Quarterly Report of Ground-Water Monitoring for the Period from October 1, 1990, to January 30, 1991 Sherwin-Williams Plant, Emeryville, California

April 22, 1991
1563.06

Prepared for:

The Sherwin-Williams Company
1450 Sherwin Avenue
Emeryville, California

LF 1563.06:FNC

LEVINE·FRICKE

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CONSULTING ENGINEERS AND HYDROGEOLOGISTS

April 22, 1991 LF 1563.06

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

Subject: Quarterly Report of Ground-Water Monitoring for the Period from October 1, 1990, to January 30, 1991 Sherwin-Williams Plant, Emeryville, California

Dear Mr. Gandesbery:

The enclosed report presents the results of the ground-water monitoring program for the period from October 1, 1990, to January 30, 1991, for the Sherwin-Williams plant in Emeryville, California.

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

Sincerely,

John DeReamer
Project Hydrogeologist

Enclosure

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CONTENTS

	PAGE
LIST OF TABLES	ii
LIST OF FIGURES	iii
CERTIFICATION	iv
1.0 INTRODUCTION AND SCOPE	1
2.0 GROUND-WATER ELEVATIONS AND FLOW DIRECTIONS	2
3.0 GROUND-WATER QUALITY SAMPLING	2
4.0 GROUND-WATER QUALITY ANALYSIS RESULTS	3
4.1 A-Zone Water-Quality Results	3
4.1.1 VOLATILE ORGANIC COMPOUND RESULTS	3
4.1.2 SEMIVOLATILE ORGANIC COMPOUND RESULTS	4
4.1.3 METALS RESULTS	4
4.2 B-Zone Water-Quality Results	5
4.2.1 VOLATILE ORGANIC COMPOUND RESULTS	5
4.2.2 SEMIVOLATILE ORGANIC COMPOUND RESULTS	6
4.2.3 METALS RESULTS	6
5.0 QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) PROCEDURES AND RESULTS	6
6.0 REFERENCES	8
LIST OF FIGURES	C-3

TABLES

FIGURES

APPENDICES

A: Ground-Water Sampling Field Data Sheets
B: Laboratory Certificates
C: Quality Assurance/Quality Control (QA/QC) Review of Ground-Water Quality Results

LIST OF TABLES

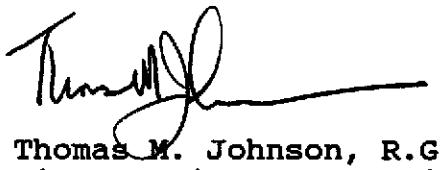
NUMBER	TITLE
1	Ground-Water Elevation Data, January 30, 1991
2	December 1990 Order of Monitoring Well Sampling
3	Sample Containers, Preservation Methods, and Holding Times
4	Historical Water-Quality Data Summary, Volatile Organic Compounds, EPA Method 8240
5	Historical Water-Quality Data Summary, Semivolatile Organic Compounds, EPA Method 8270
6	Historical Water-Quality Data Summary: Arsenic, Cadmium, Copper, Lead, Zinc, and Barium
C-1	Quality Control Data for Chemical Analyses

LIST OF FIGURES

NUMBER	TITLE
1	Site Location Map
2	Site Plan
3	A-Zone Ground-Water Elevation Map, January 30, 1991
4	B-Zone Ground-Water Elevation Map, January 30, 1991
5	Volatile Organic Compounds, EPA Method 8240, A-Zone Ground Water, December 1990
6	Volatile Organic Compounds, EPA Method 8240, B-Zone Ground Water, December 1990
7	Semivolatile Organic Compounds, EPA Method 8270, A-Zone Ground Water, December 1990
8	Semivolatile Organic Compounds, EPA Method 8270, B-Zone Ground Water, December 1990
9	Metal Concentrations, EPA Method 200/7000, A-Zone Ground Water, December 1990
10	Metal Concentrations, EPA Method 200/7000, B-Zone Ground Water, December 1990

CERTIFICATION

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



Thomas M. Johnson, R.G.
Vice President and Principal Hydrogeologist
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April 22, 1991 LF-1563.06

**QUARTERLY REPORT OF GROUND-WATER MONITORING
FOR THE PERIOD FROM OCTOBER 1, 1990, TO JANUARY 30, 1991
SHERWIN-WILLIAMS PLANT, EMERYVILLE, CALIFORNIA**

1.0 INTRODUCTION AND SCOPE

This ground-water monitoring report has been prepared for submittal to the Regional Water Quality Control Board (RWQCB) as part of a continuing environmental investigation that has been undertaken by The Sherwin-Williams Company for its manufacturing facility located at 1450 Sherwin Avenue in Emeryville, California ("the Site"; Figures 1 and 2). The scope of the ground-water monitoring program was outlined in a Work Plan submitted to the RWQCB (see Levine·Fricke, June 8, 1990, "Proposed Work Plan, Site Investigation/Treatability Study, Sherwin-Williams Plant, Emeryville, California").

