Report of Quarterly Groundwater Monitoring
for July 1 to September 30, 1996
The Sherwin-Williams Plant
Emeryville, California
October 31, 1996
LF 3435.00-004

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

Levine·Fricke·Recon
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

October 31, 1996 3435.00-004

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

Subject: Report of Quarterly Groundwater Monitoring for July 1 to September 30, 1996, The Sherwin-Williams Plant, Emeryville, California

Dear Mr. Arigala:

The enclosed report presents the results of the quarterly groundwater monitoring program conducted in July and August 1996 for the Sherwin-Williams plant in Emeryville, California. This is the second groundwater monitoring event conducted following completion of interim remedial measures activities and recent installation of additional site monitoring wells.

The quarterly monitoring program included measuring groundwater elevations and collecting and analyzing groundwater samples. The samples were analyzed 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 arsenic using EPA Method 200/6000/7000 Series.

In addition, groundwater was collected from four A-zone and four B-zone monitoring wells, and was analyzed for general minerals and oxygen and hydrogen isotopes. Evaluation of this data will help assess the degree of mixing of water between the A-zone and the B-zone at the Site. If you have any questions or comments, please call either of the undersigned or Mike Marsden at (510) 652-4500.

Sincerely,

Mark D. Knox

Mark D. Knox, P.E.
Principal Engineer

Mark D. Knox FOR

Kenton A. Gee
Project Hydrogeologist

Enclosure

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CERTIFICATION

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

Mark D. Knox 10/31/96

Mark D. Knox
Principal Engineer
California Professional Civil Engineer (33194)

Date

1.0 INTRODUCTION AND SCOPE

This quarterly groundwater monitoring report for July 1 to September 30, 1996 has been prepared for The Sherwin-Williams Company for submittal to the Regional Water Quality Control Board (RWQCB) as part of a self-monitoring program for its manufacturing facility located at 1450 Sherwin Avenue, Emeryville, California ("the Site"; Figures 1 and 2). This report describes the second monitoring event following completion of the site remedial construction activities and installation of the new monitoring wells.

The quarterly groundwater monitoring for July 1 to September 30, 1996, was conducted in July and August 1996. The quarterly monitoring activities conducted this quarter included the following:

- Groundwater levels were measured in on- and off-site monitoring wells (LF-3, LF-7, LF-8, LF-10, LF-11, LF-12, LF-13, LF-17, LF-18, LF-19, LF-20, LF-21, LF-22, LF-23, LF-24, LF-25, LF-26, LF-B3, LF-B4, LF-B-5, LF-B6, EX-1, EX-2, EX-3, and Rifkin Property wells RP-1 through RP-5 and MW-1 through MW-5).
- Groundwater samples were collected from ten A-zone monitoring wells located outside the site slurry wall, three A-zone monitoring wells located inside the slurry wall, the three extraction wells located inside the site slurry wall, and all four B-zone monitoring wells.
- Groundwater samples collected from the ten A-zone monitoring wells located outside the site slurry wall, the three extraction wells located inside the site slurry wall, and all four B-zone monitoring wells 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 arsenic using EPA Method 7060.
- Groundwater samples collected from one of the A-zone monitoring wells located outside the site slurry wall (LF-12), three A-zone monitoring wells located inside the slurry wall (LF-7, LF-10, and LF-22), and the four B-zone monitoring wells were analyzed for general minerals using EPA Method 3010, and for oxygen and hydrogen isotope analysis using an automated gas-source mass spectrometer.

Data were collected and reported in accordance with the guidelines set forth in the Quality Assurance Project Plan (QAPP) prepared for this project by Levine·Fricke·Recon (Levine·Fricke·Recon 1990a).

2.0 GROUNDWATER ELEVATIONS AND FLOW DIRECTIONS

Groundwater elevations were measured on July 29, 1996. Groundwater elevation data are presented in Table 1. Elevations and directions of groundwater flow in the A zone and the B zone are illustrated in Figures 3 and 4, respectively.

As shown in Figure 3, groundwater flow in the A zone is being affected by pumping extraction wells EX-1, EX-2, and EX-3 within the site slurry wall. The A-zone groundwater flow direction inside the slurry wall is generally toward each of the three extraction wells. The A-zone groundwater flow direction outside the slurry wall is generally toward the northwest with flow directions, changing slightly at and near the slurry wall.

The A-zone groundwater flow direction outside the slurry wall is generally consistent with historical A-zone groundwater flow directions. The A-zone groundwater flow direction inside the slurry wall indicates that A-zone groundwater within the slurry wall is being captured and prevented from moving off site.

As shown in Figure 4, B-zone groundwater flow direction is to the northwest. This is consistent with B-zone groundwater flow directions previously reported for the Site.

3.0 GROUNDWATER QUALITY SAMPLING

Levine·Fricke·Recon personnel collected groundwater samples for chemical analysis from July 30 to August 2, 1996, from A-zone monitoring wells LF-3, LF-11, LF-12, LF-13, LF-18, LF-20, LF-21, LF-23, LF-24, and LF-25, A-zone extraction wells EX-1, EX-2, and EX-3, and B-zone monitoring wells LF-B3 to LF-B6.

A minimum of 3 well volumes of water was purged from each monitoring 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 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 portable storage tank and then transferred and discharged into the site groundwater treatment system. Field measurements of temperature, pH, and specific conductance of the evacuated water were recorded during purging; wells were sampled after these parameters had stabilized.

After each well had been purged, groundwater samples were collected from monitoring wells for laboratory analysis using a new disposable, polyethylene bailer for each well. Groundwater samples collected from extraction wells were collected at discharge ports at the site treatment system. All samples for chemical analysis were analyzed by American Environmental Network of Pleasant Hill, California, a state-certified

laboratory, according to EPA Method protocols. Laboratory certificates are included in Appendix A.

4.0 GROUNDWATER QUALITY ANALYSIS RESULTS

4.1 A-Zone Water Quality

Analytical results for samples collected from A-zone monitoring wells are presented in Table 2 for VOCs, Table 3 for TPHd and TPHg, and Table 4 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 concentrations of arsenic.

4.1.1 Volatile Organic Compounds

VOC analytical results for samples collected from A-zone wells, outside the slurry wall during this sampling event, were below the reported laboratory detection limits with the exception of the sample from well LF-3. Groundwater collected from well LF-3 contained 4.5 parts per million (ppm) ethylbenzene, 24.0 ppm total xylenes, and 44.0 ppm toluene.

4.1.2 Total Petroleum Hydrocarbons as Diesel

Relatively low hydrocarbon concentrations of TPHd (5.6 ppm or less) were detected in samples from A-zone wells located outside the slurry wall (see Table 3, Figure 6, and Appendix A). TPHd concentrations 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

With the exception of wells LF-3, LF-20, and LF-21, concentrations of TPHg did not exceed the detection limit of 0.050 ppm in samples from A-zone wells located outside the slurry wall (see Table 3, Figure 7, and Appendix A). Samples collected from wells LF-20 and LF-21 contained the relatively low TPHg concentrations at 0.20 and 0.060 ppm, respectively. A sample collected from well LF-3 contained 90 ppm TPHg.

4.1.4 Inorganic Compounds as Arsenic

Analytical results for samples collected from A-zone wells, located outside the slurry wall were analyzed for inorganic compounds as arsenic. Concentrations of arsenic were detected in seven wells.

With the exception of well LF-3, concentrations ranged from 0.006 ppm in well LF-12 to 0.43 ppm in well LF-21. The sample from well LF-3 contained 72 ppm arsenic. Analytical results of arsenic in samples collected from wells LF-23 and LF-24 can not be validated because of possible field blank cross contamination as described in Section 5.0.

4.2 B-Zone Water Quality

Analytical results for samples collected from B-zone monitoring wells are presented in Table 2 for VOCs, Table 3 for TPHd and TPHg, and Table 4 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 as arsenic.

4.2.1 Volatile Organic Compounds

VOC analytical results for samples collected from B-zone wells LF-B3, LF-B4, LF-B5, and LF-B6 are presented in Table 2. 1,2-dichloroethane (1,2-DCA) was detected in wells LF-B3, LF-B5, and LF-B6 at 0.022, 0.38, and 0.030 ppm, respectively. In addition, the sample from well LF-B6 contained 0.110 ppm ethylbenzene. The concentrations of VOCs in the sample collected from well LF-B4 did not exceed the laboratory detection limits.

4.2.2 Total Petroleum Hydrocarbons as Diesel

The TPHd analytical results from samples collected from B-zone wells LF-B3 and LF-B6 indicated concentrations of diesel of 0.60 and 0.080 ppm, respectively. The concentrations of TPHd in the samples collected from wells LF-B4 and LF-B5 did not exceed the laboratory detection limit (Table 3, Figure 6, and Appendix A).

4.2.3 Total Petroleum Hydrocarbons as Gasoline

The TPHg analytical results from samples collected from B-zone wells LF-B5 and LF-B6 indicated diesel concentrations of 0.15 and 0.38 ppm, respectively. The concentrations of TPHd in the samples collected from wells LF-B3 and LF-B4 did not exceed the laboratory detection limit (Table 3, Figure 7, and Appendix A).

4.2.4 Inorganic Compounds as Arsenic

Arsenic was detected in samples collected from wells LF-B3, LF-B5, and LF-B6 at concentrations of 0.004, 0.097, and 0.033 ppm, respectively. The concentrations of arsenic in groundwater collected from these three wells have decreased significantly (an order of magnitude scale) from concentrations detected in the previous monitoring

period. The concentrations of arsenic in the sample collected from well LF-B4 did not exceed the laboratory detection limit.

5.0 GEOCHEMICAL ANALYSIS OF GROUNDWATER COLLECTED FROM FOUR A-ZONE AND FOUR B-ZONE WELLS

To evaluate the degree of mixing of water between the A- and the B-zone at the Site, additional analyses of selected groundwater samples were conducted during this quarterly monitoring event. The additional analyses for general minerals and stable isotopes were performed on groundwater samples collected from A-zone wells LF-7, LF-10, LF-12, and LF-22 and B-zone wells LF-B3, LF-B4, LF-B5, and LF-B6. General minerals were analyzed for using EPA Method 3010, and oxygen and hydrogen isotopes were analyzed for using an automated gas-source mass spectrometer.

Samples for general minerals analysis were analyzed by American Environmental Network of Pleasant Hill, California, a state-certified laboratory, according to EPA Method protocols. Samples for stable isotopes were analyzed by Isotope Solutions of Berkeley, California at the Center for Isotope Geochemistry at the Berkeley Laboratory.

Laboratory certificates for general minerals analyses are included in Appendix A. A report prepared by Isotope Solutions presenting the stable isotope analysis results and a discussion of stable isotope as an analytical tool are included in Appendix B.

5.1 General Minerals Analysis Results

Results of general minerals analysis are currently inconclusive. Because of omissions in the laboratory analytical report, an evaluation of the general minerals analytical results can not be completed. The samples will be analyzed for general minerals during the next quarterly sampling event and re-evaluated at that time.

5.2 Stable Isotope Ratio Analysis Results

Results from the stable isotope analyses indicate that the total ranges of oxygen and hydrogen isotope ratios are overlapping between the A- and B-zone samples. Differences include A-zone samples indicate slightly lower values of oxygen and hydrogen isotope ratios than B-zone samples. Also, the range of oxygen isotope ratios at the Site is larger than would be expected at a relatively small site with low relief.

The relatively large ranges of isotope ratio values suggest there is some fluid mixing at the Site, possibly with an outside source such as East Bay Municipal Utilities District water. Additionally, mixing of water between the A- and B-zone is possible based on the overlapping data (Appendix B).

6.0 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 A and in Tables 2 through 4. With the exception of the results for the field blank collected at well LF-24, these results indicate that the QA/QC controls were effective in eliminating field and/or laboratory cross contamination of samples.

The field blank collected at well LF-24 contained 0.004 ppm arsenic. Because arsenic is a low probability laboratory contaminant, the contamination in the field blank collected at well LF-24 may be caused by cross contamination in the field. Therefore, the presence of arsenic in samples collected from wells LF-23 and LF-24 may be caused by field contamination and can not be validated.

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Levine·Fricke·Recon, Inc. 1990a. Quality Assurance Project Plan for Sherwin-Williams Plant, Emeryville, California. November 29 (unpublished report).

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———. 1996. Interim Remedial Measures Completion Report, Sherwin-Williams Facility, Emeryville, California. April 19.

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Table 1
Groundwater Elevation Data, July 1996
The Sherwin-Williams Plant
Emeryville, California

Well Number	Date 29-Jul-96	Well Elevation	Measured Depth to Water	Ground-Water Elevation
Sherwin-Williams Wells				
LF-3	29-Jul-96	12.00	5.57	6.43
LF-4	29-Jul-96	12.53	NM	NM
LF-7	29-Jul-96	14.44	9.7	4.74
LF-8	29-Jul-96	12.91	8.21	4.70
LF-10	29-Jul-96	10.99	NM	NM
LF-11	29-Jul-96	10.05	3.93	6.12
LF-12	29-Jul-96	14.95	7.29	7.66
LF-13	29-Jul-96	14.78	6.96	7.82
LF-17	29-Jul-96	12.53	6.1	6.43
LF-18	29-Jul-96	13.05	8.65	4.40
LF-19	29-Jul-96	14.18	7.76	6.42
LF-20	29-Jul-96	11.77	7.91	3.86
LF-21	29-Jul-96	10.37	4.61	5.76
LF-22	29-Jul-96	19.16	12.22	6.94
LF-23	29-Jul-96	10.64	5.28	5.36
LF-24	29-Jul-96	10.22	5.24	4.98
LF-25	29-Jul-96	11.31	7.66	3.65
LF-26	29-Jul-96	12.90	8.08	4.82
EX-1	29-Jul-96	10.08	15.7	-5.62
EX-2	29-Jul-96	10.08	14.5	-4.42
EX-3	29-Jul-96	14.90	17.2	-2.30
LF-B3	29-Jul-96	10.30	4.12	6.18
LF-B4	29-Jul-96	14.55	6.97	7.58
LF-B5	29-Jul-96	18.29	11.03	7.26
LF-B6	29-Jul-96	11.99	5.81	6.18
Rifkin Property Wells				
RP-1	29-Jul-96	15.14	8.58	6.56
RP-2	29-Jul-96	15.24	8.89	6.35
RP-3	29-Jul-96	15.17	8.71	6.46
RP-4	29-Jul-96	15.13	8.88	6.25
RP-5	29-Jul-96	15.04	8.81	6.23
MW-1	29-Jul-96	13.78	7.76	6.02
MW-2	29-Jul-96	13.58	7.59	5.99
MW-3	29-Jul-96	14.60	8.08	6.52
MW-4	29-Jul-96	15.53	8.29	7.24
MW-5	29-Jul-96	15.24	8.24	7.00

Data entered by _____. Proofed by KAG.

TABLE 2

SUMARY OF HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPA 8240) IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	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	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	<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	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	<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	<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	<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-1	Destroyed under permit														
LF-2	02-Jun-89	<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	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	<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-2	Destroyed or lost during slurry wall and cap construction activities														
LF-3	02-Jun-89	<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	<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	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	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	<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	<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	<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	<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-3	16-Apr-96	<50.000	<3.000	5.500	<50.0	27.000	<30.000	45.000	<3.000	<3.000	<3.000	<3.000	<3.000	77.500	
LF-3	31-Jul-96	<50.000	<3.000	4.500	<50.000	24.000	<30.000	44.000	<3.000	<3.000	<3.000	<3.000	<3.000	72.500	
LF-4	02-Jun-89	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	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	<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	<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	<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	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	<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	<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	<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	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	

TABLE 2
SUMARY OF HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPA 8240) IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	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-5	06-Dec-89	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	<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	<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	<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	<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-5	Destroyed or lost during slurry wall and cap construction activities														
LF-6	01-Jun-89	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	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	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	<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	<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	<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	<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	<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	<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	<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	<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	<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	
LF-8	05-Dec-89	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	

TABLE 2
SUMARY OF HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPA 8240) IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	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-9	09-Jul-92	<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	<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	<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-9	Destroyed or lost during slurry wall and cap construction activities														
LF-10	07-Dec-89	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	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	<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	<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	<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	<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	<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	<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	<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	4-Apr-96	<0.100	<0.005	<0.005	<0.1	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-11	31-Jul-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-12	06-Dec-89	<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	<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	<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	

TABLE 2
SUMARY OF HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPA 8240) IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	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-12	19-Jun-91	<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	<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	<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	<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	<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	16-Apr-96	<0.100	<0.005	<0.005	<0.1	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-12	30-Jul-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-13	06-Dec-89	<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	<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	<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	<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	<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	<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	<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	<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-13	16-Apr-96	<0.100	<0.005	<0.005	<0.1	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-13	30-Jul-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-13dup	30-Jul-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-14	04-Sep-90	<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	<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	<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	<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	<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	<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-14	Destroyed during railway expansion activities														
LF-15	04-Sep-90	<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	<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	<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	<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	<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	<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	Destroyed during railway expansion activities														

TABLE 2
SUMARY OF HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPA 8240) IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	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-16	04-Sep-90	<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	<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	<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	<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	<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	<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	Destroyed under permit														
LF-18	11-Apr-96	<0.1	<0.005	<0.005	<0.100	<0.010	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-18	30-Jul-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-20	11-Apr-96	<0.1	<0.005	<0.005	<0.1	<0.010	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-20	30-Jul-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-21	10-Apr-96	<0.1	<0.005	<0.005	<0.1	<0.010	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-21	31-Jul-96	<0.1	<0.005	<0.005	<0.1	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-23	10-Apr-96	<0.1	<0.005	<0.005	<0.1	<0.010	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
(dup)	10-Apr-96	<0.1	<0.005	<0.005	<0.1	<0.010	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-23	2-Aug-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-24	11-Apr-96	<0.1	<0.005	<0.005	<0.1	<0.010	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-24	2-Aug-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-25	11-Apr-96	<0.1	<0.005	<0.005	<0.1	<0.01	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-25	2-Aug-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-B1	07-Dec-89	<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	<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	<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	<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	<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	<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	<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	

TABLE 2
SUMARY OF HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPA 8240) IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	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-B1	Destroyed under permit														
LF-B2	06-Dec-89	<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	<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	<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	<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	<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	<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	<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	Destroyed or lost during slurry wall and cap construction activities														
LF-B3	07-Dec-89	<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	<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	<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	<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	<0.020	<0.005	<0.005	<0.020	<0.005	<0.010	<0.005	<0.005	0.110	<0.005	<0.005	<0.005	0.110	
LF-B3	08-Jul-92	<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	<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	<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	<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-B3	16-Apr-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	0.013	<0.005	<0.005	<0.005	0.013	
LF-B3	1-Aug-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	0.022	<0.005	<0.005	<0.005	0.022	
LF-B4	18-Jul-90	<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	<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	<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	<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	<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	<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	<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	
LF-B4	16-Apr-96	<0.100	<0.005	<0.005	<0.1	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-B4	30-Jul-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	
LF-B5	9-Apr-96	<1.000	<0.050	<0.050	<1.0	<0.100	<0.500	<0.050	<0.050	0.280	<0.050	<0.050	<0.050	0.280	
LF-B5	1-Aug-96	<0.500	<0.030	<0.030	<0.500	<0.050	<0.300	<0.030	<0.030	0.380	<0.030	<0.030	<0.030	0.380	

TABLE 2
SUMARY OF HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPA 8240) IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	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-B6	9-Apr-96	<2.000	<0.100	0.290	<2.0	0.970	<1.000	0.290	<0.100	<0.100	<0.100	<0.100	<0.100	1.550	
LF-B6	1-Aug-96	<0.100	<0.005	0.110	<0.100	<0.010	<0.050	<0.005	<0.005	0.030	<0.005	<0.005	<0.005	0.140	
EX-1	18-Apr-96	<0.100	<0.005	0.006	<0.100	0.020	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.026	
EX-1	1-Aug-96	<0.100	<0.005	<0.005	<0.100	0.019	<0.050	0.027	<0.005	<0.005	<0.005	<0.005	<0.005	0.046	
EX-2	18-Apr-96	<50	<3.0	8.000	<50	10.0	<30.0	24.0	<3.0	<3.0	<3.0	<3.0	<3.0	42.000	
EX-2	1-Aug-96	<10.000	<0.500	0.650	<10.000	3.7	<5.000	6.6	<0.500	<0.500	<0.500	<0.500	<0.500	10.950	
EX-3	18-Apr-96	<5.0	<0.3	<0.3	<5.0	<0.5	<3.0	<0.3	<0.3	<0.3	<0.3	<0.3	<0.3	0.000	
EX-3	1-Aug-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	0.006	<0.005	<0.005	<0.005	0.006	
FIELD BLANKS & TRIP BLANKS															
LF-1-FB	01-Jun-86	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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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
SUMARY OF HISTORICAL VOLATILE ORGANIC COMPOUNDS (EPA 8240) IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	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-9-BR	09-Jul-92	<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	<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	<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	<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	<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	<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	<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	<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	<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	<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	03-Jan-94	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
LF-10-FB	06-Jan-94	<0.050	<0.003	<0.005	<0.050	<0.005	<0.030	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	<0.003	
LF-18-FB	11-Apr-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	
LF-24-FB	02-Aug-96	<0.100	<0.005	<0.005	<0.100	<0.010	<0.050	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.000	

