Report of Semiannual Ground-Water Monitoring
For the Period from
July 1 through December 31, 1993
The Sherwin-Williams Plant
Emeryville, California

June 10, 1994
1563.00-06

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

LEVINE·FRICKE

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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

June 10, 1994 LF 1563.00-06

Mr. Sumadhu Arigala
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, 1993
The Sherwin-Williams Plant
Emeryville, California

Dear Mr. Arigala:

The enclosed report presents the results of the semiannual ground-water monitoring program conducted in January 1994 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.

Monitoring activities could not be conducted in A-zone wells LF-1, LF-4, LF-9, LF-14, LF-15, LF-16, or B-zone wells LF-B1 and LF-B2 during this semiannual monitoring period. The reasons for not monitoring the wells are as follows:

- In August 1993, A-zone monitoring well LF-1 and B-zone monitoring well LF-B1 were destroyed under permit from the Alameda County Flood Control and Water Conservation District because the wells were in the pathway of the subsurface remedial slurry wall.

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- In September 1993, A-zone monitoring wells LF-4 and LF-9 were damaged by heavy equipment used during the slurry wall construction.

- In December 1993, monitoring wells LF-14, LF-15, and LF-16 were inadvertently destroyed by the Southern Pacific Transportation Company during construction activities.

- In January 1994, well LF-B2 was partially covered with debris from the slurry wall construction. Ground-water elevation was measured in well LF-B2, but the construction debris prohibited a pump or bailer from entering the well. Therefore a ground-water sample could not be collected from well LF-B2.

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

Sincerely,

Jo Ann T. Weber, R.G.
Senior Project Hydrogeologist

Enclosure

cc: Distribution List

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CERTIFICATION

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

Jo Ann T. Weber
Senior Project Hydrogeologist
California Registered Geologist (5990)

6/10/94
Date

June 10, 1994 LF 1563.00-06

REPORT OF SEMIANNUAL GROUND-WATER MONITORING FOR THE PERIOD FROM JULY 1 THROUGH DECEMBER 31, 1993 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, 1993 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 1992), which was submitted to the RWQCB.

The semiannual monitoring program for the period from July 1 through December 31, 1993 was conducted in early January 1994. The monitoring event was delayed until January because of construction activities conducted on the Site. The program included measuring ground-water elevations and collecting samples for laboratory analysis from accessible on-site and off-site perimeter monitoring wells.

Monitoring activities could not be conducted in A-zone wells LF-1, LF-4, LF-9, LF-14, LF-15, LF-16, or B-zone wells LF-B1 and LF-B2 during this semiannual monitoring period. The reasons for not monitoring the wells are as follows:

- In August 1993, A-zone monitoring well LF-1 and B-zone monitoring well LF-B1 were destroyed under permit from the Alameda County Flood Control and Water Conservation District because the wells were in the pathway of the subsurface remedial slurry wall.
- In September 1993, A-zone monitoring wells LF-4 and LF-9 were damaged by heavy equipment used during the slurry wall construction.
- In December 1993, monitoring wells LF-14, LF-15, and LF-16 were inadvertently destroyed by the Southern Pacific Transportation Company during construction activities.

- In January 1994, well LF-B2 was partially covered with debris from the slurry wall construction. Ground-water elevation was measured in well LF-B2, but the construction debris prohibited a pump or bailer from entering the well. Therefore a ground-water sample could not be collected from well LF-B2.

Actions to be taken to remedy these situations are as follows:

- Well LF-4 will be repaired and the top of the casing re-surveyed.
- Well LF-9 will be destroyed under permit and replaced with a new well.
- Wells LF-1, LF-14, LF-15, LF-16, and LF-B1 will be replaced with new wells, and the construction debris covering well LF-B2 will be removed. This work will be scheduled after installation of the slurry wall and final capping are completed.

The following activities were conducted for the 1993 semiannual monitoring event:

- Ground-water levels were measured in on-site and off-site monitoring wells (LF-2, LF-3, LF-5, LF-7, LF-8, LF-10, LF-11, LF-12, LF-13, LF-B2, LF-B3, and LF-B4).
- Ground-water samples were collected from six A-zone monitoring wells located in on-site perimeter and off-site perimeter areas (LF-7, LF-8, LF-10 through LF-13, and two B-zone monitoring wells [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 (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-2, LF-3, LF-5, LF-7, LF-8, LF-10, LF-11, LF-12, and LF-13, and in B-zone monitoring wells LF-B2, LF-B3, and LF-B4 (Table 1) on January 5, 1994. As described in Section 1.0, ground-water elevation data were not collected for A-zone wells LF-1, LF-4, LF-9, LF-14, LF-15, or LF-16 or B-zone well LF-B1. In addition, ground-water elevation was not measured in A-zone monitoring well LF-6, and the surface-water elevation of Temescal Creek was not measured during this semiannual monitoring event. 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 January 5 and January 6, 1994, from A-zone monitoring wells LF-7, LF-8, and LF-10 through LF-13, and from B-zone monitoring wells LF-B3 and LF-B4. As described in Section 1.0, no samples were collected from wells LF-9, LF-14 through LF-16, LF-B1, or LF-B2. No samples were collected from well LF-2. Ground water from well LF-2 has not been sampled since July 1990 because floating product has been observed in the well during subsequent sampling programs. The floating product, previously characterized as weathered diesel (Levine•Fricke 1990b), was most recently measured on January 5, 1994, with a product thickness of 0.2 foot.

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 filtered in the field using 0.45-micron filters and then collected in plastic bottles with nitric acid as a preservative. All samples for chemical analysis were analyzed by American Environmental Network of Pleasant Hill, California, a state-certified laboratory, according to EPA Method protocol.

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

All VOC results from ground-water sampled from A-zone wells during this sampling event were below the reported laboratory detection limits with the exception of ground-water samples from wells LF-7 and LF-13. Ground water from LF-7 contained 0.031 part per million (ppm) benzene, 0.12 ppm toluene, 0.009 ppm chlorobenzene, 0.003 ppm ethylbenzene, and 0.014 ppm total xylenes. Ground-water from well LF-13 contained 0.004 ppm of 1,1,1-trichloroethane.

4.1.2 Total Petroleum Hydrocarbons as Diesel

Relatively low hydrocarbon concentrations (less than 1.8 ppm) measured as TPHd were detected in ground-water samples from

wells LF-7, LF-8, LF-10, and LF-11 (see Table 3, Figure 6, and Appendix A). Concentrations of TPHd for wells LF-12 and LF-13 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-7, LF-10, and LF-11 (see Table 4, Figure 7, and Appendix A). Concentrations of TPHg for wells LF-8, LF-12, and LF-13 did not exceed the detection limit of 0.050 ppm.

4.1.4 Inorganic Compounds

The results for ground-water samples collected from A-zone wells that were analyzed for inorganic compounds indicated concentrations of arsenic and barium in five of the six wells. Additionally, low concentrations of lead, selenium, total chromium, and silver were detected.

Arsenic was detected in five of the six sampled A-zone monitoring wells (LF-8, and LF-10 through LF-13). Concentrations ranged from 0.003 ppm in the sample from well LF-13 to 0.94/0.82 ppm in the sample/duplicate from well LF-10.

Barium was detected in the ground-water samples from all A-zone wells sampled during this monitoring event (LF-7, LF-8, and LF-10 through LF-13). Concentrations ranged from 0.04 ppm in the sample from well LF-13 to 0.19/0.18 ppm in the sample/duplicate from well LF-10.

In addition, lead was detected at 0.001 ppm in the sample from well LF-7, selenium was detected at 0.005 ppm in samples from wells LF-8 and LF-12, total chromium was detected at 0.006 ppm in the sample from well LF-12, and silver was detected at 0.001 ppm in the sample from well LF-11.

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 sampled during this monitoring period (LF-B3 and LF-B4) indicated 0.099 ppm 1,2-dichloroethane (1,2-DCA) in the sample from well LF-B3 and 0.012 ppm trichloroethene (TCE) in the sample from well LF-B4. This is the first event during which TCE was found in this upgradient well.

4.2.2 Total Petroleum Hydrocarbons as Diesel

The results of TPHd analysis of ground-water samples collected from B-zone monitoring wells (LF-B3 and LF-B4) were less than the detection limit of 0.05 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 (LF-B3 and LF-B4) were less than the detection limit of 0.05 ppm (Table 3, Figure 6, and Appendix A).

4.2.4 Inorganic Compounds

Of the metals analyzed, 0.004 ppm and 0.003 ppm arsenic and 0.11 ppm and 0.07 ppm barium were detected in ground-water samples from wells LF-B3 and LF-B4, respectively. In addition, cadmium was detected in well LF-B3 at 0.006 ppm and lead was detected in well LF-B4 at 0.001 ppm. The results for all other analyzed metals in B-zone wells were below detection limits, which ranged from 0.0002 ppm to 0.004 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.

——. 1992. Self-Monitoring Plan for 1992-1993: Annual and Semiannual Ground-Water Monitoring Program, The Sherwin-Williams Plant, Emeryville, California. May 18.

TABLE 1
GROUND-WATER ELEVATION DATA
JANUARY 1994

Well Number	Date	Well Elevation (feet Mean Sea Level)	Measured Depth to Ground Water (feet)	Ground-Water Elevation* (feet) (MLLW Datum)
LF-1	05-Jan-94	16.92	NM	NM
LF-2	05-Jan-94	12.24	4.19	8.22 **
LF-3	05-Jan-94	11.98	5.09	6.89
LF-4	05-Jan-94	13.05	NM	NM
LF-5	05-Jan-94	10.25	3.65	6.60
LF-6	Sealed August 2, 1990			
LF-7	05-Jan-94	11.08	4.36	6.72
LF-8	05-Jan-94	12.75	6.72	6.03
LF-9	05-Jan-94	10.44	NM	NM
LF-10	05-Jan-94	10.32	3.72	6.60
LF-11	05-Jan-94	10.08	3.42	6.66
LF-12	05-Jan-94	14.97	6.98	7.99
LF-13	05-Jan-94	14.76	6.62	8.14
LF-14	05-Jan-94	10.03	NM	NM
LF-15	05-Jan-94	9.80	NM	NM
LF-16	05-Jan-94	10.10	NM	NM
LF-B1	05-Jan-94	17.11	NM	NM
LF-B2	05-Jan-94	9.72	3.05	6.67
LF-B3	05-Jan-94	10.35	3.68	6.67
LF-B4	05-Jan-94	14.54	6.62	7.92
Surface Water of Temescal Creek	05-Jan-94	10.98	NM	NM

Data entered by MEK/9 Mar 94 Data proofed by KMG

Notes:

* 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.

** The ground-water elevation in well LF-2 has been corrected to account for the presence of the lower density fluids on top of the water table using the following calculation:

$$\text{Ground-water Elevation (ft msl)} = \text{Well Elevation (ft msl)} + \left|\overline{\text{Product Thickness (ft)}}\right| \times \text{Specific gravity of product} - \left|\overline{\text{Depth to Water (ft)}}\right|$$

The specific gravity of the product was estimated to be approximately 0.87.