The following ground-water monitoring activities for this quarterly reporting period are documented in this report:

- measurement of ground-water levels in on-site and off-site perimeter monitoring wells and Temescal Creek
- collection of one round of samples from nine A-zone monitoring wells located in perimeter areas (LF-8 to LF-16) and four B-zone monitoring wells (LF-B1 to LF-B4)
- laboratory analysis of the collected ground-water samples and specified QA/QC samples.

A total of 13 monitoring wells were sampled and analyzed for volatile organic compounds (VOCs) using EPA Method 8240; semivolatile organic compounds (SVOCs) using EPA Method 8270; and six metals (arsenic, cadmium, copper, lead, zinc, and barium) using the EPA Method 200/7000 Series protocols.

The collection and reporting of ground-water data for this report were completed according to the guidelines set forth in a Quality Assurance/Quality Control document prepared for this project (Levine·Fricke, "Quality Assurance Project Plan [QAPP] for Sherwin-Williams Plant, Emeryville, California," unpublished document prepared for The Sherwin-Williams Company, November 29, 1990).

2.0 GROUND-WATER ELEVATIONS AND FLOW DIRECTIONS

Ground-water elevations were measured in A-zone monitoring wells (LF-1 to LF-16) and B-zone monitoring wells (LF-B1 to LF-B4) on January 30, 1991. The elevation of surface water in Temescal Creek, located at the northern margin of the Site, was also measured. Mean Lower Low Water was used as the datum for this project as a result of the Site's proximity to San Francisco Bay and tidally influenced Temescal Creek. The ground-water elevation data are summarized in Table 1.

Ground-water elevations and directions of ground-water flow in the A zone and the B zone are illustrated in Figures 3 and 4, respectively. The results show that ground-water flow in the A zone is, over most of the Site, toward the northwest, in the direction of Temescal Creek. Ground-water flow in the B zone (based on data from three B-zone monitoring wells) appears to be toward the north-northwest over most of the Site; however, limited data made it difficult to accurately estimate ground-water flow directions in the B zone.

3.0 GROUND-WATER QUALITY SAMPLING

Levine•Fricke personnel collected ground-water samples between December 19 and December 21, 1990. The sampled wells and the order of sampling are presented in Table 2. A minimum of 3 well volumes were purged from each well before sampling. The wells were purged either by pumping with a centrifugal pump or by hand bailing with a disposable polyethylene bailer. Wells that recovered slowly were purged dry and were allowed to recover to 80 percent of the initial well volume before they were sampled. The hoses attached to the centrifugal pump were steamed cleaned before each use. The evacuated water was pumped into a 55-gallon drum and then transferred to a holding tank located in an on-site area pending approved disposal. Field measurements of temperature, pH, and specific conductance of the evacuated water were recorded during purging; monitoring wells were sampled after these parameters had stabilized. The field records of these measured parameters are included in Appendix A.

After each well had been purged, ground-water samples were collected for laboratory analysis using a new disposable polyethylene bailer for each well. Samples were collected for analysis of VOCs using EPA Method 8240; SVOCs using EPA Method 8270; and six metals (arsenic, cadmium, copper, lead, zinc, and barium) using EPA Method 200/7000 Series. Samples were collected using the containers indicated in Table 3. The

vials containing ground-water samples intended for Method 8240 analysis were gently filled to overflowing, capped, and checked for trapped air by inverting and tapping each vial. If an air bubble was observed, the vial was emptied and gently refilled. Water samples for Method 8270 analysis were collected in 1-liter brown glass bottles with Teflon septa. Water samples for metals analysis were collected in a 1-liter plastic bottle without preservative and were filtered in the laboratory using 0.45-micron filters. All samples were analyzed by BC Analytical of Emeryville, California, a State-certified laboratory, according to EPA method protocols.