Data entered by_____. Data proofed by TAC QA/QC by SXS

Notes:

DUP = Duplicate Sample

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

1,2-DCA = 1,2-Dichloroethane

PCE = Tetrachloroethene

TCE = Trichloroethene

#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
SUMMARY OF HISTORICAL TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND GASOLINE IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT, EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	Total Petroleum Hydrocarbons As Diesel	Total Petroleum Hydrocarbons As Gasoline	Notes
LF-1	21-Jun-91	<0.050		
LF-1	09-Jul-92	0.110	<0.050	
LF-1	09-Jun-93	0.083		
LF-1	10-Jun-93		<0.050	
LF-1	Destroyed under permit			
LF-3	21-Jun-91	2.000		
LF-3	09-Jul-92	3.000	190.000	
DUP	09-Jul-92	3.300	180.000	
LF-3	10-Jun-93	100	150	#2
DUP	10-Jun-93	110	150	#2
LF-3	16-Apr-96	2.6	87	
LF-3	31-Jul-96	0.64	90	
LF-4	21-Jun-91	0.780		
DUP	21-Jun-91	0.510		
LF-4	09-Jul-92	1.200	14.000	
LF-4	09-Jun-93	1.200	2.200	#2
LF-5	06-Aug-91	4.700		
LF-5	09-Jul-92	0.830	69.000	
LF-5	09-Jun-93	2.000	95.000	#2
LF-5	Destroyed or lost during slurry wall and cap construction activities			
LF-7	20-Jun-91	<0.050		
LF-7	09-Jul-92	0.300	0.140	
DUP	09-Jul-92	0.480	0.130	
LF-7	09-Jun-93	0.340	0.110	
DUP	09-Jun-93	0.320	0.100	
LF-7	06-Jan-94	0.540	0.500	
LF-8	20-Jun-91	<0.050		
LF-8	09-Jul-92	0.250	<0.050	
LF-8	30-Dec-92	0.150	0.120	#4
LF-8	09-Jun-93	0.330	<0.050	#4
LF-8	06-Jan-94	1.700	<0.050	
LF-9	21-Jun-91	0.200		
LF-9	09-Jul-92	0.300	0.620	
LF-9	30-Dec-92	0.300	0.510	#4
LF-9	09-Jun-93	0.560	0.430	#4
LF-9	Destroyed or lost during slurry wall and cap construction activities			
LF-10	21-Jun-91	0.270		
LF-10	09-Jul-92	0.420	0.700	
LF-10	31-Dec-92	0.330	0.190	#1
DUP	31-Dec-92	0.370	0.180	#1

TABLE 3
SUMMARY OF HISTORICAL TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND GASOLINE
IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT, EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	Total Petroleum Hydrocarbons As Diesel	Total Petroleum Hydrocarbons As Gasoline	Notes
LF-10	10-Jun-93	0.470	0.180	
LF-10	06-Jan-94	1.500	0.200	
DUP	06-Jan-94	1.200	0.200	#4
LF-11	19-Jul-90			
LF-11	20-Jun-91	0.130		
LF-11-D	20-Jun-91	0.120		
LF-11	09-Jul-92	0.260	<0.050	
LF-11	31-Dec-92	0.310	0.058	#1
LF-11	09-Jun-93	0.270	<0.050	
LF-11	05-Jan-94	0.800	0.060	
LF-11	16-Apr-96	0.930	<0.05	
LF-11	31-Jul-96	0.580	<0.050	
LF-12	19-Jun-91	<0.050		
LF-12	08-Jul-92	<0.050	<0.050	
LF-12	30-Dec-92	<0.050	<0.050	
LF-12	08-Jun-93	0.099	<0.050	
LF-12	06-Jan-94	<0.050	<0.050	
LF-12	16-Apr-96	<0.05	<0.05	
LF-12	30-Jul-96	<0.050	<0.050	
LF-13	19-Jun-91	<0.050		
LF-13	08-Jul-92	<0.050	<0.050	
LF-13	30-Dec-92	<0.050	<0.050	
LF-13	08-Jun-93	0.052	<0.050	
LF-13	05-Jan-94	<0.050	<0.050	
LF-13	16-Apr-96	<0.05	<0.05	
LF-13	30-Jul-96	<0.05	<0.05	
LF-13dup	30-Jul-96	<0.05	<0.05	
LF-14	20-Jun-91	<0.050		
LF-14	09-Jul-92	0.180	<0.050	
LF-14	31-Dec-92	0.190	0.068	#1
LF-14	09-Jun-93	0.240	<0.050	
LF-14	Destroyed during railway expansion activities			
LF-15	20-Jun-91	<0.050		
LF-15	08-Jul-92	<0.050	<0.050	
LF-15	30-Dec-92	<0.050	<0.050	
LF-15	09-Jun-93	0.098	<0.050	
LF-15	Destroyed during railway expansion activies			
LF-16	20-Jun-91	<0.050		
LF-16	09-Jul-92	0.075	<0.050	
LF-16	30-Dec-92	<0.050	0.050	
LF-16	09-Jun-93	0.083	<0.050	

TABLE 3
SUMMARY OF HISTORICAL TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND GASOLINE
IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT, EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	Total Petroleum Hydrocarbons As Diesel	Total Petroleum Hydrocarbons As Gasoline	Notes
LF-16	Destroyed under permit			
LF-18	11-Apr-96	0.320	<0.05	
LF-18	30-Jul-96	0.320	<0.05	
LF-20	11-Apr-96	0.960	0.230	
LF-20	30-Jul-96	0.560	0.200	
LF-21	10-Apr-96	2.800	<0.05	
LF-21	31-Jul-96	1.400	0.060	
LF-23	10-Apr-96	1.700	<0.05	
DUP	10-Apr-96	1.300	<0.05	
LF-23	2-Aug-96	5.600	<0.05	
LF-24	11-Apr-96	0.090	<0.05	
LF-24	2-Aug-96	0.160	<0.05	
LF-25	11-Apr-95	0.180	<0.05	
LF-25	2-Aug-96	0.300	<0.05	
LF-B1	20-Jun-91	<0.050		
LF-B1	08-Jul-92	<0.050	0.180	
LF-B1	30-Dec-92	<0.050	0.200	#3
LF-B1	08-Jun-93	0.061	0.180	#3
LF-B1	Destroyed under permit			
LF-B2	21-Jun-91	<0.050		
LF-B2	08-Jul-92	<0.050	<0.050	
LF-B2	08-Jun-93	<0.050	<0.050	
LF-B2	Destroyed or lost during slurry wall and cap construction activities			
LF-B3	19-Jun-91	<0.050		
LF-B3	08-Jul-92	<0.050	0.140	
LF-B3	30-Dec-92	<0.050	0.150	#3
LF-B3	08-Jun-93	0.060	0.090	#3
LF-B3	05-Jan-94	<0.050	<0.050	
LF-B3	16-Apr-96	2.700	<0.050	
LF-B3	01-Aug-96	0.60	<0.050	
LF-B4	19-Jun-91	<0.050		
LF-B4	08-Jul-92	<0.050	<0.050	
LF-B4	30-Dec-92	<0.050	0.160	#3
LF-B4	08-Jun-93	0.066	<0.050	#3
LF-B4	05-Jan-94	<0.050	<0.050	
LF-B4	16-Apr-96	<0.05	<0.05	
LF-B4	30-Jul-96	<0.050	<0.050	

TABLE 3
SUMMARY OF HISTORICAL TOTAL PETROLEUM HYDROCARBONS AS DIESEL AND GASOLINE IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT, EMERYVILLE, CALIFORNIA
(Results reported in parts per million [ppm])

Well Number	Date Sampled	Total Petroleum Hydrocarbons As Diesel	Total Petroleum Hydrocarbons As Gasoline	Notes
LF-B5	09-Apr-96	0.100	<0.05	
LF-B5	01-Aug-96	<0.050	0.150	
LF-B6	09-Apr-96	1.000	2.700	
LF-B6	01-Aug-96	0.080	0.380	
EX-1	18-Apr-96	4.300	0.420	
EX-1	01-Aug-96	4.100	0.220	
EX-2	18-Apr-96	1.300	41.000	
EX-2	01-Aug-96	3.700	34.0	
EX-3	18-Apr-96	0.430	<0.05	
EX-3	01-Aug-96	0.820	<0.050	
		Field Blanks and Trip Blanks		
LF-24-FB	02-Aug-96	<0.05	<0.05	

Data entered by_____. Data proofed by KAC QA/QC by SKS

Notes:

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

#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.
#3 - The concentrations reported as gasoline by Anametrix for samples LF-B1, LF-B2 and LF-B4 are primarily caused by the presence of discrete hydrocarbon peak not indicative of gasoline.
#4 - The concentration reported by Anametrix as gasoline for samples LF-8 and LF-9 are primarily caused by the presence of a heavier petroleum hydrocarbon peak not indicative of gasoline.

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-1	01-Jun-89	200.000	NA	<0.0400	<0.300				
LF-1	07-Dec-89	190.000	NA	<0.0400	<0.300				
LF-1	20-Jul-90	120.000	0.060	<0.0500	<0.200				
LF-1	20-Jun-91	58.000	NA	<0.005	<0.004				
LF-1	09-Jul-92	53.200	<0.100	0.058	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-1	10-Jun-93	39.800	<0.100	<0.030	0.0039	<0.010	<0.0002	<0.050	<0.010
LF-1	Destroyed under permit								
LF-3	02-Jun-89	27.000	NA	<0.0400	<0.300				
LF-3	07-Dec-89	30.000	NA	<0.0400	<0.300				
LF-3	20-Jul-90	21.000	0.420	<0.0500	<0.200				
LF-3	20-Jun-91	60.400	NA	<0.005	<0.004				
LF-3	09-Jul-92	70.800	0.473	0.0205	<0.040	<0.010	<0.00027	<0.005	<0.010
DUP	09-Jul-92	66.600	0.452	0.0361	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-3	10-Jun-93	142.000	0.625	<0.100	<0.003	<0.010	<0.0002	<0.050	<0.010
DUP	10-Jun-93	141.000	0.635	<0.100	<0.003	<0.010	<0.0002	<0.050	<0.010
LF-3	16-Apr-96	58.000	NA	NA	<0.002	NA	NA	NA	NA
LF-3	31-Jul-96	72.000	NA	NA	NA	NA	NA	NA	NA
LF-4	02-Jun-89	0.530	NA	<0.0400	<0.300				
Duplicate	02-Jun-89	0.580	NA	<0.0400	<0.300				
LF-4	06-Dec-89	0.420	NA	<0.0400	<0.300				
Duplicate	06-Dec-89	0.550	NA	<0.0400	<0.300				
LF-4	20-Jul-90	0.190	0.160	<0.0500	<0.200				
LF-4	20-Jun-91	0.510	NA	<0.005	0.015				
LF-4-DUP	20-Jun-91	0.493	NA	<0.005	0.010				
LF-4	09-Jul-92	0.367	0.119	<0.005	<0.040	<0.010	<0.00027	<0.025	<0.010
LF-4	09-Jun-93	1.520	0.250	<0.015	<0.003	<0.010	<0.0002	<0.025	<0.010
LF-5	01-Jun-89	0.017	NA	<0.0400	<0.300				
LF-5	06-Dec-89	*<0.070	NA	<0.0400	<0.300				
LF-5	20-Jul-90	0.020	0.170	<0.0500	<0.200				
LF-5	20-Jun-91	0.038	NA	<0.005	0.003				

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-5	09-Jul-92	<0.010	0.111	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-5	09-Jun-93	0.0283	0.257	<0.005	<0.003	<0.010	<0.00027	<0.005	<0.010
LF-5	Destroyed or lost during slurry wall and cap construction activities								
LF-6	01-Jun-89	13.000	NA	0.0900	<0.300				
LF-6	05-Dec-89	16.000	NA	0.0600	<0.300				
LF-6	20-Jul-90	14.000	0.210	<0.0500	<0.200				
LF-6	Sealed August 2, 1990								
LF-7	01-Jun-89	0.008	NA	<0.0400	<0.300				
LF-7	06-Dec-89	*<0.070	NA	<0.0400	<0.300				
LF-7	19-Jul-90	<0.002	0.060	<0.0500	<0.200				
LF-7	20-Jun-91	0.012	NA	<0.005	<0.004				
LF-7	09-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
DUP	09-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-7	09-Jun-93	<0.010	0.191	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
DUP	09-Jun-93	<0.010	0.201	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-7	06-Jan-94	<0.002	0.07	<0.001	0.001	<0.002	<0.0002	<0.004	<0.001
LF-8	05-Dec-89	*<0.070	NA	<0.0400	<0.300				
LF-8	19-Jul-90	<0.002	0.120	<0.0500	<0.200				
LF-8	21-Dec-90	0.020	0.590	0.0015	<0.200				
LF-8	20-Jun-91	0.021	NA	<0.005	<0.004				
LF-8	09-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-8	30-Dec-92	0.029	0.177	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-8	09-Jun-93	0.0384	0.121	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-8	06-Jan-94	0.055	0.10	<0.001	<0.001	<0.002	<0.0002	0.005	<0.001
LF-9	05-Dec-89	0.067	NA	<0.0400	<0.300				
LF-9	19-Jul-90	0.008	0.110	<0.0500	<0.200				
LF-9	21-Dec-90	0.120	0.270	0.0029	<0.200				
LF-9	20-Jun-91	0.075	NA	<0.005	0.012				
LF-9	06-Aug-91	0.131	NA	NA	NA				

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-9	09-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-9	30-Dec-92	0.106	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-9	09-Jun-93	0.158	0.169	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-9	Destroyed or lost during slurry wall and cap construction activities								
LF-10	07-Dec-89	0.650	NA	<0.0400	<0.300				
LF-10	19-Jul-90	0.012	0.110	<0.0500	<0.200				
Duplicate	19-Jul-90	0.008	0.140	<0.0500	<0.300				
LF-10	21-Dec-90	1.000	0.330	0.0009	<0.200				
Duplicate	21-Dec-90	1.100	0.350	0.0007	<0.300				
LF-10	20-Jun-91	0.657	NA	<0.005	0.013				
LF-10	06-Aug-91	1.090	NA	NA	NA				
LF-10	09-Jul-92	0.328	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.025	<0.010
LF-10	31-Dec-92	0.550	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
DUP	31-Dec-92	0.552	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-10	10-Jun-93	0.958	0.249	<0.005	<0.003	<0.010	<0.0002	<0.050	<0.010
LF-10	06-Jan-94	0.940	0.190	<0.001	<0.001	<0.002	<0.0002	<0.004	0.002
DUP	06-Jan-94	0.820	0.180	<0.001	0.001	<0.002	<0.0002	<0.004	0.002
LF-11	05-Dec-89	*<0.070	NA	<0.0400	<0.300				
LF-11	19-Jul-90	0.007	0.120	<0.0500	<0.200				
LF-11	21-Dec-90	0.011	0.180	0.0006	<0.200				
LF-11	20-Jun-91	0.023	NA	<0.005	0.007				
LF-11	20-Jun-91	0.024	NA	<0.005	0.006				
LF-11	06-Aug-91	0.021	NA	NA	NA				
LF-11	09-Jul-92	<0.010	0.169	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-11	31-Dec-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-11	09-Jun-93	0.0116	0.152	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-11	05-Jan-94	0.019	0.130	<0.001	<0.001	<0.002	<0.0002	<0.004	0.001
LF-11	16-Apr-96	0.048	NA	NA	<0.002	NA	NA	NA	NA
LF-11	31-Jul-96	0.110	NA	NA	NA	NA	NA	NA	NA
LF-12	06-Dec-89	*<0.070	NA	<0.0400	<0.300				

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-12	18-Jul-90	0.004	0.060	<0.0500	<0.300				
LF-12	19-Jun-91	<0.010	NA	<0.005	<0.004				
LF-12	08-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-12	30-Dec-92	0.014	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-12	08-Jun-93	0.0152	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-12	06-Jan-94	0.013	0.060	<0.001	<0.001	0.006	<0.0002	0.005	<0.001
LF-12	16-Apr-96	0.043	NA	NA	<0.002	NA	NA	NA	NA
LF-12	30-Jul-93	0.006	NA	NA	NA	NA	NA	NA	NA
LF-13	06-Dec-89	*<0.070	NA	<0.0400	<0.300				
LF-13	18-Jul-90	<0.002	<0.050	<0.0500	<0.200				
LF-13	19-Dec-90	<0.002	0.100	<0.0005	<0.200				
LF-13	19-Jun-91	<0.010	NA	<0.005	<0.004				
LF-13	08-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-13	30-Dec-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-13	08-Jun-93	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-13	05-Jan-94	0.003	0.040	<0.005	<0.001	<0.002	<0.0002	<0.004	<0.001
LF-13	16-Apr-96	<0.002	NA	NA	<0.002	NA	NA	NA	NA
LF-13	30-Jul-96	<0.002	NA	NA	NA	NA	NA	NA	NA
Duplicate	30-Jul-96	<0.002	NA	NA	NA	NA	NA	NA	NA
LF-14	04-Sep-90	0.092	0.060	<0.0005	0.007				
LF-14	02-Oct-90	0.077	NA	NA	NA				
LF-14	20-Dec-90	0.150	0.470	0.0036	<0.200				
LF-14	20-Jun-91	0.095	NA	<0.005	<0.004				
LF-14	09-Jul-92	0.039	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-14	31-Dec-92	0.121	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-14	09-Jun-93	0.102	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-14	Destroyed during railway expansion activities								
LF-15	04-Sep-90	0.002	0.060	<0.0005	0.043				
LF-15	20-Dec-90	0.007	0.230	0.0007	<0.200				
LF-15	20-Jun-91	<0.010	NA	<0.005	<0.004				

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-15	08-Jul-92	<0.010	0.105	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-15	30-Dec-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-15	09-Jun-93	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-15	Destroyed during railway expansion activities								
LF-16	04-Sep-90	0.003	0.060	<0.0005	<0.002				
LF-16	20-Dec-90	0.003	0.170	0.0007	<0.200				
LF-16	20-Jun-91	0.010	NA	<0.005	<0.004				
LF-16	09-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-16	30-Dec-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-16	09-Jun-93	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.050	<0.010
LF-16	Destroyed under permit								
LF-18	11-Apr-96	0.012	NA	NA	<0.002	NA	NA	NA	NA
LF-18	30-Jul-96	0.037	NA	NA	NA	NA	NA	NA	NA
LF-20	11-Apr-96	<0.002	NA	NA	<0.002	NA	NA	NA	NA
LF-20	30-Jul-96	0.085	NA	NA	NA	NA	NA	NA	NA
LF-21	10-Apr-96	<0.002	NA	NA	<0.002	NA	NA	NA	NA
LF-21	31-Jul-96	0.43	NA	NA	NA	NA	NA	NA	NA
LF-23	10-Apr-96	<0.002	NA	NA	<0.002	NA	NA	NA	NA
DUP	10-Apr-96	0.004	NA	NA	<0.002	NA	NA	NA	NA
LF-23	02-Aug-96	**0.009	NA	NA	NA	NA	NA	NA	NA
LF-24	11-Apr-96	0.005	NA	NA	<0.002	NA	NA	NA	NA
LF-24	02-Aug-96	**0.010	NA	NA	NA	NA	NA	NA	NA
LF-25	11-Apr-96	<0.002	NA	NA	<0.002	NA	NA	NA	NA
LF-25	02-Aug-96	0.070	NA	NA	NA	NA	NA	NA	NA
LF-B1	07-Dec-89	*<0.070	NA	<0.0400	<0.300				