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	Lab I.D. Number	Acetone	Benzene	Ethyl-Benzene	Methyl Ethyl Ketone	Total Xylenes	2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
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-1	09-Jun-93	ANA	9306148-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
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-3	09-Jun-93	ANA	9306148-03	<10.000	<2.500	9.800	<10.000	48.000	<5.000	120.000	<2.500	<2.500	<2.500	<2.500	<2.500	177.800	
DUP	09-Jun-93	ANA	9306148-04	<10.000	<2.500	7.600	<10.000	37.000	<5.000	110.000	<2.500	<2.500	<2.500	<2.500	<2.500	154.600	
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-4	09-Jun-93	ANA	9306138-11	<0.200	0.051	0.210	<0.200	1.500	<0.100	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	1.761	
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	
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	150.000	
LF-5	09-Jun-93	ANA	9306138-12	<10.000	<2.500	<2.500	<10.000	4.500	<5.000	83.000	<2.500	<2.500	<2.500	<2.500	<2.500	87.500	
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	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	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	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	0.900	
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	0.007	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	0.052	
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	0.007	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	<0.020	
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	<0.020	
LF-7	09-Jun-93	ANA	9306138-04	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
DUP	09-Jun-93	ANA	9306138-05	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-7	06-Jan-94	ANA	9401042-03	<0.050	0.031	0.003	<0.050	0.014	<0.030	0.120	<0.003	<0.003	<0.003	<0.003	0.009	0.177	

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	Lab I.D. Number	Acetone	Benzene	Ethyl-Benzene	Methyl Ethyl Ketone	Total Xylenes	2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
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	0.003	
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	0.010	
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	<0.020	
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	<0.020	
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	<0.020	
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	<0.020	
LF-8	09-Jun-93	ANA	9306138-09	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-8	06-Jan-94	ANA	9401042-02	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.000	
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	0.005	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	0.004	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	<0.020	
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	0.006	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	
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	<0.020	
LF-9	09-Jun-93	ANA	9306138-10	<0.020	0.005	<0.005	<0.020	<0.005	<0.010	0.005	<0.005	<0.005	<0.005	<0.005	0.005	0.010	
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	<0.020	
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	<0.020	
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-10	09-Jun-93	ANA	9306148-02	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-10	06-Jan-94	AEN	9401041-07	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.000	
DUP	06-Jan-94	AEN	9401042-01	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.000	
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-11	09-Jun-93	ANA	9306138-07	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-11	05-Jan-94	AEN	9401041-04	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.000	
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-12	08-Jun-93	ANA	9306128-01	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-12	06-Jan-94	AEN	9401041-05	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.000	

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	Lab I.D. Number	Acetone	Benzene	Ethyl-Benzene	Methyl Ethyl Ketone	Total Xylenes	2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
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	
LF-13	08-Jun-93	ANA	9306128-06	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	0.008	<0.005	<0.005	<0.005	<0.005	0.008	
LF-13	05-Jan-94	AEN	9401041-03	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	0.004	<0.003	<0.003	<0.003	<0.003	0.004	
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-14	09-Jun-93	ANA	9306138-08	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
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-15	09-Jun-93	ANA	9306138-01	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
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-16	09-Jun-93	ANA	9306138-02	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
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-B1	08-Jun-93	ANA	9306128-07	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.160	<0.005	<0.005	<0.005	0.160	
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	
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-B2	08-Jun-93	ANA	9306128-03	<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	

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	Lab I.D. Number	Acetone	Benzene	Ethyl-Benzene	Methyl Ethyl Ketone	Total Xylenes	2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
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-B3	08-Jun-93	ANA	9306128-05	<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	05-Jan-94	AEN	9401041-02	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	0.099	<0.003	<0.003	<0.003	0.099	
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	
LF-B4	08-Jun-93	ANA	9306128-02	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-B4	05-Jan-94	AEN	9401041-01	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	0.012	<0.003	0.012	
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	
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	
TRIP08	08-Jun-93	ANA	9306128-08	<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-B3-BR	08-Jun-93	ANA	9306128-04	<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-7-TB	09-Jun-93	ANA	9306138-03	<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-7-BR	09-Jun-93	ANA	9306138-06	<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-TB	09-Jun-93	ANA	9306148-01	<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	

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	Lab I.D. Number	Acetone	Benzene	Ethyl-Benzene	Methyl Ethyl Ketone	Total Xylenes	2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
Trip Blank	03-Jan-94	AEN	9401042-04	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.000	
LF-10-FB	06-Jan-94	AEN	9401041-06	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	0.000	

Data entered by MEK/11 Feb; 9 Mar 94 Data proofed by KAG 3-10-94 QA/QC by KAG

Explanation of Symbols and Abbreviations:

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-1	09-Jun-93	ANA	9306148-05	0.083	
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-3	10-Jun-93	ANA	9306148-03	100	#2
DUP	10-Jun-93	ANA	9306148-04	110	#2
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-4	09-Jun-93	ANA	9306138-11	1.200	#2
LF-5	06-Aug-91	ANA	9108069-05	4.700	
LF-5	09-Jul-92	ANA	9207119-11	0.830	
LF-5	09-Jun-93	ANA	9306138-12	2.000	#2
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-7	09-Jun-93	ANA	9306138-04	0.340	
DUP	09-Jun-93	ANA	9306138-05	0.320	
LF-7	06-Jan-94	ANA	9401042-03	0.540	
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-8	09-Jun-93	ANA	9306138-09	0.330	
LF-8	06-Jan-94	ANA	9401042-02	1.700	
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-9	09-Jun-93	ANA	9306138-10	0.560	
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-10	10-Jun-93	ANA	9306148-02	0.470	
LF-10	06-Jan-94	AEN	9401041-07	1.500	
DUP	06-Jan-94	AEN	9401042-01	1.200	
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-11	09-Jun-93	ANA	9306138-07	0.270	
LF-11	05-Jan-94	AEN	9401041-04	0.800	
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	
LF-12	08-Jun-93	ANA	9306128-01	0.099	
LF-12	06-Jan-94	AEN	9401041-05	<0.050	
LF-13	19-Jun-91	ANA	9106245-02	<0.050	
LF-13	08-Jul-92	ANA	9207088-02	<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	30-Dec-92	ANA	9212380-03	<0.050	
LF-13	08-Jun-93	ANA	9306128-06	0.052	
LF-13	05-Jan-94	AEN	9401041-03	<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-14	09-Jun-93	ANA	9306138-09	0.240	
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-15	09-Jun-93	ANA	9306138-01	0.098	
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-16	09-Jun-93	ANA	9306138-02	0.083	
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-B1	08-Jun-93	ANA	9306128-03	0.061	
LF-B2	21-Jun-91	ANA	9106274-04	<0.050	
LF-B2	08-Jul-92	ANA	9207088-05	<0.050	
LF-B2	08-Jun-93	ANA	9306128-05	<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-B3	08-Jun-93	ANA	9306128-05	0.060	
LF-B3	05-Jan-94	AEN	9401041-02	<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	
LF-B4	08-Jun-93	ANA	9306128-02	0.066	
LF-B4	05-Jan-94	AEN	9401041-01	<0.050	

Data entered by MEK/11 Feb, 9 Mar 94 Data proofed by KMB 3/10/94 QA/QC by MEK

Notes:
B&C = BC Analytical Laboratory, Emeryville, California
AEN = American Environmental Network, Pleasant Hill, California
ANA = Anametrix Laboratory, San Jose, California

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

#2 - The concentrations reported as diesel by Anametrix for samples LF-3, LF-3DUP, LF-4, and LF-5 are primarily due to the presence of a lighter petroleum product of hydrocarbon range C6-C12, possibly gasoline.

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-1	10-Jun-93	ANA	9306148-04	<0.050	
LF-3	09-Jul-92	ANA	9207119-13	190.000	
DUP	09-Jul-92	ANA	9207119-14	180.000	
LF-3	10-Jun-93	ANA	9306148-02	150.000	
DUP	10-Jun-93	ANA	9306148-03	150.000	
LF-4	09-Jul-92	ANA	9207119-10	14.000	
LF-4	09-Jun-93	ANA	9306138-11	2.200	
LF-5	09-Jul-92	ANA	9207119-11	69.000	
LF-5	09-Jun-93	ANA	9306138-12	95.000	
LF-7	09-Jul-92	ANA	9207119-03	0.140	
DUP	09-Jul-92	ANA	9207119-04	0.130	
LF-7	09-Jun-93	ANA	9306138-04	0.110	
DUP	09-Jun-93	ANA	9306138-05	0.100	
LF-7	06-Jan-94	ANA	9401042-03	0.500	
LF-8	09-Jul-92	ANA	9207119-05	<0.050	
LF-8	30-Dec-92	ANA	9212380-09	0.120	#2
LF-8	09-Jun-93	ANA	9306138-09	<0.050	#2
LF-8	06-Jan-94	ANA	9401042-02	<0.050	
LF-9	09-Jul-92	ANA	9207119-09	0.620	
LF-9	30-Dec-92	ANA	9212380-10	0.510	#2
LF-9	09-Jun-93	ANA	9306138-10	0.430	#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-10	10-Jun-93	ANA	9306148-01	0.180	
LF-10	06-Jan-94	AEN	9401041-07	0.200	
DUP	06-Jan-94	ANA	9401042-01	0.200	#2
LF-11	09-Jul-92	ANA	9207119-06	<0.050	
LF-11	31-Dec-92	ANA	9212395-03	0.058	
LF-11	09-Jun-93	ANA	9306138-07	<0.050	
LF-11	05-Jan-94	AEN	9401041-04	0.060	
LF-12	08-Jul-92	ANA	9207088-03	<0.050	
LF-12	30-Dec-92	ANA	9212380-04	<0.050	
LF-12	08-Jun-93	ANA	9306128-01	<0.050	
LF-12	06-Jan-94	AEN	9401041-05	<0.050	
LF-13	08-Jul-92	ANA	9207088-02	<0.050	
LF-13	30-Dec-92	ANA	9212380-03	<0.050	
LF-13	08-Jun-93	ANA	9306128-06	<0.050	
LF-13	05-Jan-94	AEN	9401041-03	<0.050	
LF-14	09-Jul-92	ANA	9207119-07	<0.050	
LF-14	31-Dec-92	ANA	9212395-04	0.068	
LF-14	09-Jun-93	ANA	9306138-08	<0.050	
LF-15	08-Jul-92	ANA	9207088-09	<0.050	
LF-15	30-Dec-92	ANA	9212380-08	<0.050	
LF-15	09-Jun-93	ANA	9306138-01	<0.050	
LF-16	09-Jul-92	ANA	9207119-01	<0.050	
LF-16	30-Dec-92	ANA	9212380-07	0.050	
LF-16	09-Jun-93	ANA	9306138-02	<0.050	
LF-B1	08-Jul-92	ANA	9207088-04	0.180	
LF-B1	30-Dec-92	ANA	9212380-06	0.200	#1

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-B1	08-Jun-93	ANA	9306128-07	0.130	#1
LF-B2	08-Jul-92	ANA	9207088-05	<0.050	
LF-B2	08-Jun-93	ANA	9306128-03	<0.050	
LF-B3	08-Jul-92	ANA	9207088-08	0.140	
LF-B3	30-Dec-92	ANA	9212380-05	0.150	#1
LF-B3	08-Jun-93	ANA	9306128-05	0.090	#1
LF-B3	05-Jan-94	AEN	9401041-02	<0.050	
LF-B4	08-Jul-92	ANA	9106245-01	<0.050	
LF-B4	30-Dec-92	ANA	9212380-02	0.160	#1
LF-B4	08-Jun-93	ANA	9306128-02	<0.050	#1
LF-B4	05-Jan-94	AEN	9401041-01	<0.050	
Blanks					
LF-10-FB	06-Jan-94	AEN	9401041-06	<0.050	

Data entered by MEK/11 Feb; 9 Mar 94 Data proofed by KAG 3.10.94 QA/QC by MEK

ANA = Anametrix Laboratory, San Jose, California
AEN = American Environmental Network, Pleasant Hill, California

Samples analyzed 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 hydrocarbon peak not indicative of gasoline.

