-13	18-Jul-90	B&C	07-444-4	<0.010	<0.001	<0.001	<0.020	0.001	<0.001	0.002	0.056	<0.001	0.001	<0.001	<0.001	0.060	
LF-13	19-Dec-90	B&C	12-474-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	0.042	0.002	0.002	<0.001	<0.001	0.046	#3
LF-13	19-Jun-91	ANA	9106245-03	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	0.032	<0.005	<0.005	<0.005	<0.005	0.032	
LF-13	08-Jul-92	ANA	9207088-02	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	0.010	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-13	30-Dec-92	ANA	9212380-03	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	

TABLE 2  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab		Acetone	Benzene	Ethyl-Benzene	Methyl		2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
		Lab	I.D. Number				Ethyl-Ketone	Total Xylenes									
LF-14	04-Sep-90	B&C	07-444-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-14	21-Dec-90	B&C	12-505-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-14	20-Jun-91	ANA	9106251-08	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-14	09-Jul-92	ANA	9207119-07	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-14	31-Dec-92	ANA	9212395-04	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-15	04-Sep-90	B&C	07-444-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-15	21-Dec-90	B&C	12-505-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-15	20-Jun-91	ANA	9106251-09	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-15	08-Jul-92	ANA	9207088-09	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-15	30-Dec-92	ANA	9212380-08	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-16	04-Sep-90	B&C	07-444-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-16	20-Dec-90	B&C	12-505-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-16	20-Jun-91	ANA	9106251-10	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-16	09-Jul-92	ANA	9207119-01	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-16	30-Dec-92	ANA	9212380-07	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-B1	07-Dec-89	B&C	12-212-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.051	<0.001	<0.001	<0.001	0.051	
LF-B1	18-Jul-90	B&C	07-444-9	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.002	<0.001	0.170	0.001	<0.001	<0.001	0.171	
LF-B1	20-Dec-90	B&C	12-505-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.130	<0.001	<0.001	<0.001	0.130	
LF-B1	20-Jun-91	ANA	9106251-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.180	<0.005	<0.005	<0.005	0.180	
LF-B1	08-Jul-92	ANA	9207088-04	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.150	<0.005	<0.005	<0.005	0.150	
LF-B1	30-Dec-92	ANA	9212380-06	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.140	<0.005	<0.005	<0.005	0.140	
LF-B2	06-Dec-89	B&C	12-174-5	<0.010	<0.001	<0.001	<0.020	0.013	<0.001	<0.001	<0.001	0.007	<0.001	<0.001	<0.001	0.020	
LF-B2	18-Jul-90	B&C	07-444-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	0.007	<0.001	<0.001	<0.001	0.009	
DUP	18-Jul-90	B&C	07-444-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	0.007	<0.001	<0.001	<0.001	0.009	
LF-B2	19-Dec-90	B&C	12-474-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.004	0.002	<0.001	<0.001	0.006	

TABLE 2  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab		Acetone	Benzene	Methyl			2-Hexa- none	Toluene	1,1,1- TCA	1,2- DCA	PCE	TCE	Chloro- benzene	Total Quantified Conc.	Notes
		I.D. Lab	Number			Ethyl- Benzene	Ethyl Ketone	Total Xylenes									
LF-B2	20-Jun-91	ANA	9106251-04	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.150	<0.005	<0.005	<0.005	0.150	
LF-B2	08-Jul-92	ANA	9207088-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	0.006	
LF-B3	07-Dec-89	B&C	12-212-8	<0.010	<0.001	<0.001	<0.020	<0.001	0.001	<0.001	<0.001	0.100	<0.001	<0.001	<0.001	0.101	#1
DUP	07-Dec-89	B&C	12-212-10	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.073	<0.001	<0.001	<0.001	0.073	
LF-B3	18-Jul-90	B&C	07-444-8	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	0.086	<0.001	<0.001	<0.001	0.088	
LF-B3	20-Dec-90	B&C	12-505-3	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.084	<0.001	<0.001	<0.001	0.084	
LF-B3	19-Jun-91	ANA	9106245-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.110	<0.005	<0.005	<0.005	0.110	
LF-B3	08-Jul-92	ANA	9207088-08	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.110	<0.005	<0.005	<0.005	0.110	
LF-B3	30-Dec-92	ANA	9212380-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.110	<0.005	<0.005	<0.005	0.110	
LF-B4	18-Jul-90	B&C	07-444-3	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	0.001	<0.001	<0.001	<0.001	0.003	
LF-B4	19-Dec-90	B&C	12-474-3	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	
LF-B4	19-Jun-91	ANA	9106245-01	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-B4	08-Jul-92	ANA	9106245-01	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-B4	30-Dec-92	ANA	9212380-02	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
FIELD BLANKS & TRIP BLANKS																	
LF-1-FB	01-Jun-86	B&C	89060195	0.012	<0.001	<0.001	<0.020	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.016	
LF-1-FB	07-Dec-89	B&C	12-212-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B1-FB	07-Dec-89	B&C	12-212-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-13-FB	06-Dec-89	B&C	12-174-12	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
Trip Blank	07-Dec-89	B&C	12-212-9	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B4-TB	18-Jul-90	B&C	07-444-1	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B4-BB	18-Jul-90	B&C	07-444-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-11-TB	19-Jul-90	B&C	07-485-1	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-11-BB	19-Jul-90	B&C	07-485-1	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	

TABLE 2  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab		Acetone	Benzene	Ethyl-Benzene	Methyl Ethyl Ketone	Total Xylenes	2-Hexanone	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chlorobenzene	Total Quantified Conc.	Notes
		Lab	I.D. Number														
LF-B4-BR	19-Dec-90	B&C	12-474-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-8-TB	21-Dec-90	B&C	12-529-1	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-8-BR	21-Dec-90	B&C	12-529-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B3-BR	20-Dec-90	B&C	12-505-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B3-BR	19-Jun-91	ANA	9106245-6	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-11-BR	20-Jun-91	ANA	9106251-2	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-4-TB	24-Jun-91	ANA	9106274-1	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
Trip Blank	06-Aug-91	ANA	9108069-1	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-B3-TB	08-Jul-92	ANA	9207088-06	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-B3-BR	08-Jul-92	ANA	9207088-07	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-7-TB	09-Jul-92	ANA	9207119-02	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-9-BR	09-Jul-92	ANA	9207119-08	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-B4-TB	30-Dec-92	ANA	9212380-11	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-B4-BR	30-Dec-92	ANA	9212380-01	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-11-BR	31-Dec-92	ANA	9212395-02	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	
LF-10DUP	31-Dec-92	ANA	9212395-06	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.020	

Explanation of Symbols and Abbreviations used on Table 2:

# Signifies that there is a note of explanation for laboratory results.

B&C: Brown and Caldwell Laboratory, Emeryville, California.

ANA: Anametrix Laboratory of San Jose, California

DUP = Duplicate Sample

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

1,2-DCA = 1,2-Dichloroethane

PCE = Tetrachloroethene

TCE = Trichloroethene

NOTES:

- #1 LF-B3 6/02/89 - Vinyl Acetate reported at 0.001 ppm, Styrene reported at 0.001 ppm, and Methyl Isobutyl Ketone reported at 0.001 ppm.
- #2 LF-1 7/20/90 - cis-Dichloroethene reported at 0.001 ppm.
- #3 LF-13 12/19/90 - 1,1-Dichloroethane reported at 0.002 ppm.
- #4 LF-4 DUP 06/21/91 - cis-1,2-Dichloroethene reported at 0.020 ppm.

TABLE 3  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 TOTAL PETROLEUM HYDROCARBONS AS DIESEL  
 (Results reported in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. Number	Total Petroleum Hydrocarbons As Diesel	Notes
LF-1	21-Jun-91	ANA	9106274-08	<0.050	
LF-1	09-Jul-92	ANA	9207119-16	0.110	
LF-2	20-Jul-90	B&C	07-506-5		
LF-3	21-Jun-91	ANA	9106274-07	2.000	
LF-3	09-Jul-92	ANA	9207119-13	3.000	
DUP	09-Jul-92	ANA	9207119-14	3.300	
LF-4	21-Jun-91	ANA	9106274-02	0.780	
LF-4-D	21-Jun-91	ANA	9106274-03	0.510	
LF-4	09-Jul-92	ANA	9207119-10	1.200	
LF-5	06-Aug-91	ANA	9108069-05	4.700	
LF-5	09-Jul-92	ANA	9207119-11	0.830	
LF-7	20-Jun-91	ANA	9106251-06	<0.050	
LF-7	09-Jul-92	ANA	9207119-03	0.300	
DUP	09-Jul-92	ANA	9207119-04	0.480	
LF-8	20-Jun-91	ANA	9106251-07	<0.050	
LF-8	09-Jul-92	ANA	9207119-05	0.250	
LF-8	30-Dec-92	ANA	9212380-09	0.150	
LF-9	21-Jun-91	ANA	9106274-05	0.200	
LF-9	09-Jul-92	ANA	9207119-09	0.300	
LF-9	30-Dec-92	ANA	9212380-10	0.300	
LF-10	21-Jun-91	ANA	9106274-06	0.270	
LF-10	09-Jul-92	ANA	9207119-12	0.420	
LF-10	31-Dec-92	ANA	9212395-05	0.330	#1
DUP	31-Dec-92	ANA	9212395-06	0.370	#1
LF-11	19-Jul-90	B&C	07-485-3		
LF-11	20-Jun-91	ANA	9106251-03	0.130	
LF-11-D	20-Jun-91	ANA	9106251-04	0.120	
LF-11	09-Jul-92	ANA	9207119-06	0.260	
LF-11	31-Dec-92	ANA	9212395-03	0.310	#1
LF-12	19-Jun-91	ANA	9106245-04	<0.050	
LF-12	08-Jul-92	ANA	9207088-03	<0.050	
LF-12	30-Dec-92	ANA	9212380-04	<0.050	

TABLE 3  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 TOTAL PETROLEUM HYDROCARBONS AS DIESEL  
 (Results reported in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. Number	Total Petroleum Hydrocarbons As Diesel	Notes
LF-13	19-Jun-91	ANA	9106245-02	<0.050	
LF-13	08-Jul-92	ANA	9207088-02	<0.050	
LF-13	30-Dec-92	ANA	9212380-03	<0.050	
LF-14	20-Jun-91	ANA	9106251-08	<0.050	
LF-14	09-Jul-92	ANA	9207119-07	0.180	
LF-14	31-Dec-92	ANA	9212395-04	0.190	#1
LF-15	20-Jun-91	ANA	9106251-09	<0.050	
LF-15	08-Jul-92	ANA	9207088-09	<0.050	
LF-15	30-Dec-92	ANA	9212380-08	<0.050	
LF-16	20-Jun-91	ANA	9106251-10	<0.050	
LF-16	09-Jul-92	ANA	9207119-01	0.075	
LF-16	30-Dec-92	ANA	9212380-07	<0.050	
LF-B1	20-Jun-91	ANA	9106251-05	<0.050	
LF-B1	08-Jul-92	ANA	9207088-04	<0.050	
LF-B1	30-Dec-92	ANA	9212380-06	<0.050	
LF-B2	21-Jun-91	ANA	9106274-04	<0.050	
LF-B2	08-Jul-92	ANA	9207088-05	<0.050	
LF-B3	19-Jun-91	ANA	9106245-05	<0.050	
LF-B3	08-Jul-92	ANA	9207088-08	<0.050	
LF-B3	30-Dec-92	ANA	9212380-05	<0.050	
LF-B4	19-Jun-91	ANA	9106245-01	<0.050	
LF-B4	08-Jul-92	ANA	9106245-01	<0.050	
LF-B4	30-Dec-92	ANA	9212380-02	<0.050	

Notes:

B&C = BC Analytical Laboratory, Emeryville, California  
 ANA = Anametrix Laboratory, San Jose, California

Samples analyzed by B&C using Modified EPA Method 8015 for total fuel hydrocarbons.

Samples analyzed by Anametrix using EPA Method 3510 for total petroleum hydrocarbons as diesel.

#1 - The concentrations reported as diesel by Anametrix for samples LF-10, LF-10DUP, LF-11, and LF-14 are primarily caused by the presence of a heavier petroleum product, possibly motor oil.

TABLE 4  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
 (Results reported in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. Number	Total Petroleum Hydrocarbons As Gasoline	Notes
LF-1	09-Jul-92	ANA	9207119-16	<0.050	
LF-3	09-Jul-92	ANA	9207119-13	190.000	
DUP	09-Jul-92	ANA	9207119-14	180.000	
LF-4	09-Jul-92	ANA	9207119-10	14.000	
LF-5	09-Jul-92	ANA	9207119-11	69.000	
LF-7	09-Jul-92	ANA	9207119-03	0.140	
DUP	09-Jul-92	ANA	9207119-04	0.130	
LF-8	09-Jul-92	ANA	9207119-05	<0.050	
LF-8	30-Dec-92	ANA	9212380-09	0.120	#2
LF-9	09-Jul-92	ANA	9207119-09	0.620	
LF-9	30-Dec-92	ANA	9212380-10	0.510	#2
LF-10	09-Jul-92	ANA	9207119-12	0.700	
LF-10	31-Dec-92	ANA	9212395-05	0.190	
DUP	31-Dec-92	ANA	9212395-06	0.180	
LF-11	09-Jul-92	ANA	9207119-06	<0.050	
LF-11	31-Dec-92	ANA	9212395-03	0.058	
LF-12	08-Jul-92	ANA	9207088-03	<0.050	
LF-12	30-Dec-92	ANA	9212380-04	<0.050	
LF-13	08-Jul-92	ANA	9207088-02	<0.050	
LF-13	30-Dec-92	ANA	9212380-03	<0.050	
LF-14	09-Jul-92	ANA	9207119-07	<0.050	
LF-14	31-Dec-92	ANA	9212395-04	0.068	
LF-15	08-Jul-92	ANA	9207088-09	<0.050	
LF-15	30-Dec-92	ANA	9212380-08	<0.050	
LF-16	09-Jul-92	ANA	9207119-01	<0.050	
LF-16	30-Dec-92	ANA	9212380-07	0.050	
LF-B1	08-Jul-92	ANA	9207088-04	0.180	
LF-B1	30-Dec-92	ANA	9212380-06	0.200	#1
LF-B2	08-Jul-92	ANA	9207088-05	<0.050	



TABLE 4  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 TOTAL PETROLEUM HYDROCARBONS AS GASOLINE  
 (Results reported in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. Number	Total Petroleum Hydrocarbons As Gasoline	Notes
LF-B3	08-Jul-92	ANA	9207088-08	0.140	
LF-B3	30-Dec-92	ANA	9212380-05	0.150	#1
LF-B4	08-Jul-92	ANA	9106245-01	<0.050	
LF-B4	30-Dec-92	ANA	9212380-02	0.160	#1

Notes:

ANA = Anametrix Laboratory, San Jose, California

Samples analyzed by Anametrix using EPA Method 5030 for total petroleum hydrocarbons as gasoline.

#1 = The concentrations reported as gasoline by Anametrix for samples LF-B1, LF-B3, and LF-B4 are primarily caused by the presence of discrete hydrocarbon peak not indicative of gasoline.