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-B1	18-Jul-90	0.007	0.08	<0.0500	<0.2				
LF-B1	20-Dec-90	0.005	0.100	0.0010	<0.200				
LF-B1	20-Jun-91	<0.010	NA	<0.005	0.004				
LF-B1	08-Jul-92	<0.010	0.122	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B1	30-Dec-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-B1	08-Jun-93	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-B1	Destroyed under permit								
LF-B2	06-Dec-89	*<0.070	NA	<0.0400	<0.300				
LF-B2	18-Jul-90	0.005	0.140	<0.0500	<0.200				
Duplicate	18-Jul-90	0.004	0.150	<0.0500	<0.200				
LF-B2	19-Dec-90	0.008	0.320	0.0026	<0.200				
LF-B2	20-Jun-91	<0.010	NA	<0.005	0.005				
LF-B2	08-Jul-92	<0.010	0.245	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B2	08-Jun-93	<0.010	0.233	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-B2	Destroyed or lost during slurry wall and cap construction activities								
LF-B3	07-Dec-89	*<0.070	NA	<0.0400	<0.300				
LF-B3	18-Jul-90	0.003	0.100	<0.0500	<0.200				
LF-B3	20-Dec-90	0.002	0.160	<0.0005	<0.200				
LF-B3	19-Jun-91	<0.010	NA	<0.005	<0.004				
LF-B3	08-Jul-92	<0.010	0.133	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B3	30-Dec-92	<0.010	0.112	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-B3	08-Jun-93	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-B3	05-Jan-94	0.004	0.110	0.0060	<0.001	<0.002	<0.0002	<0.004	<0.001
LF-B3	16-Apr-96	0.036	NA	NA	<0.002	NA	NA	NA	NA
LF-B3	01-Aug-96	0.004	NA	NA	NA	NA	NA	NA	NA
LF-B4	17-Jul-90	0.003	0.080	<0.0500	<0.200				
LF-B4	19-Dec-90	<0.002	0.080	0.0014	<0.200				
LF-B4	19-Jun-91	<0.010	NA	<0.005	<0.004				
LF-B4	08-Jul-92	<0.010	0.140	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B4	30-Dec-92	<0.010	0.110	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-B4	08-Jun-93	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-B4	05-Jan-94	0.003	0.070	<0.001	0.001	<0.002	<0.0002	<0.004	<0.001
LF-B4	16-Apr-96	<0.002	NA	NA	<0.002	NA	NA	NA	NA
LF-B4	30-Jul-96	<0.002	NA	NA	NA	NA	NA	NA	NA
LF-B5	09-Apr-96	0.320	NA	NA	<0.002	NA	NA	NA	NA
LF-B5	01-Aug-96	0.097	NA	NA	NA	NA	NA	NA	NA
LF-B6	09-Apr-96	0.080	NA	NA	<0.002	NA	NA	NA	NA
LF-B6	01-Aug-96	0.033	NA	NA	NA	NA	NA	NA	NA
EX-1	18-Apr-96	0.002	NA	NA	<0.002	NA	NA	NA	NA
EX-1	01-Aug-96	0.022	NA	NA	NA	NA	NA	NA	NA
EX-2	18-Apr-96	9.3	NA	NA	<0.002	NA	NA	NA	NA
EX-2	01-Aug-96	57.0	NA	NA	NA	NA	NA	NA	NA
EX-3	18-Apr-96	200	NA	NA	<0.002	NA	NA	NA	NA
EX-3	01-Aug-96	170	NA	NA	NA	NA	NA	NA	NA
FIELD & TRIP BLANKS									
LF-1-FB	01-Jun-89	0.012	NA	<0.0400	<0.300				
LF-1-FB	07-Dec-89	0.003	NA	<0.0400	<0.300				
LF-B1-FB	07-Dec-89	0.014	NA	<0.0400	<0.300				
Trip Blank	07-Dec-89	0.013	NA	<0.0400	<0.300				
LF-B4-TB	18-Jul-90	<0.002	NA	<0.0500	<0.200				
LF-B4-BB	18-Jul-90	<0.002	NA	<0.0500	<0.200				
LF-11-TB	19-Jul-90	<0.002	NA	<0.0500	0.200				
LF-11-BB	19-Jul-90	<0.002	NA	<0.0500	<0.200				
LF-5- TB	20-Jul-90	0.002	NA	<0.0500	<0.200				
LF-16-TB	04-Sep-90	<0.002	NA	<0.0005	0.005				
LF-B4-TB	19-Dec-90	<0.002	<0.050	<0.0005	<0.200				
LF-B4-BB	19-Dec-90	<0.002	<0.050	<0.0005	<0.200				

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver
LF-B3-TB	20-Dec-90	<0.002	<0.050	<0.0005	<0.200				
LF-B3-BR	20-Dec-90	<0.002	<0.050	<0.0005	<0.200				
LF-8-TB	21-Dec-90	<0.002	<0.050	<0.0005	<0.200				
LF-8-BR	21-Dec-90	<0.002	<0.050	<0.0005	<0.200				
LF-B3-BR	19-Jun-91	<0.010	NA	<0.005	<0.004				
LF-B4-TB	19-Jun-91	<0.010	NA	<0.005	<0.004				
LF-4-TB	20-Jun-91	<0.010	NA	<0.005	<0.004				
LF-11-TB	20-Jun-91	<0.010	NA	<0.005	<0.004				
LF-11-BR	20-Jun-91	<0.010	NA	<0.005	<0.004				
Trip Blank	06-Aug-91	<0.010	NA	NA	<0.003				
LF-B3-TB	08-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-7-TB	09-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-3-TB	09-Jul-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.00027	<0.005	<0.010
LF-B4-TB	30-Dec-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-B4-BR	30-Dec-92	<0.010	<0.100	<0.005	<0.040	<0.010	<0.0002	<0.005	<0.010
LF-7-TB	09-Jun-93	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-10-FB	10-Jun-93	<0.100	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
Trip Blank	08-Jun-93	<0.010	<0.100	<0.005	<0.003	<0.010	<0.0002	<0.005	<0.010
LF-10-FB	06-Jan-94	<0.002	<0.01	<0.001	<0.001	<0.01	<0.0002	<0.004	<0.001
LF-24-FB	02-Aug-96	0.004	NA	NA	NA	NA	NA	NA	NA

Data entered by _____. Proofed by _____.

Notes :

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

** = Data not validatd based on positive results of bailer rinstate blank (0.004 ppm) of submitted samples.

NA = Not Analyzed

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

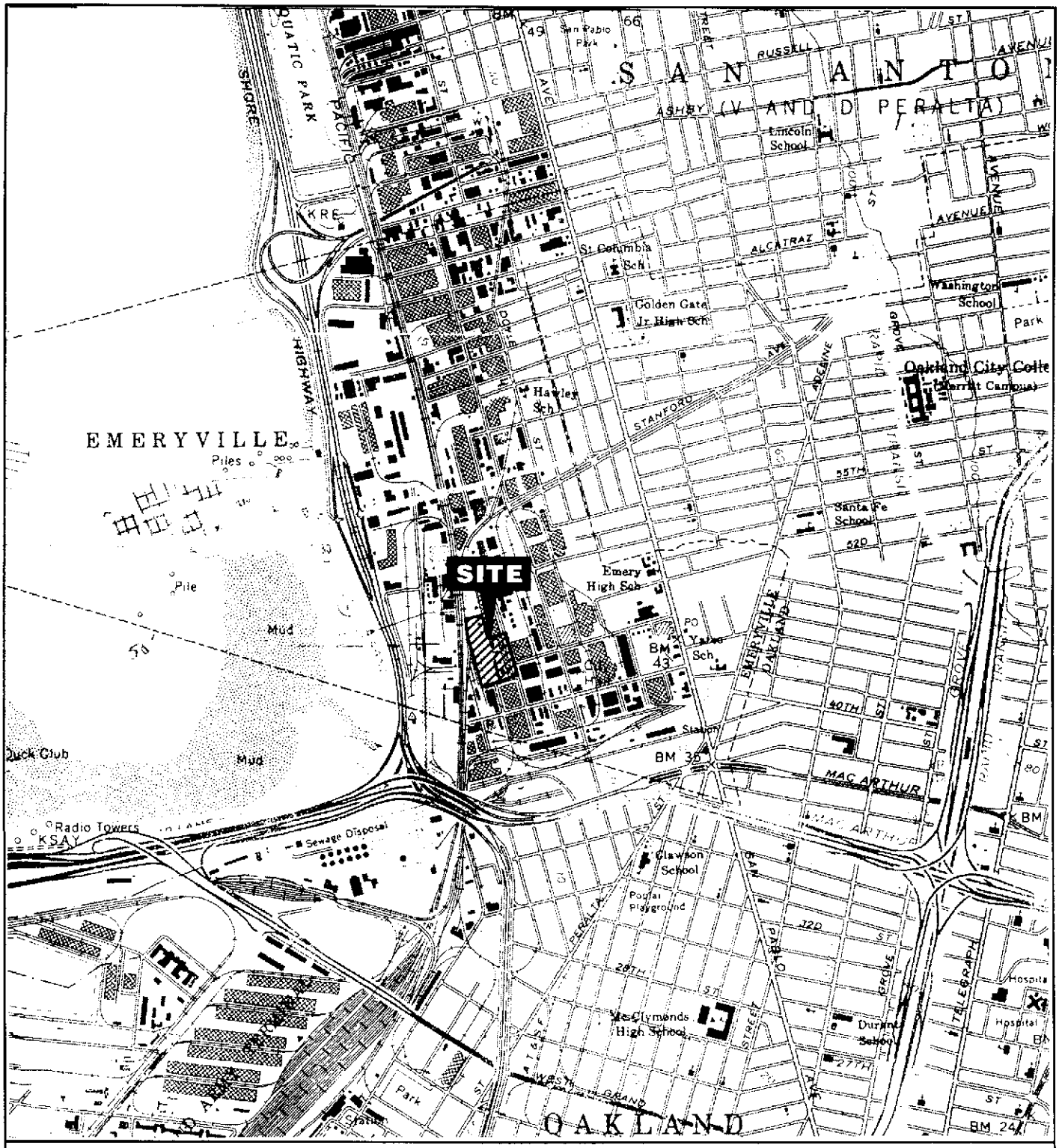
Results of analyses for other inorganic compounds as metals that are not part of the annual and semiannual self-monitoring program for 1992 and 1993 are reported in Levine*Fricke, April 4, 1990, Table 10 and Levine*Fricke, December 20, 1991, Table 5.

TABLE 4
SUMMARY OF HISTORICAL INORGANIC COMPOUNDS IN GROUNDWATER MONITORING WELLS
THE SHERWIN-WILLIAMS PLANT
EMERYVILLE, CALIFORNIA

(Results reported in parts per million [ppm])

Well Number	Date Sampled	Arsenic	Barium	Cadmium	Lead	Total Chromium	Mercury	Selenium	Silver

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 West, California
7.5 Minute Series

SHERWIN-WILLIAMS

Site Location Map

Levine·Fricke·Recon

Figure 1

Project No. 3435

3435SV01.CDR 10249GRYI KAG

3435

HORTON STREET

SHERWIN AVENUE

LF-13

LF-12

LF-B4

LF-B1

LF-1

LF-22

LF-B5

WAREHOUSE

WAREHOUSE AND OFFICE

SHOP

BOILER HOUSE

EX-3

IMPERVIOUS CAP WITHIN SLURRY WALL

TRI-BIO BIOLOGICAL TREATMENT SYSTEM

WAREHOUSE

LF-19

LF-7

LF-17

LF-2

FACTORY

FACTORY

LF-18

DRAINAGE DITCH

LF-8

NPDES Storm Sewer Outfall

LF-3

ANDCO ELECTROCHEMICAL TREATMENT SYSTEM

LF-B6

EX-1

LF-5

LF-B2

EX-2

WAREHOUSE OFFICE

TEMESCAL CREEK

TRUCK PARKING AREA

PAVED PARKING AREA

LF-26

LF-9

LF-4

WAREHOUSE

LF-20

SOIL-BENTONITE SLURRY CUT-OFF WALL

LF-10

LF-B3

LF-21

LF-11

LF-25

LF-14

EDGE OF PAVEMENT AND EASEMENT LINE

LF-24

LF-15

LF-23

LF-16

0 40 80 FEET

EXPLANATION

- Property boundary
- Chain link fence
- LF-10 ● A-zone monitoring well
- LF-B3 ● B-zone monitoring well
- EX-1 ⊙ Groundwater extraction well location
- ● Monitoring well destroyed under permit
- ⊗ Monitoring well destroyed or lost during slurry wall and cap construction activities
- ⊕ Monitoring well destroyed during railway expansion activities

3435B003.CDR 100896KAG:ecm

SHERWIN-WILLIAMS

Site Plan
July-August 1996

Levine-Fricke-Recon

Figure 2

Project No. 3435

3435GG01.CDR 101096KAG-ecm

HORTON STREET

SHERWIN AVENUE

TEMESCAL CREEK

DRAINAGE DITCH

NPDES Storm Sewer Outfall

WAREHOUSE

WAREHOUSE AND OFFICE

SHOP

BOILER HOUSE

TRI-BIO BIOLOGICAL TREATMENT SYSTEM

WAREHOUSE

FACTORY

FACTORY

ANDCO ELECTROCHEMICAL TREATMENT SYSTEM

WAREHOUSE OFFICE

WAREHOUSE

PAVED PARKING AREA

TRUCK PARKING AREA

IMPERVIOUS CAP WITHIN SLURRY WALL

SOIL-BENTONITE SLURRY CUT-OFF WALL

EDGE OF PAVEMENT AND EASEMENT LINE

MW-1	6.02	LF-1	
MW-2	5.99	LF-2	
MW-3	6.52	LF-3	6.43
MW-4	7.24	LF-4	NM
MW-5	7.00	LF-5	
RP-1	6.56	LF-7	4.74
RP-2	6.35	LF-8	4.70
RP-3	6.46	LF-9	
RP-4	6.25	LF-10	
RP-5	6.23	LF-11	6.12
EX-1	-5.62	LF-12	7.66
EX-2	4.42	LF-13	7.82
EX-3	2.30	LF-14	
LF-B1		LF-15	
LF-B2		LF-16	
LF-B3		LF-17	6.43
LF-B4		LF-18	4.40
LF-B5		LF-19	6.42
LF-B6		LF-20	3.86
LF-21	5.76	LF-22	6.94
LF-23	5.36	LF-24	4.98
LF-25	3.65	LF-26	4.82

EXPLANATION

- Property boundary
- Chain link fence
- LF-10 ● A-zone monitoring well
- LF-B3 ● B-zone monitoring well
- EX-1 ⊕ Groundwater extraction well location
- ✱ Monitoring well destroyed under permit
- ⊗ Monitoring well destroyed or lost during slurry wall and cap construction activities
- ⊕ Monitoring well destroyed during railway expansion activities
- ⊙ Rifkin property monitoring wells (TMC)
- ◒ Rifkin property monitoring wells (Levine-Fricke)
- 5.36 Groundwater elevation (feet above mean sea level)
- NM Not measured
- 5.5 Groundwater elevation contour (feet above mean sea level)

0 40 80 FEET

3435B004.CDR 101196KAG-ecm

SHERWIN-WILLIAMS

A-Zone Groundwater Elevation Map, July 29, 1996

Levine·Fricke·Recon

Figure 3

Project No. 3435

3435GG02.CDR 100896KAG.ecm

HORTON STREET

SHERWIN AVENUE

LF-13

LF-12

LF-B4 7.58

7.5

LF-B1

LF-1

LF-22

WAREHOUSE

WAREHOUSE AND OFFICE

LF-B5 7.26

SHOP

BOILER HOUSE

EX-3

IMPERVIOUS CAP WITHIN SLURRY WALL

TRI-BIO BIOLOGICAL TREATMENT SYSTEM

WAREHOUSE

7.0

LF-19

LF-7

LF-17

LF-2

FACTORY

FACTORY

LF-18

DRAINAGE DITCH

LF-8

NPDES Storm Sewer Outfall

LF-3

ANDCO ELECTROCHEMICAL TREATMENT SYSTEM

WAREHOUSE OFFICE

LF-B6 6.18

EX-1

LF-5

LF-B2

EX-2

TRUCK PARKING AREA

6.5

TEMESCAL CREEK

PAVED PARKING AREA

LF-4

WAREHOUSE

LF-26

LF-9

LF-20

SOIL-BENTONITE SLURRY CUT-OFF WALL

LF-10 6.18

LF-B3

LF-21

LF-11

LF-25

LF-14

EDGE OF PAVEMENT AND EASEMENT LINE

LF-24

LF-15

LF-23

LF-16

0 40 80 FEET

EXPLANATION

- Property boundary
- Chain link fence
- LF-10 ● A-zone monitoring well
- LF-B3 ● B-zone monitoring well
- EX-1 ⊙ Groundwater extraction well location
- ⊗ Monitoring well destroyed under permit
- ⊗ Monitoring well destroyed or lost during slurry wall and cap construction activities
- ⊕ Monitoring well destroyed during railway expansion activities
- 6.86 Groundwater elevation (feet above mean sea level)
- ~7.5 Groundwater elevation contour (feet above mean sea level); dashed where inferred

3435B003.CDR 100896KAG.ecm

SHERWIN-WILLIAMS

B-Zone Groundwater Elevation Map, July 29, 1996

Levine·Fricke·Recon

Figure 4

Project No. 3435

KEY TO ABBREVIATIONS

Ace	Acetone
B	Benzene
E	Ethylbenzene
X	Total Xylenes
2H	2-Hexanone
T	Toluene
1,1,1-TCA	1,1,1-Trichloroethane
1,2-DCA	1,2-Dichloroethane
PCE	Tetrachloroethene
TCE	Trichloroethene
CB	Chlorobenzene

SHERWIN-WILLIAMS

Volatile Organic Compounds, EPA Method 8240, A-Zone Groundwater, July-August 1996

Levine·Fricke·Recon

Figure 5

Project No. 3435

3435QC03.CDR 100896KAG:ecm

3435B003.CDR 050696ECM:KAG

3435@C05.CDR 100896KAG-ecm

HORTON STREET

SHERWIN AVENUE

<0.05/<0.05 TPHd
LF-13

<0.050 TPHd
LF-12

LF-B4 <0.050 TPHd

LF-B1
LF-1
LF-22

LF-B5
<0.050 TPHd

WAREHOUSE

WAREHOUSE AND OFFICE

SHOP BOILER HOUSE

EX-3
0.82 TPHd

TRI-BIO BIOLOGICAL TREATMENT SYSTEM

WAREHOUSE

IMPERVIOUS CAP WITHIN SLURRY WALL

LF-19

LF-7

LF-17

LF-2

FACTORY

FACTORY

0.320 TPHd
LF-18

DRAINAGE DITCH

LF-8

NPDES Storm Sewer Outfall

LF-3
0.64 TPHd

ANDCO ELECTROCHEMICAL TREATMENT SYSTEM

LF-B6
0.080 TPHd

EX-1
4.1 TPHd

LF-5

LF-B2

EX-2
3.7 TPHd

WAREHOUSE OFFICE

TEMESCAL CREEK

TRUCK PARKING AREA

PAVED PARKING AREA

LF-26

LF-9

LF-4

WAREHOUSE

0.560 TPHd
LF-20

SOIL-BENTONITE SLURRY CUT-OFF WALL

LF-10
0.6 TPHd
LF-B3

LF-21
1.4 TPHd

0.580 TPHd
LF-11

LF-25
0.30 TPHd

LF-14

LF-24
0.16 TPHd

EDGE OF PAVEMENT AND EASEMENT LINE

LF-15

5.6 TPHd
LF-23

LF-16

0 40 80 FEET

EXPLANATION

- Property boundary
- Chain link fence
- LF-10 A-zone monitoring well
- LF-B3 B-zone monitoring well
- EX-1 Groundwater extraction well location
- Monitoring well destroyed under permit
- Monitoring well destroyed or lost during slurry wall and cap construction activities
- Monitoring well destroyed during railway expansion activities
- <0.05/<0.05 TPHd — Total petroleum hydrocarbons as diesel
  - Duplicate analysis
  - Concentration in parts per million (ppm)

34358003.CDR 050696ECM:KAG

SHERWIN-WILLIAMS

Total Petroleum Hydrocarbons as Diesel, A-Zone and B-Zone Groundwater, July-August 1996