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-1	10-Jun-93	ANA	9306148-05	6000/7000	39.800	<0.100	<0.030	0.0039	<0.010	<0.0002	<0.050	<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-3	10-Jun-93	ANA	9306148-03	6000/7000	142.000	0.625	<0.100	<0.003	<0.010	<0.0002	<0.050	<0.010
DUP	10-Jun-93	ANA	9306148-04	6000/7000	141.000	0.635	<0.100	<0.003	<0.010	<0.0002	<0.050	<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-4	09-Jun-93	ANA	9306138-16	6000/7000	1.520	0.250	<0.015	<0.003	<0.010	<0.0002	<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-5	09-Jun-93	ANA	9306138-12	6000/7000	0.0283	0.257	<0.005	<0.003	<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				
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-7	09-Jun-93	ANA	9306138-04	6000/7000	<0.010	0.191	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
DUP	09-Jun-93	ANA	9306138-05	6000/7000	<0.010	0.201	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-7	06-Jan-94	AEN	9401042-03	200	<0.002	0.07	<0.001	0.001	<0.002	<0.0002	<0.004	<0.001
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				

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-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-8	09-Jun-93	ANA	9306138-09	6000/7000	0.0384	0.121	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-8	06-Jan-94	AEN	9401042-02	200	0.055	0.10	<0.001	<0.001	<0.002	<0.0002	0.005	<0.001
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-9	09-Jun-93	ANA	9306138-10	6000/7000	0.158	0.169	<0.005	<0.003	<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				
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-10	10-Jun-93	ANA	9306148-02	6000/7000	0.958	0.249	<0.005	<0.003	<0.010	<0.0002	<0.050	<0.010
LF-10	06-Jan-94	AEN	9401041-07	200	0.940	0.190	<0.001	<0.001	<0.002	<0.0002	<0.004	0.002
DUP	06-Jan-94	AEN	9401042-01	200	0.820	0.180	<0.001	0.001	<0.002	<0.0002	<0.004	0.002
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-11	09-Jun-93	ANA	9306138-15	6000/7000	0.0116	0.152	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-11	05-Jan-94	AEN	9401041-04	200	0.019	0.130	<0.001	<0.001	<0.002	<0.0002	<0.004	0.001
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-12	08-Jun-93	ANA	9306128-01	6000/7000	0.0152	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-12	06-Jan-94	AEN	9401041-05	200	0.013	0.060	<0.001	<0.001	0.006	<0.0002	0.005	<0.001
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

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-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-13	08-Jun-93	ANA	9306128-06	6000/7000	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-13	05-Jan-94	AEN	9401041-03	200	0.003	0.040	<0.005	<0.001	<0.002	<0.0002	<0.004	<0.001
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
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-14	09-Jun-93	ANA	9306138-08	6000/7000	0.102	<0.100	<0.005	<0.003	<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-15	09-Jun-93	ANA	9306138-01	6000/7000	<0.010	<0.100	<0.005	<0.003	<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-16	09-Jun-93	ANA	9306138-02	6000/7000	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.050	<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-B1	08-Jun-93	ANA	9306128-07	6000/7000	<0.010	<0.100	<0.005	<0.003	<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-B2	08-Jun-93	ANA	9306128-03	6000/7000	<0.010	0.233	<0.005	<0.003	<0.010	<0.0002	<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				
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-B3	08-Jun-93	ANA	9306128-05	6000/7000	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-B3	05-Jan-94	AEN	9401041-02	200	0.004	0.110	0.0060	<0.001	<0.002	<0.0002	<0.004	<0.001
LF-B4	17-Jul-90	B&C	07-444-3	200/7000	0.003	0.080	<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-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
LF-B4	08-Jun-93	ANA	9306128-02	6000/7000	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-B4	05-Jan-94	AEN	9401041-01	200	0.003	0.070	<0.001	0.001	<0.002	<0.0002	<0.004	<0.001
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				
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
LF-7-TB	09-Jun-93	ANA	9306138-03	6000/7000	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-10-FB	10-Jun-93	ANA	9306148-01	6000/7000	<0.100	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
Trip Blank	08-Jun-93	ANA	9306128-08	6000/7000	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-10-FB	06-Jan-94	AEN	9401041-06	200	<0.002	<0.01	<0.001	<0.001	<0.01	<0.0002	<0.004	<0.001

Data entered by MEK/11 Feb; 9 Mar 94 Data proofed by KAG 3.10.94 QA/QC by MEK

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

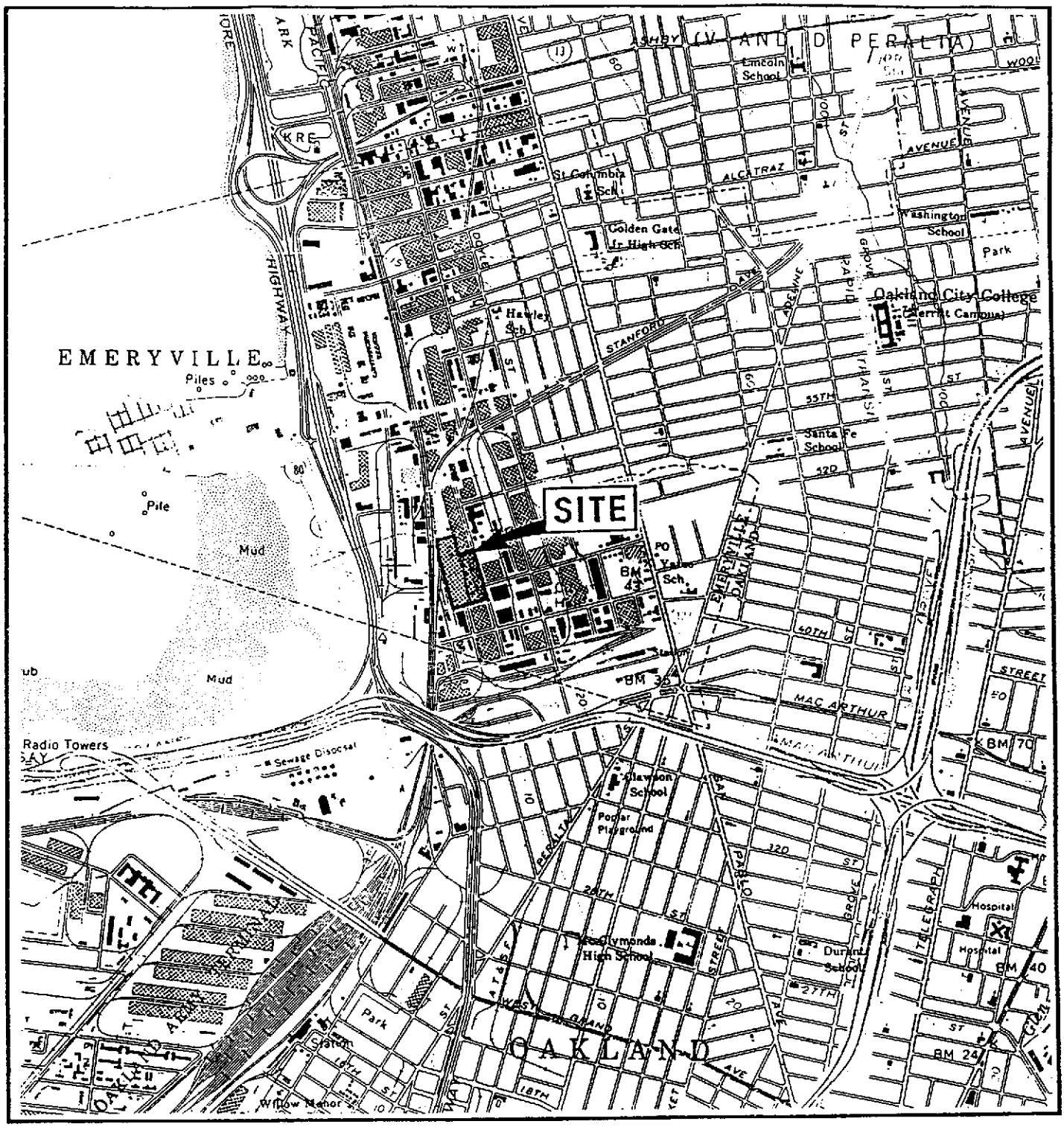
* = Data not validated based on positive results of trip blank (0.014 ppm) or bailer rinsate blank (0.013 ppm) of submitted samples. Detection Limit for arsenic for December 1989 sampling period set at 0.070 or 5 times the reported value of 0.014 ppm for trip blank sample.