#2 = The concentration reported by Anametrix as gasoline for sample LF-8 and LF-9 are primarily caused by the presence of a heavier petroleum

TABLE 5  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 INORGANIC COMPOUNDS  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-1	01-Jun-89	B&C	89060194	200/7000	200.000	NA	<0.0400	<0.300				
LF-1	07-Dec-89	B&C	12-212-1	200/7000	190.000	NA	<0.0400	<0.300				
LF-1	20-Jul-90	B&C	07-506-7	200/7000	120.000	0.060	<0.0500	<0.200				
LF-1	20-Jun-91	ANA	9106274-08	200/7000	58.000	NA	<0.005	<0.004				
LF-1	09-Jul-92	ANA	9207119-16	200/7000	53.200	<0.100	0.058	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-3	02-Jun-89	B&C	89060502	200/7000	27.000	NA	<0.0400	<0.300				
LF-3	07-Dec-89	B&C	12-212-2	200/7000	30.000	NA	<0.0400	<0.300				
LF-3	20-Jul-90	B&C	07-506-6	200/7000	21.000	0.420	<0.0500	<0.200				
LF-3	20-Jun-91	ANA	9106274-07	200/7000	60.400	NA	<0.005	<0.004				
LF-3	09-Jul-92	ANA	9207119-13	200/7000	70.800	0.473	0.0205	<0.040	<0.010	<0.00027	<0.005	<0.010
DUP	09-Jul-92	ANA	9207119-14	200/7000	66.600	0.452	0.0361	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-4	02-Jun-89	B&C	89060503	200/7000	0.530	NA	<0.0400	<0.300				
Duplicate	02-Jun-89	B&C	89060504	200/7000	0.580	NA	<0.0400	<0.300				
LF-4	06-Dec-89	B&C	12-174-1	200/7000	0.420	NA	<0.0400	<0.300				
Duplicate	06-Dec-89	B&C	12-174-6	200/7000	0.550	NA	<0.0400	<0.300				
LF-4	20-Jul-90	B&C	07-506-3	200/7000	0.190	0.160	<0.0500	<0.200				
LF-4	20-Jun-91	ANA	9106274-02	200/7000	0.510	NA	<0.005	0.015				
LF-4-DUP	20-Jun-91	ANA	9106274-03	200/7000	0.493	NA	<0.005	0.010				
LF-4	09-Jul-92	ANA	9207119-10	200/7000	0.367	0.119	<0.005	<0.040	<0.010	<0.00027	<0.025	<0.010
LF-5	01-Jun-89	B&C	89060192	200/7000	0.017	NA	<0.0400	<0.300				
LF-5	06-Dec-89	B&C	12-174-2	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-5	20-Jul-90	B&C	07-506-2	200/7000	0.020	0.170	<0.0500	<0.200				
LF-5	20-Jun-91	ANA	9108069-05	200/7000	0.038	NA	<0.005	0.003				
LF-5	09-Jul-92	ANA	9207119-11	200/7000	<0.010	0.111	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-6	01-Jun-89	B&C	89060193	200/7000	13.000	NA	0.0900	<0.300				
LF-6	05-Dec-89	B&C	12-128-3	200/7000	16.000	NA	0.0600	<0.300				
LF-6	20-Jul-90	B&C	07-506-4	200/7000	14.000	0.210	<0.0500	<0.200				

TABLE 5  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 INORGANIC COMPOUNDS  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-6	Sealed August 2, 1990											
LF-7	01-Jun-89	B&C	89060191	200/7000	0.008	NA	<0.0400	<0.300				
LF-7	06-Dec-89	B&C	12-174-3	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-7	19-Jul-90	B&C	07-485-4	200/7000	<0.002	0.060	<0.0500	<0.200				
LF-7	20-Jun-91	ANA	9106251-06	200/7000	0.012	NA	<0.005	<0.004				
LF-7	09-Jul-92	ANA	9207119-03	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
DUP	09-Jul-92	ANA	9207119-04	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-8	05-Dec-89	B&C	12-128-4	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-8	19-Jul-90	B&C	07-485-4	200/7000	<0.002	0.120	<0.0500	<0.200				
LF-8	21-Dec-90	B&C	12-529-3	200/7000	0.020	0.590	0.0015	<0.200				
LF-8	20-Jun-91	ANA	9106251-07	200/7000	0.021	NA	<0.005	<0.004				
LF-8	09-Jul-92	ANA	9207119-05	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-8	30-Dec-92	ANA	9212380-09	200/7000	0.029	0.177	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-9	05-Dec-89	B&C	12-128-1	200/7000	0.067	NA	<0.0400	<0.300				
LF-9	19-Jul-90	B&C	07-485-7	200/7000	0.008	0.110	<0.0500	<0.200				
LF-9	21-Dec-90	B&C	12-529-5	200/7000	0.120	0.270	0.0029	<0.200				
LF-9	20-Jun-91	ANA	9106274-05	200/7000	0.075	NA	<0.005	0.012				
LF-9	06-Aug-91	ANA	9108069-02	200/7000	0.131	NA	NA	NA				
LF-9	09-Jul-92	ANA	9207119-09	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-9	30-Dec-92	ANA	9212380-10	200/7000	0.106	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-10	07-Dec-89	B&C	12-212-5	200/7000	0.650	NA	<0.0400	<0.300				
LF-10	19-Jul-90	B&C	07-485-7	200/7000	0.012	0.110	<0.0500	<0.200				
Duplicate	19-Jul-90	B&C	07-485-8	200/7000	0.008	0.140	<0.0500	<0.300				
LF-10	21-Dec-90	B&C	12-529-6	200/7000	1.000	0.330	0.0009	<0.200				
Duplicate	21-Dec-90	B&C	12-529-7	200/7000	1.100	0.350	0.0007	<0.300				
LF-10	20-Jun-91	ANA	9106274-06	200/7000	0.657	NA	<0.005	0.013				
LF-10	06-Aug-91	ANA	9108069-02	200/7000	1.090	NA	NA	NA				

TABLE 5  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 INORGANIC COMPOUNDS  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. No.	Type of Analysis	Total							
					Arsenic	Barium	Cadmium	Lead	Chromium	Mercury	Selenium	Silver
LF-10	09-Jul-92	ANA	9207119-12	200/7000	0.328	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.025	<0.010
LF-10	31-Dec-92	ANA	9212395-05	200/7000	0.550	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
DUP	31-Dec-92	ANA	9212395-06	200/7000	0.552	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-11	05-Dec-89	B&C	12-128-2	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-11	19-Jul-90	B&C	07-485-5	200/7000	0.007	0.120	<0.0500	<0.200				
LF-11	21-Dec-90	B&C	12-529-4	200/7000	0.011	0.180	0.0006	<0.200				
LF-11	20-Jun-91	ANA	9106251-06	200/7000	0.023	NA	<0.005	0.007				
LF-11	20-Jun-91	ANA	9106251-07	200/7000	0.024	NA	<0.005	0.006				
LF-11	06-Aug-91	ANA	9108069-04	200/7000	0.021	NA	NA	NA				
LF-11	09-Jul-92	ANA	9207119-06	200/7000	<0.010	0.169	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-11	31-Dec-92	ANA	9212395-03	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-12	06-Dec-89	B&C	12-174-2	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-12	18-Jul-90	B&C	07-444-5	200/7000	0.004	0.060	<0.0500	<0.300				
LF-12	19-Jun-91	ANA	9106245-04	200/7000	<0.010	NA	<0.005	<0.004				
LF-12	08-Jul-92	ANA	9207088-03	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-12	30-Dec-92	ANA	9212380-04	200/7000	0.014	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-13	06-Dec-89	B&C	12-174-7	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-13	18-Jul-90	B&C	07-444-4	200/7000	<0.002	<0.050	<0.0500	<0.200				
LF-13	19-Dec-90	B&C	12-474-4	200/7000	<0.002	0.100	<0.0005	<0.200				
LF-13	19-Jun-91	ANA	9106245-03	200/7000	<0.010	NA	<0.005	<0.004				
LF-13	08-Jul-92	ANA	9207088-02	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-13	30-Dec-92	ANA	9212380-03	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-14	04-Sep-90	B&C	09-014-1	200/7000	0.092	0.060	<0.0005	0.007				
LF-14	02-Oct-90	B&C	10-034-2	200/7000	0.077	NA	NA	NA				
LF-14	20-Dec-90	B&C	12-505-7	200/7000	0.150	0.470	0.0036	<0.200				
LF-14	20-Jun-91	ANA	9106251-08	200/7000	0.095	NA	<0.005	<0.004				
LF-14	09-Jul-92	ANA	9207119-07	200/7000	0.039	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010

TABLE 5  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 INORGANIC COMPOUNDS  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-14	31-Dec-92	ANA	9212395-04	200/7000	0.121	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-15	04-Sep-90	B&C	09-014-2	200/7000	0.002	0.060	<0.0005	0.043				
LF-15	20-Dec-90	B&C	12-505-6	200/7000	0.007	0.230	0.0007	<0.200				
LF-15	20-Jun-91	ANA	9106251-09	200/7000	<0.010	NA	<0.005	<0.004				
LF-15	08-Jul-92	ANA	9207088-09	200/7000	<0.010	0.105	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-15	30-Dec-92	ANA	9212380-08	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-16	04-Sep-90	B&C	09-014-3	200/7000	0.003	0.060	<0.0005	<0.002				
LF-16	20-Dec-90	B&C	12-505-5	200/7000	0.003	0.170	0.0007	<0.200				
LF-16	20-Jun-91	ANA	9106251-10	200/7000	0.010	NA	<0.005	<0.004				
LF-16	09-Jul-92	ANA	9207119-01	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-16	30-Dec-92	ANA	9212380-07	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-B1	07-Dec-89	B&C	12-212-6	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-B1	18-Jul-90	B&C	7-444-6	200/7000	0.007	0.08	<0.0500	<0.2				
LF-B1	20-Dec-90	B&C	12-505-4	200/7000	0.005	0.100	0.0010	<0.200				
LF-B1	20-Jun-91	ANA	9106251-05	200/7000	<0.010	NA	<0.005	0.004				
LF-B1	08-Jul-92	ANA	9207088-04	200/7000	<0.010	0.122	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B1	30-Dec-92	ANA	9212380-06	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-B2	06-Dec-89	B&C	12-174-5	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-B2	18-Jul-90	B&C	7-444-9	200/7000	0.005	0.140	<0.0500	<0.200				
Duplicate	18-Jul-90	B&C	7-444-	200/7000	0.004	0.150	<0.0500	<0.200				
LF-B2	19-Dec-90	B&C	12-474-6	200/7000	0.008	0.320	0.0026	<0.200				
LF-B2	20-Jun-91	ANA	9106274-04	200/7000	<0.010	NA	<0.005	0.005				
LF-B2	08-Jul-92	ANA	9207088-05	200/7000	<0.010	0.245	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B3	07-Dec-89	B&C	12-212-6	200/7000	*<0.070	NA	<0.0400	<0.300				
LF-B3	18-Jul-90	B&C	7-444-8	200/7000	0.003	0.100	<0.0500	<0.200				
LF-B3	20-Dec-90	B&C	12-505-3	200/7000	0.002	0.160	<0.0005	<0.200				

TABLE 5  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 INORGANIC COMPOUNDS  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-B3	19-Jun-91	ANA	9106245-05	200/7000	<0.010	NA	<0.005	<0.004				
LF-B3	08-Jul-92	ANA	9207088-08	200/7000	<0.010	0.133	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B3	30-Dec-92	ANA	9212380-05	200/7000	<0.010	0.112	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-B4	17-Jul-90	B&C	07-444-3	200/7000	0.003	0.080	<0.0500	<0.200				
LF-B4	19-Dec-90	B&C	12-474-3	200/7000	<0.002	0.080	0.0014	<0.200				
LF-B4	19-Jun-91	ANA	9106245-01	200/7000	<0.010	NA	<0.005	<0.004				
LF-B4	08-Jul-92	ANA	9207088-01	200/7000	<0.010	0.140	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B4	30-Dec-92	ANA	9212380-02	200/7000	<0.010	0.110	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
FIELD & TRIP BLANKS												
LF-1-FB	01-Jun-89	B&C	89060195	200/7000	0.012	NA	<0.0400	<0.300				
LF-1-FB	07-Dec-89	B&C	12-212-2	200/7000	0.003	NA	<0.0400	<0.300				
LF-B1-FB	07-Dec-89	B&C	12-212-7	200/7000	0.014	NA	<0.0400	<0.300				
Trip Blank	07-Dec-89	B&C	12-212-9	200/7000	0.013	NA	<0.0400	<0.300				
LF-B4-TB	18-Jul-90	B&C	07-444-1	200/7000	<0.002	NA	<0.0500	<0.200				
LF-B4-BB	18-Jul-90	B&C	07-444-2	200/7000	<0.002	NA	<0.0500	<0.200				
LF-11-TB	19-Jul-90	B&C	07-485-1	200/7000	<0.002	NA	<0.0500	0.200				
LF-11-BB	19-Jul-90	B&C	07-485-2	200/7000	<0.002	NA	<0.0500	<0.200				
LF-5-TB	20-Jul-90	B&C	07-506-1	200/7000	0.002	NA	<0.0500	<0.200				
LF-16-TB	04-Sep-90	B&C	09-014-4	200/7000	<0.002	NA	<0.0005	0.005				
LF-B4-TB	19-Dec-90	B&C	12-474-1	200/7000	<0.002	<0.050	<0.0005	<0.200				
LF-B4-BB	19-Dec-90	B&C	12-474-2	200/7000	<0.002	<0.050	<0.0005	<0.200				
LF-B3-TB	20-Dec-90	B&C	12-505-1	200/7000	<0.002	<0.050	<0.0005	<0.200				
LF-B3-BR	20-Dec-90	B&C	12-505-2	200/7000	<0.002	<0.050	<0.0005	<0.200				
LF-8-TB	21-Dec-90	B&C	12-529-1	200/7000	<0.002	<0.050	<0.0005	<0.200				
LF-8-BR	21-Dec-90	B&C	12-529-2	200/7000	<0.002	<0.050	<0.0005	<0.200				

TABLE 5  
 HISTORICAL WATER-QUALITY DATA SUMMARY  
 INORGANIC COMPOUNDS  
 (All concentrations expressed in parts per million [ppm])

Well Number	Date Sampled	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-B3-BR	19-Jun-91	ANA	9106245-06	200/7000	<0.010	NA	<0.005	<0.004				
LF-B4-TB	19-Jun-91	ANA	9106245-02	200/7000	<0.010	NA	<0.005	<0.004				
LF-4-TB	20-Jun-91	ANA	9106274-01	200/7000	<0.010	NA	<0.005	<0.004				
LF-11-TB	20-Jun-91	ANA	9106251-01	200/7000	<0.010	NA	<0.005	<0.004				
LF-11-BR	20-Jun-91	ANA	9106251-02	200/7000	<0.010	NA	<0.005	<0.004				
Trip Blank	06-Aug-91	ANA	9108069-01	200/7000	<0.010	NA	NA	<0.003				
LF-B3-TB	08-Jul-92	ANA	9207088-06	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-7-TB	09-Jul-92	ANA	9207119-02	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-3-TB	09-Jul-92	ANA	9207119-15	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B4-TB	30-Dec-92	ANA	9212380-11	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-B4-BR	30-Dec-92	ANA	9212380-01	200/7000	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010

Notes:

\* = Data not validated based on positive results of trip blank (0.014 ppm) or bailer rinsate blank (0.013 ppm) of submitted samples. Detection Limit for arsenic for December 1989 sampling period set at 0.070 ppm or 5 times the reported value of 0.014 ppm for the trip blank sample.