Levine-Fricke-Recon Figure 6

Project No. 3435

3435QC02.CDR 100896KAG:ecm

HORTON STREET

LF-13 <0.05/<0.05 TPHg

LF-12 <0.050 TPHg

LF-B4 <0.050 TPHg

LF-B1 LF-1 LF-22

LF-B5 0.15 TPHg

WAREHOUSE

WAREHOUSE AND OFFICE

SHOP BOILER HOUSE

EX-3 <0.050 TPHg

IMPERVIOUS CAP WITHIN SLURRY WALL

TRI-BIO BIOLOGICAL TREATMENT SYSTEM

WAREHOUSE

LF-19

LF-7

LF-17 LF-2

FACTORY

FACTORY

LF-3 90 TPHg

ANDCO ELECTROCHEMICAL TREATMENT SYSTEM

<0.05 TPHg LF-18

DRAINAGE DITCH

LF-8 NPDES Storm Sewer Outfall

LF-B6 0.38 TPHg

EX-1 0.220 TPHg

LF-5

LF-B2

EX-2 34.0 TPHg

WAREHOUSE OFFICE

SHERWIN AVENUE

TEMESCAL CREEK

TRUCK PARKING AREA

LF-26

LF-9

PAVED PARKING AREA

LF-4

LF-20 0.20 TPHg

LF-10 <0.050 TPHg

LF-B3

WAREHOUSE

SOIL-BENTONITE SLURRY CUT-OFF WALL

LF-21 0.060 TPHg

<0.05 TPHg LF-25

LF-14

LF-11 <0.050 TPHg

EDGE OF PAVEMENT AND EASEMENT LINE

LF-24 <0.05 TPHg

LF-15

<0.05 TPHg LF-23

LF-16

0 40 80 FEET

EXPLANATION

- Property boundary
- Chain link fence
- LF-10 A-zone monitoring well
- LF-B3 B-zone monitoring well
- EX-1 Ground-water extraction well location
- Monitoring well destroyed under permit
- Monitoring well destroyed or lost during slurry wall and cap construction activities
- Monitoring well destroyed during railway expansion activities
- <0.05/<0.05 TPHg — Total petroleum hydrocarbons as gasoline; Duplicate analysis; Concentration in parts per million (ppm)

3435B003.CDR 050896ECM:KAG

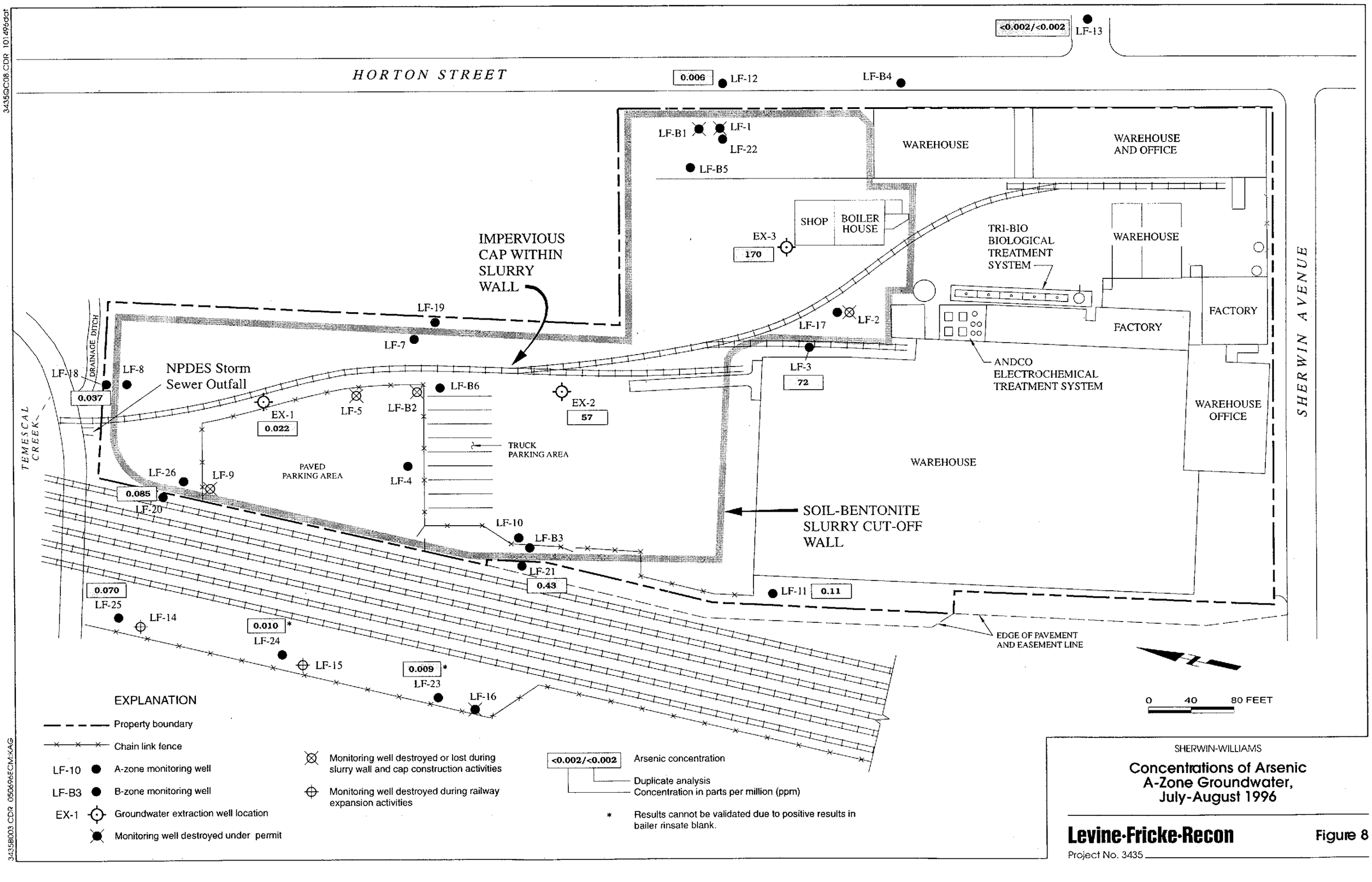
SHERWIN-WILLIAMS

Total Petroleum Hydrocarbons as Gasoline, A-Zone and B-Zone Groundwater, July-August 1996

Levine-Fricke-Recon Figure 7

Project No. 3435

3435GC08.CDR 10/14/96dat



3435B003.CDR 05/06/96ECM:KAG

SHERWIN-WILLIAMS

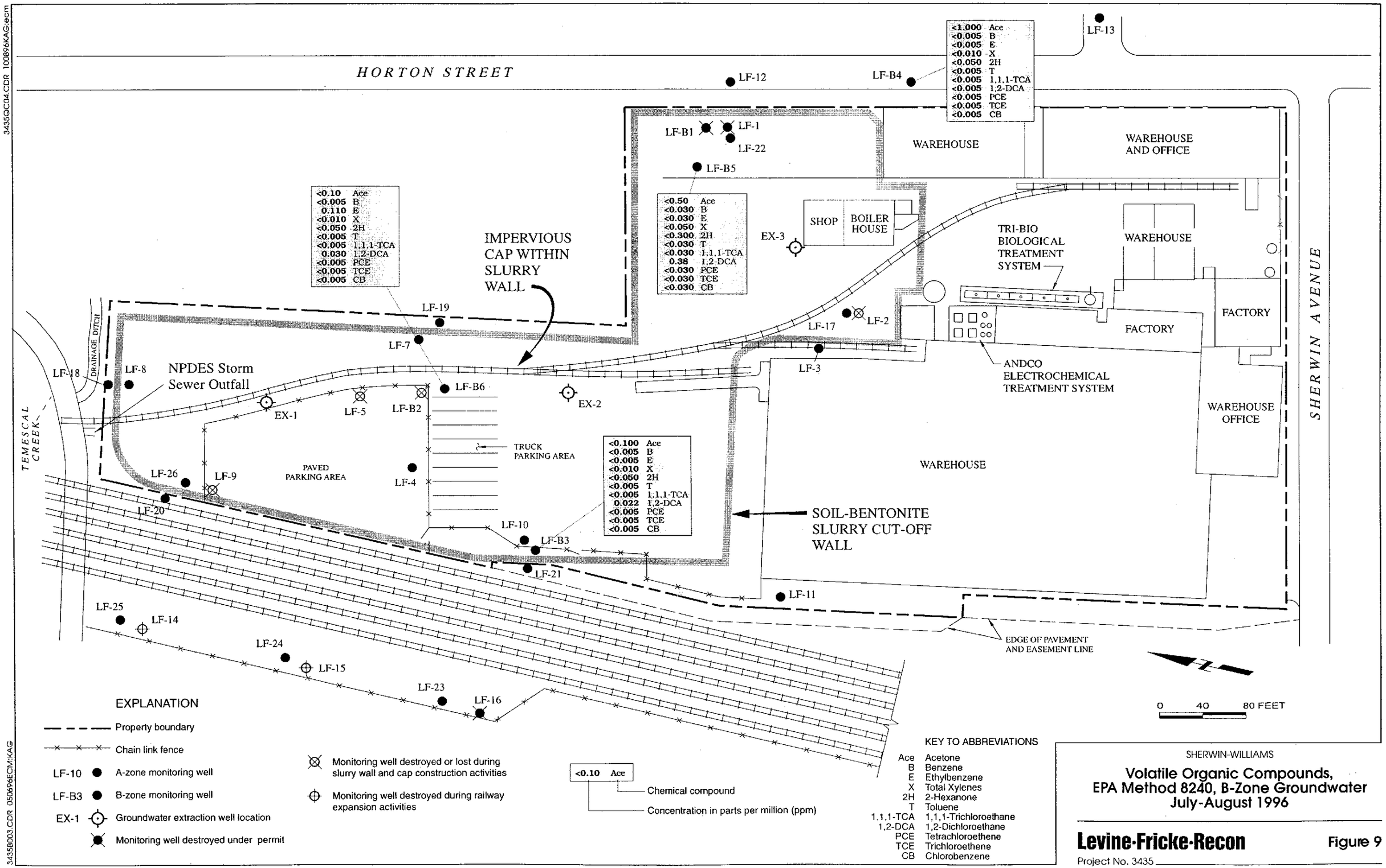
Concentrations of Arsenic A-Zone Groundwater, July-August 1996

Levine-Fricke-Recon

Figure 8

Project No. 3435

3435QC04.CDR 100896KAG:ecm



EXPLANATION

- Property boundary
- Chain link fence
- LF-10 ● A-zone monitoring well
- LF-B3 ● B-zone monitoring well
- EX-1 ⊙ Groundwater extraction well location
- ✱ Monitoring well destroyed under permit
- ⊗ Monitoring well destroyed or lost during slurry wall and cap construction activities
- ⊕ Monitoring well destroyed during railway expansion activities

<0.10 Ace
- Chemical compound
- Concentration in parts per million (ppm)

KEY TO ABBREVIATIONS

Ace	Acetone
B	Benzene
E	Ethylbenzene
X	Total Xylenes
2H	2-Hexanone
T	Toluene
1,1,1-TCA	1,1,1-Trichloroethane
1,2-DCA	1,2-Dichloroethane
PCE	Tetrachloroethene
TCE	Trichloroethene
CB	Chlorobenzene

3435B003.CDR 050696ECM:KAG

SHERWIN-WILLIAMS

Volatile Organic Compounds, EPA Method 8240, B-Zone Groundwater July-August 1996

Levine·Fricke·Recon Figure 9

Project No. 3435

3435GC09.CDR 100996KAG.dot

HORTON STREET

SHERWIN AVENUE

LF-13

LF-12

LF-B4 <0.002

LF-B1 LF-1 LF-22

LF-B5 0.097

WAREHOUSE

WAREHOUSE AND OFFICE

SHOP

BOILER HOUSE

EX-3

IMPERVIOUS CAP WITHIN SLURRY WALL

TRI-BIO BIOLOGICAL TREATMENT SYSTEM

WAREHOUSE

LF-19

LF-7

LF-17

LF-2

FACTORY

FACTORY

LF-18

DRAINAGE DITCH

LF-8

NPDES Storm Sewer Outfall

LF-3

ANDCO ELECTROCHEMICAL TREATMENT SYSTEM

LF-B6 0.033

EX-1

LF-5

LF-B2

EX-2

WAREHOUSE OFFICE

TEMESCAL CREEK

TRUCK PARKING AREA

PAVED PARKING AREA

LF-26

LF-9

LF-4

WAREHOUSE

LF-20

SOIL-BENTONITE SLURRY CUT-OFF WALL

LF-10

LF-B3 0.004

LF-21

LF-11

LF-25

LF-14

EDGE OF PAVEMENT AND EASEMENT LINE

LF-24

LF-15

LF-23

LF-16

0 40 80 FEET

EXPLANATION

- Property boundary
- Chain link fence
- LF-10 — A-zone monitoring well
- LF-B3 — B-zone monitoring well
- EX-1 — Groundwater extraction well location
- Monitoring well destroyed under permit
- Monitoring well destroyed or lost during slurry wall and cap construction activities
- Monitoring well destroyed during railway expansion activities
- <0.002 — Arsenic concentration in parts per million (ppm)

3435B003.CDR 050696ECM:KAG

SHERWIN-WILLIAMS

Concentrations of Arsenic B-Zone Groundwater, July-August 1996

Levine-Fricke-Recon

Figure 10

Project No. 3435

APPENDIX A

LABORATORY CERTIFICATES

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

ATTN: KENTON GEE
CLIENT PROJ. ID: 3435.00.04
CLIENT PROJ. NAME: SHERWIN WMS
C.O.C. NUMBER: 15067

REPORT DATE: 08/15/96
DATE(S) SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
AEN WORK ORDER: 9608029

PROJECT SUMMARY:

On August 2, 1996, this laboratory received 4 water sample(s).

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

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

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: LF-25
AEN LAB NO: 9608029-01A
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/10/96

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

LEVINE-FRICKE

SAMPLE ID: LF-25
AEN LAB NO: 9608029-01D
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/12/96
Benzene	71-43-2	ND	5	ug/L	08/12/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/12/96
Bromoform	75-25-2	ND	5	ug/L	08/12/96
Bromomethane	74-83-9	ND	10	ug/L	08/12/96
2-Butanone	78-93-3	ND	100	ug/L	08/12/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/12/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/12/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/12/96
Chloroethane	75-00-3	ND	10	ug/L	08/12/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/12/96
Chloroform	67-66-3	ND	5	ug/L	08/12/96
Chloromethane	74-87-3	ND	10	ug/L	08/12/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/12/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/12/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/12/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/12/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/12/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/12/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/12/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/12/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/12/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/12/96
2-Hexanone	591-78-6	ND	50	ug/L	08/12/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/12/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/12/96
Styrene	100-42-5	ND	5	ug/L	08/12/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/12/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/12/96
Toluene	108-88-3	ND	5	ug/L	08/12/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/12/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/12/96
Trichloroethene	79-01-6	ND	5	ug/L	08/12/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/12/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/12/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-25
AEN LAB NO: 9608029-01G
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/12/96
TPH as Diesel	GC-FID	0.30 *	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-25
AEN LAB NO: 9608029-01I
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/02/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	0.070 *	0.002	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-24-FB
AEN LAB NO: 9608029-02A
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/10/96

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

LEVINE-FRICKE

SAMPLE ID: LF-24-FB
AEN LAB NO: 9608029-02D
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/12/96
Benzene	71-43-2	ND	5	ug/L	08/12/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/12/96
Bromoform	75-25-2	ND	5	ug/L	08/12/96
Bromomethane	74-83-9	ND	10	ug/L	08/12/96
2-Butanone	78-93-3	ND	100	ug/L	08/12/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/12/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/12/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/12/96
Chloroethane	75-00-3	ND	10	ug/L	08/12/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/12/96
Chloroform	67-66-3	ND	5	ug/L	08/12/96
Chloromethane	74-87-3	ND	10	ug/L	08/12/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/12/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/12/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/12/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/12/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/12/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/12/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/12/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/12/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/12/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/12/96
2-Hexanone	591-78-6	ND	50	ug/L	08/12/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/12/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/12/96
Styrene	100-42-5	ND	5	ug/L	08/12/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/12/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/12/96
Toluene	108-88-3	ND	5	ug/L	08/12/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/12/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/12/96
Trichloroethene	79-01-6	ND	5	ug/L	08/12/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/12/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/12/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-24-FB
AEN LAB NO: 9608029-02G
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/12/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-24-FB
AEN LAB NO: 9608029-02I
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/02/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	0.004 *	0.002	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-24
AEN LAB NO: 9608029-03A
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-24
AEN LAB NO: 9608029-03D
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/12/96
Benzene	71-43-2	ND	5	ug/L	08/12/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/12/96
Bromoform	75-25-2	ND	5	ug/L	08/12/96
Bromomethane	74-83-9	ND	10	ug/L	08/12/96
2-Butanone	78-93-3	ND	100	ug/L	08/12/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/12/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/12/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/12/96
Chloroethane	75-00-3	ND	10	ug/L	08/12/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/12/96
Chloroform	67-66-3	ND	5	ug/L	08/12/96
Chloromethane	74-87-3	ND	10	ug/L	08/12/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/12/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/12/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/12/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/12/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/12/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/12/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/12/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/12/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/12/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/12/96
2-Hexanone	591-78-6	ND	50	ug/L	08/12/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/12/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/12/96
Styrene	100-42-5	ND	5	ug/L	08/12/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/12/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/12/96
Toluene	108-88-3	ND	5	ug/L	08/12/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/12/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/12/96
Trichloroethene	79-01-6	ND	5	ug/L	08/12/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/12/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/12/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-24
AEN LAB NO: 9608029-03G
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/12/96
TPH as Diesel	GC-FID	0.16 *	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-24
AEN LAB NO: 9608029-03I
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/02/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	0.010 *	0.002	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-23
AEN LAB NO: 9608029-04A
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-23
AEN LAB NO: 9608029-04D
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/13/96
Benzene	71-43-2	ND	5	ug/L	08/13/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/13/96
Bromoform	75-25-2	ND	5	ug/L	08/13/96
Bromomethane	74-83-9	ND	10	ug/L	08/13/96
2-Butanone	78-93-3	ND	100	ug/L	08/13/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/13/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/13/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/13/96
Chloroethane	75-00-3	ND	10	ug/L	08/13/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/13/96
Chloroform	67-66-3	ND	5	ug/L	08/13/96
Chloromethane	74-87-3	ND	10	ug/L	08/13/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/13/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/13/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/13/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/13/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/13/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/13/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/13/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/13/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/13/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/13/96
2-Hexanone	591-78-6	ND	50	ug/L	08/13/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/13/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/13/96
Styrene	100-42-5	ND	5	ug/L	08/13/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/13/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/13/96
Toluene	108-88-3	ND	5	ug/L	08/13/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/13/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/13/96
Trichloroethene	79-01-6	ND	5	ug/L	08/13/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/13/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/13/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/13/96

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

LEVINE-FRICKE

SAMPLE ID: LF-23
AEN LAB NO: 9608029-04G
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/12/96
TPH as Diesel	GC-FID	5.6 *	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-23
AEN LAB NO: 9608029-04I
AEN WORK ORDER: 9608029
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/02/96
DATE RECEIVED: 08/02/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/02/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	0.009 *	0.002	mg/L	08/12/96

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9608029

CLIENT PROJECT ID: 3435.00.04

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9608029
AEN LAB NO: 0812-BLANK
DATE EXTRACTED: 08/12/96
DATE ANALYZED: 08/13/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9608029
DATE(S) EXTRACTED: 08/12/96
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
08/12/96	LF-25	01	71
08/12/96	LF-24-FB	02	79
08/12/96	LF-24	03	81
08/12/96	LF-23	04	76
QC Limits:			65-125

DATE EXTRACTED: 08/12/96
DATE ANALYZED: 08/14/96
SAMPLE SPIKED: 9607241-10
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	4.00	84	2	60-110	15

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9608029
AEN LAB NO: 0810-BLANK
DATE ANALYZED: 08/10/96
INSTRUMENT: E
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

AEN LAB NO: 0812-BLANK
DATE ANALYZED: 08/12/96
INSTRUMENT: E
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9608029
INSTRUMENT: E
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
08/10/96	LF-25	01	106
08/10/96	LF-24-FB	02	104
08/12/96	LF-24	03	106
08/12/96	LF-23	04	106
QC Limits:			70-130

DATE ANALYZED: 08/10/96
SAMPLE SPIKED: LCS
INSTRUMENT: E

Laboratory Control Sample Recovery

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Hydrocarbons as Gasoline	500	113	2	60-120	20

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9608029
AEN LAB NO: 0812-BLANK
DATE ANALYZED: 08/12/96
INSTRUMENT: 13
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9608029
AEN LAB NO: 0813-BLANK
DATE ANALYZED: 08/13/96
INSTRUMENT: 13
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9608029
INSTRUMENT: 13
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery 1,2-Dichloroethane-d_4	Toluene-d_8	p-Bromofluorobenzene
08/12/96	LF-25	01	83	94	99
08/12/96	LF-24-FB	02	81	91	91
08/12/96	LF-24	03	84	93	94
08/13/96	LF-23	04	84	101	88
QC Limits:			76-114	88-110	86-115

DATE ANALYZED: 08/13/96
SAMPLE SPIKED: 9608019-02
INSTRUMENT: 13

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
1,1-Dichloroethene	50	85	<1	59-155	25
Trichloroethene	50	97	4	71-157	25
Benzene	50	97	1	37-151	25
Toluene	50	88	6	47-150	25
Chlorobenzene	50	102	5	37-160	25

QUALITY CONTROL DATA

AEN JOB NO: 9608029
SAMPLE SPIKED: DI WATER
DATE(S) ANALYZED: 08/12/96
MATRIX: WATER

Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	MS Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
As. Arsenic	4000/7060	ND	0.04	104	3	69-136	13

END OF REPORT

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9608029

Project No.: 3435.00.04	Field Logbook No.:	Date: 8-2-96	Serial No.: No 15067
Project Name: Sherwin Williams	Project Location: Emeryville		
Sampler (Signature): Jeffrey Rogers			Samplers: JNR

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	TPHg	EPA 8240	TPHd	Dissolved As			HOLD	RUSH	REMARKS
LF-25	8-2-96	10:50	01AI	9	H2O	X	X	X	X					STD TAT
LF-24-FB	↓	11:15	02AI	9	↓	↓	↓	↓	↓					
LF-24		11:35	03AI	9										Preserve + filter dissolved As in Lab
LF-23	↓	12:10	04AI	9	↓	↓	↓	↓	↓					
														Results to Kenton Lee

RELINQUISHED BY: (Signature) Jeffrey Rogers	DATE 8-2-96	TIME 13:15	RECEIVED BY: (Signature)	DATE 8-2-96	TIME 13:20
RELINQUISHED BY: (Signature)	DATE 8-2-96	TIME 15:50	RECEIVED BY: (Signature) Lori L Pruitt	DATE 8-2-96	TIME 15:50
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

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

REPORT DATE: 08/21/96
DATE(S) SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
AEN WORK ORDER: 9607403

ATTN: **KENTON GEE**
CLIENT PROJ. ID: 3435.00.04
CLIENT PROJ. NAME: SHERWIN WMS.
C.O.C. NUMBER: 15038

PROJECT SUMMARY:

On July 30, 1996, this laboratory received 3 water sample(s).