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

Project No. 1563

LEVINE • FRICKE
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

JDR11JUL89em

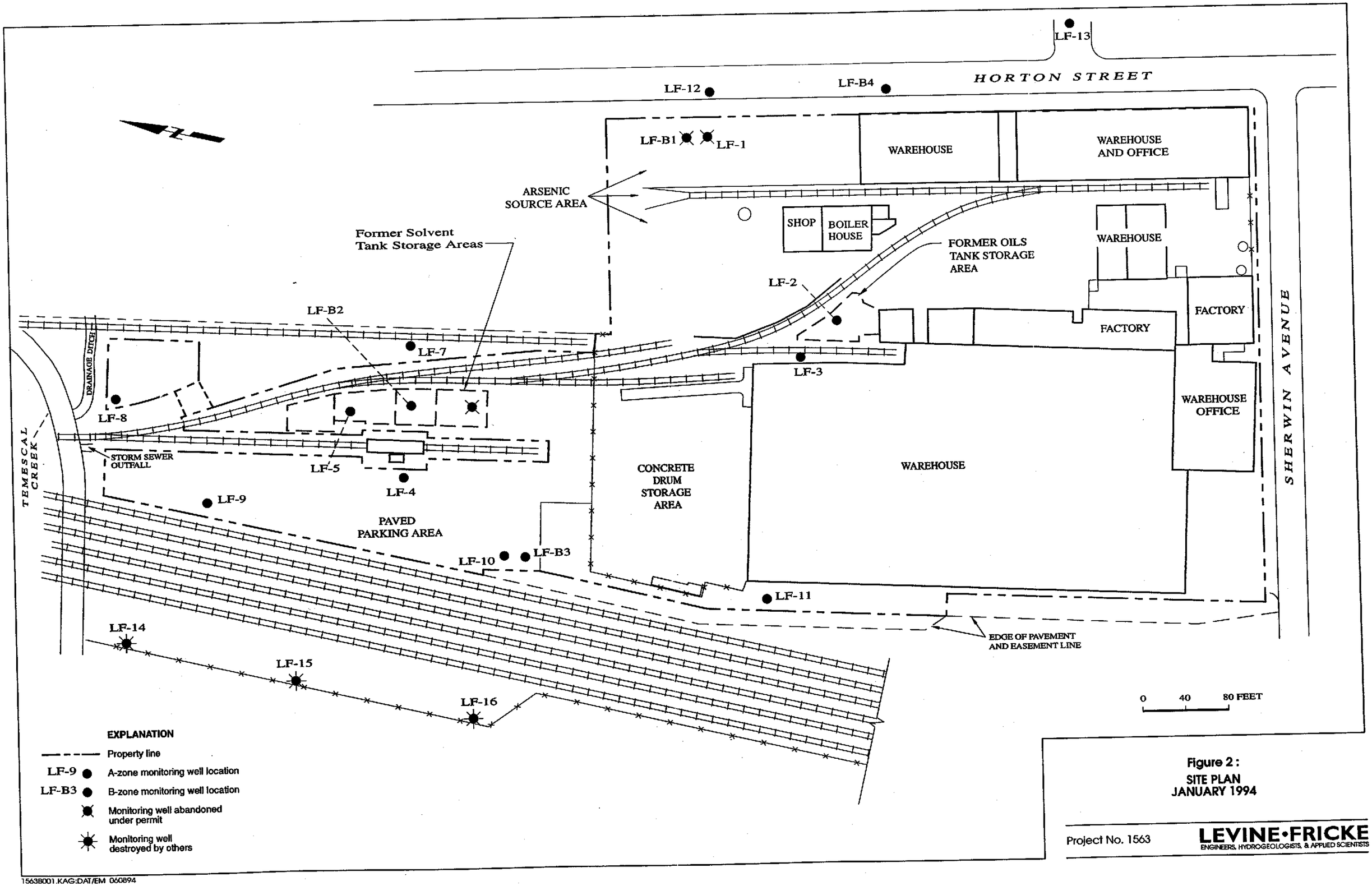
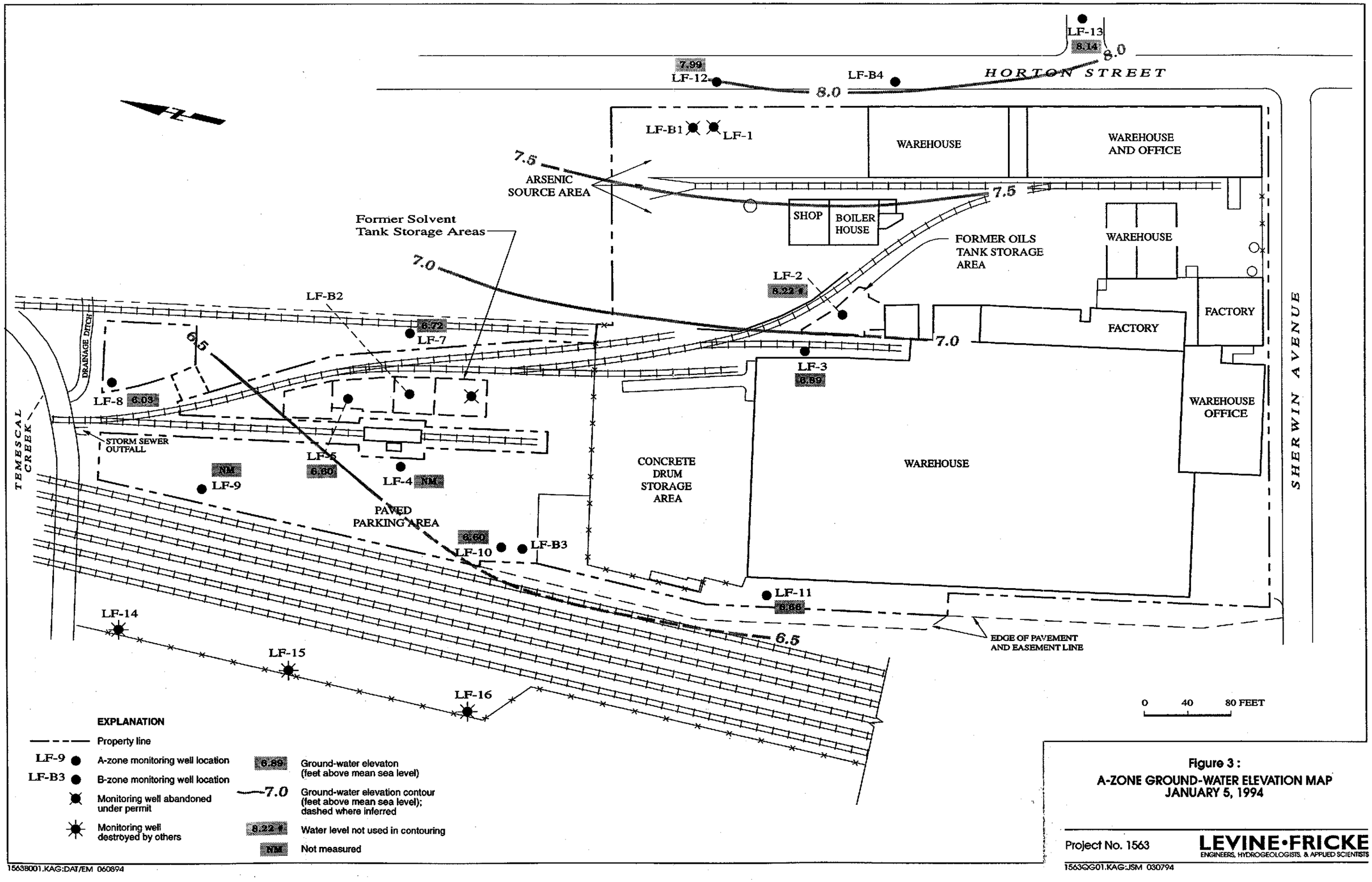


Figure 2 :
SITE PLAN
JANUARY 1994

Project No. 1563

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

1563B001.KAG:DAT/EM 060894



1563B001.KAG:DAT/EM 060894

Figure 3 :
A-ZONE GROUND-WATER ELEVATION MAP
JANUARY 5, 1994

Project No. 1563

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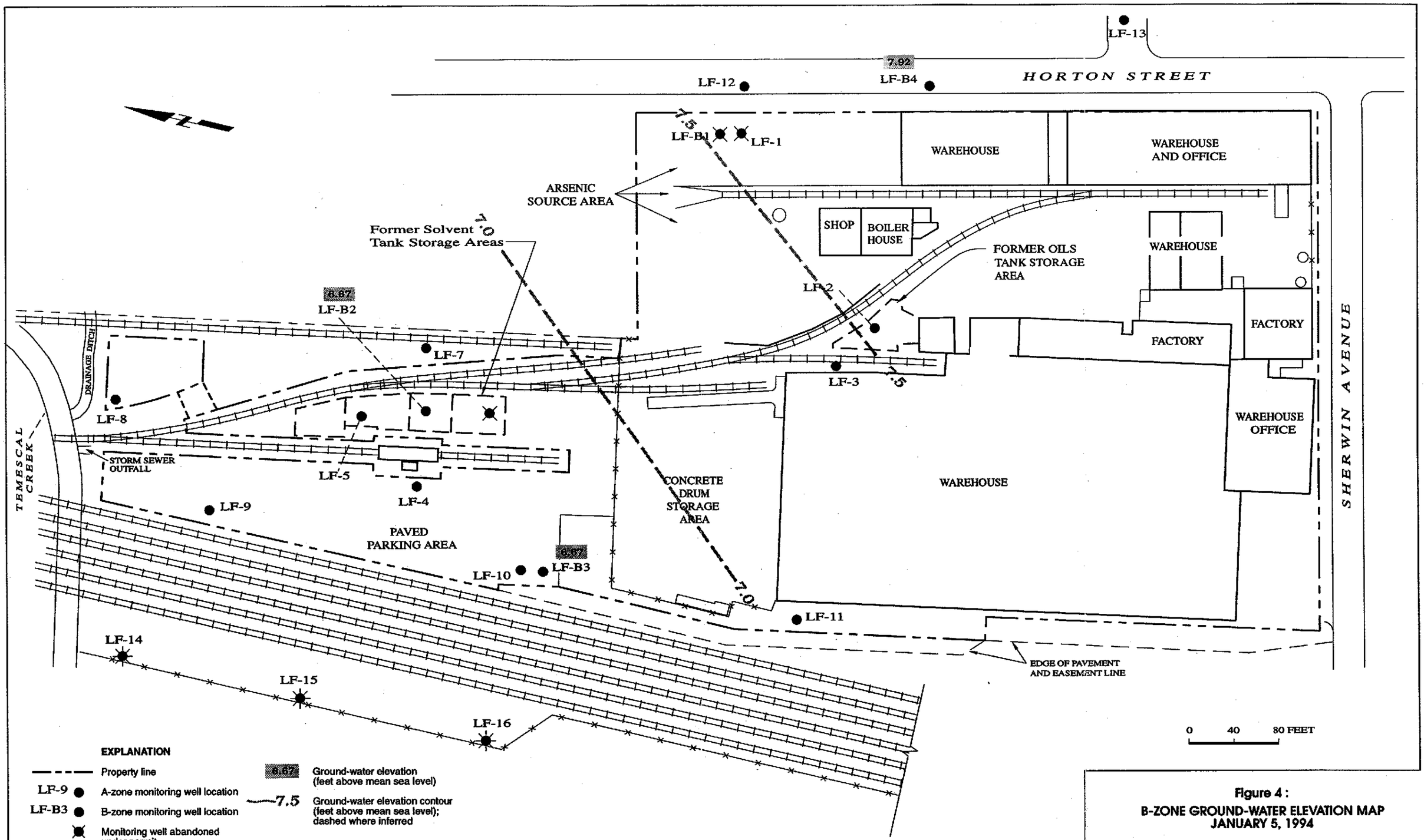
1563QG01.KAG:JSM 030794