NA = Not Analyzed

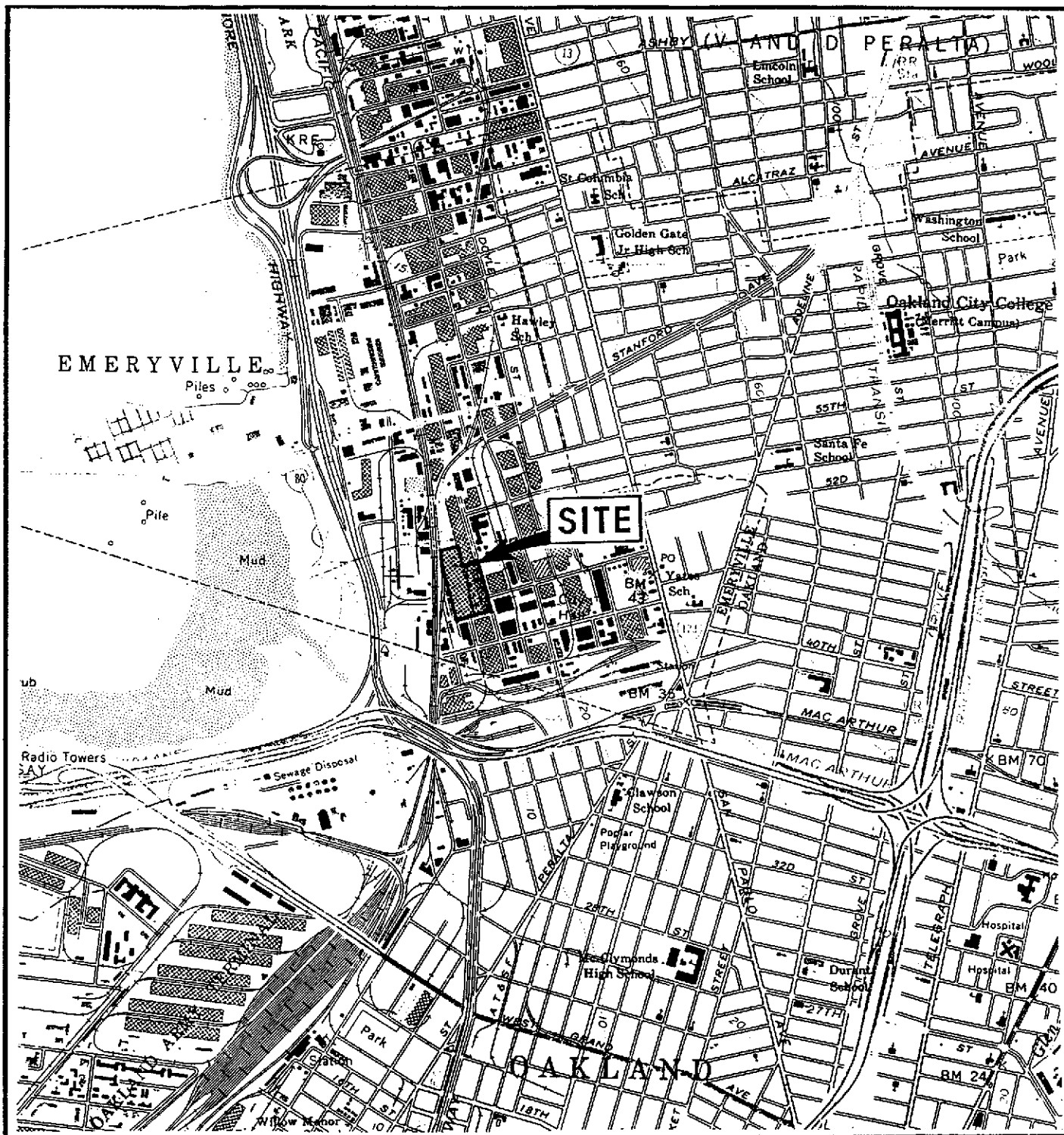
200/7000 = EPA Method 200/6000/7000 Series for selected metals.

Analytical Laboratories:

B&C: BC Analytical Laboratory, Emeryville, California.

ANA: Anametrix Laboratory, San Jose, California

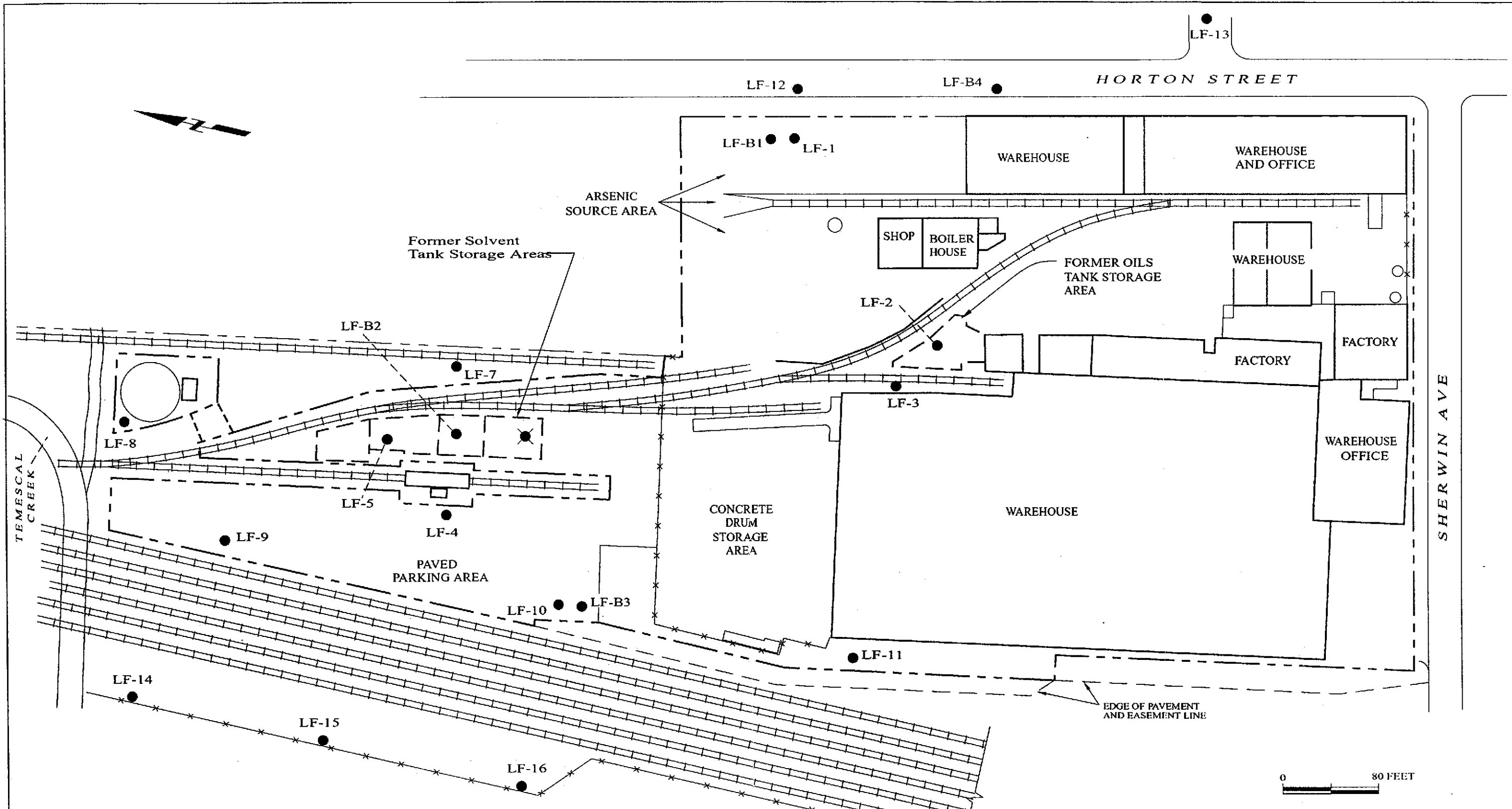
Results of analyses for other inorganic compounds as metals that are not part of the annual and semiannual self-monitoring program for 1992 and 1993 are reported in Levine-Fricke April 4, 1990 (Table 10) and Levine-Fricke December 20, 1991 (Table 5).



MAP SOURCE:  
 U.S.G.S. Oakland West Quadrangle,  
 Oakland, California  
 7.5 Minute Series

Figure 1: SITE LOCATION MAP



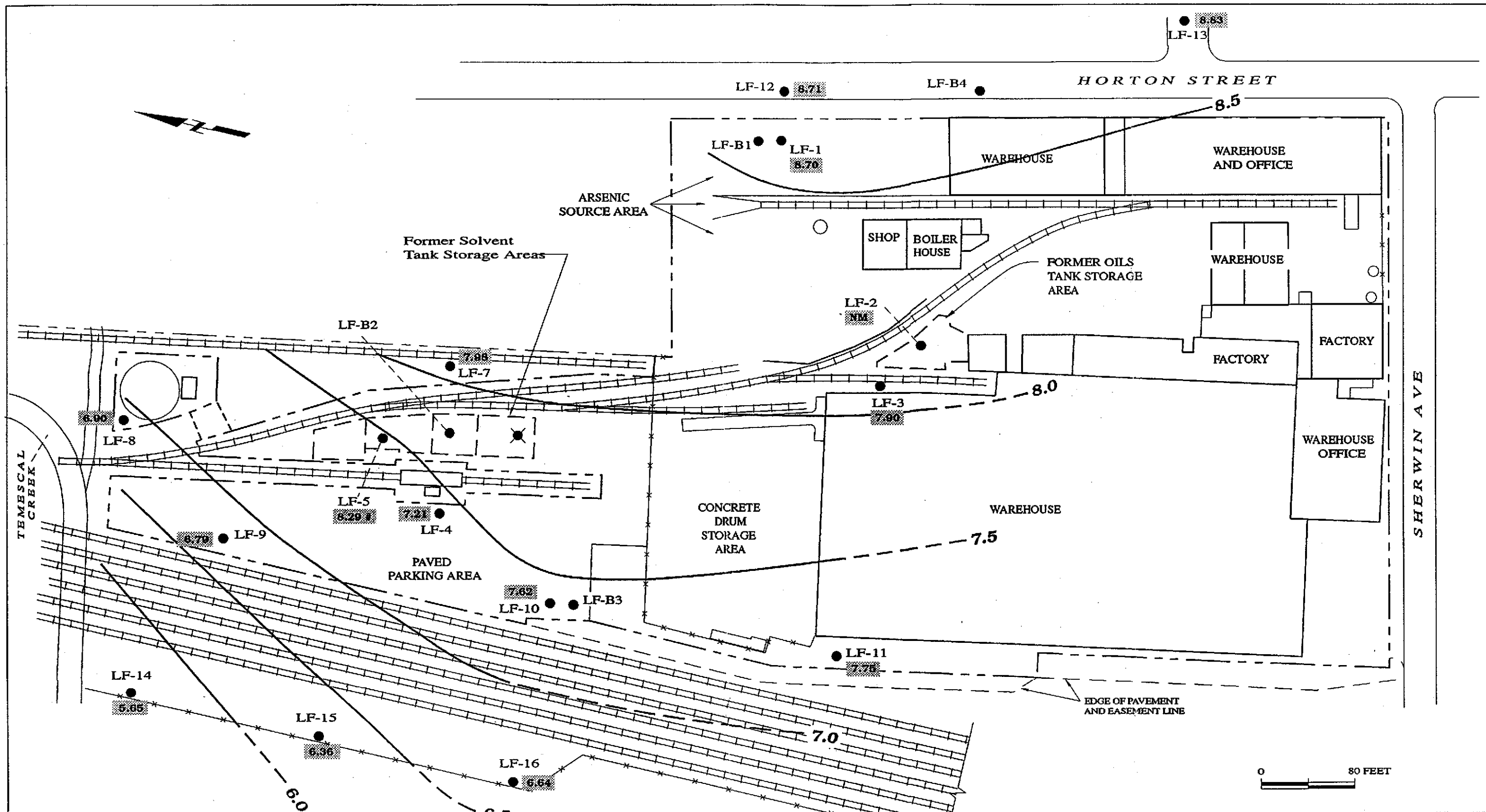


**EXPLANATION**

- Monitoring well location
- - - Property line
- ★ Monitoring well destroyed by sealing with grout