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

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

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

Larry Klein
Laboratory Director

Revision of report dated 08/13/96

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01A
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01D
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01G
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01I
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	0.006 *	0.002	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01J
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-			Prep Date	08/05/96
General Minerals						
Bicarbonate Alkalinity	SM 2320B	130	*	2	mg CaCO3/L	08/08/96
Carbonate Alkalinity	SM 2320B	ND		2	mg CaCO3/L	08/08/96
Hydroxide Alkalinity	SM 2320B	ND		2	mg CaCO3/L	08/08/96
Calcium	EPA 6010	46	*	0.05	mg/L	08/07/96
Chloride	EPA 300	17	*	0.5	mg/L	08/04/96
Copper	EPA 6010	0.14	*	0.01	mg/L	08/07/96
Iron	EPA 6010	130	*	0.05	mg/L	08/07/96
Magnesium	EPA 6010	54	*	0.04	mg/L	08/07/96
Manganese	EPA 6010	13	*	0.005	mg/L	08/07/96
pH	EPA 9040	7.1		NA	std. units	07/30/96
Sodium	EPA 6010	28	*	0.1	mg/L	08/07/96
Sulfate	EPA 300	33	*	0.5	mg/L	08/04/96
Conductivity	EPA 120.1	390	*	20	umhos/cm	08/07/96
Total Dissolved Solids	EPA 160.1	240	*	10	mg/L	08/06/96
Hardness	SM 2340B	340	*	1	mg CaCO3/L	08/07/96
Zinc	EPA 6010	0.81	*	0.01	mg/L	08/07/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02A
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	EPA 8240				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02D
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02G
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02I
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	ND	0.002	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02J
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	08/05/96
General Minerals					
Bicarbonate Alkalinity	SM 2320B	190 *	2	mg CaCO3/L	08/08/96
Carbonate Alkalinity	SM 2320B	ND	2	mg CaCO3/L	08/08/96
Hydroxide Alkalinity	SM 2320B	ND	2	mg CaCO3/L	08/08/96
Calcium	EPA 6010	41 *	0.05	mg/L	08/07/96
Chloride	EPA 300	32 *	0.5	mg/L	08/04/96
Copper	EPA 6010	0.02 *	0.01	mg/L	08/07/96
Iron	EPA 6010	0.77 *	0.05	mg/L	08/07/96
Magnesium	EPA 6010	22 *	0.04	mg/L	08/07/96
Manganese	EPA 6010	0.66 *	0.005	mg/L	08/07/96
pH	EPA 9040	7.0	NA	std. units	07/31/96
Sodium	EPA 6010	35 *	0.1	mg/L	08/07/96
Sulfate	EPA 300	26 *	0.5	mg/L	08/04/96
Conductivity	EPA 120.1	500 *	20	umhos/cm	08/07/96
Total Dissolved Solids	EPA 160.1	280 *	10	mg/L	08/06/96
Hardness	SM 2340B	190 *	1	mg CaCO3/L	08/07/96
Zinc	EPA 6010	0.08 *	0.01	mg/L	08/07/96

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

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9607403-03A
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9607403-03D
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9607403-03G
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9607403-03I
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/21/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	ND	0.002	mg/L	08/06/96

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9607403

CLIENT PROJECT ID: 3435.00.04

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9607403
AEN LAB NO: 0805-BLANK
DATE EXTRACTED: 08/05/96
DATE ANALYZED: 08/05/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9607403
DATE(S) EXTRACTED: 08/05/96
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
08/06/96	LF-12	01	87
08/06/96	LF-B4	02	84
C8/06/96	LF-13	03	88
QC Limits:			65-125

DATE EXTRACTED: 08/02/96
DATE ANALYZED: 08/05/96
SAMPLE SPIKED: 9607292-07
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	4.00	99	1	60-110	15

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9607403
AEN LAB NO: 0806-BLANK
DATE ANALYZED: 08/06/96
INSTRUMENT: F
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9607403
INSTRUMENT: F
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
08/06/96	LF-12	01	75
08/06/96	LF-B4	02	72
08/06/96	LF-13	03	75
QC Limits:			70-130

DATE ANALYZED: 08/06/96
SAMPLE SPIKED: LCS
INSTRUMENT: F

Laboratory Control Sample Recovery

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Hydrocarbons as Gasoline	500	117	8	60-120	20

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9607403
AEN LAB NO: 0802-BLANK
DATE ANALYZED: 08/02/96
INSTRUMENT: 13
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9607403
INSTRUMENT: 13
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery 1,2-Dichloroethane-d_4	Toluene-d_8	p-Bromofluorobenzene
08/02/96	LF-12	01	88	89	86
08/02/96	LF-B4	02	91	93	89
08/02/96	LF-13	03	93	91	86
QC Limits:			76-114	88-110	86-115

DATE ANALYZED: 08/01/96
SAMPLE SPIKED: 9607395-01
INSTRUMENT: 13

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
1,1-Dichloroethene	50	142	5	59-155	25
Trichloroethene	50	107	14	71-157	25
Benzene	50	93	11	37-151	25
Toluene	50	98	9	47-150	25
Chlorobenzene	50	95	13	37-160	25

QUALITY CONTROL DATA

AEN JOB NO: 9607403
SAMPLE SPIKED: DI WATER
DATE(S) ANALYZED: 08/04-07/96
MATRIX: WATER

Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	MS Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
As, Arsenic	4000/7060	ND	0.04	102	12	69-136	13
Ca, Calcium	ICP/6010	ND	10.0	107	3	80-120	15
Cu, Copper	ICP/6010	ND	0.125	108	1	86-123	10
Fe, Iron	ICP/6010	ND	0.5	103	<1	84-133	10
Mg, Magnesium	ICP/6010	ND	10.0	104	1	90-112	10
Mn, Manganese	ICP/6010	ND	0.25	115	<1	93-122	10
Na, Sodium	ICP/6010	ND	10.0	103	1	86-112	10
Zn, Zinc	ICP/6010	ND	0.25	105	5	90-121	10
Chloride	DIONEX/300	ND	10.0	101	<1	80-120	15
Sulfate	DIONEX/300	ND	10.0	116	<1	80-120	15

END OF REPORT

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

C-1.5-B (FIELD BLANK) C-1.5-G
R-7.5-D (FIELD BLANK) R-3.5-1

Project No.: 3435.0004	Field Logbook No.:	Date: 7-30-96	Serial No.:
Project Name: Sherwin Williams	Project Location: Emeryville, CA		№ 15038
Sampler (Signature): Jane Rieger			Samplers: Jane

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 5240	TPHg	TPHd	Dissolved As	10 General Minerals		HOLD	RUSH	REMARKS
LF-12	7-30-96	11:50	010 K	11	H_2O	X	X	X	X	X				STD TAT
LF-B4	↓	13:30	020 K	11	↓	X	X	X	X	X				
LF-13		14:10	030 K	9		X	X	X	X					Results to Kenton Gee
LF-113		15:10		9		X	X	X	X					
LF-20		14:55		9		X	X	X	X					
LF-18	↓	15:25	040 K	9	↓	X	X	X	X					Preserve + filter dissolved As in Lab

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
Jane Rieger	7-30-96	16:05	[illegible]	7-30-96	16:10
[illegible]	7-30-96	18:20	Eric Smith	7-30-96	1810
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

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

ATTN: [redacted]
CLIENT PROJ. ID: 3435.00.04
CLIENT PROJ. NAME: SHERWIN WMS.
C.O.C. NUMBER: 15038

REPORT DATE: 08/13/96
DATE(S) SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
AEN WORK ORDER: 9607403

PROJECT SUMMARY:

On July 30, 1996, this laboratory received 3 water sample(s).

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

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

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01A
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01D
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01G
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01I
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	0.006 *	0.002	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-12
AEN LAB NO: 9607403-01J
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-			Prep Date	08/05/96
General Minerals						
Bicarbonate Alkalinity	SM 2320B	130	*	2		08/08/96
Carbonate Alkalinity	SM 2320B	ND		2		08/08/96
Hydroxide Alkalinity	SM 2320B	ND		2		08/08/96
Calcium	EPA 6010	46	*	0.05		08/07/96
Chloride	EPA 300	17	*	0.5		08/04/96
Copper	EPA 6010	0.14	*	0.01		08/07/96
Iron	EPA 6010	130	*	0.05		08/07/96
Magnesium	EPA 6010	54	*	0.04		08/07/96
Manganese	EPA 6010	13	*	0.005		08/07/96
pH	EPA 9040	7.1				07/30/96
Sodium	EPA 6010	28	*	0.1		08/07/96
Sulfate	EPA 300	33	*	0.5		08/04/96
Conductivity	EPA 120.1	390	*	20		08/07/96
Total Dissolved Solids	EPA 160.1	240	*	10		08/06/96
Hardness	SM 2340B	340	*	1		08/07/96
Zinc	EPA 6010	0.81	*	0.01		08/07/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02A
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02D
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02G
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02I
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	ND	0.002	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B4
AEN LAB NO: 9607403-02J
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	08/05/96
General Minerals					
Bicarbonate Alkalinity	SM 2320B	190 *	2		08/08/96
Carbonate Alkalinity	SM 2320B	ND	2		08/08/96
Hydroxide Alkalinity	SM 2320B	ND	2		08/08/96
Calcium	EPA 6010	41 *	0.05		08/07/96
Chloride	EPA 300	32 *	0.5		08/04/96
Copper	EPA 6010	0.02 *	0.01		08/07/96
Iron	EPA 6010	0.77 *	0.05		08/07/96
Magnesium	EPA 6010	22 *	0.04		08/07/96
Manganese	EPA 6010	0.66 *	0.005		08/07/96
pH	EPA 9040	7.0			07/31/96
Sodium	EPA 6010	35 *	0.1		08/07/96
Sulfate	EPA 300	26 *	0.5		08/04/96
Conductivity	EPA 120.1	500 *	20		08/07/96
Total Dissolved Solids	EPA 160.1	280 *	10		08/06/96
Hardness	SM 2340B	190 *	1		08/07/96
Zinc	EPA 6010	0.08 *	0.01		08/07/96

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

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9607403-03A
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9607403-03D
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9607403-03G
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-13
AEN LAB NO: 9607403-03I
AEN WORK ORDER: 9607403
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	ND	0.002	mg/L	08/06/96

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9607403

CLIENT PROJECT ID: 3435.00.04

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9607403
AEN LAB NO: 0805-BLANK
DATE EXTRACTED: 08/05/96
DATE ANALYZED: 08/05/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9607403
DATE(S) EXTRACTED: 08/05/96
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
08/06/96	LF-12	01	87
08/06/96	LF-B4	02	84
08/06/96	LF-13	03	88
QC Limits:			65-125

DATE EXTRACTED: 08/02/96
DATE ANALYZED: 08/05/96
SAMPLE SPIKED: 9607292-07
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	4.00	99	1	60-110	15

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9607403
AEN LAB NO: 0806-BLANK
DATE ANALYZED: 08/06/96
INSTRUMENT: F
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9607403
INSTRUMENT: F
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
08/06/96	LF-12	01	75
08/06/96	LF-B4	02	72
08/06/96	LF-13	03	75
QC Limits:			70-130

DATE ANALYZED: 08/06/96
SAMPLE SPIKED: LCS
INSTRUMENT: F

Laboratory Control Sample Recovery

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Hydrocarbons as Gasoline	500	117	8	60-120	20

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9607403
AEN LAB NO: 0802-BLANK
DATE ANALYZED: 08/02/96
INSTRUMENT: 13
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9607403
INSTRUMENT: 13
MATRIX: WATER

Surrogate Standard Recovery Summary

			Percent Recovery		
Date Analyzed	Client Id.	Lab Id.	1,2-Dichloro-ethane-d_4	Toluene-d_8	p-Bromofluoro-benzene
08/02/96	LF-12	01	88	89	86
08/02/96	LF-B4	02	91	93	89
08/02/96	LF-13	03	93	91	86
QC Limits:			76-114	88-110	86-115

DATE ANALYZED: 08/01/96
SAMPLE SPIKED: 9607395-01
INSTRUMENT: 13

Matrix Spike Recovery Summary

				QC Limits	
Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	Percent Recovery	RPD
1,1-Dichloroethene	50	142	5	59-155	25
Trichloroethene	50	107	14	71-157	25
Benzene	50	93	11	37-151	25
Toluene	50	98	9	47-150	25
Chlorobenzene	50	95	13	37-160	25

QUALITY CONTROL DATA

AEN JOB NO: 9607403
SAMPLE SPIKED: DI WATER
DATE(S) ANALYZED: 08/04-07/96
MATRIX: WATER

Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	MS Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
As, Arsenic	4000/7060	ND	0.04	102	12	69-136	13
Ca, Calcium	ICP/6010	ND	10.0	107	3	80-120	15
Cu, Copper	ICP/6010	ND	0.125	108	1	86-123	10
Fe, Iron	ICP/6010	ND	0.5	103	<1	84-133	10
Mg, Magnesium	ICP/6010	ND	10.0	104	1	90-112	10
Mn, Manganese	ICP/6010	ND	0.25	115	<1	93-122	10
Na, Sodium	ICP/6010	ND	10.0	103	1	86-112	10
Zn, Zinc	ICP/6010	ND	0.25	105	5	90-121	10
Chloride	DIONEX/300	ND	10.0	101	<1	80-120	15
Sulfate	DIONEX/300	ND	10.0	116	<1	80-120	15

END OF REPORT

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

C1, S-3 (All metals) R1, S-6
R-7, S-10 (pH Boron) R3, S-1

Project No.: 3435.00.04	Field Logbook No.:	Date: 7-30-96	Serial No.: No 15038
Project Name: Sherwin Williams	Project Location: Emeryville, CA		
Sampler (Signature): Jeffrey Rosen			Samplers: JMR

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 5210	TPHg	TPHd	Dissolved As	10 General Minerals			HOLD	RUSH	REMARKS
LF-12	7-30-96	11:50	010-K	11	H_2O	X	X	X	X	X					STD TAT
LF-B4	↓	13:30	02A-K	11	↓	X	X	X	X	X					
LF-13		14:10	03A-I	9		X	X	X	X						Results to Kenton Gep
LF-113		15:10	9607404	9		X	X	X	X						
LF-20		14:55		9		X	X	X	X						
LF-18	↓	15:25		9	↓	X	X	X	X						Preserve + filter dissolved As in Lab

RELINQUISHED BY: (Signature) Jeffrey Rosen	DATE 7-30-96	TIME 16:05	RECEIVED BY: (Signature) [signature]	DATE 7-30-96	TIME 16:10
RELINQUISHED BY: (Signature) [signature] 7-30-96	DATE	TIME 18:00	RECEIVED BY: (Signature) Lori L Pruitt	DATE 7-30-96	TIME 1800
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

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

ATTN: KENTON GEE
CLIENT PROJ. ID: 3435.00.04
CLIENT PROJ. NAME: SHERWIN WMS
C.O.C. NUMBER: 15041

REPORT DATE: 08/15/96
DATE(S) SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
AEN WORK ORDER: 9608014

PROJECT SUMMARY:

On August 1, 1996, this laboratory received 5 water sample(s).