1563B001.KAG:DAT/EM 060894

Figure 4 :
B-ZONE GROUND-WATER ELEVATION MAP
JANUARY 5, 1994

Project No. 1563

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

1563GG02.KAG:JSM 030894

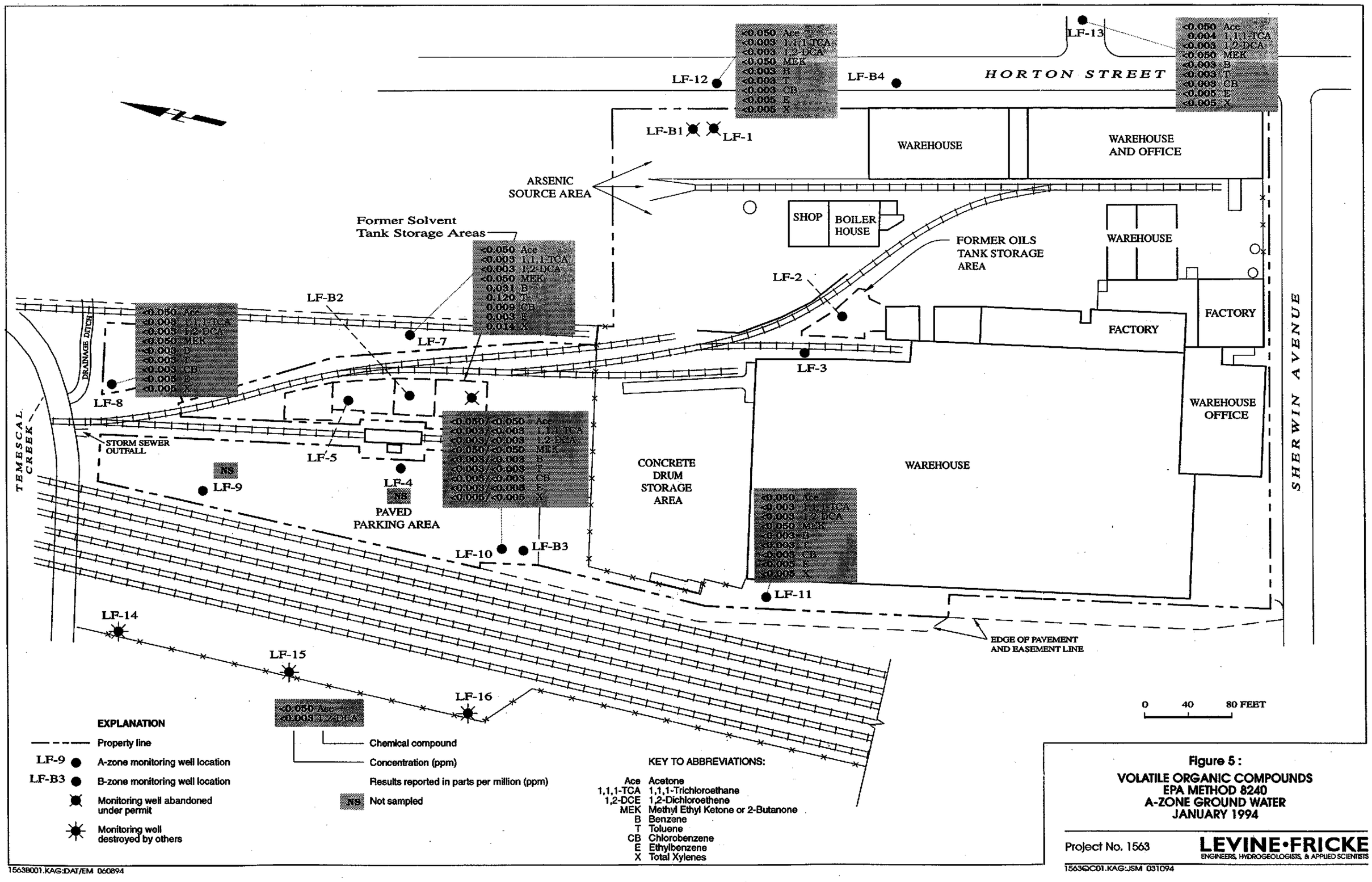


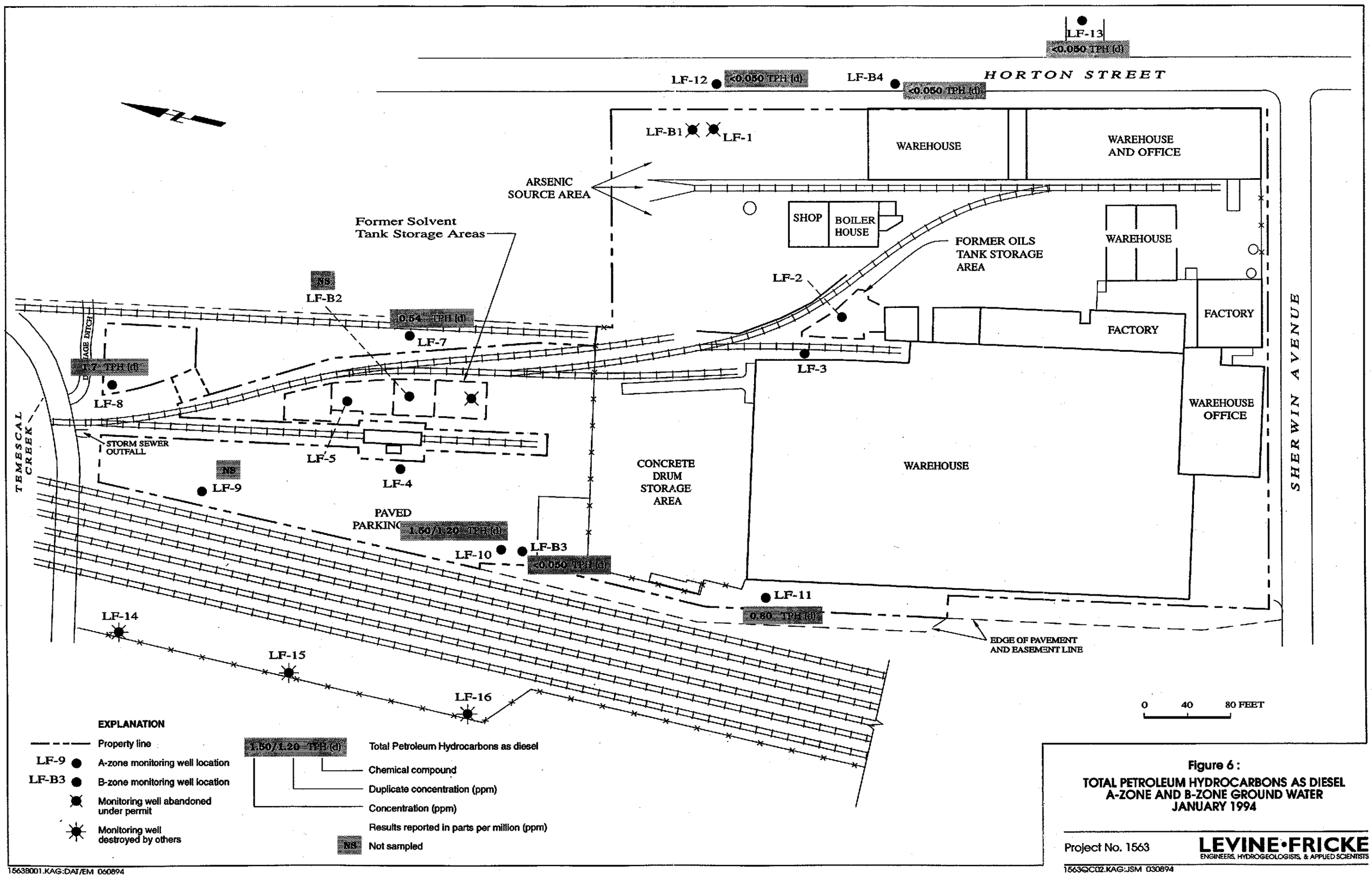
Figure 5 :
VOLATILE ORGANIC COMPOUNDS
EPA METHOD 8240
A-ZONE GROUND WATER
JANUARY 1994

Project No. 1563

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

1563B001.KAG:DAT/EM 060894

1563GC01.KAG:JSM 031094



15638001.KAG:DAT/EM 060894

Figure 6 :

TOTAL PETROLEUM HYDROCARBONS AS DIESEL A-ZONE AND B-ZONE GROUND WATER JANUARY 1994

Project No. 1563

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

1563QC02.KAG:JSM 030894

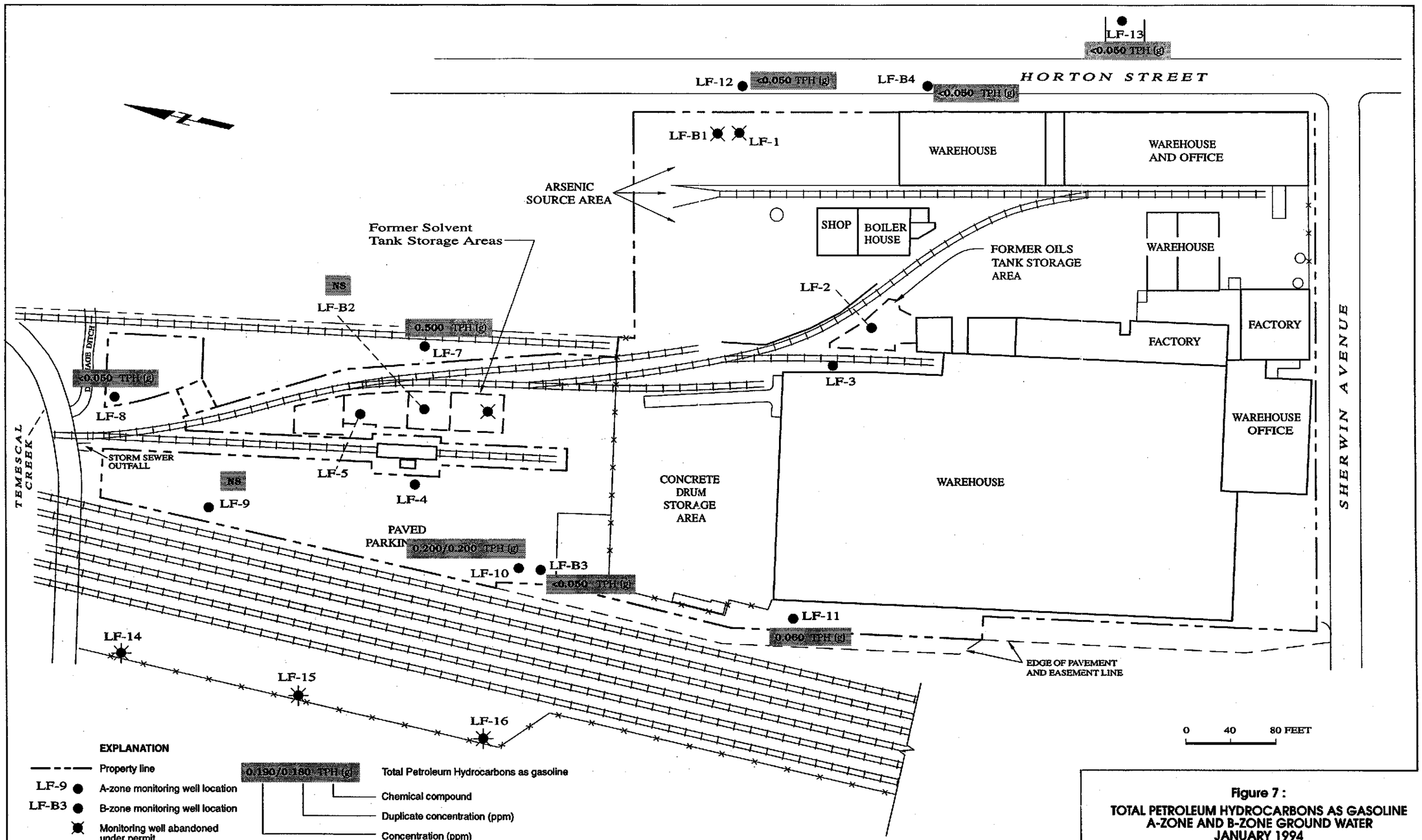


Figure 7 :
TOTAL PETROLEUM HYDROCARBONS AS GASOLINE A-ZONE AND B-ZONE GROUND WATER JANUARY 1994

Project No. 1563

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

1563801.KAG:DAT/EM 060894

1563QC03.KAG:JSM 030894

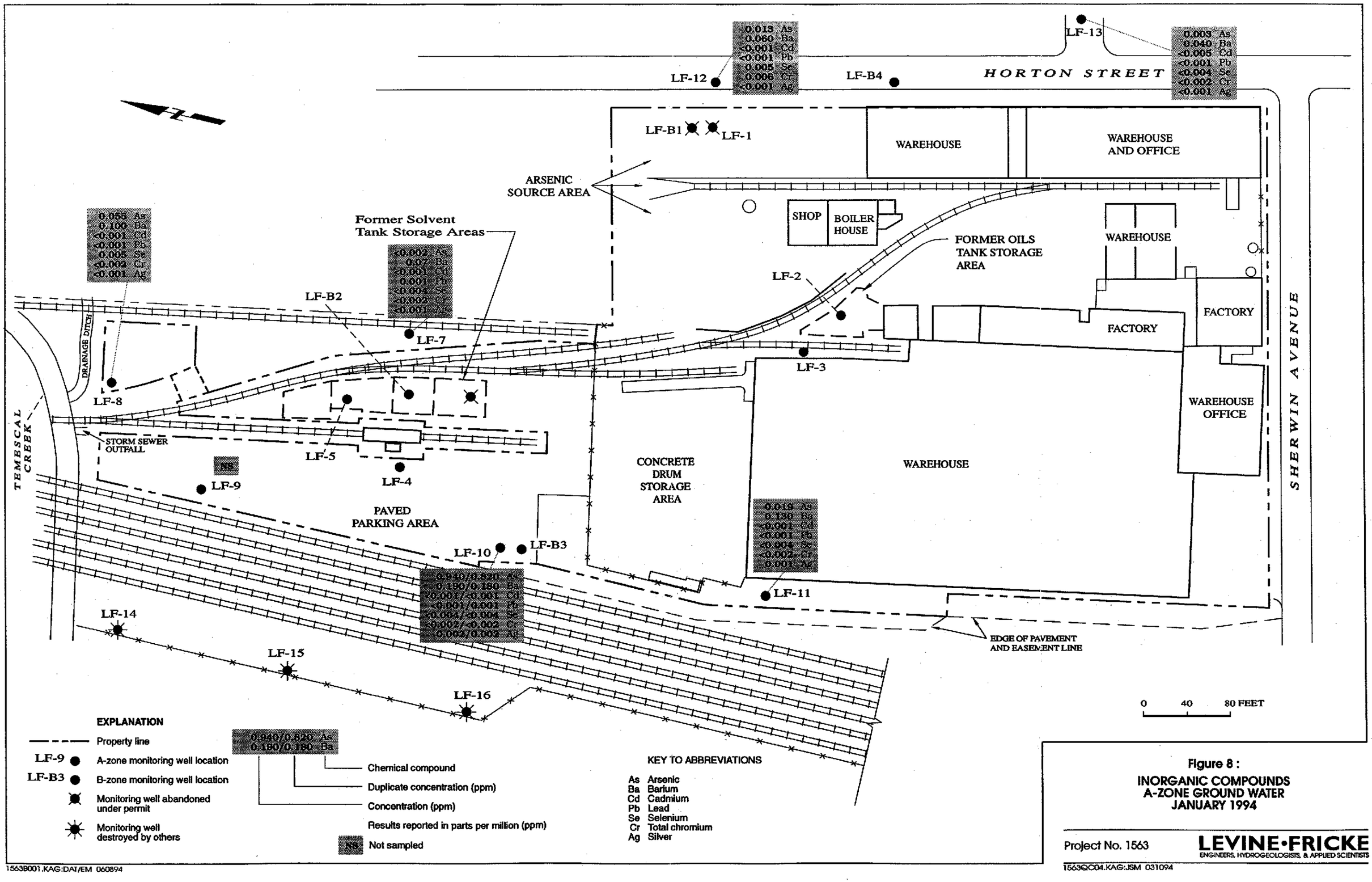


Figure 8 :