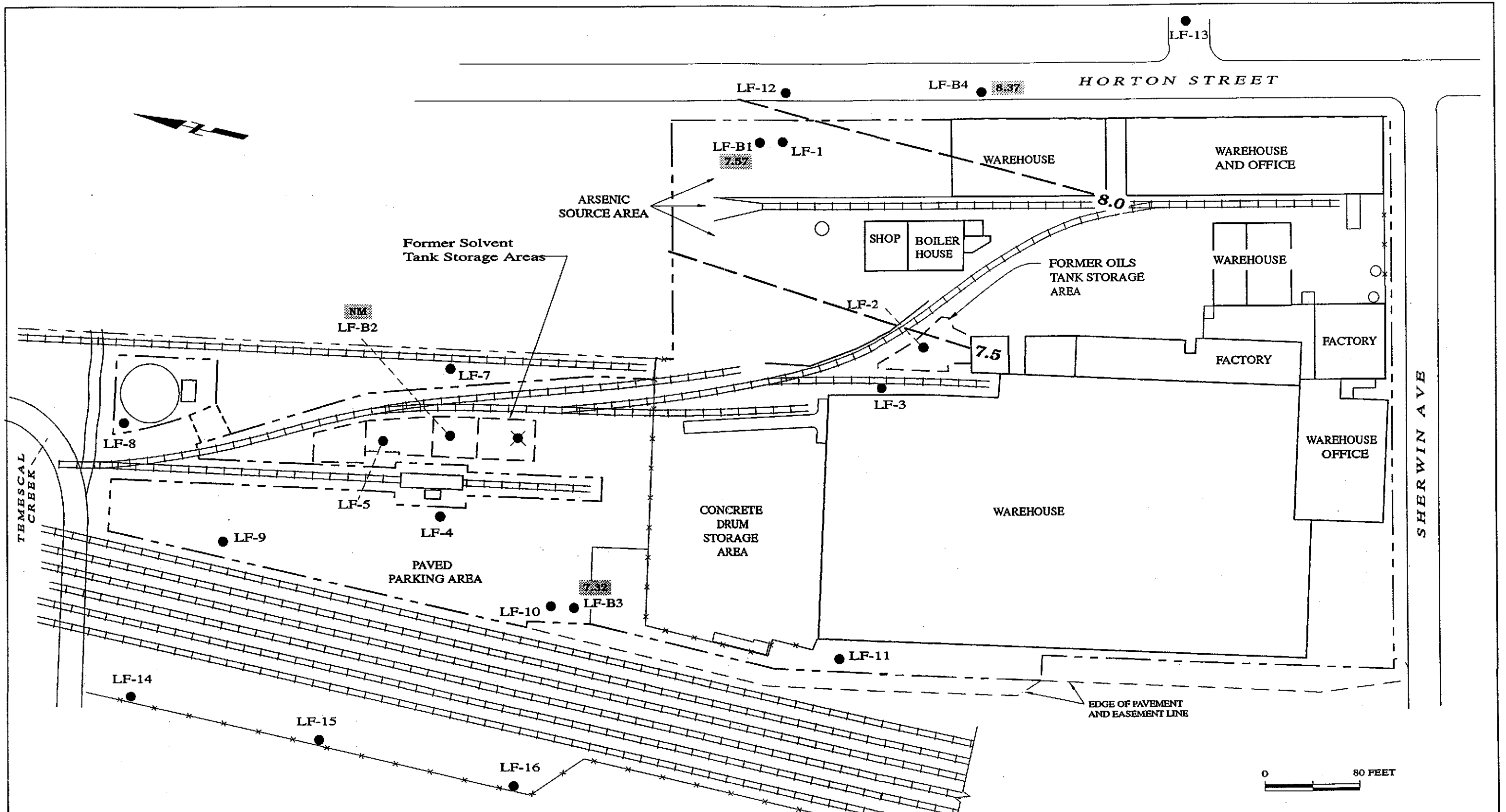


**Figure 2 :  
SITE PLAN**



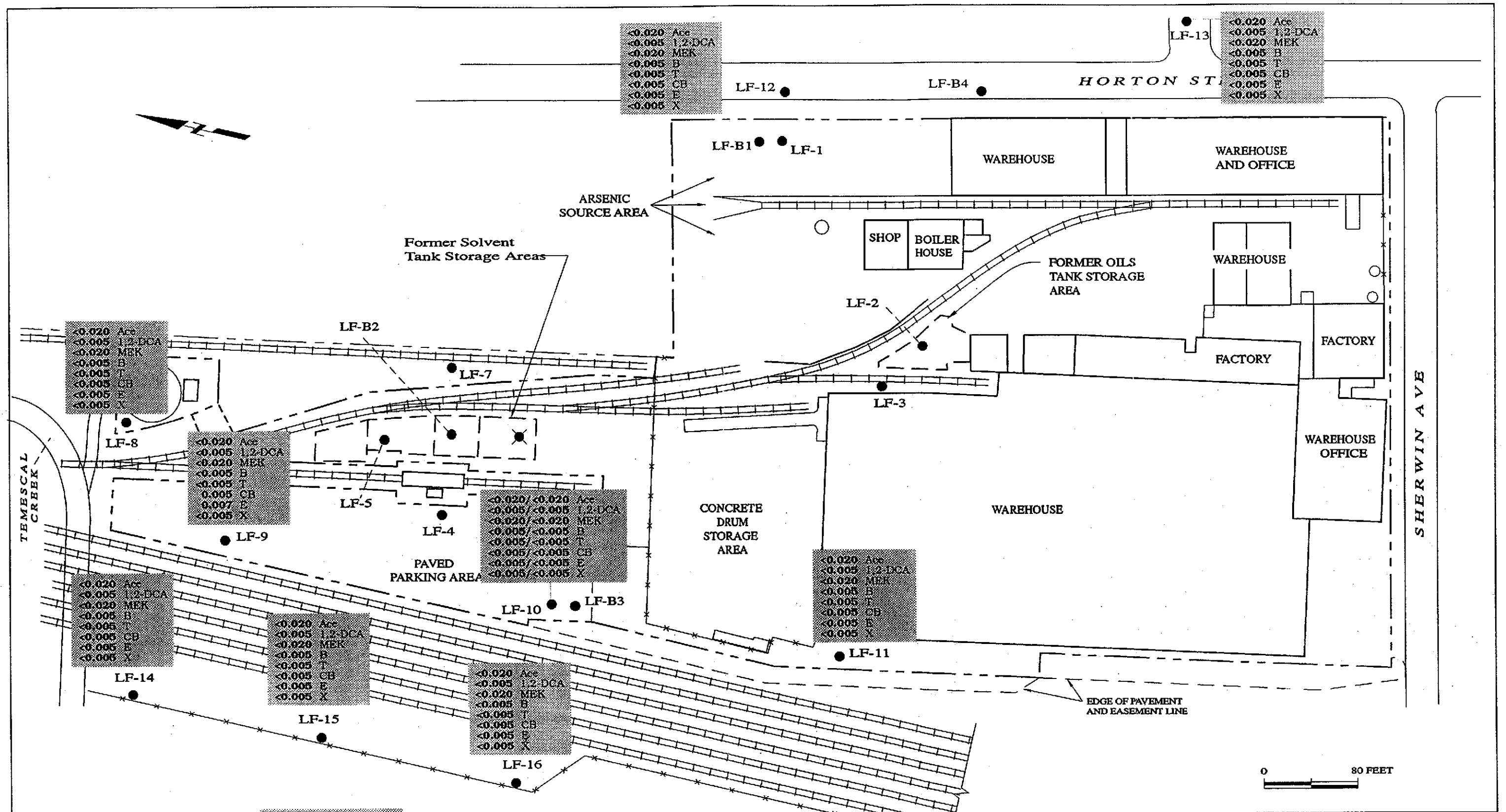
- EXPLANATION**
- Monitoring well location
  - - - Property line
  - ⊗ Monitoring well destroyed by sealing with grout
  - 8.65 Ground-water elevation (feet above mean sealevel)
  - ~ 9.5 Ground-water elevation contour (feet above mean sea level); dashed where inferred
  - 8.29 # Water level not used in contouring
  - NM not measured

**Figure 3 :**  
**A-ZONE GROUND-WATER ELEVATION MAP**  
**DECEMBER 30, 1992**



- EXPLANATION**
- Monitoring well location
  - - - Property line
  - ⊗ Monitoring well destroyed by sealing with grout
  - 8.32 Ground-water elevation (feet above mean sea level)
  - ~ 10.5 Ground-water elevation contour (feet above mean sea level); dashed where inferred
  - NM not measured

Figure 4:  
B-ZONE GROUND-WATER ELEVATION MAP  
DECEMBER 30, 1992



<0.020 Ace  
<0.005 1,2-DCE  
<0.020 MEK  
<0.005 B  
<0.005 T  
<0.005 CB  
<0.005 E  
<0.005 X

<0.020 Ace  
<0.005 1,2-DCE  
<0.020 MEK  
<0.005 B  
<0.005 T  
<0.005 CB  
<0.005 E  
<0.005 X

<0.020 Ace  
<0.005 1,2-DCE  
<0.020 MEK  
<0.005 B  
<0.005 T  
<0.005 CB  
<0.005 E  
<0.005 X

<0.020 Ace  
<0.005 1,2-DCE  
<0.020 MEK  
<0.005 B  
<0.005 T  
<0.005 CB  
0.007 E  
<0.005 X

<0.020 / <0.020 Ace  
<0.005 / <0.005 1,2-DCE  
<0.020 / <0.020 MEK  
<0.005 / <0.005 B  
<0.005 / <0.005 T  
<0.005 / <0.005 CB  
<0.005 / <0.005 E  
<0.005 / <0.005 X

<0.020 Ace  
<0.005 1,2-DCE  
<0.020 MEK  
<0.005 B  
<0.005 T  
<0.005 CB  
<0.005 E  
<0.005 X

<0.020 Ace  
<0.005 1,2-DCE  
<0.020 MEK  
<0.005 B  
<0.005 T  
<0.005 CB  
<0.005 E  
<0.005 X

<0.020 Ace  
<0.005 1,2-DCE  
<0.020 MEK  
<0.005 B  
<0.005 T  
<0.005 CB  
<0.005 E  
<0.005 X

<0.020 Ace  
<0.005 1,2-DCE  
<0.020 MEK  
<0.005 B  
<0.005 T  
<0.005 CB  
<0.005 E  
<0.005 X

**EXPLANATION**

- Monitoring well location
- - - Property line
- ⊗ Monitoring well destroyed by sealing with grout

<0.020 / <0.020 Ace  
<0.005 / <0.005 1,2-DCE

- Chemical compound
- Duplicate concentration (ppm)
- Concentration (ppm)
- Results reported in parts per million (ppm)

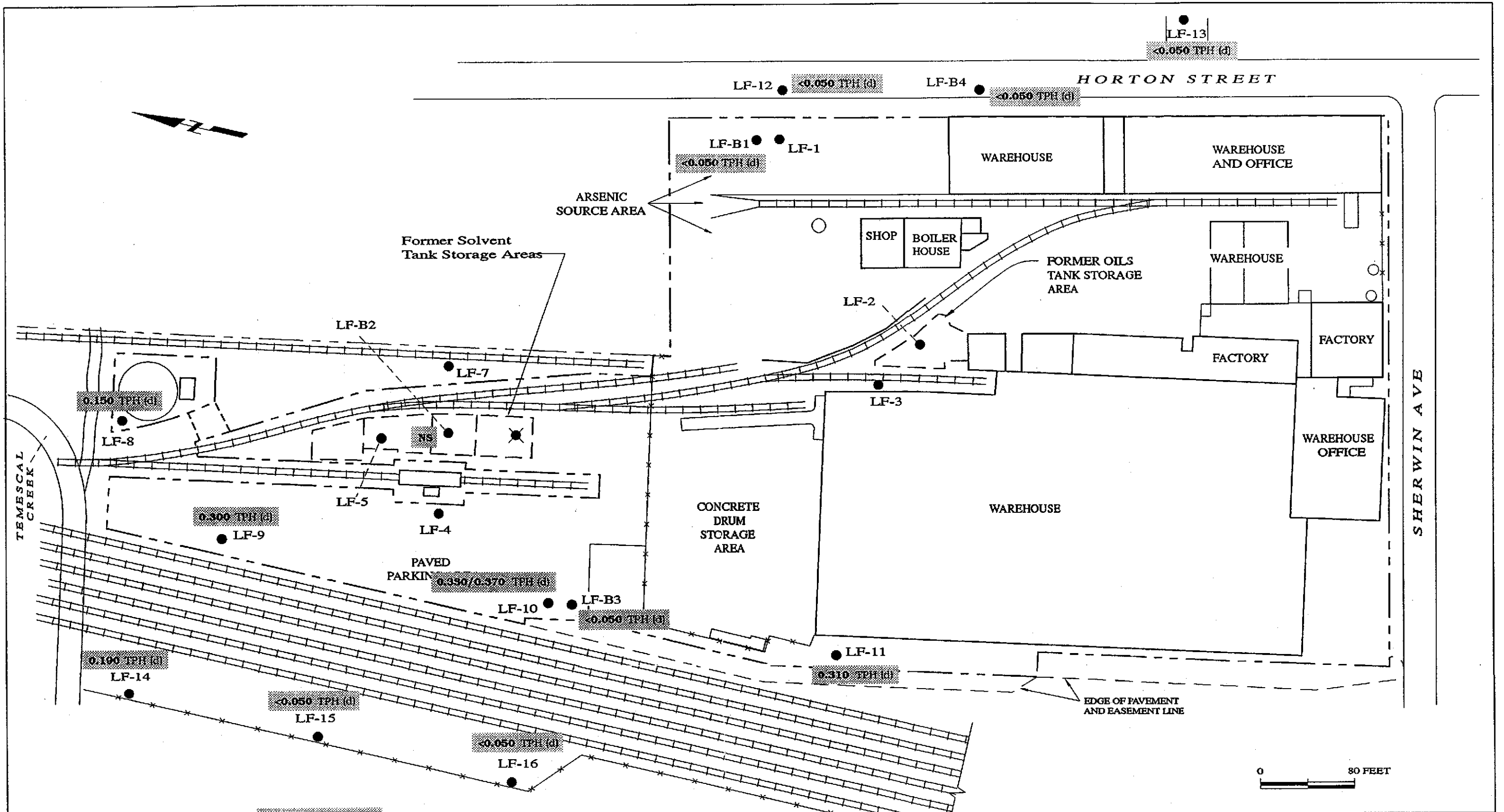
**KEY TO ABBREVIATIONS:**

- Ace Acetone
- 1,2-DCE 1,2-Dichloroethene
- MEK Methyl Ethyl Ketone or 2-Butanone
- B Benzene
- T Toluene
- CB Chlorobenzene
- E Ethylbenzene
- X Total Xylenes

**Figure 5:**  
VOLATILE ORGANIC COMPOUNDS  
EPA METHOD 8240  
A-ZONE GROUND WATER  
DECEMBER 1992

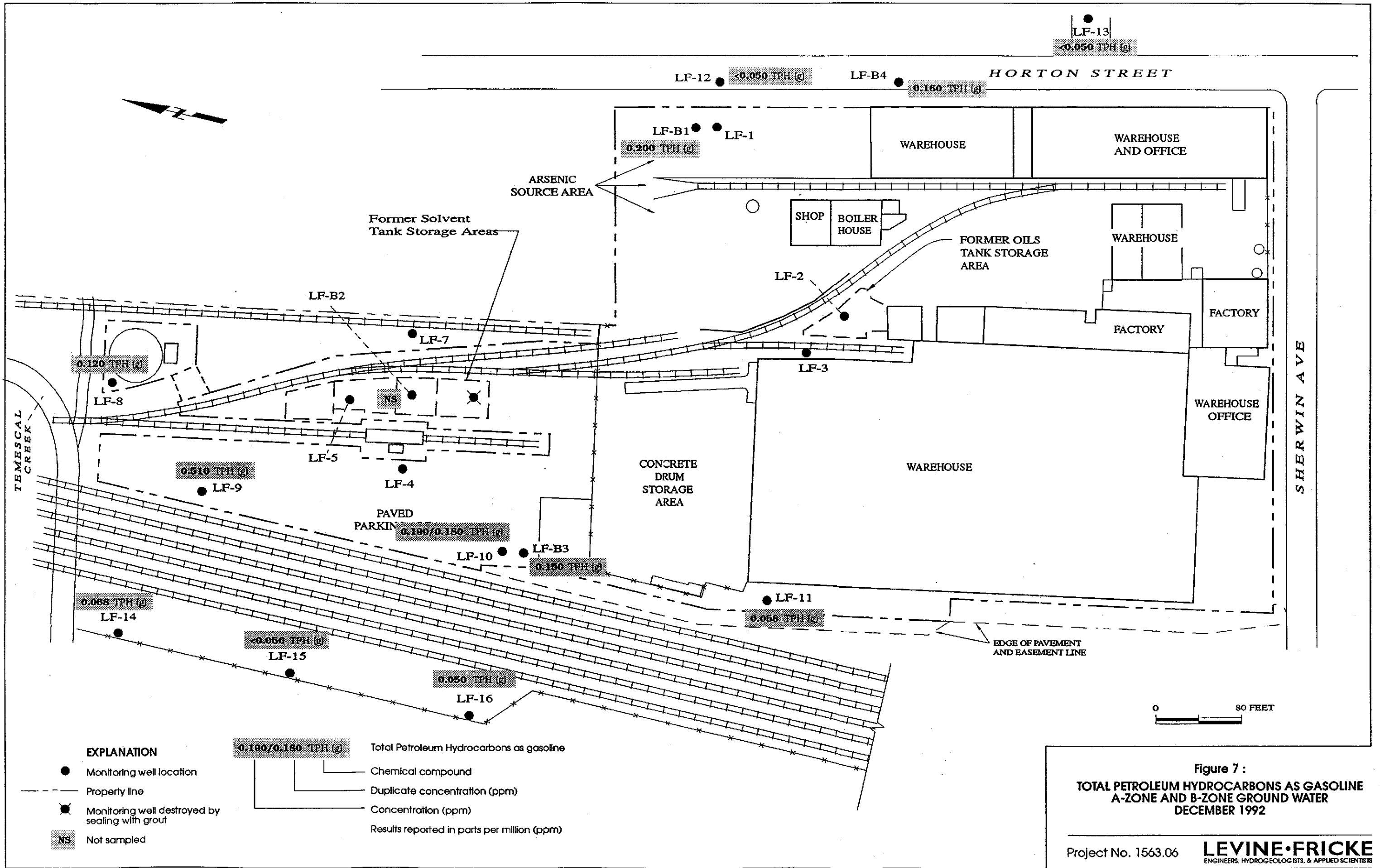
Project No. 1563.06

**LEVINE·FRICKE**  
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS



EXPLANATION	
●	Monitoring well location
---	Property line
✱	Monitoring well destroyed by sealing with grout
NS	Not sampled
0.330/0.370 TPH (d)	Total Petroleum Hydrocarbons as diesel
0.050 TPH (d)	Chemical compound
0.330/0.370	Duplicate concentration (ppm)
0.050	Concentration (ppm)
	Results reported in parts per million (ppm)