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

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

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: LF-10
AEN LAB NO: 9608014-01A
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-			Prep Date	08/09/96
General Minerals						
Bicarbonate Alkalinity	SM 2320B	870	*	2	mg CaCO3/L	08/13/96
Carbonate Alkalinity	SM 2320B	ND		2	mg CaCO3/L	08/13/96
Hydroxide Alkalinity	SM 2320B	ND		2	mg CaCO3/L	08/13/96
Calcium	EPA 6010	200	*	0.05	mg/L	08/12/96
Chloride	EPA 300	26	*	0.5	mg/L	08/11/96
Copper	EPA 6010	0.58	*	0.01	mg/L	08/12/96
Iron	EPA 6010	560	*	0.05	mg/L	08/13/96
Magnesium	EPA 6010	170	*	0.04	mg/L	08/12/96
Manganese	EPA 6010	27	*	0.005	mg/L	08/12/96
pH	EPA 9040	6.9		NA	std. units	08/01/96
Sodium	EPA 6010	63	*	0.1	mg/L	08/12/96
Sulfate	EPA 300	0.7	*	0.5	mg/L	08/11/96
Conductivity	EPA 120.1	1,400	*	20	umhos/cm	08/07/96
Total Dissolved Solids	EPA 160.1	840	*	10	mg/L	08/07/96
Hardness	SM 2340B	1,200	*	1	mg CaCO3/L	08/12/96
Zinc	EPA 6010	2.3	*	0.005	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B6
AEN LAB NO: 9608014-02A
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	0.38 *	0.05	mg/L	08/10/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B6
AEN LAB NO: 9608014-02D
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/09/96
Benzene	71-43-2	ND	5	ug/L	08/09/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/09/96
Bromoform	75-25-2	ND	5	ug/L	08/09/96
Bromomethane	74-83-9	ND	10	ug/L	08/09/96
2-Butanone	78-93-3	ND	100	ug/L	08/09/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/09/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/09/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/09/96
Chloroethane	75-00-3	ND	10	ug/L	08/09/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/09/96
Chloroform	67-66-3	ND	5	ug/L	08/09/96
Chloromethane	74-87-3	ND	10	ug/L	08/09/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/09/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/09/96
1,2-Dichloroethane	107-06-2	30 *	5	ug/L	08/09/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/09/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/09/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/09/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/09/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/09/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/09/96
Ethylbenzene	100-41-4	110 *	5	ug/L	08/09/96
2-Hexanone	591-78-6	ND	50	ug/L	08/09/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/09/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/09/96
Styrene	100-42-5	ND	5	ug/L	08/09/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/09/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/09/96
Toluene	108-88-3	ND	5	ug/L	08/09/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/09/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/09/96
Trichloroethene	79-01-6	ND	5	ug/L	08/09/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/09/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/09/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/09/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B6
AEN LAB NO: 9608014-02G
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/09/96
TPH as Diesel	GC-FID	0.08 *	0.05	mg/L	08/10/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B6
AEN LAB NO: 9608014-02I
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/01/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	0.033 *	0.002	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B6
AEN LAB NO: 9608014-02J
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-			Prep Date	08/09/96
General Minerals						
Bicarbonate Alkalinity	SM 2320B	340	*	2	mg CaCO3/L	08/13/96
Carbonate Alkalinity	SM 2320B	ND		2	mg CaCO3/L	08/13/96
Hydroxide Alkalinity	SM 2320B	ND		2	mg CaCO3/L	08/13/96
Calcium	EPA 6010	110	*	0.05	mg/L	08/12/96
Chloride	EPA 300	63	*	0.5	mg/L	08/11/96
Copper	EPA 6010	0.02	*	0.01	mg/L	08/12/96
Iron	EPA 6010	11	*	0.05	mg/L	08/12/96
Magnesium	EPA 6010	51	*	0.04	mg/L	08/12/96
Manganese	EPA 6010	3.2	*	0.005	mg/L	08/12/96
pH	EPA 9040	7.0		NA	std. units	08/01/96
Sodium	EPA 6010	63	*	0.1	mg/L	08/12/96
Sulfate	EPA 300	240	*	0.5	mg/L	08/11/96
Conductivity	EPA 120.1	1,200	*	20	umhos/cm	08/07/96
Total Dissolved Solids	EPA 160.1	780	*	10	mg/L	08/07/96
Hardness	SM 2340B	480	*	1	mg CaCO3/L	08/12/96
Zinc	EPA 6010	0.06	*	0.005	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-7
AEN LAB NO: 9608014-03A
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	08/09/96
General Minerals					
Bicarbonate Alkalinity	SM 2320B	360 *	2	mg CaCO3/L	08/13/96
Carbonate Alkalinity	SM 2320B	ND	2	mg CaCO3/L	08/13/96
Hydroxide Alkalinity	SM 2320B	ND	2	mg CaCO3/L	08/13/96
Calcium	EPA 6010	220 *	0.05	mg/L	08/12/96
Chloride	EPA 300	33 *	0.5	mg/L	08/11/96
Copper	EPA 6010	2.1 *	0.01	mg/L	08/12/96
Iron	EPA 6010	1,200 *	0.05	mg/L	08/13/96
Magnesium	EPA 6010	220 *	0.04	mg/L	08/12/96
Manganese	EPA 6010	12 *	0.005	mg/L	08/12/96
pH	EPA 9040	6.4	NA	std. units	08/01/96
Sodium	EPA 6010	43 *	0.1	mg/L	08/12/96
Sulfate	EPA 300	450 *	0.5	mg/L	08/11/96
Conductivity	EPA 120.1	1,300 *	20	umhos/cm	08/07/96
Total Dissolved Solids	EPA 160.1	970 *	10	mg/L	08/07/96
Hardness	SM 2340B	1,500 *	1	mg CaCO3/L	08/12/96
Zinc	EPA 6010	26 *	0.005	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B5
AEN LAB NO: 9608014-04A
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	0.15 *	0.05	mg/L	08/10/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B5
AEN LAB NO: 9608014-04D
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	500	ug/L	08/09/96
Benzene	71-43-2	ND	30	ug/L	08/09/96
Bromodichloromethane	75-27-4	ND	30	ug/L	08/09/96
Bromoform	75-25-2	ND	30	ug/L	08/09/96
Bromomethane	74-83-9	ND	50	ug/L	08/09/96
2-Butanone	78-93-3	ND	500	ug/L	08/09/96
Carbon Disulfide	75-15-0	ND	50	ug/L	08/09/96
Carbon Tetrachloride	56-23-5	ND	30	ug/L	08/09/96
Chlorobenzene	108-90-7	ND	30	ug/L	08/09/96
Chloroethane	75-00-3	ND	50	ug/L	08/09/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	50	ug/L	08/09/96
Chloroform	67-66-3	ND	30	ug/L	08/09/96
Chloromethane	74-87-3	ND	50	ug/L	08/09/96
Dibromochloromethane	124-48-1	ND	30	ug/L	08/09/96
1,1-Dichloroethane	75-34-3	ND	30	ug/L	08/09/96
1,2-Dichloroethane	107-06-2	380 *	30	ug/L	08/09/96
1,1-Dichloroethene	75-35-4	ND	30	ug/L	08/09/96
cis-1,2-Dichloroethene	156-59-2	ND	30	ug/L	08/09/96
trans-1,2-Dichloroethene	156-60-5	ND	30	ug/L	08/09/96
1,2-Dichloropropane	78-87-5	ND	30	ug/L	08/09/96
cis-1,3-Dichloropropene	10061-01-5	ND	30	ug/L	08/09/96
trans-1,3-Dichloropropene	10061-02-6	ND	30	ug/L	08/09/96
Ethylbenzene	100-41-4	ND	30	ug/L	08/09/96
2-Hexanone	591-78-6	ND	300	ug/L	08/09/96
Methylene Chloride	75-09-2	ND	100	ug/L	08/09/96
4-Methyl-2-pentanone	108-10-1	ND	300	ug/L	08/09/96
Styrene	100-42-5	ND	30	ug/L	08/09/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	30	ug/L	08/09/96
Tetrachloroethene	127-18-4	ND	30	ug/L	08/09/96
Toluene	108-88-3	ND	30	ug/L	08/09/96
1,1,1-Trichloroethane	71-55-6	ND	30	ug/L	08/09/96
1,1,2-Trichloroethane	79-00-5	ND	30	ug/L	08/09/96
Trichloroethene	79-01-6	ND	30	ug/L	08/09/96
Vinyl Acetate	108-05-4	ND	300	ug/L	08/09/96
Vinyl Chloride	75-01-4	ND	50	ug/L	08/09/96
Xylenes, Total	1330-20-7	ND	50	ug/L	08/09/96

LEVINE-FRICKE

SAMPLE ID: LF-B5
AEN LAB NO: 9608014-04D
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

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

LEVINE-FRICKE

SAMPLE ID: LF-B5
AEN LAB NO: 9608014-04G
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/09/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/10/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B5
AEN LAB NO: 9608014-04I
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/01/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	0.097 *	0.002	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B5
AEN LAB NO: 9608014-04J
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	08/09/96
General Minerals					
Bicarbonate Alkalinity	SM 2320B	260 *	2	mg CaCO3/L	08/13/96
Carbonate Alkalinity	SM 2320B	ND	2	mg CaCO3/L	08/13/96
Hydroxide Alkalinity	SM 2320B	ND	2	mg CaCO3/L	08/13/96
Calcium	EPA 6010	56 *	0.05	mg/L	08/12/96
Chloride	EPA 300	30 *	0.5	mg/L	08/11/96
Copper	EPA 6010	0.05 *	0.01	mg/L	08/12/96
Iron	EPA 6010	30 *	0.05	mg/L	08/12/96
Magnesium	EPA 6010	38 *	0.04	mg/L	08/12/96
Manganese	EPA 6010	1.8 *	0.005	mg/L	08/12/96
pH	EPA 9040	7.0	NA	std. units	08/01/96
Sodium	EPA 6010	46 *	0.1	mg/L	08/12/96
Sulfate	EPA 300	52 *	0.5	mg/L	08/11/96
Conductivity	EPA 120.1	630 *	20	umhos/cm	08/07/96
Total Dissolved Solids	EPA 160.1	380 *	10	mg/L	08/07/96
Hardness	SM 2340B	300 *	1	mg CaCO3/L	08/12/96
Zinc	EPA 6010	0.15 *	0.005	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-22
AEN LAB NO: 9608014-05A
AEN WORK ORDER: 9608014
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT		REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-			Prep Date	08/09/96
General Minerals						
Bicarbonate Alkalinity	SM 2320B	260	*	2	mg CaCO3/L	08/13/96
Carbonate Alkalinity	SM 2320B	ND		2	mg CaCO3/L	08/13/96
Hydroxide Alkalinity	SM 2320B	ND		2	mg CaCO3/L	08/13/96
Calcium	EPA 6010	93	*	0.05	mg/L	08/12/96
Chloride	EPA 300	29	*	0.5	mg/L	08/11/96
Copper	EPA 6010	0.41	*	0.01	mg/L	08/12/96
Iron	EPA 6010	210	*	0.05	mg/L	08/13/96
Magnesium	EPA 6010	96	*	0.04	mg/L	08/12/96
Manganese	EPA 6010	16	*	0.005	mg/L	08/12/96
pH	EPA 9040	7.0		NA	std. units	08/01/96
Sodium	EPA 6010	41	*	0.1	mg/L	08/12/96
Sulfate	EPA 300	99	*	0.5	mg/L	08/11/96
Conductivity	EPA 120.1	750	*	20	umhos/cm	08/07/96
Total Dissolved Solids	EPA 160.1	520	*	10	mg/L	08/07/96
Hardness	SM 2340B	630	*	1	mg CaCO3/L	08/12/96
Zinc	EPA 6010	4.1	*	0.005	mg/L	08/12/96

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9608014

CLIENT PROJECT ID: 3435.00.04

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9608014
AEN LAB NO: 0809-BLANK
DATE EXTRACTED: 08/09/96
DATE ANALYZED: 08/10/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9608014
DATE(S) EXTRACTED: 08/09/96
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
08/10/96	LF-B6	02	102
08/10/96	LF-B5	04	88
QC Limits:			65-125

DATE EXTRACTED: 08/09/96
DATE ANALYZED: 08/10/96
SAMPLE SPIKED: 9607241-09
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	4.00	72	7	60-110	15

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9608014
AEN LAB NO: 0810-BLANK
DATE ANALYZED: 08/10/96
INSTRUMENT: E
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9608014
INSTRUMENT: E
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
08/10/96	LF-B6	02	102
08/10/96	LF-B5	04	102
QC Limits:			70-130

DATE ANALYZED: 08/10/96
SAMPLE SPIKED: LCS
INSTRUMENT: E

Laboratory Control Sample Recovery

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Hydrocarbons as Gasoline	500	113	2	60-120	20

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9608014
AEN LAB NO: 0809-BLANK
DATE ANALYZED: 08/09/96
INSTRUMENT: 13
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9608014
INSTRUMENT: 13
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery 1,2-Dichloroethane-d_4	Toluene-d_8	p-Bromofluorobenzene
08/09/96	LF-B6	02	94	89	93
08/09/96	LF-B5	04	99	89	101
QC Limits:			76-114	88-110	86-115

DATE ANALYZED: 08/08/96
SAMPLE SPIKED: 9607422-04
INSTRUMENT: 13

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
1,1-Dichloroethene	50	91	20	59-155	25
Trichloroethene	50	99	14	71-157	25
Benzene	50	93	15	37-151	25
Toluene	50	97	10	47-150	25
Chlorobenzene	50	110	4	37-160	25

QUALITY CONTROL DATA

AEN JOB NO: 9608014
SAMPLE SPIKED: DI WATER
DATE(S) ANALYZED: 08/05-12/96
MATRIX: WATER

Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	MS Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
As, Arsenic	4000/7060	ND	0.04	104	3	69-136	13
Ca, Calcium	ICP/6010	ND	10.0	106	<1	80-120	15
Cu, Copper	ICP/6010	ND	0.125	103	1	86-123	10
Fe, Iron	ICP/6010	ND	0.5	102	1	84-133	10
Mg, Magnesium	ICP/6010	ND	10.0	102	1	90-112	10
Mn, Manganese	ICP/6010	ND	0.25	115	<1	93-122	10
Na, Sodium	ICP/6010	ND	10.0	103	<1	86-112	10
Zn, Zinc	ICP/6010	ND	0.25	108	2	90-121	10
Chloride	DIONEX/300	ND	10.0	102	2	80-120	15
Sulfate	DIONEX/300	ND	10.0	111	3	80-120	15

END OF REPORT

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

R-3.5-1 G1.5-5 R-1.5-6 9608014

Project No.: 3435.02.04	Field Logbook No.:	Date: 8-1-96	Serial No.:
Project Name: Sherwin Williams	Project Location: Emeryville		No 15041
Sampler (Signature): Jeffrey Rodgers			Samplers: JMR

SAMPLES						ANALYSES								
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	TPHg	EPA 5520 C	TPHd	Dissolved As	As (General Minerals)	HOLD	RUSH	REMARKS
LF-10	8-1-96	9:05	01AB	2	H2O					X			5 DAY TAT
LF-B6		9:45	02A-K	11		X	X	X	X	X			
LF-7		10:10	03AB	2						X			Preserve + filter dissolved
LF-B5		11:00	04A-K	11		X	X	X	X	X			As in Lab
LF-22		11:35	05AB	2						X			
LF-B3		12:00		11		X	X	X	X	X			Results to Kenton Sep
EX-1		12:50	9608015	9		X	X	X	X				
EX-2		13:05		9		X	X	X	X				
EX-3		13:40		9		X	X	X	X				

RELINQUISHED BY: (Signature) Jeffrey Rodgers	DATE 8-1-96	TIME 2:53	RECEIVED BY: (Signature) [signature]	DATE 8-1-96	TIME 2:53
RELINQUISHED BY: (Signature) [signature]	DATE 8-1-96	TIME 15:23	RECEIVED BY: (Signature) Lai L Pratt	DATE 8-1-96	TIME 1523
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

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

ATTN: KENTON GEE
CLIENT PROJ. ID: 3435.00.04
CLIENT PROJ. NAME: SHERWIN WMS.
C.O.C. NUMBER: 15040

REPORT DATE: 08/13/96
DATE(S) SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
AEN WORK ORDER: 9607414

PROJECT SUMMARY:

On July 31, 1996, this laboratory received 3 water sample(s).

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

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

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

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: LF-11
AEN LAB NO: 9607414-01A
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	EPA 8240				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-11
AEN LAB NO: 9607414-01D
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/09/96

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

LEVINE-FRICKE

SAMPLE ID: LF-11
AEN LAB NO: 9607414-01G
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/07/96
TPH as Diesel	GC-FID	0.58 *	0.05	mg/L	08/09/96

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

LEVINE-FRICKE

SAMPLE ID: LF-11
AEN LAB NO: 9607414-01I
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	0.11 *	0.002	mg/L	08/07/96

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

LEVINE-FRICKE

SAMPLE ID: LF-21
AEN LAB NO: 9607414-02A
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-21
AEN LAB NO: 9607414-02D
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	0.06 *	0.05	mg/L	08/09/96

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

LEVINE-FRICKE

SAMPLE ID: LF-21
AEN LAB NO: 9607414-02G
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/07/96
TPH as Diesel	GC-FID	1.4 *	0.05	mg/L	08/09/96

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

LEVINE-FRICKE

SAMPLE ID: LF-21
AEN LAB NO: 9607414-02I
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	0.43 *	0.002	mg/L	08/07/96

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

LEVINE-FRICKE

SAMPLE ID: LF-3
AEN LAB NO: 9607414-03A
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	EPA 8240				
Acetone	67-64-1	ND	50000	ug/L	08/03/96
Benzene	71-43-2	ND	3000	ug/L	08/03/96
Bromodichloromethane	75-27-4	ND	3000	ug/L	08/03/96
Bromoform	75-25-2	ND	3000	ug/L	08/03/96
Bromomethane	74-83-9	ND	5000	ug/L	08/03/96
2-Butanone	78-93-3	ND	50000	ug/L	08/03/96
Carbon Disulfide	75-15-0	ND	5000	ug/L	08/03/96
Carbon Tetrachloride	56-23-5	ND	3000	ug/L	08/03/96
Chlorobenzene	108-90-7	ND	3000	ug/L	08/03/96
Chloroethane	75-00-3	ND	5000	ug/L	08/03/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	5000	ug/L	08/03/96
Chloroform	67-66-3	ND	3000	ug/L	08/03/96
Chloromethane	74-87-3	ND	5000	ug/L	08/03/96
Dibromochloromethane	124-48-1	ND	3000	ug/L	08/03/96
1,1-Dichloroethane	75-34-3	ND	3000	ug/L	08/03/96
1,2-Dichloroethane	107-06-2	ND	3000	ug/L	08/03/96
1,1-Dichloroethene	75-35-4	ND	3000	ug/L	08/03/96
cis-1,2-Dichloroethene	156-59-2	ND	3000	ug/L	08/03/96
trans-1,2-Dichloroethene	156-60-5	ND	3000	ug/L	08/03/96
1,2-Dichloropropane	78-87-5	ND	3000	ug/L	08/03/96
cis-1,3-Dichloropropene	10061-01-5	ND	3000	ug/L	08/03/96
trans-1,3-Dichloropropene	10061-02-6	ND	3000	ug/L	08/03/96
Ethylbenzene	100-41-4	4,500 *	3000	ug/L	08/03/96
2-Hexanone	591-78-6	ND	30000	ug/L	08/03/96
Methylene Chloride	75-09-2	ND	10000	ug/L	08/03/96
4-Methyl-2-pentanone	108-10-1	ND	30000	ug/L	08/03/96
Styrene	100-42-5	ND	3000	ug/L	08/03/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	3000	ug/L	08/03/96
Tetrachloroethene	127-18-4	ND	3000	ug/L	08/03/96
Toluene	108-88-3	44,000 *	3000	ug/L	08/03/96
1,1,1-Trichloroethane	71-55-6	ND	3000	ug/L	08/03/96
1,1,2-Trichloroethane	79-00-5	ND	3000	ug/L	08/03/96
Trichloroethene	79-01-6	ND	3000	ug/L	08/03/96
Vinyl Acetate	108-05-4	ND	30000	ug/L	08/03/96
Vinyl Chloride	75-01-4	ND	5000	ug/L	08/03/96
Xylenes, Total	1330-20-7	24,000 *	5000	ug/L	08/03/96

LEVINE-FRICKE

SAMPLE ID: LF-3
AEN LAB NO: 9607414-03A
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

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

LEVINE-FRICKE

SAMPLE ID: LF-3
AEN LAB NO: 9607414-03D
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	90 *	12	mg/L	08/09/96

Reporting limit elevated due to high level of target compound. Sample run at dilution.

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

LEVINE-FRICKE

SAMPLE ID: LF-3
AEN LAB NO: 9607414-03G
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/07/96
TPH as Diesel	GC-FID	0.64 *	0.2	mg/L	08/09/96

Reporting limit elevated due to hydrocarbon interference in the gasoline range.

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

LEVINE-FRICKE

SAMPLE ID: LF-3
AEN LAB NO: 9607414-03I
AEN WORK ORDER: 9607414
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/31/96
DATE RECEIVED: 07/31/96
REPORT DATE: 08/13/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/31/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	72 *	0.002	mg/L	08/07/96

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9607414

CLIENT PROJECT ID: 3435.00.04

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9607414
AEN LAB NO: 0807-BLANK
DATE EXTRACTED: 08/07/96
DATE ANALYZED: 08/07/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9607414
DATE EXTRACTED: 08/07/96
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
08/09/96	LF-11	01	101
08/09/96	LF-21	02	100
08/09/96	LF-3	03	90
QC Limits:			65-125

DATE EXTRACTED: 08/07/96
DATE ANALYZED: 08/08/96
SAMPLE SPIKED: 9607270-01
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	4.00	83	10	60-110	15

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9607414
AEN LAB NO: 0809-BLANK
DATE ANALYZED: 08/09/96
INSTRUMENT: H
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9607414
INSTRUMENT: H
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
08/09/96	LF-11	01	98
08/09/96	LF-21	02	99
08/09/96	LF-3	03	91
QC Limits:			70-130

DATE ANALYZED: 08/08/96
SAMPLE SPIKED: 9607422-04
INSTRUMENT: H

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Hydrocarbons as Gasoline	500	109	3	66-117	19

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9607414
AEN LAB NO: 0802-BLANK
DATE ANALYZED: 08/02/96
INSTRUMENT: 13
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9607414
INSTRUMENT: 13
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery 1,2-Dichloroethane-d_4	Toluene-d_8	p-Bromofluorobenzene
08/02/96	LF-11	01	89	97	87
08/02/96	LF-21	02	92	92	87
08/03/96	LF-3	03	92	91	88
QC Limits:			76-114	88-110	86-115

DATE ANALYZED: 08/03/96
SAMPLE SPIKED: 9607420-03
INSTRUMENT: 13

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
1,1-Dichloroethene	50	99	3	59-155	25
Trichloroethene	50	99	7	71-157	25
Benzene	50	88	2	37-151	25
Toluene	50	95	6	47-150	25
Chlorobenzene	50	96	9	37-160	25

QUALITY CONTROL DATA

AEN JOB NO: 9607414
SAMPLE SPIKED: DI WATER
DATE(S) ANALYZED: 08/06/96
MATRIX: WATER

Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	MS Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
As. Arsenic	4000/7060	ND	0.04	102	12	69-136	13

END OF REPORT

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

R3 S3 121, 5-D

9607-414

Project No.: 3435.00.04	Field Logbook No.:	Date: 7-31-96	Serial No.: № 15040
Project Name: Sherwin Williams	Project Location: Emeryville		
Sampler (Signature): J. Jeffrey Rogers			Samplers: JMR

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES: EPA 8240	TPHg	TPHd	Dissolved As			HOLD	RUSH	REMARKS
LF-11 RD	7-31-96	13:15	01A-I	9	H2O	X	X	X	X					STD TAT
LF-21	↓	13:50	02A-I	9	↓	↓	↓	↓	↓					
LF-3	↓	14:20	03A-I	9	↓	↓	↓	↓	↓					Preserve & filter Dissolved As in Lab
														Results to Kenton Gee
														COC corrected for sample LF-11 RD Jeff Rogers. J. Rogers

RELINQUISHED BY: (Signature) Jeffrey Rogers	DATE 7-31-96	TIME 15:20	RECEIVED BY: (Signature)	DATE 7-31-96	TIME 15:20
RELINQUISHED BY: (Signature)	DATE 7-31-96	TIME 1600	RECEIVED BY: (Signature) Lisa L Pruitt	DATE 7-31-96	TIME 1600
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

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

ATTN: KENTON GEE
CLIENT PROJ. ID: 3435.00.04
CLIENT PROJ. NAME: SHERWIN WMS
C.O.C. NUMBER: 15041

REPORT DATE: 08/15/96
DATE(S) SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
AEN WORK ORDER: 9608015

PROJECT SUMMARY:

On August 1, 1996, this laboratory received 4 water sample(s).