INORGANIC COMPOUNDS
A-ZONE GROUND WATER
JANUARY 1994

Project No. 1563

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

1563B001.KAG:DAT/EM 060894

1563QC04.KAG:JSM 031094

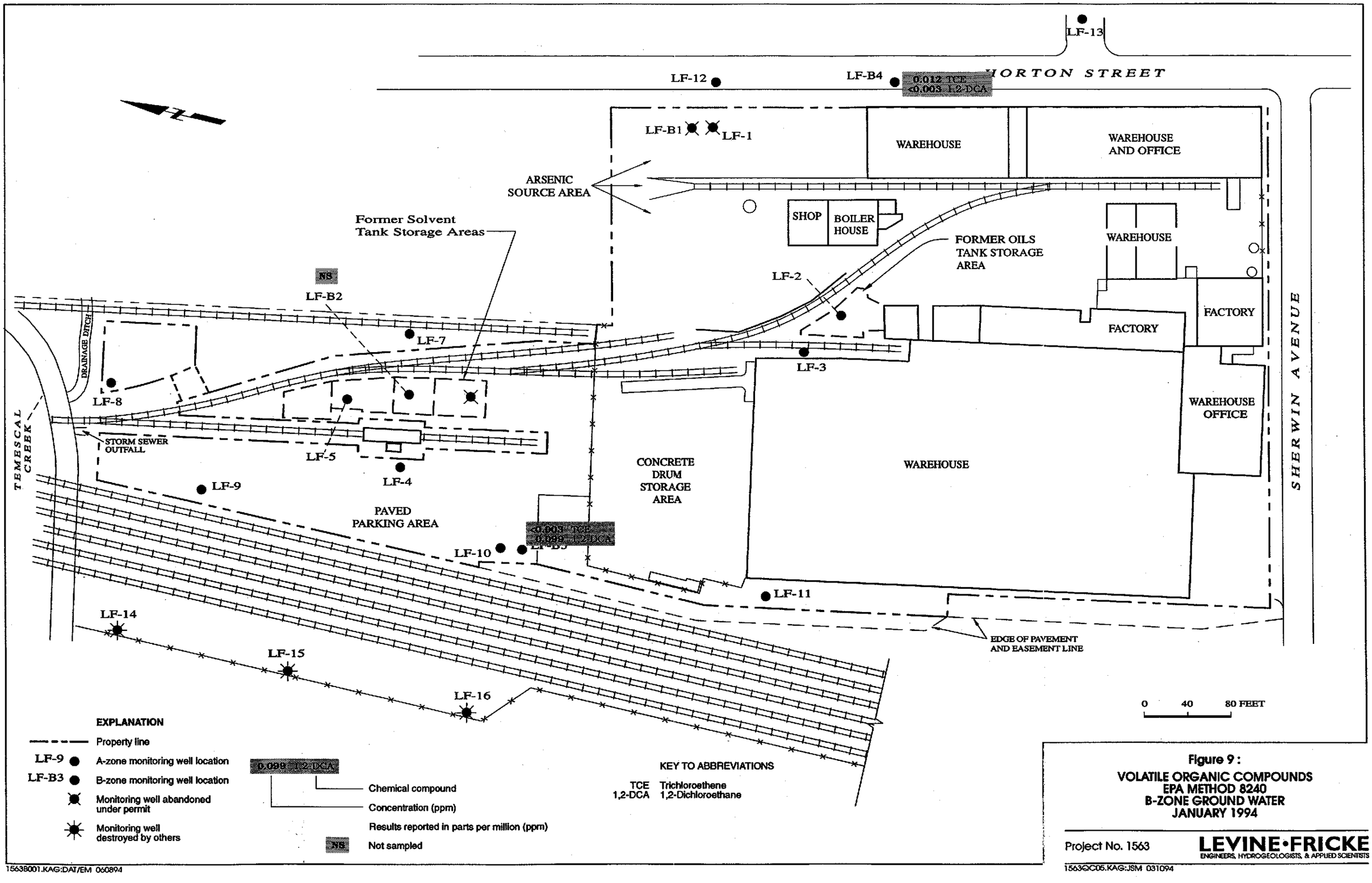


Figure 9 :
VOLATILE ORGANIC COMPOUNDS
EPA METHOD 8240
B-ZONE GROUND WATER
JANUARY 1994

Project No. 1563

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ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

1563B001.KAG:DAT/EM 060894

1563QC05.KAG:JSM 031094

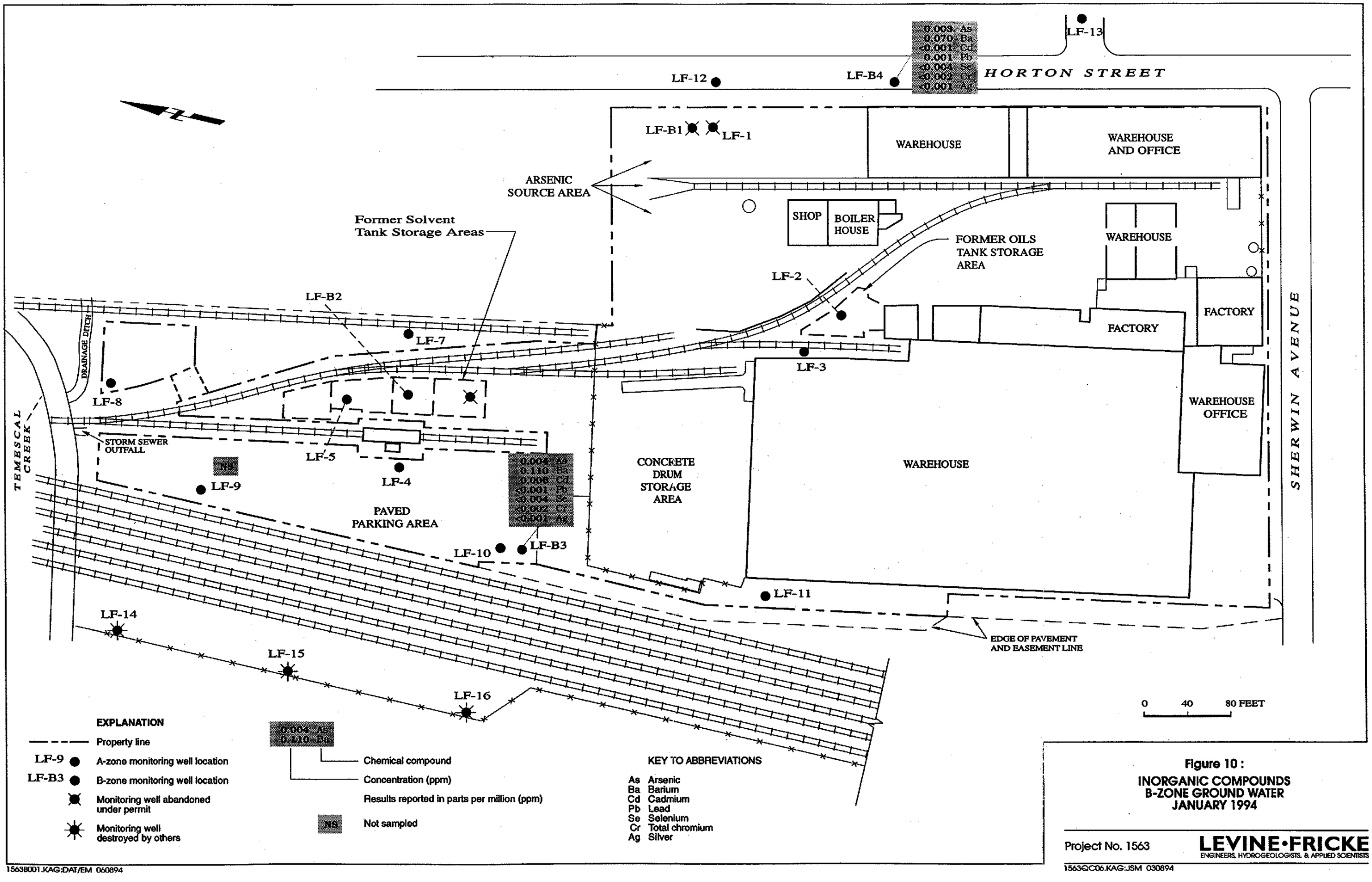

Figure 10 :
INORGANIC COMPOUNDS
B-ZONE GROUND WATER
JANUARY 1994

Project No. 1563

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS, & APPLIED SCIENTISTS

1563B001.KAG:DAT/EM 060894

1563QC06.KAG:JSM 030894

APPENDIX A

LABORATORY CERTIFICATES

American Environmental Network

Certificate of Analysis

OHS Certification: 1172

AIHA Accreditation: 11134

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

ATTN: KENTON GEE

CLIENT PROJ. ID: 1563.06
C.O.C. SERIAL NO: 12933
PROJ. NAME: SHERWIN WILLIAMS

REPORT DATE: 01/20/94

DATE SAMPLED: 01/05-06/94

DATE RECEIVED: 01/06/94

AEN JOB NO: 9401041

COPY

PROJECT SUMMARY:

On January 6, 1994, this laboratory received seven (7) water samples.