4.0 GROUND-WATER QUALITY ANALYSIS RESULTS

Ground-water samples from nine A-zone perimeter monitoring wells (LF-8 to LF-16) and four B-zone monitoring wells (LF-B1 to LF-B4) were submitted for analysis. Laboratory results for ground-water samples from these wells are summarized in Tables 4, 5, and 6. These tables include historical results from previous ground-water sampling events as well as data from the current round of sampling.

4.1 A-Zone Water-Quality Results

4.1.1 VOLATILE ORGANIC COMPOUND RESULTS

The quantified VOC results for the ground-water samples collected from the perimeter monitoring wells sampled during this reporting period are summarized in Table 4. Quantified VOC results for sampled A-zone monitoring wells are illustrated in Figure 5; quantified VOC results for B-zone monitoring wells are illustrated in Figure 6.

The VOC results for upgradient wells LF-12 and LF-13 were generally below the laboratory detection limits (see Table 4, Figure 5, and Appendix B). Exceptions include the detection of 0.042 ppm (parts per million) of 1,1,1-trichloroethane (1,1,1-TCA), 0.002 ppm of tetrachloroethene (PCE), and 0.002 ppm of 1,2-dichloroethane (1,2-DCA) in well LF-13; and 0.002 ppm of PCE and 0.003 ppm of TCE (trichloroethene) in well LF-12.

The VOC results for off-site downgradient wells LF-14, LF-15, and LF-16 were below the laboratory detection limits (see Table 4, Figure 5, and Appendix B). The VOC results for on-site downgradient perimeter wells LF-8 to LF-11 are also below the reported laboratory detection limits.

The results of VOC analyses indicated the occurrence of a limited range of tentatively identified compounds (TICs) in ground water sampled from monitoring wells LF-8, LF-9, and LF-10. The TIC results for this round of sampling are included in the laboratory certificates in Appendix B.

4.1.2 SEMIVOLATILE ORGANIC COMPOUND RESULTS

The quantified SVOC results for analyzed ground-water samples for this reporting period are summarized in Table 5. The quantified SVOC results for A-zone monitoring wells are illustrated in Figure 7; quantified SVOC results for B-zone monitoring wells are illustrated in Figure 8.

The SVOC results for this reporting period for upgradient monitoring wells LF-12 and LF-13 were below the reported laboratory detection limits (see Table 5, Figure 7, and Appendix B).

The SVOC results for this reporting period for off-site downgradient monitoring wells LF-14, LF-15, and LF-16 were below the reported laboratory detection limits (see Table 5, Figure 7, and Appendix B). The SVOC results for on-site downgradient perimeter wells LF-8, LF-9, LF-10, and LF-11 are also below the indicated laboratory detection limits, with the exception of 0.034 ppm of bis(2-ethylhexyl)phthalate reported for LF-11.

The TICs reported for this sampling round in the SVOC range were generally limited to long-chain hydrocarbon compounds as reported in the laboratory certificates in Appendix B.

TICs are compounds for which the laboratory is able to provide only tentative compound identification and semiquantified estimates of concentration as a result of the lack of a quantification standard. Semiquantified estimates of concentration for TICs may be in error by as much as one or two or more orders of magnitude. Consequently, TIC data are appropriately evaluated solely on a qualitative basis.

4.1.3 METALS RESULTS

Ground-water samples from this sampling round were analyzed for six metals (arsenic, cadmium, copper, lead, zinc, and barium) using EPA 200/7000 Series analytical methods. The results of the laboratory analyses for these metals are summarized in Table 6. Metals results for ground-water

samples from A-zone monitoring wells are illustrated in Figure 9 and results from B-zone monitoring wells are illustrated in Figure 10.

Metals detected in ground water sampled from upgradient monitoring wells LF-12 and LF-13 were generally below the laboratory detection limits as summarized in Table 6 and reported in Appendix B. Exceptions include the detection of 0.004 ppm of arsenic and 0.060 ppm of barium for LF-12 and the detection of 0.100 ppm of barium for LF-13 (see Figure 9).

The metals results for ground-water samples from off-site downgradient monitoring wells LF-14, LF-15, and LF-16 included the occurrence of detectable concentrations of arsenic, cadmium, zinc, and barium (see Table 6). Metals results for ground water sampled from on-site downgradient perimeter monitoring wells LF-8, LF-9, LF-10, and LF-11 included the occurrence of detectable concentrations of arsenic, cadmium, zinc, and barium (see Table 6).