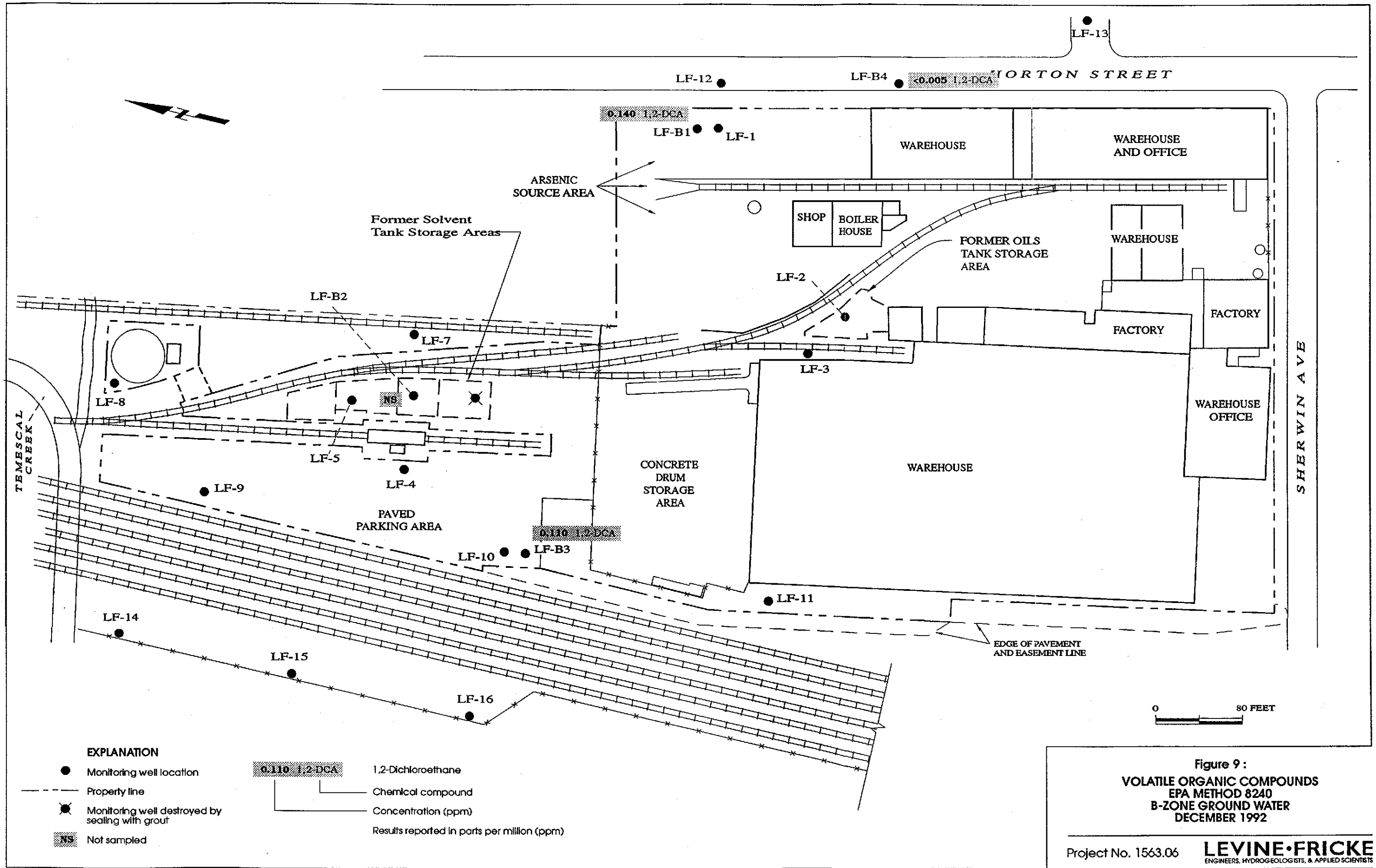
**Figure 6 :**  
**TOTAL PETROLEUM HYDROCARBONS AS DIESEL**  
**A-ZONE AND B-ZONE GROUND WATER**  
**DECEMBER 1992**



- EXPLANATION**
- Monitoring well location
  - - - Property line
  - ⊗ Monitoring well destroyed by sealing with grout
  - NS Not sampled
  - 0.100/0.180 TPH (g) Total Petroleum Hydrocarbons as gasoline
  - Chemical compound
  - Duplicate concentration (ppm)
  - Concentration (ppm)
  - Results reported in parts per million (ppm)

**Figure 7 :**  
**TOTAL PETROLEUM HYDROCARBONS AS GASOLINE**  
**A-ZONE AND B-ZONE GROUND WATER**  
**DECEMBER 1992**







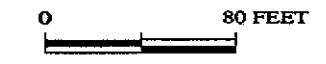
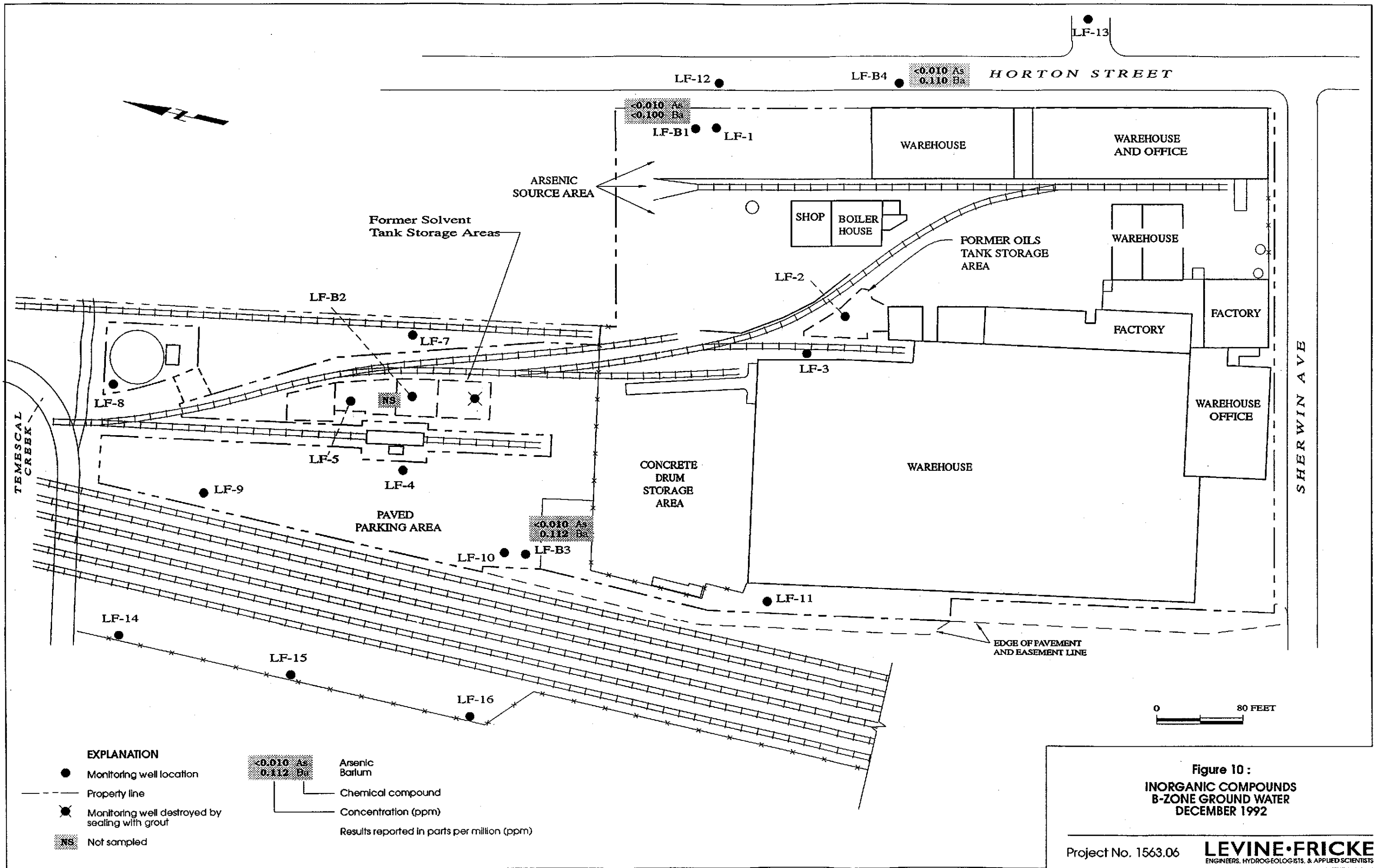


Figure 10:  
 INORGANIC COMPOUNDS  
 B-ZONE GROUND WATER  
 DECEMBER 1992

**APPENDIX A**

**LABORATORY CERTIFICATES**



MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212395  
Date Received : 12/31/92  
Project ID : 1563.06  
Purchase Order: N/A

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

ANAMETRIX ID	CLIENT SAMPLE ID
9212395- 2	LF-11-BR
9212395- 3	LF-11
9212395- 4	LF-14
9212395- 5	LF-10
9212395- 6	LF-10DUP

This report consists of 27 pages not including the cover letter, and is organized in sections according to the specific Anamatrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anamatrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

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

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

Sarah Schoen, Ph.D.  
Laboratory Director

JAN 16 1993

01-14-93

Date

**COPY**

# ANAMETRIX REPORT DESCRIPTION

## GCMS

### Organic Analysis Data Sheets (OADS)

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

### Tentatively Identified Compounds (TICs)

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted at Anamatrix. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

### Surrogate Recovery Summary (SRS)

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

### Matrix Spike Recovery Form (MSR)

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

### Qualifiers

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

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 soil analyses.

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

### REPORTING CONVENTIONS

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

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212395  
Date Received : 12/31/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : GCMS  
Sub-Department: GCMS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9212395- 2	LF-11-BR	WATER	12/31/92	8240
9212395- 3	LF-11	WATER	12/31/92	8240
9212395- 4	LF-14	WATER	12/31/92	8240
9212395- 5	LF-10	WATER	12/31/92	8240
9212395- 6	LF-10DUP	WATER	12/31/92	8240

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212395  
Date Received : 12/31/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : GCMS  
Sub-Department: GCMS

QA/QC SUMMARY :

- No QA/QC problems.

*Anna Mando*  
Department Supervisor

1-12-93  
Date

*See Lu Yu*  
Chemist

1-12-93  
Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-11-BR  
 Matrix : WATER  
 Date Sampled : 12/31/92  
 Date Analyzed : 1/ 8/93  
 Instrument ID : MSD1

Anametrix ID : 9212395-02  
 Analyst : M  
 Supervisor : W  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Sample ID : LF-11  
Matrix : WATER  
Date Sampled : 12/31/92  
Date Analyzed : 1/ 8/93  
Instrument ID : MSD1

Anamatrix ID : 9212395-03  
Analyst : *LM*  
Supervisor : *LM*  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U



ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-14  
 Matrix : WATER  
 Date Sampled : 12/31/92  
 Date Analyzed : 1/ 8/93  
 Instrument ID : MSD1

Anamatrix ID : 9212395-04  
 Analyst : *AM*  
 Supervisor : *UN*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-10  
 Matrix : WATER  
 Date Sampled : 12/31/92  
 Date Analyzed : 1/ 8/93  
 Instrument ID : MSD1

Anamatrix ID : 9212395-05  
 Analyst : LY  
 Supervisor : UH  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-10DUP  
 Matrix : WATER  
 Date Sampled : 12/31/92  
 Date Analyzed : 1/ 8/93  
 Instrument ID : MSD1

Anamatrix ID : 9212395-06  
 Analyst : *W*  
 Supervisor : *W*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID :  
 Sample ID : BLANK  
 Matrix : WATER  
 Date Sampled : 0/ 0/ 0  
 Date Analyzed : 1/ 8/93  
 Instrument ID : MSD1

Anamatrix ID : BJ0801A2  
 Analyst : *W*  
 Supervisor : *W*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Matrix : LIQUID

Anamatrix ID : 9212395  
Analyst : *VA*  
Supervisor : *UA*

	SAMPLE ID	SU1	SU2	SU3
1	BLANK	95	98	98
2	LCS	98	100	96
3	LF-11-BR	95	98	96
4	LF-11	97	98	98
5	LF-14	97	98	95
6	LF-10	94	98	94
7	LF-10DUP	97	99	94
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

QC LIMITS

-----  
 SU1 = 1,2-Dichloroethane-d4 (83-109)  
 SU2 = Toluene-d8 (88-110)  
 SU3 = 1,4-Bromofluorobenzene (88-110)

\* Values outside of Anamatrix QC limits

LABORATORY CONTROL SPIKE RECOVERY FORM --- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project/Case	:		Anamatrix ID	:	MJ0801A2
Matrix	:	WATER	Analyst	:	W
Date Sampled	:	0/ 0/ 0	Supervisor	:	W
Date Analyzed	:	01/08/93	SDG/Batch	:	
Instrument ID	:	MSD1		:	

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	%REC LIMITS
1,1-Dichloroethene	50	0	54	108	72-145
Benzene	50	0	51	102	83-125
Trichloroethene	50	0	51	102	61-140
Toluene	50	0	50	100	82-123
Chlorobenzene	50	0	48	96	82-125

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212395  
Date Received : 12/31/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9212395- 3	LF-11	WATER	12/31/92	TPHd
9212395- 4	LF-14	WATER	12/31/92	TPHd
9212395- 5	LF-10	WATER	12/31/92	TPHd
9212395- 6	LF-10DUP	WATER	12/31/92	TPHd
9212395- 3	LF-11	WATER	12/31/92	TPHg
9212395- 4	LF-14	WATER	12/31/92	TPHg
9212395- 5	LF-10	WATER	12/31/92	TPHg
9212395- 6	LF-10DUP	WATER	12/31/92	TPHg

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212395  
Date Received : 12/31/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as diesel for samples LF-11, LF-14, LF-10 and LF-10DUP are primarily due to the presence of a heavier petroleum product, possibly motor oil.

Cheryl Bolmer                      1/13/93  
Department Supervisor                      Date

Luna Sher                      1/13/93  
Chemist                      Date



ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE)

ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9212395  
Matrix : WATER  
Date Sampled : 12/31/92

Project Number : 1563.06  
Date Released : 01/07/93

Reporting Limit	Sample I.D.# LF-11	Sample I.D.# LF-14	Sample I.D.# LF-10	Sample I.D.# LF-10DUP	Sample I.D.# BJ0401E1	
COMPOUNDS (ug/L)	-03	-04	-05	-06	BLANK	
TPH as Gasoline	50	58	68	190	180	ND
% Surrogate Recovery	98%	102%	112%	106%	102%	
Instrument I.D.	HP12	HP12	HP12	HP12	HP12	
Date Analyzed	01/04/93	01/04/93	01/05/93	01/05/93	01/04/93	
RLMF	1	1	1	1	1	

- ND - Not detected at or above the practical quantitation limit for the method.  
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.  
RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Uma Shor 1/13/93  
Analyst Date

Cheryl Balmer 1/13/93  
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE)  
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9212395  
Matrix : WATER  
Date Sampled : N/A

Project Number : 1563.06  
Date Released : 01/07/93

COMPOUNDS	Reporting Limit (ug/L)	Sample I.D.# BJ0501E1 BLANK
TPH as Gasoline	50	ND
% Surrogate Recovery		100%
Instrument I.D.		HP12
Date Analyzed		01/05/93
RLMF		1

- ND - Not detected at or above the practical quantitation limit for the method.
- TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.
- RLMF - Reporting Limit Multiplication Factor.

Anamatrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Lucia Shar 1/13/93  
Analyst Date

Cheryl Balmer 1/13/93  
Supervisor Date

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

Anamatrix W.O.: 9212395  
Matrix : WATER  
Date Sampled : 12/31/92  
Date Extracted: 01/04/93

Project Number : 1563.06  
Date Released : 01/12/93  
Instrument I.D.: HP9

Anamatrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9212395-03	LF-11	01/06/93	50	310
9212395-04	LF-14	01/06/93	50	190
9212395-05	LF-10	01/06/93	50	330
9212395-06	LF-10DUP	01/06/93	50	370
DWBL010993	METHOD BLANK	01/06/93	50	ND

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

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

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

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

Charlton Burch 1-14-93  
Analyst Date

Cheryl Balman 1/14/93  
Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT  
 EPA METHOD 5030 WITH GC/FID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1563.06 LF-11  
 Matrix : WATER  
 Date Sampled : 12/31/92  
 Date Analyzed : 01/04/93

Anamatrix I.D. : 9212395-03  
 Analyst : IS  
 Supervisor : OB  
 Date Released : 01/12/93  
 Instrument ID : HP12

COMPOUND	SPIKE AMT (ug/L)	SAMPLE AMT (ug/L)	REC MS (ug/L)	% REC MS	REC MD (ug/L)	% REC MD	RPD	% REC LIMITS
GASOLINE	250	58	303	98%	305	99%	1%	48-145
P-BFB				105%		101%		53-147

\* Limits established by Anamatrix, Inc.