Client requested samples be analyzed for inorganic and organic parameters. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

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

RECEIVED
JAN 26
LEVINE-FRICKE

Larry Klein
General Manager

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9401041-01A
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	EPA 8240				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	12 *	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9401041-01C
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	ND	0.05	mg/L	01/11/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9401041-01E
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/11/94
TPH as Diesel	GC-FID	ND	0.05	mg/L	01/12/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9401041-01G
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	0.003 *	0.002	mg/L	01/17/94
Barium	EPA 200.7	0.07 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.001	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.002	mg/L	01/14/94
Lead	EPA 239.2	0.001 *	0.001	mg/L	01/17/94
Selenium	EPA 270.2	ND	0.004	mg/L	01/17/94
Silver	EPA 200.7	ND	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9401041-02A
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/17/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	99 *	3	ug/L	01/17/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9401041-02C
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	ND	0.05	mg/L	01/11/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9401041-02E
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/11/94
TPH as Diesel	GC-FID	ND	0.05	mg/L	01/13/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9401041-02G
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	0.004 *	0.002	mg/L	01/14/94
Barium	EPA 200.7	0.11 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	0.006 *	0.001	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.002	mg/L	01/14/94
Lead	EPA 239.2	ND	0.001	mg/L	01/17/94
Selenium	EPA 270.2	ND	0.004	mg/L	01/14/94
Silver	EPA 200.7	ND	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9401041-03A
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	4 *	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9401041-03C
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	ND	0.05	mg/L	01/11/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9401041-03E
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/11/94
TPH as Diesel	GC-FID	ND	0.05	mg/L	01/13/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9401041-03G
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	0.003 *	0.002	mg/L	01/14/94
Barium	EPA 200.7	0.04 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.005	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.002	mg/L	01/14/94
Lead	EPA 239.2	ND	0.001	mg/L	01/17/94
Selenium	EPA 270.2	ND	0.004	mg/L	01/14/94
Silver	EPA 200.7	ND	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-11
AEN LAB NO: 9401041-04A
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-11
AEN LAB NO: 9401041-04C
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	0.06 *	0.05	mg/L	01/11/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-11
AEN LAB NO: 9401041-04E
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/11/94
TPH as Diesel	GC-FID	0.8 *	0.05	mg/L	01/13/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-11
AEN LAB NO: 9401041-04G
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/05/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	0.019 *	0.002	mg/L	01/14/94
Barium	EPA 200.7	0.13 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.001	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.002	mg/L	01/14/94
Lead	EPA 239.2	ND	0.001	mg/L	01/17/94
Selenium	EPA 270.2	ND	0.004	mg/L	01/14/94
Silver	EPA 200.7	0.001 *	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9401041-05A
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9401041-05C
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	ND	0.05	mg/L	01/12/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9401041-05E
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/11/94
TPH as Diesel	GC-FID	ND	0.05	mg/L	01/13/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9401041-05G
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	0.013 *	0.002	mg/L	01/14/94
Barium	EPA 200.7	0.06 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.001	mg/L	01/14/94
Chromium	EPA 200.7	0.006 *	0.002	mg/L	01/14/94
Lead	EPA 239.2	ND	0.001	mg/L	01/17/94
Selenium	EPA 270.2	0.005 *	0.004	mg/L	01/14/94
Silver	EPA 200.7	ND	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-10-FB
AEN LAB NO: 9401041-06A
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	EPA 8240				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-10-FB
AEN LAB NO: 9401041-06C
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	ND	0.05	mg/L	01/11/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-10-FB
AEN LAB NO: 9401041-06E
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	ND	0.002	mg/L	01/14/94
Barium	EPA 200.7	ND	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.001	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.01	mg/L	01/14/94
Lead	EPA 239.2	ND	0.001	mg/L	01/17/94
Selenium	EPA 270.2	ND	0.004	mg/L	01/14/94
Silver	EPA 200.7	ND	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-10
AEN LAB NO: 9401041-07A
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-10
AEN LAB NO: 9401041-07C
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	0.2 *	0.05	mg/L	01/12/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-10
AEN LAB NO: 9401041-07E
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/11/94
TPH as Diesel	GC-FID	1.5 *	0.05	mg/L	01/13/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-10
AEN LAB NO: 9401041-07G
AEN WORK ORDER: 9401041
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/20/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	0.94 *	0.002	mg/L	01/17/94
Barium	EPA 200.7	0.19 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.001	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.002	mg/L	01/14/94
Lead	EPA 239.2	ND	0.001	mg/L	01/17/94
Selenium	EPA 270.2	ND	0.004	mg/L	01/14/94
Silver	EPA 200.7	0.002 *	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

DATE EXTRACTED: 01/11/94
DATE ANALYZED: 01/12/94
CLIENT PROJ. ID: 1563.06

AEN JOB NO: 9401041
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATER
METHOD: EPA 3510 GCFID

ANALYTE	Spike Added (mg/L)	Average Percent Recovery	RPD
Diesel	2.02	87	2

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
Diesel	(55-119)	8

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

CLIENT PROJ. ID: 1563.06

AEN JOB NO: 9401041

INSTRUMENT: F

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 5030 GCFID
(WATER MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
01/11/94	LF-B4	01	99
01/11/94	LF-B3	02	97
01/11/94	LF-13	03	98
01/11/94	LF-11	04	98
01/11/94	LF-12	05	96
01/11/94	LF-10-FB	06	99
01/11/94	LF-10	07	101

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 01/12/94
SAMPLE SPIKED: 9101082-01
CLIENT PROJ. ID: 1563.06

AEN JOB NO: 9401041
INSTRUMENT: F

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 5030 GCFID
(WATER MATRIX)

ANALYTE	Spike Added (mg/L)	Average Percent Recovery	RPD
Hydrocarbons as Gasoline	500	100	5

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
Gasoline	(72-119)	12

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

INSTRUMENT: 12

AEN JOB NO: 9401041

CLIENT PROJ. ID: 1563.06

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8240
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)		
Date Analyzed	Sample Id.	Lab Id.	1,2-Dichloro-ethane-d_4	Toluene-d_8	p-Bromofluoro-benzene
01/14/94	LF-B4	01	96	95	96
01/14/94	LF-B3	02	96	97	97
01/14/94	LF-13	03	98	100	98
01/14/94	LF-11	04	95	103	96
01/14/94	LF-12	05	95	97	97
01/14/94	LF-10-FB	06	96	99	93
01/14/94	LF-10	07	104	98	104

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
1,2-Dichloroethane-d_4	(77-123)
Toluene-d_8	(90-108)
p-Bromofluorobenzene	(89-109)

QUALITY CONTROL DATA

DATE ANALYZED: 01/14/94
SAMPLE SPIKED: 9401067-01
CLIENT PROJ. ID: 1563.06

AEN JOB NO: 9401041
INSTRUMENT: 12

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8240
(WATER MATRIX)

ANALYTE	Spike Added (ug/L)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	90	2
Trichloroethene	50.0	107	4
Benzene	50.0	97	6
Toluene	50.0	106	3
Chlorobenzene	50.0	105	3

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
1,1-Dichloroethene	(81-123)	12
Trichloroethene	(87-112)	9
Benzene	(92-116)	12
Toluene	(91-116)	12
Chlorobenzene	(92-113)	10

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

MATRIX: WATER

AEN JOB NO: 9401041

CLIENT PROJ. ID: 1563.06

DIGESTION DATE: 01/13/94

MATRIX SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SAMPLE SPIKED	SPIKE ADDED (mg/L)	AVERAGE % REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	QC CONTROL LIMITS RPD LIMIT
Ag, Silver	ICP/200.7	9401041-02G	0.04	92	2	78-111	9
As, Arsenic	4000/206.2	9401041-01G	0.04	97	4	65-146	12
Ba, Barium	ICP/200.7	9401041-02G	0.4	98	2	83-108	5
Cd, Cadmium	ICP/200.7	9401041-02G	0.05	87	5	64-128	15
Cr, Chromium	ICP/200.7	9401041-02G	0.04	95	4	75-114	7
Hg, Mercury	Hg/245.1	9401041-07G	2.0 ug/L	102	1	80-120	17
Pb, Lead	ICP/239.2	9401041-01G	0.02	81	4	75-125	20
Se, Selenium	4000/270.2	9401041-01G	0.08	80	1	24-141	21

RPD = Relative Percent Difference

QUALITY CONTROL DATA

MATRIX: WATER

AEN JOB NO: 9401041

CLIENT PROJ. ID: 1563.06

DIGESTION DATE: 01/13/94

METHOD SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SPIKE ADDED (mg/L)	AVERAGE % REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	QC CONTROL LIMITS RPD LIMIT
Ag, Silver	ICP/200.7	0.04	93	3	66-127	11
As, Arsenic	4000/206.2	0.04	93	2	90-115	12
Ba, Barium	ICP/200.7	0.4	100	2	89-109	5
Cd, Cadmium	ICP/200.7	0.05	87	6	71-134	12
Cr, Chromium	ICP/200.7	0.04	98	4	85-114	6
Hg, Mercury	Hg/245.1	2.0 ug/L	103	2	80-120	15
Pb, Lead	4000/239.2	0.02	109	4	75-125	20
Se, Selenium	4000/270.2	0.08	91	<1	76-131	14

RPD = Relative Percent Difference
< = Less Than

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

ATTN: KENTON GEE

CLIENT PROJ. ID: 1563.06
C.O.C. SERIAL NO: 12933
PROJ. NAME: SHERWIN WILLIAMS

REPORT DATE: 01/21/94

DATE SAMPLED: 01/06/94

DATE RECEIVED: 01/06/94

AEN JOB NO: 9401042

COPY

PROJECT SUMMARY:

On January 6, 1994, this laboratory received four (4) water samples.

Client requested samples be analyzed for inorganic and organic parameters. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

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

RECEIVED
JAN 26
LEVINE-FRICKE

Larry Klein
General Manager

LEVINE-FRICKE

SAMPLE ID: LF-110
AEN LAB NO: 9401042-01A
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-110
AEN LAB NO: 9401042-01C
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	0.2 *	0.05	mg/L	01/12/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-110
AEN LAB NO: 9401042-01E
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/10/94
TPH as Diesel	GC-FID	1.2 *	0.05	mg/L	01/11/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-110
AEN LAB NO: 9401042-01G
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	0.82 *	0.002	mg/L	01/17/94
Barium	EPA 200.7	0.18 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.001	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.002	mg/L	01/14/94
Lead	EPA 239.2	0.001 *	0.001	mg/L	01/17/94
Selenium	EPA 270.2	ND	0.004	mg/L	01/17/94
Silver	EPA 200.7	0.002 *	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-8
AEN LAB NO: 9401042-02A
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-8
AEN LAB NO: 9401042-02C
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	ND	0.05	mg/L	01/12/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-8
AEN LAB NO: 9401042-02E
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/10/94
TPH as Diesel	GC-FID	1.7 *	0.05	mg/L	01/11/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-8
AEN LAB NO: 9401042-02G
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	0.055 *	0.002	mg/L	01/17/94
Barium	EPA 200.7	0.10 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.001	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.002	mg/L	01/14/94
Lead	EPA 239.2	ND	0.001	mg/L	01/17/94
Selenium	EPA 270.2	0.005 *	0.004	mg/L	01/17/94
Silver	EPA 200.7	ND	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-7
AEN LAB NO: 9401042-03A
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	31 *	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	9 *	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	3 *	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	120 *	3	ug/L	01/17/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	14 *	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-7
AEN LAB NO: 9401042-03C
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	0.5 *	0.05	mg/L	01/12/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-7
AEN LAB NO: 9401042-03E
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for Diesel/Oil	EPA 3510	-		Extrn Date	01/10/94
TPH as Diesel	GC-FID	0.54 *	0.05	mg/L	01/11/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: LF-7
AEN LAB NO: 9401042-03G
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/06/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Mercury	EPA 245.1	ND	0.0002	mg/L	01/13/94
#Digestion, Metals	EPA 200.0	-		Prep Date	01/13/94
Arsenic	EPA 206.2	ND	0.002	mg/L	01/14/94
Barium	EPA 200.7	0.07 *	0.01	mg/L	01/14/94
Cadmium	EPA 200.7	ND	0.001	mg/L	01/14/94
Chromium	EPA 200.7	ND	0.002	mg/L	01/14/94
Lead	EPA 239.2	0.001 *	0.001	mg/L	01/17/94
Selenium	EPA 270.2	ND	0.004	mg/L	01/14/94
Silver	EPA 200.7	ND	0.001	mg/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: TRIP BLANK
AEN LAB NO: 9401042-04A
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/03/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
VOCs in Water by 8240	**EPA 8240**				
Acetone	67-64-1	ND	50	ug/L	01/14/94
Benzene	71-43-2	ND	3	ug/L	01/14/94
Bromodichloromethane	75-27-4	ND	3	ug/L	01/14/94
Bromoform	75-25-2	ND	3	ug/L	01/14/94
Bromomethane	74-83-9	ND	5	ug/L	01/14/94
2-Butanone	78-93-3	ND	50	ug/L	01/14/94
Carbon Disulfide	75-15-0	ND	5	ug/L	01/14/94
Carbon Tetrachloride	56-23-5	ND	3	ug/L	01/14/94
Chlorobenzene	108-90-7	ND	3	ug/L	01/14/94
Chloroethane	75-00-3	ND	5	ug/L	01/14/94
2-Chloroethyl Vinyl Ether	110-75-8	ND	5	ug/L	01/14/94
Chloroform	67-66-3	ND	3	ug/L	01/14/94
Chloromethane	74-87-3	ND	5	ug/L	01/14/94
Dibromochloromethane	124-48-1	ND	3	ug/L	01/14/94
1,1-Dichloroethane	75-34-3	ND	3	ug/L	01/14/94
1,2-Dichloroethane	107-06-2	ND	3	ug/L	01/14/94
1,1-Dichloroethene	75-35-4	ND	3	ug/L	01/14/94
cis-1,2-Dichloroethene	156-59-2	ND	3	ug/L	01/14/94
trans-1,2-Dichloroethene	156-60-5	ND	3	ug/L	01/14/94
1,2-Dichloropropane	78-87-5	ND	3	ug/L	01/14/94
cis-1,3-Dichloropropene	10061-01-5	ND	3	ug/L	01/14/94
trans-1,3-Dichloropropene	10061-02-6	ND	3	ug/L	01/14/94
Ethylbenzene	100-41-4	ND	3	ug/L	01/14/94
2-Hexanone	591-78-6	ND	30	ug/L	01/14/94
Methylene Chloride	75-09-2	ND	3	ug/L	01/14/94
4-Methyl-2-pentanone	108-10-1	ND	30	ug/L	01/14/94
Styrene	100-42-5	ND	3	ug/L	01/14/94
1,1,2,2-Tetrachloroethane	79-34-5	ND	3	ug/L	01/14/94
Tetrachloroethene	127-18-4	ND	3	ug/L	01/14/94
Toluene	108-88-3	ND	3	ug/L	01/14/94
1,1,1-Trichloroethane	71-55-6	ND	3	ug/L	01/14/94
1,1,2-Trichloroethane	79-00-5	ND	3	ug/L	01/14/94
Trichloroethene	79-01-6	ND	3	ug/L	01/14/94
Vinyl Acetate	108-05-4	ND	30	ug/L	01/14/94
Vinyl Chloride	75-01-4	ND	5	ug/L	01/14/94
Xylenes, Total	1330-20-7	ND	5	ug/L	01/14/94