4.2 B-Zone Water-Quality Results

4.2.1 VOLATILE ORGANIC COMPOUND RESULTS

The quantified VOC results for ground water sampled from B-zone monitoring wells LF-B1, LF-B2, LF-B3, and LF-B4 are summarized in Table 4 and illustrated in Figure 6. The VOC results indicated the occurrence of 1,2-DCA in LF-B1 (0.130 ppm), LF-B2 (0.004 ppm), and LF-B3 (0.084 ppm). The results for 1,2-DCA for ground water sampled from LF-B4 were below the laboratory detection limit (i.e., <0.001 ppm). The results for LF-B2 included the detection of 0.002 ppm of PCE and the results for LF-B4 included the detection of 0.002 ppm of toluene. A limited range of VOC TICs were reported for B-zone ground-water samples. The detected TICs are as reported in Appendix B.

As previously reported, TICs are compounds for which the laboratory is able to provide only tentative compound identification and semiquantified estimates of concentration as a result of the lack of a quantification standard. Semiquantified estimates of concentration for TICs may be in error by as much as one or two or more orders of magnitude. Consequently, TIC data are appropriately evaluated solely on a qualitative basis.

4.2.2 SEMIVOLATILE ORGANIC COMPOUND RESULTS

The quantified results for SVOCs are summarized in Table 7.

The SVOC results for the ground-water samples for this reporting period from the B-zone monitoring wells were generally below the reported laboratory detection limits (see Table 5 and Appendix B). Exceptions include the detection of phenol (0.041 ppm) and bis(2-ethylhexyl)phthalate (0.045 ppm) in the ground water sampled from monitoring well LF-B1. No other SVOC compounds were detected in concentrations greater than the reported detection limits. Detected SVOC TICs are as reported in Appendix B.

As previously reported, TICs are compounds for which the laboratory is able to provide only tentative compound identification and semiquantified estimates of concentration as a result of the lack of a quantification standard. Semiquantified estimates of concentration for TICs may be in error by as much as one or two or more orders of magnitude. Consequently, TIC data are appropriately evaluated solely on a qualitative basis.

4.2.3 METALS RESULTS

The results of analyses for six metals indicated the occurrence of detectable concentrations of arsenic in wells LF-B1 (0.005 ppm), LF-B2 (0.008 ppm), and LF-B3 (0.002 ppm); cadmium in wells LF-B1 (0.0010 ppm), LF-B2 (0.0026 ppm), and LF-B4 (0.0014 ppm); barium in wells LF-B1 (0.10 ppm), LF-B2 (0.32 ppm), LF-B3 (0.16 ppm), and LF-B4 (0.08 ppm); and zinc in wells LF-B2 (0.17 ppm) and LF-B4 (0.080 ppm) (see Table 6). The results for copper and lead were below the laboratory detection limits of 0.05 ppm for copper and 0.20 ppm for lead (see Figure 10).

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

Strict control measures were implemented to maintain data quality and to minimize the potential for field and/or laboratory cross contamination of samples, particularly for arsenic. QA/QC procedures included the collection of trip blank and bailer rinsate blank samples, controlling sampling order, the use of disposable bailers, and daily steam cleaning of pump hoses before and after use. The monitoring wells were sampled in several groups according to location, including off-site upgradient locations, off-site downgradient

locations, and on-site downgradient perimeter locations. The wells in each group were sampled in the order of increasing concentration of arsenic, based on previous results and as prescribed in the QAPP (November 29, 1990). The December 1990 sampling order, including the collection and submittal of trip blanks and bailer rinsate blanks, is indicated in Table 3.

Three types of QA/QC samples were collected and analyzed for each analytical method, including laboratory-supplied trip blanks, bailer rinsate blanks, and duplicates. One or more trip blanks, bailer rinsate blanks, and duplicate samples were collected and analyzed using EPA Methods 8240 and 8270, and for metals using EPA Method 200/7000 Series. Trip blank samples for arsenic and lead analysis were submitted on a daily basis to provide an indication of residual contamination of laboratory equipment.

The results for the QA/QC samples are reported in Appendix C and in Table C-1. These results indicate that the implemented QA/QC controls were effective in minimizing field and/or laboratory cross contamination of samples, particularly with regard to arsenic results.