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

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

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

RECEIVED

Larry Klein
Laboratory Director

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9608015-01A
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9608015-01D
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/09/96
Benzene	71-43-2	ND	5	ug/L	08/09/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/09/96
Bromoform	75-25-2	ND	5	ug/L	08/09/96
Bromomethane	74-83-9	ND	10	ug/L	08/09/96
2-Butanone	78-93-3	ND	100	ug/L	08/09/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/09/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/09/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/09/96
Chloroethane	75-00-3	ND	10	ug/L	08/09/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/09/96
Chloroform	67-66-3	ND	5	ug/L	08/09/96
Chloromethane	74-87-3	ND	10	ug/L	08/09/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/09/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/09/96
1,2-Dichloroethane	107-06-2	22 *	5	ug/L	08/09/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/09/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/09/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/09/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/09/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/09/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/09/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/09/96
2-Hexanone	591-78-6	ND	50	ug/L	08/09/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/09/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/09/96
Styrene	100-42-5	ND	5	ug/L	08/09/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/09/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/09/96
Toluene	108-88-3	ND	5	ug/L	08/09/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/09/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/09/96
Trichloroethene	79-01-6	ND	5	ug/L	08/09/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/09/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/09/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/09/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9608015-01G
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/09/96
TPH as Diesel	GC-FID	0.60 *	0.05	mg/L	08/10/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9608015-01I
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/01/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	0.004 *	0.002	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: LF-B3
AEN LAB NO: 9608015-01J
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion, Metals by ICP	EPA 3010	-		Prep Date	08/09/96
General Minerals					
Bicarbonate Alkalinity	SM 2320B	ND	2	mg CaCO3/L	08/13/96
Carbonate Alkalinity	SM 2320B	190 *	2	mg CaCO3/L	08/13/96
Hydroxide Alkalinity	SM 2320B	99 *	2	mg CaCO3/L	08/13/96
Calcium	EPA 6010	110 *	0.05	mg/L	08/12/96
Chloride	EPA 300	21 *	0.5	mg/L	08/11/96
Copper	EPA 6010	0.03 *	0.01	mg/L	08/12/96
Iron	EPA 6010	3.2 *	0.05	mg/L	08/12/96
Magnesium	EPA 6010	3.9 *	0.04	mg/L	08/12/96
Manganese	EPA 6010	2.7 *	0.005	mg/L	08/12/96
pH	EPA 9040	11.4	NA	std. units	08/01/96
Sodium	EPA 6010	21 *	0.1	mg/L	08/12/96
Sulfate	EPA 300	15 *	0.5	mg/L	08/11/96
Conductivity	EPA 120.1	820 *	20	umhos/cm	08/07/96
Total Dissolved Solids	EPA 160.1	330 *	10	mg/L	08/07/96
Hardness	SM 2340B	290 *	1	mg CaCO3/L	08/12/96
Zinc	EPA 6010	2.2 *	0.005	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: EX-1
AEN LAB NO: 9608015-02A
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	0.22 *	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: EX-1
AEN LAB NO: 9608015-02D
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/09/96
Benzene	71-43-2	ND	5	ug/L	08/09/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/09/96
Bromoform	75-25-2	ND	5	ug/L	08/09/96
Bromomethane	74-83-9	ND	10	ug/L	08/09/96
2-Butanone	78-93-3	ND	100	ug/L	08/09/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/09/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/09/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/09/96
Chloroethane	75-00-3	ND	10	ug/L	08/09/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/09/96
Chloroform	67-66-3	ND	5	ug/L	08/09/96
Chloromethane	74-87-3	ND	10	ug/L	08/09/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/09/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/09/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/09/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/09/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/09/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/09/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/09/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/09/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/09/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/09/96
2-Hexanone	591-78-6	ND	50	ug/L	08/09/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/09/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/09/96
Styrene	100-42-5	ND	5	ug/L	08/09/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/09/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/09/96
Toluene	108-88-3	27 *	5	ug/L	08/09/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/09/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/09/96
Trichloroethene	79-01-6	ND	5	ug/L	08/09/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/09/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/09/96
Xylenes, Total	1330-20-7	19 *	10	ug/L	08/09/96

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

LEVINE-FRICKE

SAMPLE ID: EX-1
AEN LAB NO: 9608015-02G
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/09/96
TPH as Diesel	GC-FID	4.1 *	0.05	mg/L	08/10/96

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

LEVINE-FRICKE

SAMPLE ID: EX-1
AEN LAB NO: 9608015-02I
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/01/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	0.022 *	0.002	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: EX-2
AEN LAB NO: 9608015-03A
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	34 *	1	mg/L	08/12/96

Reporting limit elevated due to high level of target compound. Sample run at dilution.

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

LEVINE-FRICKE

SAMPLE ID: EX-2
AEN LAB NO: 9608015-03D
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	10000	ug/L	08/09/96
Benzene	71-43-2	ND	500	ug/L	08/09/96
Bromodichloromethane	75-27-4	ND	500	ug/L	08/09/96
Bromoform	75-25-2	ND	500	ug/L	08/09/96
Bromomethane	74-83-9	ND	1000	ug/L	08/09/96
2-Butanone	78-93-3	ND	10000	ug/L	08/09/96
Carbon Disulfide	75-15-0	ND	1000	ug/L	08/09/96
Carbon Tetrachloride	56-23-5	ND	500	ug/L	08/09/96
Chlorobenzene	108-90-7	ND	500	ug/L	08/09/96
Chloroethane	75-00-3	ND	1000	ug/L	08/09/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	1000	ug/L	08/09/96
Chloroform	67-66-3	ND	500	ug/L	08/09/96
Chloromethane	74-87-3	ND	1000	ug/L	08/09/96
Dibromochloromethane	124-48-1	ND	500	ug/L	08/09/96
1,1-Dichloroethane	75-34-3	ND	500	ug/L	08/09/96
1,2-Dichloroethane	107-06-2	ND	500	ug/L	08/09/96
1,1-Dichloroethene	75-35-4	ND	500	ug/L	08/09/96
cis-1,2-Dichloroethene	156-59-2	ND	500	ug/L	08/09/96
trans-1,2-Dichloroethene	156-60-5	ND	500	ug/L	08/09/96
1,2-Dichloropropane	78-87-5	ND	500	ug/L	08/09/96
cis-1,3-Dichloropropene	10061-01-5	ND	500	ug/L	08/09/96
trans-1,3-Dichloropropene	10061-02-6	ND	500	ug/L	08/09/96
Ethylbenzene	100-41-4	650 *	500	ug/L	08/09/96
2-Hexanone	591-78-6	ND	5000	ug/L	08/09/96
Methylene Chloride	75-09-2	ND	2000	ug/L	08/09/96
4-Methyl-2-pentanone	108-10-1	ND	5000	ug/L	08/09/96
Styrene	100-42-5	ND	500	ug/L	08/09/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	500	ug/L	08/09/96
Tetrachloroethene	127-18-4	ND	500	ug/L	08/09/96
Toluene	108-88-3	6,600 *	500	ug/L	08/09/96
1,1,1-Trichloroethane	71-55-6	ND	500	ug/L	08/09/96
1,1,2-Trichloroethane	79-00-5	ND	500	ug/L	08/09/96
Trichloroethene	79-01-6	ND	500	ug/L	08/09/96
Vinyl Acetate	108-05-4	ND	5000	ug/L	08/09/96
Vinyl Chloride	75-01-4	ND	1000	ug/L	08/09/96
Xylenes, Total	1330-20-7	3,700 *	1000	ug/L	08/09/96

LEVINE-FRICKE

SAMPLE ID: EX-2
AEN LAB NO: 9608015-03D
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED

Reporting limits elevated due to high levels of target compounds. Sample run at dilution.

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

LEVINE-FRICKE

SAMPLE ID: EX-2
AEN LAB NO: 9608015-03G
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/09/96
TPH as Diesel	GC-FID	3.7 *	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: EX-2
AEN LAB NO: 9608015-03I
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/01/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	57 *	0.002	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: EX-3
AEN LAB NO: 9608015-04A
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: EX-3
AEN LAB NO: 9608015-04D
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	EPA 8240				
Acetone	67-64-1	ND	100	ug/L	08/09/96
Benzene	71-43-2	ND	5	ug/L	08/09/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/09/96
Bromoform	75-25-2	ND	5	ug/L	08/09/96
Bromomethane	74-83-9	ND	10	ug/L	08/09/96
2-Butanone	78-93-3	ND	100	ug/L	08/09/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/09/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/09/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/09/96
Chloroethane	75-00-3	ND	10	ug/L	08/09/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/09/96
Chloroform	67-66-3	ND	5	ug/L	08/09/96
Chloromethane	74-87-3	ND	10	ug/L	08/09/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/09/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/09/96
1,2-Dichloroethane	107-06-2	6 *	5	ug/L	08/09/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/09/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/09/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/09/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/09/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/09/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/09/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/09/96
2-Hexanone	591-78-6	ND	50	ug/L	08/09/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/09/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/09/96
Styrene	100-42-5	ND	5	ug/L	08/09/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/09/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/09/96
Toluene	108-88-3	ND	5	ug/L	08/09/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/09/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/09/96
Trichloroethene	79-01-6	ND	5	ug/L	08/09/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/09/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/09/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/09/96

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

LEVINE-FRICKE

SAMPLE ID: EX-3
AEN LAB NO: 9608015-04G
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/12/96
TPH as Diesel	GC-FID	0.82 *	0.05	mg/L	08/12/96

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

LEVINE-FRICKE

SAMPLE ID: EX-3
AEN LAB NO: 9608015-04I
AEN WORK ORDER: 9608015
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 08/01/96
DATE RECEIVED: 08/01/96
REPORT DATE: 08/15/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	08/01/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/09/96
Arsenic	EPA 7060	170 *	0.002	mg/L	08/12/96

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9608015

CLIENT PROJECT ID: 3435.00.04

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9608015
AEN LAB NO: 0809-BLANK
DATE EXTRACTED: 08/09/96
DATE ANALYZED: 08/10/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

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

AEN LAB NO: 0812-BLANK
DATE EXTRACTED: 08/12/96
DATE ANALYZED: 08/12/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9608015
DATE(S) EXTRACTED: 08/09/96; 08/12/96
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
08/10/96	LF-B3	01	109
08/10/96	EX-1	02	I
08/12/96	EX-2	03	103
08/12/96	EX-3	04	87
QC Limits:			65-125

I: Interference

DATE EXTRACTED: 08/09/96
DATE ANALYZED: 08/10/96
SAMPLE SPIKED: 9607241-09
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	4.00	72	7	60-110	15

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9608015
AEN LAB NO: 0812-BLANK
DATE ANALYZED: 08/12/96
INSTRUMENT: E
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9608015
INSTRUMENT: E
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
08/12/96	LF-B3	01	104
08/12/96	EX-1	02	105
08/12/96	EX-2	03	97
08/12/96	EX-3	04	103
QC Limits:			70-130

DATE ANALYZED: 08/12/96
SAMPLE SPIKED: 9608015-04
INSTRUMENT: E

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Hydrocarbons as Gasoline	500	106	1	66-117	19

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9608015
AEN LAB NO: 0809-BLANK
DATE ANALYZED: 08/09/96
INSTRUMENT: 13
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9608015
INSTRUMENT: 13
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery 1,2-Dichloroethane-d_4	Toluene-d_8	p-Bromofluorobenzene
08/09/96	LF-B3	01	100	89	102
08/09/96	EX-1	02	113	90	97
08/09/96	EX-2	03	104	89	98
08/09/96	EX-3	04	96	89	104
QC Limits:			76-114	88-110	86-115

DATE ANALYZED: 08/08/96
SAMPLE SPIKED: 9607422-04
INSTRUMENT: 13

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
1,1-Dichloroethene	50	91	20	59-155	25
Trichloroethene	50	99	14	71-157	25
Benzene	50	93	15	37-151	25
Toluene	50	97	10	47-150	25
Chlorobenzene	50	110	4	37-160	25

QUALITY CONTROL DATA

AEN JOB NO: 9608015
SAMPLE SPIKED: DI WATER
DATE(S) ANALYZED: 08/11-12/96
MATRIX: WATER

Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	MS Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
As, Arsenic	4000/7060	ND	0.04	104	3	69-136	13
Ca, Calcium	ICP/6010	ND	10.0	106	<1	80-120	15
Cu, Copper	ICP/6010	ND	0.125	103	1	86-123	10
Fe, Iron	ICP/6010	ND	0.5	102	1	84-133	10
Mg, Magnesium	ICP/6010	ND	10.0	102	1	90-112	10
Mn, Manganese	ICP/6010	ND	0.25	115	<1	93-122	10
Na, Sodium	ICP/6010	ND	10.0	103	<1	86-112	10
Zn, Zinc	ICP/6010	ND	0.25	108	2	90-121	10
Chloride	DIONEX/300	ND	10.0	100	1	80-120	15
Sulfate	DIONEX/300	ND	10.0	113	3	80-120	15

END OF REPORT

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

N-T.S-L
R3.5-)
C-1.S-5 9608015

Project No.: 3435.00.04	Field Logbook No.:	Date: 8-1-96	Serial No.: № 15041
Project Name: Sherwin Williams	Project Location: Emeryville		
Sampler (Signature): [signature]			Samplers: JMR

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	TPHg	EPA 5240	TPHd	Dissolved As	10 General Minerals		HOLD	RUSH	REMARKS
LF-10	8-1-96	9:05		2	H2O					X				STD TAT
LF-B6	↓	9:45	9608014	11	↓	X	X	X	X	X				
LF-7		10:10		2						X				Preserve & filter dissolved
LF-B5		11:00		11		X	X	X	X	X				As in Lab
LF-22		11:35		2						X				
LF-B3		12:00	01A-K	11		X	X	X	X	X				Results to Kenton Beck
EX-1		12:50	02A-I	9		X	X	X	X					
EX-2		13:05	03A-I	9		X	X	X	X					
EX-3	↓	13:40	04A-I	9	↓	X	X	X	X					

RELINQUISHED BY: (Signature) [signature]	DATE 8-1-96	TIME 2:53	RECEIVED BY: (Signature) [signature]	DATE 8-1-96	TIME 2:53
RELINQUISHED BY: (Signature) [signature]	DATE 8-1-96	TIME 15:23	RECEIVED BY: (Signature) [signature]	DATE 8-1-96	TIME 1523
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

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172 AIHA Accreditation: 11134

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

REPORT DATE: 08/09/96
DATE(S) SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
AEN WORK ORDER: 9607404

ATTN: KENTON GEE
CLIENT PROJ. ID: 3435.00.04
CLIENT PROJ. NAME: SHERWIN WMS.
C.O.C. NUMBER: 15038

PROJECT SUMMARY:

On July 30, 1996, this laboratory received 3 water sample(s).

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

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

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

Larry Klein
Laboratory Director

RECEIVED
AUG 12

LEVINE-FRICKE

SAMPLE ID: LF-113
AEN LAB NO: 9607404-01A
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	**EPA 8240**				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-113
AEN LAB NO: 9607404-01D
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/08/96

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

LEVINE-FRICKE

SAMPLE ID: LF-113
AEN LAB NO: 9607404-01G
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-113
AEN LAB NO: 9607404-01I
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/30/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	ND	0.002	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-20
AEN LAB NO: 9607404-02A
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	EPA 8240				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-20
AEN LAB NO: 9607404-02D
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	0.2 *	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-20
AEN LAB NO: 9607404-02G
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	0.56 *	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-20
AEN LAB NO: 9607404-02I
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/30/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	0.085 *	0.002	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-18
AEN LAB NO: 9607404-03A
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
Volatile Organic Compounds	EPA 8240				
Acetone	67-64-1	ND	100	ug/L	08/02/96
Benzene	71-43-2	ND	5	ug/L	08/02/96
Bromodichloromethane	75-27-4	ND	5	ug/L	08/02/96
Bromoform	75-25-2	ND	5	ug/L	08/02/96
Bromomethane	74-83-9	ND	10	ug/L	08/02/96
2-Butanone	78-93-3	ND	100	ug/L	08/02/96
Carbon Disulfide	75-15-0	ND	10	ug/L	08/02/96
Carbon Tetrachloride	56-23-5	ND	5	ug/L	08/02/96
Chlorobenzene	108-90-7	ND	5	ug/L	08/02/96
Chloroethane	75-00-3	ND	10	ug/L	08/02/96
2-Chloroethyl Vinyl Ether	110-75-8	ND	10	ug/L	08/02/96
Chloroform	67-66-3	ND	5	ug/L	08/02/96
Chloromethane	74-87-3	ND	10	ug/L	08/02/96
Dibromochloromethane	124-48-1	ND	5	ug/L	08/02/96
1,1-Dichloroethane	75-34-3	ND	5	ug/L	08/02/96
1,2-Dichloroethane	107-06-2	ND	5	ug/L	08/02/96
1,1-Dichloroethene	75-35-4	ND	5	ug/L	08/02/96
cis-1,2-Dichloroethene	156-59-2	ND	5	ug/L	08/02/96
trans-1,2-Dichloroethene	156-60-5	ND	5	ug/L	08/02/96
1,2-Dichloropropane	78-87-5	ND	5	ug/L	08/02/96
cis-1,3-Dichloropropene	10061-01-5	ND	5	ug/L	08/02/96
trans-1,3-Dichloropropene	10061-02-6	ND	5	ug/L	08/02/96
Ethylbenzene	100-41-4	ND	5	ug/L	08/02/96
2-Hexanone	591-78-6	ND	50	ug/L	08/02/96
Methylene Chloride	75-09-2	ND	20	ug/L	08/02/96
4-Methyl-2-pentanone	108-10-1	ND	50	ug/L	08/02/96
Styrene	100-42-5	ND	5	ug/L	08/02/96
1,1,2,2-Tetrachloroethane	79-34-5	ND	5	ug/L	08/02/96
Tetrachloroethene	127-18-4	ND	5	ug/L	08/02/96
Toluene	108-88-3	ND	5	ug/L	08/02/96
1,1,1-Trichloroethane	71-55-6	ND	5	ug/L	08/02/96
1,1,2-Trichloroethane	79-00-5	ND	5	ug/L	08/02/96
Trichloroethene	79-01-6	ND	5	ug/L	08/02/96
Vinyl Acetate	108-05-4	ND	50	ug/L	08/02/96
Vinyl Chloride	75-01-4	ND	10	ug/L	08/02/96
Xylenes, Total	1330-20-7	ND	10	ug/L	08/02/96

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

LEVINE-FRICKE

SAMPLE ID: LF-18
AEN LAB NO: 9607404-03D
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
TPH as Gas in water	5030/GC-FID	ND	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-18
AEN LAB NO: 9607404-03G
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Extraction for TPH	EPA 3510	-		Extrn Date	08/05/96
TPH as Diesel	GC-FID	0.32 *	0.05	mg/L	08/06/96

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

LEVINE-FRICKE

SAMPLE ID: LF-18
AEN LAB NO: 9607404-03I
AEN WORK ORDER: 9607404
CLIENT PROJ. ID: 3435.00.04

DATE SAMPLED: 07/30/96
DATE RECEIVED: 07/30/96
REPORT DATE: 08/09/96

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Sample Filtration	0.45 um	-		Filtr Date	07/30/96
#Digestion, Metals by GFAA	EPA 3020	-		Prep Date	08/05/96
Arsenic	EPA 7060	0.037 *	0.002	mg/L	08/06/96