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT  
 EPA METHOD 5030 WITH GC/FID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1563.06 LF-10DUP  
 Matrix : WATER  
 Date Sampled : 12/31/92  
 Date Analyzed : 01/05/93

Anamatrix I.D. : 9212395-06  
 Analyst : IS  
 Supervisor : OS  
 Date Released : 01/12/93  
 Instrument ID : HP12

COMPOUND	SPIKE AMT (ug/L)	SAMPLE AMT (ug/L)	REC MS (ug/L)	% REC MS	REC MD (ug/L)	% REC MD	RPD	% REC LIMITS
GASOLINE	250	180	358	71%	385	82%	7%	48-145
P-BFB				122%		122%		53-147

\* Limits established by Anamatrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT  
 EPA METHOD 5030 WITH GC/FID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE  
 Matrix : WATER  
 Date Sampled : N/A  
 Date Analyzed : 01/04/93

Anamatrix I.D. : LCSW0104  
 Analyst : IS  
 Supervisor : OS  
 Date Released : 01/12/93  
 Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	250	290	116%	56-116
SURROGATE			98%	53-147

\* Quality control established by Anamatrix, Inc.

TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT  
 EPA METHOD 5030 WITH GC/FID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE  
 Matrix : WATER  
 Date Sampled : N/A  
 Date Analyzed : 01/05/93

Anamatrix I.D. : LCSW0105  
 Analyst : IS  
 Supervisor : CS  
 Date Released : 01/12/93  
 Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	250	206	82%	56-116
SURROGATE			99%	53-147

\* Quality control established by Anamatrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE  
 Matrix : WATER  
 Date Sampled : N/A  
 Date Extracted: 01/04/93  
 Date Analyzed : 01/06/93

Anamatrix I.D. : LCSW0104  
 Analyst : IS  
 Supervisor : OS  
 Date Released : 01/12/93  
 Instrument I.D.: HP9

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCS D REC (ug/L)	% REC LCS D	RPD	% REC LIMITS
DIESEL	1250	1320	106%	1380	110%	4%	63-130

\*Quality control established by Anamatrix, Inc.



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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL-STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212395  
Date Received : 12/31/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9212395- 3	LF-11	WATER	12/31/92	6010
9212395- 4	LF-14	WATER	12/31/92	6010
9212395- 5	LF-10	WATER	12/31/92	6010
9212395- 6	LF-10DUP	WATER	12/31/92	6010
9212395- 2	LF-11-BR	WATER	12/31/92	7060
9212395- 3	LF-11	WATER	12/31/92	7060
9212395- 4	LF-14	WATER	12/31/92	7060
9212395- 5	LF-10	WATER	12/31/92	7060
9212395- 6	LF-10DUP	WATER	12/31/92	7060
9212395- 3	LF-11	WATER	12/31/92	7470
9212395- 4	LF-14	WATER	12/31/92	7470
9212395- 5	LF-10	WATER	12/31/92	7470
9212395- 6	LF-10DUP	WATER	12/31/92	7470
9212395- 3	LF-11	WATER	12/31/92	7740
9212395- 4	LF-14	WATER	12/31/92	7740
9212395- 5	LF-10	WATER	12/31/92	7740
9212395- 6	LF-10DUP	WATER	12/31/92	7740

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212395  
Date Received : 12/31/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Mona Kamel For      1/11/93  
Department Supervisor      Date

Jizza J. Nagborsali      1/12/93  
Chemist      Date

**ANALYSIS DATA SHEET - INDIVIDUAL METALS**  
**ANAMETRIX, INC. - (408) 432-8192**

Anamatrix W.O.: 9212395  
 Matrix : WATER  
 Date Sampled : 12/31/92  
 Project Number: 1563.06

Date Prepared : 01/04/93  
 Date Analyzed : 01/05/93  
 Date Released : 01/11/93  
 Instrument I.D.: ICP1

ELEMENTS	EPA Method#	Reporting Limit (ug/L)	Sample I.D.# LF-11	Sample I.D.# LF-14	Sample I.D.# LF-10	Sample I.D.# LF-10DUP	Sample I.D.# BLANK
Silver (Ag)	6010	10.0	ND	ND	ND	ND	ND
Barium (Ba)	6010	100	119	ND	ND	ND	ND
Cadmium (Cd)	6010	5.0	ND	ND	ND	ND	ND
Total Cr	6010	10.0	ND	ND	ND	ND	ND
Mercury (Hg)	7470	0.20	ND	ND	ND	ND	ND
Lead (Pb)	6010	40.0	ND	ND	ND	ND	ND

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

All Metals by EPA Method 6010/7000, Test Method for Evaluating Solid Waste, SW-846 3rd Edition November 1986, and California Code of Regulations Title 22, or Method for Chemical Analysis of Water and Wastes, EPA, 3rd edition, 1983.

Mona Kamel for 1/11/93  
 Supervisor Date

Jozza I Nagpouala 1/12/93  
 Chemist Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS  
ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9212395  
Matrix : WATER  
Date Sampled : 12/31/92  
Project Number: 1563.06

Date Prepared : 01/04/93  
Date Analyzed : 01/06/93  
Date Released : 01/11/93  
Instrument I.D : AA2

ANAMETRIX ID	CLIENT ID	REPORTING LIMIT (ug/L)	Arsenic EPA METHOD 7060 (ug/L)
9212395-02	LF-11-BR	10.0	ND
9212395-03	LF-11	10.0	ND
9212395-04	LF-14	50.0	121
9212395-05	LF-10	100	550
9212395-06	LF-10DUP	100	532
MB0104W	METHOD BLANK	10.0	ND

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

All Metals by EPA Method 6010/7000, Test Method for Evaluating Solid Waste, SW-846 3rd Edition November 1986, and California Code of Regulations Title 22, or Method for Chemical Analysis of Water and Wastes, EPA, 3rd edition, 1983.

W. Annunzio 1/12/93  
Supervisor Date

J. J. Nagowski 1/12/93  
Chemist Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS  
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9212395  
 Matrix : WATER  
 Date Sampled : 12/31/92  
 Project Number: 1563.06

Date Prepared : 01/04/93  
 Date Analyzed : 01/06/93  
 Date Released : 01/11/93  
 Instrument I.D : AA2

ANAMETRIX ID	CLIENT ID	REPORTING LIMIT (ug/L)	Selenium EPA METHOD 7740 (ug/L)
9212395-02	LF-11-BR	5.0	ND
9212395-03	LF-11	5.0	ND
9212395-04	LF-14	5.0	ND
9212395-05	LF-10	5.0	ND
9212395-06	LF-10DUP	5.0	ND
MB0104W	METHOD BLANK	5.0	ND

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

All Metals by EPA Method 6010/7000, Test Method for Evaluating Solid Waste, SW-846 3rd Edition November 1986, and California Code of Regulations Title 22, or Method for Chemical Analysis of Water and Wastes, EPA, 3rd edition, 1983.

Manny Kuper 1/12/93  
 Supervisor Date

J. J. Nagpurwala 1/12/93  
 Chemist Date

ANAMETRIX, INC.  
 1961 CONCOURSE DRIVE, SUITE E  
 SAN JOSE, CA 95131, (408) 432-8192

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 INDIVIDUAL METALS METHOD SPIKE REPORT  
 -----

Spike I.D. : LCS0104W  
 Date Prepared: 01/04/93  
 Date Analyzed: 01/05, 01/06/93  
 Assoc. WO # : 9212395

Inst. ID: HGA1/AA2/ICP1  
 Date : 01/11/93  
 Matrix : WATER  
 Units : ug/L

ELEMENTS	METHOD	SPIKE AMOUNT	METHOD SPIKE	% REC.
Ag	6010	50.0	43.2	86.4
As	7060	40.0	34.0	85.0
Ba	6010	2000	1890	94.5
Cd	6010	50.0	46.0	92.0
Tl Cr	6010	200	191	95.5
Hg	7470	1.0	0.93	93.0
Pb	6010	500	441	88.2
Se	7740	10.0	9.7	97.0

=====

COMMENT: Quality control limits for percent recovery are 80-120%.

Mannikgupta 1/12/93  
 Supervisor Date

J. J. Nagborsale 1/12/93  
 Chemist Date

4212395  
10/14 16

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1563.06	Field Logbook No.:	Date: 12.31.92	Serial No.: 9889
Project Name: Shepwin Williams		Project Location: Emeryville	

Sampler (Signature): <i>Priscilla C. Head</i>	ANALYSES	Samplers: SCH JCR
---	----------	-------------------

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES								REMARKS
						EPA 601	ARSENIC	EPA 8240	TPH9	TPHd	8 Metals	HOLD	RUSH	
① LF.84.TB	12.30.92	0800		3	H <sub>2</sub> O	1	2							8 Metals: As, Ba, Cd, Cr, Pb, Hg, Se, Ag
② LF.11.BR	12.31.92	0840		3	↓	1	2							Dissolved metals: Please filter and preserve at the lab.
③ LF.11	↓	0900		8	↓		2	3	2	1				Results to John DeResmer  Normal turnaround  Anamatrix Ref. # 1801K  LF.84.TB to be analyzed for 8 Metals. LF.11.BR to be analyzed for Arsenic.
④ LF.14	↓	0940		8	↓		2	3	2	1				
⑤ LF.10	↓	1015		8	↓		2	3	2	1				
⑥ LF.10-DUP	↓	1115		8	↓		2	3	2	1				

RELINQUISHED BY: (Signature) <i>Priscilla C. Head</i>	DATE: 12/31/92	TIME: 14:50	RECEIVED BY: (Signature) <i>Denny B. Carigosa</i>	DATE: 12/31/92	TIME: 17:50
RELINQUISHED BY: (Signature) <i>Denny B. Carigosa</i>	DATE: 12/31/92	TIME: 15:50	RECEIVED BY: (Signature) <i>Priscilla C. Head</i>	DATE: 12/31/92	TIME: 15:50
RELINQUISHED BY: (Signature)	DATE:	TIME:	RECEIVED BY: (Signature)	DATE:	TIME:
METHOD OF SHIPMENT: <i>Courier</i>	DATE:	TIME:	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE 1900 Powell Street, 12th Floor Emeryville, Ca 94608 (415) 652-4500	Analytical Laboratory:  Anamatrix, S.J.
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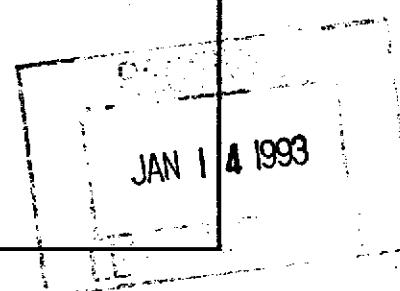
Part of INCHCAPE ENVIRONMENTAL

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212380  
Date Received : 12/30/92  
Project ID : 1563.06  
Purchase Order: N/A

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

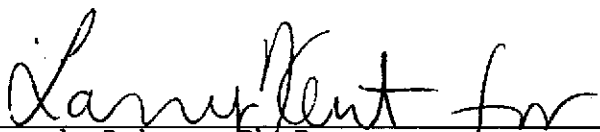
ANAMETRIX ID	CLIENT SAMPLE ID
9212380- 1	LF-B4-BR
9212380- 2	LF-B4
9212380- 3	LF-13
9212380- 4	LF-12
9212380- 5	LF-B3
9212380- 6	LF-B1
9212380- 7	LF-16
9212380- 8	LF-15
9212380- 9	LF-8
9212380-10	LF-9
9212380-11	LF-B4-TB



This report consists of 35 pages not including the cover letter, and is organized in sections according to the specific Anamatrix laboratory group or section which performed the analysis(es) and generated the data. The Report Summary that precedes each section will help you determine which Anamatrix group is responsible for those test results, and will bear the signatures of the department supervisor and the chemist who have reviewed the analytical data. Please refer all questions to the department supervisor who signed the form.

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

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

  
Sarah Schoen, Ph.D.  
Laboratory Director

1-12-93  
Date



## ANAMETRIX REPORT DESCRIPTION GCMS

### Organic Analysis Data Sheets (OADS)

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

### Tentatively Identified Compounds (TICs)

TIC forms contain tabulated results for non-target compounds detected in GC/MS analyses. TICs must be requested at the time samples are submitted at Anamatrix. TIC forms immediately follow the OADS form for each sample. If TICs are requested but not found, then TIC forms will not be included with the report.

### Surrogate Recovery Summary (SRS)

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

### Matrix Spike Recovery Form (MSR)

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

### Qualifiers

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

- U - Indicates that the compound was analyzed for, but was not detected at or above the specified reporting limit.
- B - Indicates that the compound was detected in the associated method blank.
- J - Indicates that the compound was detected at an amount below the specified reporting limit. Consequently, the amount should be considered an approximate value. Tentatively identified compounds will always have a "J" qualifier because they are not included in the instrument calibration.
- E - Indicates that the amount reported exceeded the linear range of the instrument calibration.
- D - Indicates that the compound was detected in an analysis performed at a secondary dilution.
- A - Indicates that the tentatively identified compound is a suspected aldol condensation product. This is common in EPA Method 8270 soil analyses.

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

### REPORTING CONVENTIONS

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

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212380  
Date Received : 12/30/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : GCMS  
Sub-Department: GCMS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9212380- 1	LF-B4-BR	WATER	12/30/92	8240
9212380- 2	LF-B4	WATER	12/30/92	8240
9212380- 3	LF-13	WATER	12/30/92	8240
9212380- 4	LF-12	WATER	12/30/92	8240
9212380- 5	LF-B3	WATER	12/30/92	8240
9212380- 6	LF-B1	WATER	12/30/92	8240
9212380- 7	LF-16	WATER	12/30/92	8240
9212380- 8	LF-15	WATER	12/30/92	8240
9212380- 9	LF-8	WATER	12/30/92	8240
9212380-10	LF-9	WATER	12/30/92	8240
9212380-11	LF-B4-TB	WATER	12/30/92	8240

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212380  
Date Received : 12/30/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : GCMS  
Sub-Department: GCMS

QA/QC SUMMARY :

- No QA/QC problems.

*Jane Manno*  
Department Supervisor

*1-11-93*  
Date

*Lee Lee Jr*  
Chemist

*1-11-93*  
Date

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-B4-BR  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Date Analyzed : 1/ 5/93  
 Instrument ID : MSD1

Anamatrix ID : 9212380-01  
 Analyst : *W*  
 Supervisor : *W*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Sample ID : LF-B4  
Matrix : WATER  
Date Sampled : 12/30/92  
Date Analyzed : 1/ 5/93  
Instrument ID : MSD1

Anamatrix ID : 9212380-02  
Analyst :  
Supervisor :  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Sample ID : LF-13  
Matrix : WATER  
Date Sampled : 12/30/92  
Date Analyzed : 1/ 5/93  
Instrument ID : MSD1

Anametrix ID : 9212380-03  
Analyst : *by*  
Supervisor : *WJ*  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	6.	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-12  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Date Analyzed : 1/ 5/93  
 Instrument ID : MSD1

Anamatrix ID : 9212380-04  
 Analyst : LA  
 Supervisor : *W*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Sample ID : LF-B3  
Matrix : WATER  
Date Sampled : 12/30/92  
Date Analyzed : 1/ 5/93  
Instrument ID : MSD1

Anametrix ID : 9212380-05  
Analyst : W  
Supervisor : W  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	110.	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U



ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-B1  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Date Analyzed : 1/ 5/93  
 Instrument ID : MSD1

Anamatrix ID : 9212380-06  
 Analyst : LY  
 Supervisor : WJ  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	140.	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-16  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Date Analyzed : 1/ 5/93  
 Instrument ID : MSD1

Anametrix ID : 9212380-07  
 Analyst : *W*  
 Supervisor : *W*  
 Dilution Factor : 1.0  
 Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Sample ID : LF-15  
Matrix : WATER  
Date Sampled : 12/30/92  
Date Analyzed : 1/ 5/93  
Instrument ID : MSD1

Anametrix ID : 9212380-08  
Analyst : *W*  
Supervisor : *W*  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Sample ID : LF-8  
Matrix : WATER  
Date Sampled : 12/30/92  
Date Analyzed : 1/ 5/93  
Instrument ID : MSD1

Anametrix ID : 9212380-09  
Analyst : *ly*  
Supervisor : *aj*  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Sample ID : LF-9  
Matrix : WATER  
Date Sampled : 12/30/92  
Date Analyzed : 1/ 5/93  
Instrument ID : MSD1