6.0 REFERENCES

Levine•Fricke, Inc. July 17, 1989. "Results of Environmental Investigation, Sherwin-Williams Plant, Emeryville, California," unpublished report prepared for The Sherwin-Williams Company.

Levine•Fricke, Inc. June 8, 1990. "Proposed Work Plan, Site Investigation/Treatability Study, Sherwin-Williams Plant, Emeryville, California."

Levine•Fricke, Inc. November 29, 1990. "Quarterly Report of Ground-Water Monitoring For the Period of July 1 to September 30, 1990, Sherwin-Williams Plant, Emeryville, California".

Levine•Fricke, Inc. November 29, 1990. "Quality Assurance Project Plan for Sherwin-Williams Plant, Emeryville, California," unpublished document prepared for The Sherwin-Williams Company.

TABLE 1

GROUND-WATER ELEVATION DATA

JANUARY 30, 1991

Well Number	Well Elevation (feet Mean Sea Level)	Well Elevation (feet Mean Lower Low Water)	Measured Depth to Ground Water (feet)	Ground Water Elevation* (feet) (MLLW Datum)
LF-1	16.92	19.78	8.97	10.81
LF-2	12.24	15.10	5.60	9.50
LF-3	11.98	14.84	5.11	9.73
LF-4	13.05	15.91	7.23	8.68
LF-5	10.48	13.34 **	4.24	9.10 **
LF-7	11.08	13.94	4.82	9.12
LF-8	12.75	15.61	7.32	8.29
LF-9	10.44	13.30	5.39	7.91
LF-10	10.32	13.18	4.15	9.03
LF-11	10.08	12.94	3.69	9.25
LF-12	14.97	17.83	6.95	10.88
LF-13	14.76	17.62	6.70	10.92
LF-14	10.03	12.89	5.89	7.00
LF-15	9.80	12.66	5.02	7.64
LF-16	10.10	12.96	4.68	8.28
LF-B1	17.12	19.98	10.77	9.21
LF-B2	11.23	14.09 **	3.25	10.84 **
LF-B3	10.36	13.22	3.88	9.34
LF-B4	14.54	17.40	6.88	10.52
BRIDGE	10.98	13.84	10.19	3.65

* The correction factor to convert to a Mean Lower Low Water Datum is +2.86 for Berkeley Marina on San Francisco Bay. The Mean Lower Low Water Datum (MLLW) provides a preferred plane of reference for water levels that may be close to the level of low tide.

** Ground-water elevation data for LF-5 and LF-B2 not used for mapping. Top-of-casing elevations need to be resurveyed.

BRIDGE refers to railroad bridge crossing Temescal Creek.

TABLE 2

DECEMBER 1990 ORDER OF MONITORING WELL SAMPLING
(Includes Schedule for Collection and Submittal of Trip Blanks and Bailer Rinsate Blanks)

Sampling Date, Sampling Order, And Well Identification	Arsenic Results in PPM From Annual Sampling Report
Samples Collected on December 19, 1990	
LF-B4-Trip Blank	
LF-B4-Bailer Rinsate Blank	
LF-B4	0.003
LF-13	<0.002
LF-12	0.004
LF-B2	0.005
Samples Collected on December 20, 1990	
LF-B3-Trip Blank	
LF-B3-Bailer Rinsate Blank	
LF-B3	0.003
LF-B1	0.007
LF-16	0.003
LF-15	0.002
LF-14	0.077
Samples Collected on December 21, 1990	
LF-8-Trip Blank	
LF-8-Bailer Rinsate Blank	
LF-8	<0.002
LF-11	0.007
LF-9	0.008
LF-10	0.012
LF-10-Duplicate	0.008

TABLE 3

SAMPLE CONTAINERS, PRESERVATION METHODS, AND HOLDING TIMES

EPA Method	Parameter	Volume	Container	Preservation (degrees Celsius)	Holding Time
601/8010	halogenated volatile organic	40 ml	glass	4	14 days
Modified 8015	total petroleum hydrocarbons	40 ml	glass	4 (1)	14 days
602/8020	aromatic volatile organic compounds	40 ml	glass	4 (1)	14 days
624/8240	volatile organic compounds	40 ml	glass	4 (1)	14 days
625/8270	base/neutral/acid extractables	2 L	glass	4	extract within 7 days and analyze within 40 days of extraction.
200/7000 Series	priority pollutant metals	1 L	plastic	4 (2)	6 months

Notes:
(1) Water samples preserved with hydrochloric acid.