ND = Not detected
* = Indicates value above reporting limit

LEVINE-FRICKE

SAMPLE ID: TRIP BLANK
AEN LAB NO: 9401042-04B
AEN WORK ORDER: 9401042
CLIENT PROJ. ID: 1563.06

DATE SAMPLED: 01/03/94
DATE RECEIVED: 01/06/94
REPORT DATE: 01/21/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in Water	5030/GC-FID	ND	0.05	mg/L	01/12/94

ND = Not detected
* = Indicates value above reporting limit

QUALITY CONTROL DATA

DATE EXTRACTED: 01/04/94
DATE ANALYZED: 01/04/94
CLIENT PROJ. ID: 1563.06

AEN JOB NO: 9401042
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: C

METHOD SPIKE RECOVERY SUMMARY
TPH EXTRACTABLE WATER
METHOD: EPA 3510 GCFID

ANALYTE	Spike Added (mg/L)	Average Percent Recovery	RPD
Diesel	2.02	86	2

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
Diesel	(55-119)	8

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

CLIENT PROJ. ID: 1563.06

AEN JOB NO: 9401042

INSTRUMENT: F

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 5030 GCFID
(WATER MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION Client Id.	Lab Id.	SURROGATE RECOVERY (PERCENT) Fluorobenzene
01/12/94	LF-110	01	100
01/12/94	LF-8	02	99
01/12/94	LF-7	03	97
01/12/94	TRIP BLANK	04	100

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 01/12/94
SAMPLE SPIKED: 9101082-01
CLIENT PROJ. ID: 1563.06

AEN JOB NO: 9401042
INSTRUMENT: F

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 5030 GCFID
(WATER MATRIX)

ANALYTE	Spike Added (mg/L)	Average Percent Recovery	RPD
Hydrocarbons as Gasoline	500	100	5

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
Gasoline	(72-119)	12

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

INSTRUMENT: 12

AEN JOB NO: 9401042

CLIENT PROJ. ID: 1563.06

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8240
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)		
Date Analyzed	Sample Id.	Lab Id.	1,2-Dichloroethane-d_4	Toluene-d_8	p-Bromofluorobenzene
01/14/94	LF-110	01	95	98	91
01/14/94	LF-8	02	95	96	100
01/14/94	LF-7	03	92	98	95
01/14/94	TRIP BLANK	04	92	102	98

CURRENT QC LIMITS

ANALYTE	PERCENT RECOVERY
1,2-Dichloroethane-d_4	(77-123)
Toluene-d_8	(90-108)
p-Bromofluorobenzene	(89-109)

QUALITY CONTROL DATA

DATE ANALYZED: 01/14/94
SAMPLE SPIKED: 9401042-02
CLIENT PROJ. ID: 1563.06

AEN JOB NO: 9401042
INSTRUMENT: 12

MATRIX SPIKE RECOVERY SUMMARY
METHOD: EPA 8240
(WATER MATRIX)

ANALYTE	Spike Added (ug/L)	Average Percent Recovery	RPD
1,1-Dichloroethene	50.0	100	4
Trichloroethene	50.0	109	<1
Benzene	50.0	99	<1
Toluene	50.0	100	2
Chlorobenzene	50.0	111	3

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
1,1-Dichloroethene	(81-123)	12
Trichloroethene	(87-112)	9
Benzene	(92-116)	12
Toluene	(91-116)	12
Chlorobenzene	(92-113)	10

RPD = Relative Percent Difference

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

MATRIX: WATER

AEN JOB NO: 9401042

CLIENT PROJ. ID: 1563.06

DIGESTION DATE: 01/13/94

METHOD SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SPIKE ADDED (mg/L)	AVERAGE % REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	QC CONTROL LIMITS RPD LIMIT
Ag, Silver	ICP/200.7	0.04	93	3	66-127	11
As, Arsenic	4000/206.2	0.04	93	2	90-115	12
Ba, Barium	ICP/200.7	0.4	100	2	89-109	5
Cd, Cadmium	ICP/200.7	0.05	87	6	71-134	12
Cr, Chromium	ICP/200.7	0.04	98	4	85-114	6
Hg, Mercury	Hg/245.1	2.0 ug/L	103	2	80-120	15
Pb, Lead	4000/239.2	0.02	109	4	75-125	20
Se, Selenium	4000/270.2	0.08	91	<1	76-131	14

RPD = Relative Percent Difference
< = Less Than

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

9401042

CHAIN OF CUSTODY / ANALYSES REQUEST FORM ~~9401041~~

Project No.: 1563.06	Field Logbook No.:	Date: 1/6/94	Serial No.: № 12933
Project Name: Sherwin Williams	Project Location: Emeryville		
Sampler (Signature): [signature]			Samplers: NPD

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624 (8260)	TPH(g)	TPH(d)	8 metals		HOLD	RUSH	REMARKS
LF-B4	1/5	1200	01 A-G	7	H_2O		X	X	X	X				Normal TAT
LF-B3	↓	1355	02 A-G	↓			↓	↓	↓	↓				
LF-13	↓	1310	03 A-G	↓			↓	↓	↓	↓				Results to:
LF-11	↓	1440	04 A-G	↓			↓	↓	↓	↓				Kenton Gee
LF-12	1/6	1215	05 A-G	↓			↓	↓	↓	↓				
LF-10-FB	↓	1310	06 A-E	5			X	X		X				Metals: As, Ba, Cd, Cr
LF-10	↓	1330	07 A-G	7			↓	↓	X	↓				Pb, Hg, Se, Ag
LF-110	↓	1340	~~08 A-G~~	↓			↓	↓	↓	↓				
LF-8	↓	1105	~~09 A-G~~	↓			↓	↓	↓	↓				Metals samples were
LF-7	↓	1250	~~10 A-G~~	↓			↓	↓	↓	↓				filtered in Field
TRIP BLANK	1/3		~~11 A-B~~	2			X	X						

Margin annotations: 9401041 (LF-B4 through LF-10); 9401042 (LF-110 through TRIP BLANK): 01 A-G (LF-110), 02 A-G (LF-8), 03 A-G (LF-7), 04 A-B (TRIP BLANK).

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
[signature]	1/6/94	16:00	[signature]	1-6-94	1600
[signature]	1/6/94	4:50	Lai L. Pruitt	1-6-94	16:50

METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:

Sample Collector: LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500

Analytical Laboratory: AEN

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink)

FORM NO. 86/COC/ARF

CHAIN OF CUSTODY / ANALYSES REQUEST FORM 9401044

Project No.: 1563.06	Field Logbook No.:	Date: 1/6/94	Serial No.:
Project Name: Sherwin Williams	Project Location: Emeryville		№ 12933
Sampler (Signature): [signature]			Samplers: NPD

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	TPH(g)	TPH(d)	metals	HOLD	RUSH	REMARKS
LF-B4	1/5	1200	01 A-G	7	H_2O		X	X	X	X			Normal TAT
LF-B3	↓	1355	02 A-G	↓			↓	↓	↓	↓			
LF-13		1310	03 A-G										Results to: Kenton Gee
LF-11		1440	04 A-G										
LF-12	1/6	1215	05 A-G										
LF-10-FB		1310	06 A-E	5			X	X		X			Metals: As, Ba, Cd, Cr Pb, Hg, Se, Ag
LF-10		1330	07 A-G	7					X				
LF-110		1340	~~08 A-G~~										
LF-8		1105	~~09 A-G~~										Metals samples were filtered in field
LF-7	↓	1250	~~10 A-G~~	↓	↓		↓	↓	↓	↓			
TRIP BLANK	1/3		~~11 A-B~~	2			X	X					

9401042

RELINQUISHED BY: (Signature) [signature]	DATE 1/6/94	TIME 1610	RECEIVED BY: (Signature) [signature]	DATE 1-6-94	TIME 1600
RELINQUISHED BY: (Signature) [signature]	DATE 1/6/94	TIME 4:50	RECEIVED BY: (Signature) Lai L-Pruitt	DATE 1-6-94	TIME 1650
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT:	DATE	TIME	LAB COMMENTS:		

Sample Collector:

LEVINE-FRICKE
1900 Powell Street, 12th Floor
Emeryville, California 94608
(510) 652-4500

Analytical Laboratory: AEN

Shipping Copy (White) Lab Copy (Green) File Copy (Yellow) Field Copy (Pink) FORM NO. 86/COC/ARF

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 American Environmental Network of Pleasant Hill, 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 well LF-10. The bailer rinsate sample that was poured before sampling well LF-10 was analyzed by EPA Method 8240 (VOCs), EPA Method 5030 (TPHg), 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 TPHg analysis was also prepared and sent to the field in the same batch of containers used for ground-water sample shipment.

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 January 1994 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 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 American Environmental Network 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	06-Jan-94	AEN	9401041-07	ND	ND	ND	ND	ND	ND	1.5	0.2	0.94	0.19	ND	ND
	06-Jan-94	AEN	9401042-01	ND	ND	ND	ND	ND	ND	1.2	0.2	0.82	0.18	0.001	ND
	RPD(%)			NA	NA	NA	NA	NA	NA	22.2	0.0	13.6	5.4	NA	NA
TRIP BLANKS															
Trip Blank	03-Jan-94	AEN	9401042-04	ND	ND	ND	ND	ND	ND	NA	NA	NA	NA	NA	NA
FIELD BLANK															
LF-10-FB	06-Jan-94	AEN	9401041-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Explanation of Symbols and Abbreviations Used in Table B-1: Analytical Laboratory: AEN = American Environmental Network, Pleasant Hill, 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

Data entered by MEK/9 Mar 94 Data proofed by KAG 3-10-94