Anametrix ID : 9212380-10  
Analyst : *LA*  
Supervisor : *CH*  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	5.	U
100-41-4	Ethylbenzene	5.	7.	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
Sample ID : LF-B4-TB  
Matrix : WATER  
Date Sampled : 12/30/92  
Date Analyzed : 1/ 6/93  
Instrument ID : MSD1

Anamatrix ID : 9212380-11  
Analyst : *W*  
Supervisor : *W*  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	ND	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 8240  
ANAMETRIX, INC. (408)432-8192

Project ID :  
Sample ID : BLANK  
Matrix : WATER  
Date Sampled : 0/ 0/ 0  
Date Analyzed : 1/ 5/93  
Instrument ID : MSD1

Anamatrix ID : BJ0502A2  
Analyst : *W*  
Supervisor : *W*  
Dilution Factor : 1.0  
Conc. Units : ug/L

CAS No.	COMPOUND NAME	REPORTING LIMIT	AMOUNT DETECTED	Q
74-87-3	Chloromethane	10.	ND	U
75-01-4	Vinyl chloride	10.	ND	U
74-83-9	Bromomethane	10.	ND	U
75-00-3	Chloroethane	10.	ND	U
75-69-4	Trichlorofluoromethane	5.	ND	U
75-35-4	1,1-Dichloroethene	5.	ND	U
76-13-1	Trichlorotrifluoroethane	5.	ND	U
67-64-1	Acetone	20.	ND	U
75-15-0	Carbon disulfide	5.	ND	U
75-09-2	Methylene chloride	5.	5.	U
156-60-5	Trans-1,2-dichloroethene	5.	ND	U
75-34-3	1,1-Dichloroethane	5.	ND	U
156-59-2	Cis-1,2-dichloroethene	5.	ND	U
78-93-3	2-Butanone	20.	ND	U
67-66-3	Chloroform	5.	ND	U
71-55-6	1,1,1-Trichloroethane	5.	ND	U
56-23-5	Carbon tetrachloride	5.	ND	U
108-05-4	Vinyl acetate	10.	ND	U
71-43-2	Benzene	5.	ND	U
107-06-2	1,2-Dichloroethane	5.	ND	U
79-01-6	Trichloroethene	5.	ND	U
78-87-5	1,2-Dichloropropane	5.	ND	U
75-27-4	Bromodichloromethane	5.	ND	U
10061-01-5	Cis-1,3-dichloropropene	5.	ND	U
108-10-1	4-Methyl-2-pentanone	10.	ND	U
108-88-3	Toluene	5.	ND	U
10061-02-6	Trans-1,3-dichloropropene	5.	ND	U
79-00-5	1,1,2-Trichloroethane	5.	ND	U
127-18-4	Tetrachloroethene	5.	ND	U
591-78-6	2-Hexanone	10.	ND	U
124-48-1	Dibromochloromethane	5.	ND	U
108-90-7	Chlorobenzene	5.	ND	U
100-41-4	Ethylbenzene	5.	ND	U
1330-20-7	Xylene (Total)	5.	ND	U
100-42-5	Styrene	5.	ND	U
75-25-2	Bromoform	5.	ND	U
79-34-5	1,1,2,2-Tetrachloroethane	5.	ND	U
541-73-1	1,3-Dichlorobenzene	5.	ND	U
106-46-7	1,4-Dichlorobenzene	5.	ND	U
95-50-1	1,2-Dichlorobenzene	5.	ND	U

SURROGATE RECOVERY SUMMARY -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Matrix : LIQUID

Anamatrix ID : 9212380  
 Analyst : *W*  
 Supervisor : *WJ*

	SAMPLE ID	SU1	SU2	SU3
1	BLANK	95	98	102
2	LCS	94	98	103
3	LF-B4	95	98	101
4	LF-B4MS	98	97	99
5	LF-B4MSD	97	97	98
6	LF-B4-BR	96	95	100
7	LF-13	94	97	100
8	LF-12	102	97	98
9	LF-B3	107	96	100
10	LF-B1	101	97	98
11	LF-16	99	97	101
12	LF-15	97	97	98
13	LF-8	96	96	98
14	LF-9	95	95	100
15	LF-B4-TB	95	95	101
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				

QC LIMITS

SU1 = 1,2-Dichloroethane-d4 (83-109)  
 SU2 = Toluene-d8 (88-110)  
 SU3 = 1,4-Bromofluorobenzene (88-110)

\* Values outside of Anamatrix QC limits



MATRIX SPIKE RECOVERY FORM -- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project ID : 1563.06  
 Sample ID : LF-B4  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Date Analyzed : 1/ 5/93  
 Instrument ID : MSD1

Anamatrix ID : 9212380-02  
 Analyst : *U*  
 Supervisor : *W*

COMPOUND	SPIKE ADDED (ug/L )	SAMPLE CONCENTRATION (ug/L )	MS CONCENTRATION (ug/L )	MS % REC	%REC LIMITS
1,1-Dichloroethene	50.	0.	48.	95	67-150
Benzene	50.	0.	52.	104	75-134
Trichloroethene	50.	0.	52.	103	69-136
Toluene	50.	0.	51.	103	78-130
Chlorobenzene	50.	0.	54.	108	85-130

COMPOUND	SPIKE ADDED (ug/L )	MSD CONCENTRATION (ug/L )	MSD % REC	% RPD	RPD LIMITS	%REC LIMITS
1,1-Dichloroethene	50.	48.	97	2	25	67-150
Benzene	50.	54.	108	4	25	75-134
Trichloroethene	50.	54.	107	4	25	69-136
Toluene	50.	54.	108	5	25	78-130
Chlorobenzene	50.	57.	114	5	25	85-130

\* Value is outside of Anamatrix QC limits

RPD: 0 out of 5 outside limits  
 Spike Recovery: 0 out of 10 outside limits

LABORATORY CONTROL SPIKE RECOVERY FORM --- EPA METHOD 8240  
 ANAMETRIX, INC. (408)432-8192

Project/Case	:		Anamatrix ID	:	MJ0501A2
Matrix	:	WATER	Analyst	:	LA
Date Sampled	:	0/ 0/ 0	Supervisor	:	UH
Date Analyzed	:	01/05/93	SDG/Batch	:	
Instrument ID	:	MSD1		:	

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	%REC LIMITS
1,1-Dichloroethene	50	0	53	106	72-145
Benzene	50	0	51	102	83-125
Trichloroethene	50	0	49	98	61-140
Toluene	50	0	48	96	82-123
Chlorobenzene	50	0	49	98	82-125

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212380  
Date Received : 12/30/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9212380- 2	LF-B4	WATER	12/30/92	TPHd
9212380- 3	LF-13	WATER	12/30/92	TPHd
9212380- 4	LF-12	WATER	12/30/92	TPHd
9212380- 5	LF-B3	WATER	12/30/92	TPHd
9212380- 6	LF-B1	WATER	12/30/92	TPHd
9212380- 7	LF-16	WATER	12/30/92	TPHd
9212380- 8	LF-15	WATER	12/30/92	TPHd
9212380- 9	LF-8	WATER	12/30/92	TPHd
9212380-10	LF-9	WATER	12/30/92	TPHd
9212380- 2	LF-B4	WATER	12/30/92	TPHg
9212380- 3	LF-13	WATER	12/30/92	TPHg
9212380- 4	LF-12	WATER	12/30/92	TPHg
9212380- 5	LF-B3	WATER	12/30/92	TPHg
9212380- 6	LF-B1	WATER	12/30/92	TPHg
9212380- 7	LF-16	WATER	12/30/92	TPHg
9212380- 8	LF-15	WATER	12/30/92	TPHg
9212380- 9	LF-8	WATER	12/30/92	TPHg
9212380-10	LF-9	WATER	12/30/92	TPHg

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212380  
Date Received : 12/30/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : GC  
Sub-Department: TPH

QA/QC SUMMARY :

- The concentrations reported as gasoline for samples LF-B4, LF-B3 and LF-B1 are primarily due to the presence of discrete hydrocarbon peaks not indicative of gasoline.
- The concentrations reported as gasoline for samples LF-8 and LF-9 are primarily due to the presence of a heavier petroleum product, possibly diesel, kerosene, or jet fuel.

Cheyl Baeman 1/12/93  
Department Supervisor Date

Reggie Dawson 1/12/93  
Chemist Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE )  
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9212380  
Matrix : WATER  
Date Sampled : 12/30/92

Project Number : 1563.06  
Date Released : 01/07/93

	Reporting Limit	Sample I.D.# LF-B4	Sample I.D.# LF-13	Sample I.D.# LF-12	Sample I.D.# LF-B3	Sample I.D.# LF-B1
COMPOUNDS	(ug/L)	-02	-03	-04	-05	-06
TPH as Gasoline	50	160	ND	ND	150	200
% Surrogate Recovery		119%	122%	104%	109%	110%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		12/31/92	12/31/92	12/31/92	12/31/92	12/31/92
RLMF		1	1	1	1	1

- ND - Not detected at or above the practical quantitation limit for the method.  
 TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.  
 RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Dawson 1/12/93  
Analyst Date

Christ Balmer 1/12/93  
Supervisor Date

ANALYSIS DATA SHEET - TOTAL PETROLEUM HYDROCARBONS  
(GASOLINE )  
ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9212380  
Matrix : WATER  
Date Sampled : 12/30/92

Project Number : 1563.06  
Date Released : 01/07/93

	Reporting Limit	Sample I.D.# LF-16	Sample I.D.# LF-15	Sample I.D.# LF-8	Sample I.D.# LF-9	Sample I.D.# BD3101E2
COMPOUNDS	(ug/L)	-07	-08	-09	-10	BLANK
TPH as Gasoline	50	ND	ND	120	510	ND
% Surrogate Recovery		103%	107%	104%	129%	108%
Instrument I.D.		HP12	HP12	HP12	HP12	HP12
Date Analyzed		12/31/92	12/31/92	12/31/92	12/31/92	12/31/92
RLMF		1	1	1	1	1

- ND - Not detected at or above the practical quantitation limit for the method.  
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using modified EPA Method 8015 following sample purge and trap by EPA Method 5030.  
RLMF - Reporting Limit Multiplication Factor.

Anametrix control limits for surrogate p-Bromofluorobenzene recovery are 53-147%.

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

Reggie Dawson 1/12/93  
Analyst Date

Cheryl Bealmer 1/12/93  
Supervisor Date

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

Anametrix W.O.: 9212380  
Matrix : WATER  
Date Sampled : 12/30/92  
Date Extracted: 12/31/92

Project Number : 1563.06  
Date Released : 01/07/93  
Instrument I.D.: HP23

Anametrix I.D.	Client I.D.	Date Analyzed	Reporting Limit (ug/L)	Amount Found (ug/L)
9212380-02	LF-B4	12/31/92	50	ND
9212380-03	LF-13	12/31/92	50	ND
9212380-04	LF-12	12/31/92	50	ND
9212380-05	LF-B3	12/31/92	50	ND
9212380-06	LF-B1	12/31/92	50	ND
9212380-07	LF-16	12/31/92	50	ND
9212380-08	LF-15	12/31/92	50	ND
9212380-09	LF-8	12/31/92	50	150
9212380-10	LF-9	12/31/92	50	300
DWBL123192	METHOD BLANK	12/31/92	50	ND

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

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

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

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

Reggie Davison 1/12/93  
Analyst Date

Cheryl Balmer 1/12/93  
Supervisor Date

TOTAL VOLATILE HYDROCARBON MATRIX SPIKE REPORT  
 EPA METHOD 5030 WITH GC/FID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 1563.06 LF-15  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Date Analyzed : 12/31/92

Anamatrix I.D. : 9212380-08  
 Analyst : RD  
 Supervisor : *CP*  
 Date Released : 01/07/93  
 Instrument ID : HP12

COMPOUND	SPIKE AMT (ug/L)	SAMPLE AMT (ug/L)	REC MS (ug/L)	% REC MS	REC MD (ug/L)	% REC MD	RPD	% REC LIMITS
GASOLINE	250	0	239	96%	230	92%	-4%	48-145
P-BFB				118%		106%		53-147

\* Limits established by Anamatrix, Inc.



TOTAL VOLATILE HYDROCARBON LABORATORY CONTROL SAMPLE REPORT  
 EPA METHOD 5030 WITH GC/FID  
 ANAMETRIX, INC. (408) 432-8192

Sample I.D. : LAB CONTROL SAMPLE  
 Matrix : WATER  
 Date Sampled : N/A  
 Date Analyzed : 12/31/92

Anamatrix I.D. : LCSW1231  
 Analyst : RD  
 Supervisor :  
 Date Released : 01/07/93  
 Instrument I.D.: HP12

COMPOUND	SPIKE AMT. (ug/L)	REC LCS (ug/L)	%REC LCS	% REC LIMITS
GASOLINE	250	246	98%	56-116
SURROGATE		103%		53-147

\* Quality control established by Anamatrix, Inc.

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

Sample I.D. : LAB CONTROL SAMPLE  
 Matrix : WATER  
 Date Sampled : N/A  
 Date Extracted: 12/31/92  
 Date Analyzed : 01/07/93

Anamatrix I.D. : LCSW1231  
 Analyst : RD  
 Supervisor : *CR*  
 Date Released : 01/11/93  
 Instrument I.D.: HP23

COMPOUND	SPIKE AMT (ug/L)	LCS REC (ug/L)	% REC LCS	LCSD REC (ug/L)	% REC LCSD	RPD	% REC LIMITS
DIESEL	1250	1170	94%	1180	94%	1%	63-130

\*Quality control established by Anamatrix, Inc.

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212380  
Date Received : 12/30/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9212380- 1	LF-B4-BR	WATER	12/30/92	6010
9212380- 2	LF-B4	WATER	12/30/92	6010
9212380- 3	LF-13	WATER	12/30/92	6010
9212380- 4	LF-12	WATER	12/30/92	6010
9212380- 5	LF-B3	WATER	12/30/92	6010
9212380- 6	LF-B1	WATER	12/30/92	6010
9212380- 7	LF-16	WATER	12/30/92	6010
9212380- 8	LF-15	WATER	12/30/92	6010
9212380- 9	LF-8	WATER	12/30/92	6010
9212380-10	LF-9	WATER	12/30/92	6010
9212380-11	LF-B4-TB	WATER	12/30/92	6010
9212380- 1	LF-B4-BR	WATER	12/30/92	7060
9212380- 2	LF-B4	WATER	12/30/92	7060
9212380- 3	LF-13	WATER	12/30/92	7060
9212380- 4	LF-12	WATER	12/30/92	7060
9212380- 5	LF-B3	WATER	12/30/92	7060
9212380- 6	LF-B1	WATER	12/30/92	7060
9212380- 7	LF-16	WATER	12/30/92	7060
9212380- 8	LF-15	WATER	12/30/92	7060
9212380- 9	LF-8	WATER	12/30/92	7060
9212380-10	LF-9	WATER	12/30/92	7060
9212380-11	LF-B4-TB	WATER	12/30/92	7060

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212380  
Date Received : 12/30/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

SAMPLE INFORMATION:

ANAMETRIX SAMPLE ID	CLIENT SAMPLE ID	MATRIX	DATE SAMPLED	METHOD
9212380- 1	LF-B4-BR	WATER	12/30/92	7470
9212380- 2	LF-B4	WATER	12/30/92	7470
9212380- 3	LF-13	WATER	12/30/92	7470
9212380- 4	LF-12	WATER	12/30/92	7470
9212380- 5	LF-B3	WATER	12/30/92	7470
9212380- 6	LF-B1	WATER	12/30/92	7470
9212380- 7	LF-16	WATER	12/30/92	7470
9212380- 8	LF-15	WATER	12/30/92	7470
9212380- 9	LF-8	WATER	12/30/92	7470
9212380-10	LF-9	WATER	12/30/92	7470
9212380-11	LF-B4-TB	WATER	12/30/92	7470
9212380- 1	LF-B4-BR	WATER	12/30/92	7740
9212380- 2	LF-B4	WATER	12/30/92	7740
9212380- 3	LF-13	WATER	12/30/92	7740
9212380- 4	LF-12	WATER	12/30/92	7740
9212380- 5	LF-B3	WATER	12/30/92	7740
9212380- 6	LF-B1	WATER	12/30/92	7740
9212380- 7	LF-16	WATER	12/30/92	7740
9212380- 8	LF-15	WATER	12/30/92	7740
9212380- 9	LF-8	WATER	12/30/92	7740
9212380-10	LF-9	WATER	12/30/92	7740
9212380-11	LF-B4-TB	WATER	12/30/92	7740

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

MR. JOHN DeREAMER  
LEVINE-FRICKE  
1900 POWELL STREET 12TH FLOOR  
EMERYVILLE, CA 94608

Workorder # : 9212380  
Date Received : 12/30/92  
Project ID : 1563.06  
Purchase Order: N/A  
Department : METALS  
Sub-Department: METALS

QA/QC SUMMARY :

- No QA/QC problems encountered for samples.