(2) Water samples preserved following filtration with nitric acid so that pH <2.

Soils will be collected in brass tubes (undisturbed soils) or glass jars (disturbed soils). Preservation of soils will only include keeping samples at 4 degrees Celsius.

TABLE 4

HISTORICAL WATER-QUALITY DATA SUMMARY

VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	I.D. No.	Acetone	Benzene	Ethyl-Benzene	Methyl Ethyl Ketone	Total Xylenes	2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
LF-1	01-Jun-89	B&C	89060194	30.000	<0.200	0.900	20.000	3.600	15.000	6.000	<0.200	<0.200	<0.200	<0.200	<0.200	75.500	
LF-1	07-Dec-89	B&C	12-212-1	<0.010	<0.001	<0.001	<0.020	0.040	<0.001	<0.001	<0.001	<0.001	0.002	<0.001	<0.001	0.042	
LF-1	20-Jul-90	B&C	07-506-7	0.450	0.002	<0.001	0.200	0.160	<0.001	0.018	<0.001	<0.001	0.005	0.004	<0.001	0.840	#2
LF-2	02-Jun-89	B&C	89060501	<0.050	0.015	0.015	<0.100	0.300	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	0.330	
LF-2	07-Dec-89	B&C	12-212-3	0.350	<0.020	<0.020	<0.400	0.840	<0.020	0.029	<0.020	<0.020	<0.020	<0.020	<0.020	1.219	
LF-2	20-Jul-90	B&C	07-506-5	<0.500	<0.050	0.066	8.800	0.910	12.000	0.051	<0.050	<0.050	<0.050	<0.050	0.050	21.827	
LF-3	02-Jun-89	B&C	89060502	<1.000	<0.100	2.500	<2.000	12.000	<0.100	17.000	<0.100	<0.100	<0.100	<0.100	<0.100	31.500	
LF-3	07-Dec-89	B&C	12-212-4	<5.000	<0.500	6.300	<10.000	32.000	<0.500	77.000	<0.500	<0.500	<0.500	<0.500	<0.500	115.300	
LF-3	20-Jul-90	B&C	07-506-6	10.000	0.110	5.000	7.700	22.000	1.900	52.000	<0.050	<0.050	<0.050	<0.050	<0.050	98.710	
LF-4	02-Jun-89	B&C	89060503	1.300	<0.200	1.300	4.700	3.800	0.260	<0.200	<0.020	<0.020	<0.020	<0.020	<0.020	11.360	
Dup	02-Jun-89	B&C	89060504	1.300	<0.200	1.700	4.700	4.100	0.280	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	12.080	
LF-4	06-Dec-89	B&C	12-174-1	<0.020	<0.020	0.200	<0.040	0.650	<0.002	<0.004	<0.002	<0.002	<0.002	<0.002	<0.002	0.850	
DUP	06-Dec-89	B&C	12-174-6	<0.050	<0.005	0.250	<0.100	0.750	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	1.000	
LF-4	20-Jul-90	B&C	07-506-3	<1.000	<1.000	<0.100	<2.000	0.380	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	0.380	
LF-5	01-Jun-89	B&C	89060192	220.000	<2.000	2.000	390.000	8.000	<2.000	300.000	<1.000	<1.000	<1.000	<2.000	<1.000	920.000	
LF-5	06-Dec-89	B&C	12-174-4	51.000	<1.000	<1.000	320.000	<1.000	<1.000	310.000	<1.000	<1.000	<1.000	<1.000	<1.000	681.000	
LF-5	20-Jul-90	B&C	07-506-2	<10.000	<1.000	1.100	170.000	2.600	6.700	170.000	<1.000	<1.000	<1.000	<1.000	<1.000	350.400	
LF-6	01-Jun-89	B&C	89060193	280.000	<1.000	6.000	470.000	210.000	<1.000	22.000	<0.200	<0.200	<0.200	<1.000	<0.200	988.000	
LF-6	05-Dec-89	B&C	12-128-3	64.000	<1.000	5.000	320.000	17.000	<1.000	59.000	<1.000	<1.000	<1.000	<1.000	<1.000	465.000	
LF-6	20-Jul-90	B&C	07-506-4	200.000	<1.000	4.000	720.000	13.000	24.000	45.000	<1.000	<1.000	45.000	<1.000	<1.000	1051.000	
LF-7	01-Jun-89	B&C	89060191	<0.005	0.050	<0.005	<0.005	0.580	<0.005	0.270	<0.001	<0.001	<0.001	<0.005	<0.001	0.900	
LF-7	06-Dec-89	B&C	12-174-3	<0.010	0.031	0.052	<0.020	0.150	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	0.007	0.243	
LF-7	19-Jul-90	B&C	07-485-4	<0.010	<0.001	0.007	<0.020	0.044	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.052	