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

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9607404

CLIENT PROJECT ID: 3435.00.04

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9607404
AEN LAB NO: 0805-BLANK
DATE EXTRACTED: 08/05/96
DATE ANALYZED: 08/05/96
INSTRUMENT: C
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9607404
DATE(S) EXTRACTED: 08/05/96
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
08/06/96	LF-113	01	87
08/06/96	LF-20	02	93
08/06/96	LF-18	03	87
QC Limits:			65-125

DATE EXTRACTED: 08/02/96
DATE ANALYZED: 08/05/96
SAMPLE SPIKED: 9607292-07
INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	4.00	99	1	60-110	15

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9607404
AEN LAB NO: 0806-BLANK
DATE ANALYZED: 08/06/96
INSTRUMENT: F
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

AEN LAB NO: 0807-BLANK
DATE ANALYZED: 08/07/96
INSTRUMENT: F
MATRIX: WATER

Method Blank

	CAS #	Result (mg/L)	Reporting Limit (mg/L)
HCs as Gasoline		ND	0.05

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9607404
INSTRUMENT: F
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
08/08/96	LF-113	01	99
08/06/96	LF-20	02	70
08/06/96	LF-18	03	71
QC Limits:			70-130

DATE ANALYZED: 08/06/96
SAMPLE SPIKED: LCS
INSTRUMENT: F

Laboratory Control Sample Recovery

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Hydrocarbons as Gasoline	500	117	8	60-120	20

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9607404
AEN LAB NO: 0802-BLANK
DATE ANALYZED: 08/02/96
INSTRUMENT: 13
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8240

AEN JOB NO: 9607404
INSTRUMENT: 13
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery 1,2-Dichloroethane-d_4	Toluene-d_8	p-Bromofluorobenzene
08/02/96	LF-113	01	87	96	88
08/02/96	LF-20	02	92	92	91
08/02/96	LF-18	03	95	92	89
QC Limits:			76-114	88-110	86-115

DATE ANALYZED: 08/01/96
SAMPLE SPIKED: 9607395-01
INSTRUMENT: 13

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Average Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
1,1-Dichloroethene	50	142	5	59-155	25
Trichloroethene	50	107	14	71-157	25
Benzene	50	93	11	37-151	25
Toluene	50	98	9	47-150	25
Chlorobenzene	50	95	13	37-160	25

QUALITY CONTROL DATA

AEN JOB NO: 9607404
SAMPLE SPIKED: DI WATER
DATE(S) ANALYZED: 08/06/96
MATRIX: WATER

Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	MS Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
As, Arsenic	4000/7060	ND	0.04	102	12	69-136	13

END OF REPORT

7607404 (?)
C-1, S-3 (filt metals)
R-7, S-10 (pH ...)
R-1, S-4
R-3, S-1

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3435.0004	Field Logbook No.:	Date: 7-30-96	Serial No.: № 15038
Project Name: Sherwin Williams	Project Location: Emeryville, CA		
Sampler (Signature): [signature]			Samplers: Jme

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 8240	TPHg	TPHd	Dissolved As	10 General Minerals			HOLD	RUSH	REMARKS
LF-12	7-30-96	11:50	9607403	11	H2O	X	X	X	X	X					STD TAT
LF-B4	↓	13:30		11	↓	X	X	X	X	X					
LF-13		14:10		9		X	X	X	X						Results to Kenton Gep
LF-113		15:10	01A-I	9		X	X	X	X						
LF-20		14:55	02A-I	9		X	X	X	X						
LF-18		15:25	03A-I	9		X	X	X	X						Preserve + Filter dissolved As in Lab

	DATE	TIME		DATE	TIME
RELINQUISHED BY: (Signature) [signature]	7-30-96	16:05	RECEIVED BY: (Signature) [signature]	7-30-96	16:10
RELINQUISHED BY: (Signature) [signature]	7-30-96	18:00	RECEIVED BY: (Signature) Lori L Pruitt	7-30-96	1800
RELINQUISHED BY: (Signature)			RECEIVED BY: (Signature)		
METHOD OF SHIPMENT:			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

ISOTOPE SOLUTIONS' REPORT ON A INITIAL STABLE ISOTOPE INVESTIGATION

ISOTOPE SOLUTIONS

1126 Deleware St., Berkeley, CA 94702
(510) 527-7237

Michael Marsden
Levine-Fricke
1900 Powell St., 12th Floor
Emeryville, CA 94608

September 14, 1996

Mr. Marsden,

We are pleased to enclose the final report for the initial investigation of stable isotopic compositions of eight groundwater samples from the Sherman Williams site, Emeryville, CA. Also enclosed is an invoice for the analytical work and enclosed report.

We are pleased that you have chosen ISOTOPE SOLUTIONS to support this project. Please feel free to call us if you have any questions concerning the data and interpretations in the enclosed report. We are eager to provide you with continuing support in the use of geochemical and isotopic information in this or other environmental or ecological investigations handled by your firm.

Sincerely,

Dr. Leticia B. Menchaca
Isotope Solutions

Initial Stable Isotopic Investigation of the Sherman Williams Site, Emeryville, CA

Introduction

Natural waters from differing sources have distinctive stable isotopic compositions ($^{18}O/^{16}O$ and $^{2}H/^{1}H$ or D/H ratios), as expressed by their $\delta^{18}O$ and δD values (Epstein and Mayeda, 1953; Friedman, 1953). The stable isotopic compositions are characteristics of the water molecules themselves; they are inherent tracers that allow waters of differing origins to be identified and distinguished from one another (e.g., Mazor, 1991).

This report presents the results of oxygen and hydrogen isotope analyses of eight groundwater samples from the Sherman Williams site, Emeryville, CA. The analyses were conducted as a preliminary survey to determine if stable isotopic compositions of groundwater samples taken from the shallow subsurface (Upper zone) are distinctive from those of groundwater samples taken from deeper portions (Lower zone) of the site. The data may also contribute information on the origin(s) of the groundwaters and on the degree to which the Upper and Lower zones are isolated from one another.

Stable isotopic contrast would be expected if the waters of the two sampled zones are of differing age and/or origin. The stable isotopic results may also provide information on the degree of mixing (if any) between groundwaters from the two zones, especially in any areas where geochemical results may indicate the possibility of vertical communication.

Finally, the stable isotope data are useful in determining the potential for possible active stable isotope tracer studies at the site, to determine the directions and velocities of infiltration and subsurface water flow in areas of particular interest or sensitivity. In such tests, pure water with a differing stable isotopic composition can be used as the tracer fluid with no potential damage to the environment. Such environmentally innocuous tracers are particularly applicable to ecologically sensitive sites, such as wetlands or other sites near surfaces water bodies.

Analytical Methods

Oxygen isotope ($^{18}O/^{16}O$) and hydrogen isotope ($^{2}H/^{1}H$, or D/H) ratios were measured on an automated gas-source mass spectrometer at the Center for Isotope Geochemistry at the Berkeley Laboratory. At this laboratory, water samples for O-isotope analysis are inlet directly into an automated, computer driven gas equilibration system attached to the mass spectrometer. Hydrogen gas samples are prepared for D/H ratio analysis using conventional reduction methods over zinc in closed tubes. The hydrogen gas is inlet to the mass spectrometer through an automated inlet system. Analytical reports are automatically printed and electronically filed in the mass spectrometer computer system.

All stable isotopic data are reported using delta (δ) notation, expressing parts per thousand (‰ or per mil) differences between the isotope ratio of the sample and that of the standard, V-SMOW (Craig, 1961):

$$\delta^{18}O \text{ or } \delta D = ((R_S - R_{V\text{-}SMOW})/R_{V\text{-}SMOW}) \times 1000, \text{ where}$$

$$R = {}^{18}O/{}^{16}O \text{ or } D/H,$$

$$s = \text{sample, and}$$

$$V\text{-}SMOW = \text{Vienna Standard Mean Ocean Water.}$$

Typical analytical uncertainties (standard deviations from the mean) in the $\delta^{18}O$ and δD values of water samples using the methods and instrumentation described above are ±0.1 and 1.0 ‰, respectively at the 2σ (95%) confidence level.

Completion of Data Quality Objectives

All DQOs for this project, including goals covering completeness, precision, accuracy and QA/QC appear to have been fully satisfied.

Results

The $\delta^{18}O$ and δD values of the eight submitted water samples are shown on Table 1, below.

Table 1. Oxygen and hydrogen isotope data, Sherman Williams site, Emeryville, CA.

	Sample Number	$\delta^{18}O$ (‰)	δD (‰)
Lower Zone	LF-B3	-5.3	-32
	LF-B4	-6.2	-36
	LF-B5	-7.7	-51
	LF-B6	-6.6	-43
Upper Zone	LF-7	-6.3	-38
	LF-10	-7.3	-49
	LF-12	-7.8	-55
	LF-22	-8.0	-55

Figure 1. Meteoric Water Line Diagram for Sherman Williams Site, Emeryville, CA

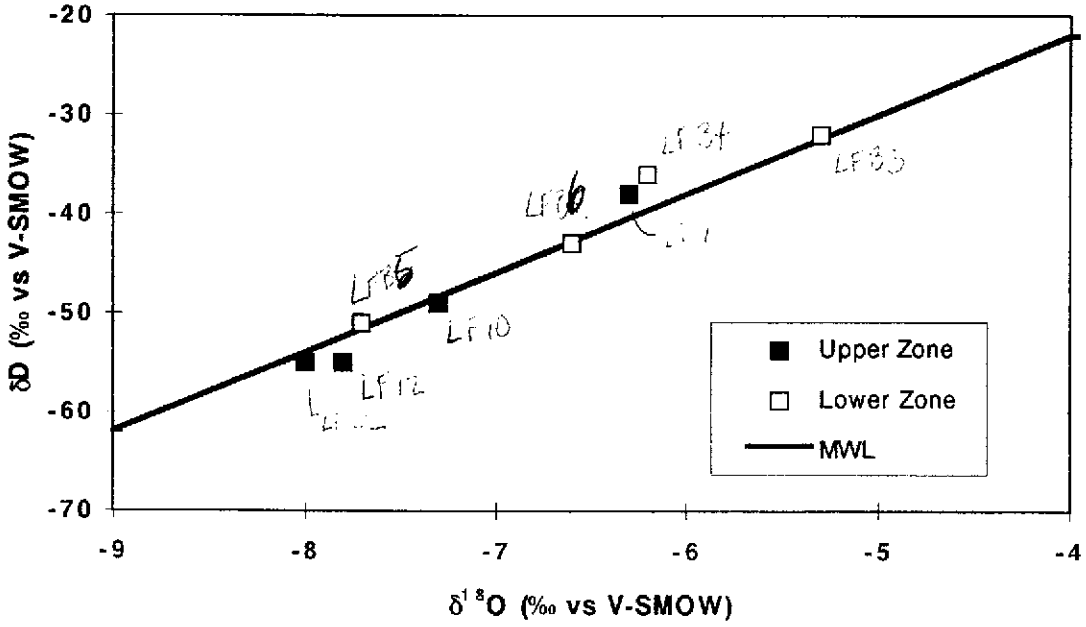
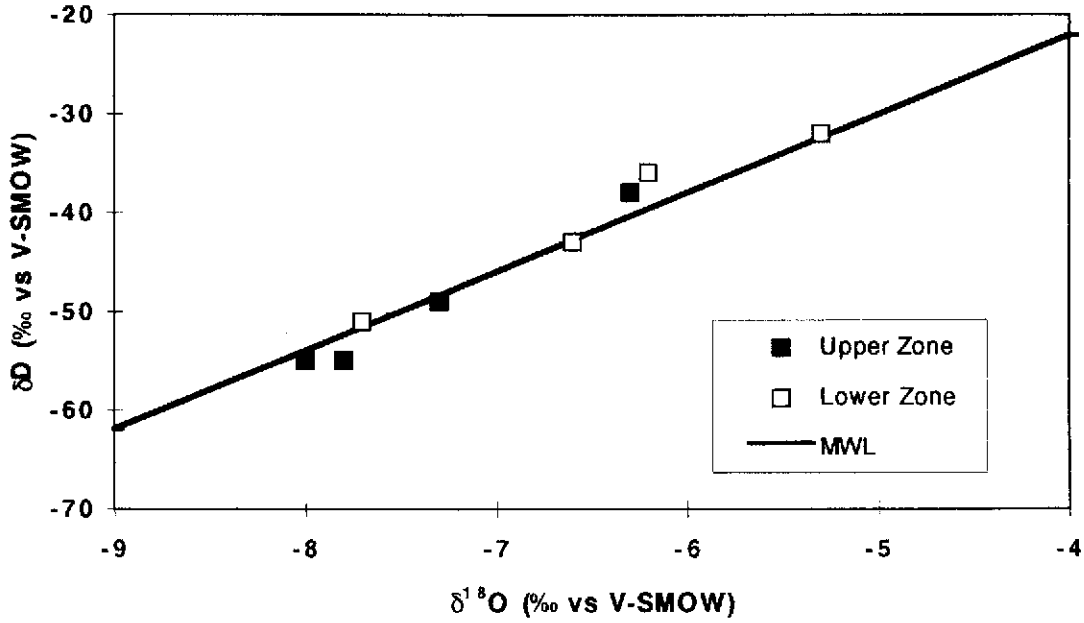


Figure 1. Meteoric Water Line Diagram for Sherman Williams Site, Emeryville, CA



Discussion

The stable isotopic data for Sherman Williams site waters are plotted on a convention Meteoric Water Diagram on Figure 1, where the heavy dark line is the Global Meteoric Water Line, defined by the equation (Craig, 1961):

$$\delta D = 8\delta^{18}O + 10$$

Essentially all natural waters that have been recently equilibrated with the atmosphere fall on or near this line, unless the waters have been partly evaporated (Craig, 1961). The fact that the data for the Sherman Williams site fall along the Meteoric Water Line shows that they suffered little or no evaporated prior to infiltration. Because $\delta^{18}O$ and δD values of the samples are linearly related, the following discussion will focus only on the $\delta^{18}O$ values.

Origin(s) of the Groundwaters

The $\delta^{18}O$ values provide information on the likely origin(s) of groundwaters analyzed in this investigation. The total ranges in $\delta^{18}O$ (-5.3 to -8.0 ‰) and δD (-32 to -55 ‰) for the eight Emeryville site samples are not unusual for relatively shallow (less than 50 meters depth) groundwaters in the East Bay area. To illustrate this fact, it is useful to compare the Sherman Williams site results with results for the Ernest Orlando Lawrence Berkeley National Laboratory (Berkeley Lab), located approximately 5 km to the ENE and at a slightly higher average elevation (~250 m) than the Emeryville site (Smith et al., 1993).

Shallow groundwaters at Berkeley Lab have $\delta^{18}O$ values that range from -6 ‰ to -7 ‰ in most areas, as would be expected at a site where the mean annual rainfall has a $\delta^{18}O$ value of -5.8 ± 0.1 ‰ (Smith, et al., 1993). Where Berkeley Lab waters have been mixed with facility waters delivered from the East Bay Municipal Utilities District (EBMUD; $\delta^{18}O$ = -12 ‰), the $\delta^{18}O$ values are lower (more negative) , ranging down to values below -10 ‰ in one area. At Berkeley Lab, the lowest $\delta^{18}O$ values occur along inactive faults and near areas of leaking facility water lines and broken sanitary sewers. Infiltration of small amounts of surface irrigation waters may also contribute to slightly lower $\delta^{18}O$ values in some areas. Several particularly ^{18}O-rich shallow groundwater samples at Berkeley Lab (ranging up to $\delta^{18}O$ = -5 ‰) are probably the result of infiltration of some partly evaporated water from nearby cooling towers.

The most ^{18}O-rich Emeryville site water (Sample LF-B3; $\delta^{18}O$ = -5.3 ‰) is slightly "heavier" than the most ^{18}O-rich (non-evaporated) groundwaters from the Berkeley Lab ($\delta^{18}O$ ~ -6 ‰). The 0.7 ‰ difference is consistent with the ~250 meter lower average elevation of the Emeryville site. Higher elevation and lower temperatures cause precipitation to be depleted in ^{18}O, due to the temperature dependence of stable isotopic fractionation during condensation (see Mazor, 1991).

The most ^{18}O-rich Emeryville site water (Sample LF-B3; $\delta^{18}O$ = -5.3 ‰) is also isotopically similar to the average annual rainfall in the area, as determined for 1992 Berkeley precipitation (Smith, et al., 1993). The stable isotopic data suggest that the Sherman Williams groundwaters do not contain a significant component of San Francisco Bay water ($\delta^{18}O$ estimated to be ~ -2 ‰ near the Emeryville site). This conclusion could be further verified with geochemical information for the samples.

Stable Isotopic Distinctions between the Upper and Lower Zones

Four of the eight samples analyzed are from the Upper zone at the Emeryville site (Samples 7, 10, 12, and 22), while the remaining four samples were taken from a Lower zone (Samples B3 through B6). Figure 1 shows the following:

- The total ranges in $\delta^{18}O$ and δD are overlapping for the two sampled groups.
- Upper zone samples range to slightly lower values ($\delta^{18}O$ = -8.0 ‰) than Lower zone samples ($\delta^{18}O$ = - 7.7 ‰).
- Lower zone samples (filled squares) range to higher $\delta^{18}O$ values ($\delta^{18}O$ = -5.3 ‰) than Upper zone samples ($\delta^{18}O$ = -6.3 ‰).
- One Lower zone sample plots with three Upper Zone samples and, conversely, one Upper zone sample plots near three Lower Zone samples.

Stable Isotopic Ranges

The isotopically "lightest", most ^{18}O-poor sample (LF-22) has a $\delta^{18}O$ value of -8.0 ‰, 2.7 ‰ lower than the most ^{18}O-rich sample. This range is somewhat larger than would be expected for a relatively small site with low relief, suggesting:

- mixing of two or more isotopically distinct waters (i.e., groundwater with $\delta^{18}O$ ~ -6 ‰ and EBMUD water with $\delta^{18}O$ ~ -12 ‰), or
- the existence of more than 1 isolated or partially isolated zones, each with a smaller overall range in $\delta^{18}O$. Note that the four samples from the Lower zone show almost the entire range of $\delta^{18}O$ demonstrated by all eight samples, implying the likelihood of some mixing with low-^{18}O waters even within this zone.

Conclusions

The initial stable isotopic evaluation of eight groundwater samples from the Upper and Lower zones at the Sherman Williams site in Emeryville, CA, indicate the following:

- The stable isotopic compositions of the groundwaters are similar to those at other East Bay sites, when corrected for elevation differences.
- The most ^{18}O-rich groundwaters are isotopically similar to mean annual rainfall in Berkeley, suggesting a dominant local rain water origin.
- The relatively large ranges in $\delta^{18}O$ and δD values suggest that there is some fluid mixing at the site, perhaps involving EBMUD water.
- The possibility of mixing of waters between the Upper and Lower zones can not be ruled out solely on the basis of the stable isotopic data.

Recommendations

If more information is desired, we recommend that follow-up investigations be conducted to further investigate the waters from the Upper and Lower zones. For example, water from the Lower zones of wells that delivered samples B3 and B5 and from the Upper zones of wells that delivered samples LF-7 and LF-22 might be resampled for stable isotopic and low level tritium analysis, as well as inorganic cations and anions. These samples represent the most extreme stable isotopic compositions measured in this initial investigation*.

The combination of these data are more likely to allow a more diagnostic interpretation of the extent to which the Upper and Lower zones are isolated from one another, as well as the extent of any mixing of San Francisco Bay water with groundwaters at the Emeryville site.

Isotope Solutions would be pleased to further discuss the data and interpretations contained in this report, as well as various additional geochemical and isotopic approaches that may provide further information on the hydrogeology of this site.

*Note that the pattern of stable isotopic data shown on Figure 1 might also be explained if the Upper and Lower zones had quite distinctive stable isotopic compositions, but two of the samples (numbers B5 and 7) had been inadvertently switched during sample collection. It is recommended that these two wells be resampled and reanalyzed to investigate this possibility.

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Invoice for Sherman Williams Stable Isotope Investigation

Analytical and Sample Handling ($^{18}O/^{16}O$ and D/H, 8 samples)	$1,200.00
Interpreting and Reporting	800.00
Miscellaneous Operating Expenses	100.00
Total Cost	$2,100.00

Full payment to Isotope Solutions is due within 15 calendar days of the date of receipt of the enclosed interpretive report for this investigation.

Please make check payable to ISOTOPE SOLUTION at:

1126 Delaware Street
Berkeley, CA 94702

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9/14/96