Manuel Lopez 1/6/93  
Department Supervisor Date

Mona Kamel 1/6/93  
Chemist Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS  
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9212380  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Project Number: 1563.06

Date Prepared : 01/04/93  
 Date Analyzed : 01/04/93  
 Date Released : 01/05/93  
 Instrument I.D.: HGA1/AA2/ICP1

ELEMENTS	EPA Method#	Reporting Limit	Sample	Sample	Sample	Sample	Sample
			I.D.# LF-B4-BR	I.D.# LF-B4	I.D.# LF-13	I.D.# LF-12	I.D.# LF-B3
		(ug/L)	-01	-02	-03	-04	-05
Silver (Ag)	6010	10.0	ND	ND	ND	ND	ND
Arsenic (As)	7060	10.0	ND	ND	ND	13.9	ND
Barium (Ba)	6010	100	ND	110	ND	ND	112
Cadmium (Cd)	6010	5.0	ND	ND	ND	ND	ND
Total Cr	6010	10.0	ND	ND	ND	ND	ND
Mercury (Hg)	7470	0.20	ND	ND	ND	ND	ND
Lead (Pb)	6010	40.0	ND	ND	ND	ND	ND
Selenium (Se)	7740	5.0	ND	ND	ND	ND	ND

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

All Metals by EPA Method 200 Series, Method for Chemical Analysis of Water and Wastes, 3rd Edition, 1983, and California Administrative Code Title 22, Section 66699.

Manny Kameel 1/8/93  
 Supervisor Date

Mong Kameel 1/08/93  
 Chemist Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS  
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9212380  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Project Number: 1563.06

Date Prepared : 01/04/93  
 Date Analyzed : 01/04/93  
 Date Released : 01/05/93  
 Instrument I.D.: HGA1/AA2/ICP1

ELEMENTS	EPA Method#	Reporting Limit (ug/L)	Sample	Sample	Sample	Sample	Sample
			I.D.# LF-B1	I.D.# LF-16	I.D.# LF-15	I.D.# LF-8	I.D.# LF-B4-TB
Silver (Ag)	6010	10.0	ND	ND	ND	ND	ND
Arsenic (As)	7060	10.0	ND	ND	ND	29.0	ND
Barium (Ba)	6010	100	ND	ND	ND	177	ND
Cadmium (Cd)	6010	5.0	ND	ND	ND	ND	ND
Total Cr	6010	10.0	ND	ND	ND	ND	ND
Mercury (Hg)	7470	0.20	ND	ND	ND	ND	ND
Lead (Pb)	6010	40.0	ND	ND	ND	ND	ND
Selenium (Se)	7740	5.0	ND	ND	ND	ND	ND

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

All Metals by EPA Method 200 Series, Method for Chemical Analysis of Water and Wastes, 3rd Edition, 1983 , and California Administrative Code Title 22, Section 66699.

Manny Liguera 1/6/93  
 Supervisor Date

Mona Kameel 1/6/93  
 Chemist Date

ANALYSIS DATA SHEET - INDIVIDUAL METALS  
 ANAMETRIX, INC. - (408) 432-8192

Anamatrix W.O.: 9212380  
 Matrix : WATER  
 Date Sampled : 12/30/92  
 Project Number: 1563.06

Date Prepared : 01/04/93  
 Date Analyzed : 01/04/93  
 Date Released : 01/05/93  
 Instrument I.D.: HGA1/AA2/ICP1

ELEMENTS	EPA Method#	Reporting Limit (ug/L)	Sample I.D.# LF-9
Silver (Ag)	6010	10.0	ND
Arsenic (As)	7060	20.0	106
Barium (Ba)	6010	100	ND
Cadmium (Cd)	6010	5.0	ND
Total Cr	6010	10.0	ND
Mercury (Hg)	7470	0.20	ND
Lead (Pb)	6010	40.0	ND
Selenium (Se)	7740	5.0	ND

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

All Metals by EPA Method 200 Series, Method for Chemical Analysis of Water and Wastes, 3rd Edition, 1983, and California Administrative Code Title 22, Section 66699.

Manay Gupta 1/6/93  
 Supervisor Date

Mona Kamel 1/6/93  
 Chemist Date



ANALYSIS DATA SHEET - INDIVIDUAL METALS  
 ANAMETRIX, INC. - (408) 432-8192

Anametrix W.O.: 9212380  
 Matrix : WATER  
 Date Sampled : N/A  
 Project Number: 1563.06

Date Prepared : 01/04/93  
 Date Analyzed : 01/04/93  
 Date Released : 01/05/93  
 Instrument I.D.: HGA1/AA2/ICP1

ELEMENTS	EPA Method#	Reporting Limit (ug/L)	Sample I.D.# BLANK
			MB0104W
Silver (Ag)	6010	10.0	ND
Arsenic (As)	7060	10.0	ND
Barium (Ba)	6010	100	ND
Cadmium (Cd)	6010	5.0	ND
Total Cr	6010	10.0	ND
Mercury (Hg)	7470	0.20	ND
Lead (Pb)	6010	40.0	ND
Selenium (Se)	7740	5.0	ND

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

All Metals by EPA Method 200 Series, Method for Chemical Analysis of Water and Wastes, 3rd Edition, 1983, and California Administrative Code Title 22, Section 66699.

Manny Lopez 1/8/93  
 Supervisor Date

Mona Kamel 1/08/93  
 Chemist Date

ANAMETRIX, INC.  
1961 CONCOURSE DRIVE, SUITE E  
SAN JOSE, CA 95131, (408) 432-8192

-----  
INDIVIDUAL METALS METHOD SPIKE REPORT  
-----

Spike I.D. : LCS0104W  
Date Prepared: 01/04/93  
Date Analyzed: 01/04/93  
Assoc. WO # : 9212380

Inst. ID: HGA1/AA2/ICP1  
Date : 01/05/93  
Matrix : WATER  
Units : ug/L

ELEMENTS	METHOD	SPIKE AMOUNT	METHOD SPIKE	% REC.
Ag	6010	50.0	44.4	88.8
As	7060	40.0	40.1	100
Ba	6010	2000	2150	108
Cd	6010	50.0	50.4	101
Ttl Cr	6010	200	201	101
Hg	7470	1.0	1.1	110
Pb	6010	500	508	102
Se	7740	10.0	10.6	106

=====

COMMENT: Quality control limits for percent recovery are 80-120%.

Wahid Hayer 1/6/93  
Supervisor Date

Mona Kameel 1/16/93  
Chemist Date

ANAMETRIX, INC.  
 1961 CONCOURSE DRIVE, SUITE E  
 SAN JOSE, CA 95131, (408) 432-8192

-----  
 INDIVIDUAL METALS MATRIX SPIKE REPORT  
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Spike I.D. : 9212380-01MS,MD  
 Date Prepared: 01/04/93  
 Date Analyzed: 01/04/93  
 Assoc. WO # : 9212380

Inst. ID: HGA1/AA2/ICP1  
 Date : 01/05/93  
 Matrix : WATER  
 Units : ug/L

ELEMENTS	METHOD	SPIKE AMOUNT	SAMPLE CONC.*	M.S. CONC.	% REC.	M.S.D. CONC.	% REC.	R P D
Ag	6010	50.0	0.0	42.8	85.6	42.6	85.2	0.5
As	7060	40.0	0.0	38.8	97.0	38.8	97.0	0.0
Ba	6010	2000	0.0	2140	107	2150	108	0.5
Cd	6010	50.0	0.0	51.7	103	49.5	99.0	4.3
Ttl Cr	6010	200	0.0	198	99.0	199	99.5	0.5
Hg	7470	1.0	0.0	1.0	100	1.1	110	9.5
Pb	6010	500	0.0	497	99.4	503	101	1.2
Se	7740	10.0	0.0	9.4	94.0	8.7	87.0	7.7

=====

COMMENT: Quality control limits for percent recovery are 75-125% and 25% for RPD.

\* : Sample concentration of 0.0 indicates that the analyte in the sample was below detection limit for the method. 0.0 is entered for calculations of the percent recovery and RPD only.

Manu/Quyn 1/6/93  
 Supervisor Date

Mona Kamel 1/6/93  
 Chemist Date

12/30/92

(15) (18) 9212380 (10/12)

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1563.06      Field Logbook No.:      Date: 12-30-92      Serial No.: 9773

Project Name: Sherwin-Williams      Project Location: Emeryville

Sampler (Signature): Prescott C. Heald      ANALYSES      Samplers: SCH JCK

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES						REMARKS	
						EPA 601	EPA 624	EPA 8210	8 Metals	TPH <sub>g</sub>	TPH <sub>d</sub>		HOLD
<del>LF-B4-TB</del>	<del>12-31-92</del>	SCH										Normal Turnaround	
① LF-B4-BR	12-30-92	1105		3	H <sub>2</sub> O		2	1					Results to John DeReamer
② LF-B4		1110		8			2	1	3	2			
③ LF-13		1055		8			2	1	3	2			
④ LF-12		1130		8			2	1	3	2			Anamatrix Ref. # 1801K
⑤ LF-B3		1235		8			2	1	3	2			
⑥ LF-B1		1330		8			2	1	3	2			8 metals: As, Ba, Cd, Cr, Pb, Hg, Se, Ag
⑦ LF-16		1400		8			2	1	3	2			Filter metals samples at the lab
⑧ LF-15		1420		8			2	1	3	2			
⑨ LF-8		1515		8			2	1	3	2			
⑩ LF-9		1555		8			2	1	3	2			
⑪ LF-B4-TB				3	H <sub>2</sub> O		2	1					← added TB as per instruction from John DeReamer 12-30-92

RELINQUISHED BY: (Signature) Prescott C. Heald	DATE 12/30/92	TIME 16:30	RECEIVED BY: (Signature) [Signature]	DATE 12/31/92	TIME 16:30
RELINQUISHED BY: (Signature) [Signature]	DATE 12/30/92	TIME 18:35	RECEIVED BY: (Signature) [Signature]	DATE 12/31/92	TIME 18:35
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Cowies	DATE	TIME	LAB COMMENTS:		

Sample Collector: LEVINE-FRICKE  
1900 Powell Street, 12th Floor  
Emeryville, Ca 94608  
(415) 652-4500

Analytical Laboratory: Anamatrix, S.J.

**APPENDIX B**

**QUALITY ASSURANCE/QUALITY CONTROL  
REVIEW OF GROUND-WATER QUALITY RESULTS**

## APPENDIX B

QUALITY ASSURANCE/QUALITY CONTROL REVIEW OF  
GROUND-WATER QUALITY RESULTS

Water-quality analyses were performed by Anamatrix Laboratory of San Jose, California, using EPA Method 8240 (VOCs), EPA Method 3510 (TPHd), EPA Method 5030 (TPHg), and EPA 200/6000/7000 Series Methods for analysis for eight metals (arsenic, barium, cadmium, total chromium, lead, mercury, selenium, and silver). A duplicate sample for analysis with all four methods was collected from well LF-10.

Bailer rinsate blanks were prepared in the field by pouring nitrogen-purged deionized water into sampling bailers before sampling wells LF-11 and LF-B4. The bailer rinsate sample that was poured before sampling well LF-B4 was analyzed by EPA Method 8240 (VOCs) and EPA 200/6000/7000 Series Methods for analysis of two metals (arsenic and selenium). The bailer rinsate sample that was poured before sampling well LF-11 was analyzed by EPA Method 8240 (VOCs) and EPA 200/6000/7000 Series Methods for analysis of eight metals (arsenic, barium, cadmium, total chromium, lead, mercury, selenium, and silver).

One laboratory-prepared trip blank for VOC analysis was prepared and sent to the field in the same batch of containers used for ground-water sample shipment. One laboratory-prepared trip blank for metals analysis was also prepared and sent to the field in the same batch of containers used for ground-water sample shipment. These metals trip blanks were analyzed for eight metals including arsenic.

Data precision of analytical results for duplicate samples is assessed by the relative percent difference (RPD) parameter, which is defined as the absolute value of the difference between two values divided by their arithmetic mean. Results close to the analytical detection limit are generally subject to variability, and as such, the RPD may not be an appropriate parameter to evaluate in those cases. RPD values for analyses of the duplicate sample indicated good data precision for the samples collected during the December 1992 sampling round (Table B-1) with all of the calculated RPD values less than 30 percent.

In addition to the field duplicates, laboratory surrogate spikes and matrix spikes were evaluated. Matrix spikes are samples prepared by taking an aliquot of an actual sample and adding known amounts of the target compounds before extraction

## LEVINE-FRICKE

and analysis. The total amount detected in the spike sample (less the amount in the original sample), divided by the theoretical amount added, expressed as a percentage, is the matrix spike recovery. An RPD can be calculated for matrix spikes prepared in duplicate. Surrogate spikes are compounds that are similar in chemical structure to the target compounds but are not commonly found in environmental samples. These compounds are added to samples, and the amount detected divided by the theoretical amount added, expressed as a percentage, is the surrogate spike recovery. Surrogate spike recoveries, matrix spike recoveries, and RPD values were found to be in good agreement with recoveries within Anamatrix' limits.

None of the field or trip blanks were found to contain any of the target compounds above laboratory method detection limits. None of the laboratory method blanks were found to contain any of the target compounds above laboratory method detection limits.

TABLE B-1  
 QUALITY CONTROL DATA FOR CHEMICAL ANALYSES  
 DATA PRECISION AS RELATIVE PERCENT DIFFERENCE (RPD) OF DUPLICATE SAMPLE ANALYSES  
 AND COMPOUNDS DETECTED IN FIELD BLANKS  
 [All concentrations expressed in parts per million (ppm)]

Well No.	Date	Lab	Lab I.D. No.	Acetone	MEK	Toluene	Total Xylenes	Benzene	Chloro-benzene	TPHd	TPHg	Arsenic	Barium	Lead	Cadmium
LF-10	31-Dec-92	ANA	9212395-05	ND	ND	ND	ND	ND	ND	0.33	0.19	0.55	ND	ND	ND
	31-Dec-92	ANA	9212395-06	ND	ND	ND	ND	ND	ND	0.37	0.18	0.532	ND	ND	ND
	RPD(%)			NA	NA	NA	NA	NA	NA	11.4	5.4	3.3	NA	NA	NA
<b>TRIP BLANKS</b>															
LF-B4-TB	30-Dec-92	ANA	9212380-11	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND
<b>BAILER RINSATE BLANKS</b>															
LF-B4-BR	30-Dec-92	ANA	9212380-11	ND	ND	ND	ND	ND	ND	NA	NA	ND	ND	ND	ND
LF-11-BR	31-Dec-92	ANA	9212395-02	ND	ND	ND	ND	ND	ND	NA	NA	ND	NA	NA	NA

Explanation of Symbols and Abbreviations Used in Table B-1:

Analytical Laboratory:

ANA = Anametrix Laboratory, San Jose, California

- MEK = methyl ethyl ketone
- NA = Not Analyzed
- ND = Not Detected
- RPD = Relative Percent Difference, defined as the difference between two values divided by their arithmetic mean