TABLE 4

HISTORICAL WATER-QUALITY DATA SUMMARY

VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	I.D. No.	Acetone	Benzene	Ethyl-Benzene	Methyl Ethyl Ketone	Total Xylenes	2-Hexa-none	Toluene	1,1,1-TCA	1,2-DCA	PCE	TCE	Chloro-benzene	Total Quantified Conc.	Notes
LF-8	05-Dec-89	B&C	12-128-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	<0.001	0.003	
LF-8	19-Jul-90	B&C	07-485-5	<0.010	<0.001	0.007	<0.020	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.010	
LF-8	21-Dec-90	B&C	12-529-3	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-9	05-Dec-89	B&C	12-128-1	<0.010	<0.001	0.022	<0.020	<0.001	<0.001	0.003	<0.001	<0.001	<0.001	<0.001	0.005	0.030	
LF-9	19-Jul-90	B&C	07-485-6	<0.010	<0.001	0.011	<0.020	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.004	0.017	
LF-9	21-Dec-90	B&C	12-529-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-10	07-Dec-89	B&C	12-212-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-10	19-Jul-90	B&C	07-485-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
DUP	19-Jul-90	B&C	07-485-8	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-10	19-Dec-90	B&C	12-529-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
DUP	19-Dec-90	B&C	12-529-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-11	05-Dec-89	B&C	12-128-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	
DUP	05-Dec-89	B&C	12-128-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.023	<0.001	<0.001	<0.001	<0.001	<0.001	0.000	
LF-11	19-Jul-90	B&C	07-485-3	0.015	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	<0.001	<0.001	0.016	
LF-11	21-Dec-90	B&C	12-529-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-12	06-Dec-89	B&C	12-174-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.005	<0.001	<0.001	<0.001	<0.001	<0.001	0.005	
LF-12	18-Jul-90	B&C	07-444-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	0.001	0.002	<0.001	0.003	
LF-12	19-Dec-90	B&C	12-474-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	0.003	<0.001	0.005	
LF-13	06-Dec-89	B&C	12-174-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	0.029	<0.001	<0.001	<0.001	<0.001	0.031	
LF-13	18-Jul-90	B&C	07-444-4	<0.010	<0.001	<0.001	<0.020	0.001	<0.001	0.002	0.056	<0.001	0.001	<0.001	<0.001	0.060	
LF-13	19-Dec-90	B&C	12-474-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	0.042	0.002	0.002	<0.001	<0.001	0.046	#3
LF-14	04-Sep-90	B&C	07-444-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-14	21-Dec-90	B&C	12-505-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	

TABLE 4

HISTORICAL WATER-QUALITY DATA SUMMARY

VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	I.D. No.	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-15	04-Sep-90	B&C	07-444-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-15	21-Dec-90	B&C	12-505-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-16	04-Sep-90	B&C	07-444-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-16	20-Dec-90	B&C	12-505-5	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B1	07-Dec-89	B&C	12-212-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.051	<0.001	<0.001	<0.001	0.051	
LF-B1	18-Jul-90	B&C	07-444-9	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.002	<0.001	0.170	0.001	<0.001	<0.001	0.171	
LF-B1	20-Dec-90	B&C	12-505-4	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.130	<0.001	<0.001	<0.001	0.130	
LF-B2	06-Dec-89	B&C	12-174-5	<0.010	<0.001	<0.001	<0.020	0.013	<0.001	<0.001	<0.001	0.007	<0.001	<0.001	<0.001	0.020	
LF-B2	18-Jul-90	B&C	07-444-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	0.007	<0.001	<0.001	<0.001	0.009	
DUP	18-Jul-90	B&C	07-444-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	0.007	<0.001	<0.001	<0.001	0.009	
LF-B2	19-Dec-90	B&C	12-474-6	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.004	0.002	<0.001	<0.001	0.006	
LF-B3	07-Dec-89	B&C	12-212-8	<0.010	<0.001	<0.001	<0.020	<0.001	0.001	<0.001	<0.001	0.100	<0.001	<0.001	<0.001	0.101	#1
DUP	07-Dec-89	B&C	12-212-10	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.073	<0.001	<0.001	<0.001	0.073	
LF-B3	18-Jul-90	B&C	07-444-8	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	0.086	<0.001	<0.001	<0.001	0.088	
LF-B3	20-Dec-90	B&C	12-505-3	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	0.084	<0.001	<0.001	<0.001	0.084	
LF-B4	18-Jul-90	B&C	07-444-3	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	0.001	<0.001	<0.001	<0.001	0.003	
LF-B4	19-Dec-90	B&C	12-474-3	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	0.002	<0.001	<0.001	<0.001	<0.001	<0.001	0.002	
FIELD BLANKS & TRIP BLANKS																	
LF-1-FB	01-Jun-86	B&C	89060195	0.012	<0.001	<0.001	<0.020	0.004	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	0.016	
LF-1-FB	07-Dec-89	B&C	12-212-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B1-FB	07-Dec-89	B&C	12-212-7	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-13-FB	06-Dec-89	B&C	12-174-12	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
Trip Blank	07-Dec-89	B&C	12-212-9	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	

TABLE 4

HISTORICAL WATER-QUALITY DATA SUMMARY

VOLATILE ORGANIC COMPOUNDS, EPA METHOD 8240

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	I.D. No.	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-B4-TB	18-Jul-90	B&C	07-444-1	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B4-BB	18-Jul-90	B&C	07-444-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-11-TB	19-Jul-90	B&C	07-485-1	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-11-BB	19-Jul-90	B&C	07-485-1	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B4-BR	19-Dec-90	B&C	12-474-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-8-TB	21-Dec-90	B&C	12-529-1	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-8-BR	21-Dec-90	B&C	12-529-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	
LF-B3-BR	20-Dec-90	B&C	12-505-2	<0.010	<0.001	<0.001	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.001	<0.020	

Explanation of Symbols and Abbreviations used on Table 4:

Signifies that there is a note of explanation for laboratory results.
B&C: Brown and Caldwell Laboratory, Emeryville, California.

DUP = Duplicate Sample

1,1,1-TCA = 1,1,1-Trichloroethane
1,2-DCA = 1,2-Dichloroethane
PCE = Tetrachloroethene
TCE = Trichloroethene

NOTES:

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

TABLE 5

HISTORICAL WATER-QUALITY DATA SUMMARY

SEMIVOLATILE ORGANIC COMPOUNDS, EPA METHOD 8270

(All concentrations expressed in parts per million (ppm))

Well No.	Date	Lab	Lab I.D.	Type of Analysis	2-Methyl-naptha-lene	Naphtha-lene	Phenol	2-Methyl-phenol	4-Methyl-phenol	2,4-Di-methyl-phenol	Bis(2-ethyl-hexyl)-phthalate	Total All Quantified Concentrations	Notes
LF-1	01-Jun-89	B&C	89060194	8270	<0.004	0.018	<0.020	0.011	<0.010	<0.005	<0.040	0.029	
LF-1	07-Dec-89	B&C	12-212-1	8270	<0.004	<0.004	<0.020	<0.010	<0.020	<0.010	*<0.170	<0.040	
LF-1	20-Jul-90	B&C	07-506-7	8270	<0.002	<0.002	0.011	<0.005	<0.010	<0.005	<0.020	0.011	
LF-2	02-Jun-89	B&C	89060501	8270	<0.100	0.650	<0.500	<0.200	<0.500	<0.200	<1.000	0.650	
LF-2	07-Dec-89	B&C	12-212-3	8270	<0.020	0.320	<0.100	<0.050	<0.100	<0.050	<0.200	0.320	
LF-2	20-Jul-90	B&C	07-506-5	8270	<0.020	0.330	<0.100	<0.050	<0.100	<0.050	<0.200	0.330	
LF-3	02-Jun-89	B&C	89060502	8270	0.034	0.091	<0.100	0.020	<0.010	<0.005	<0.020	0.287	#1
LF-3	07-Dec-89	B&C	12-212-4	8270	<0.020	0.140	<0.100	0.070	0.450	<0.050	<0.200	0.660	
LF-3	20-Jul-90	B&C	07-506-6	8270	<0.020	0.160	<0.100	0.240	0.800	<0.050	<0.200	1.200	
LF-4	02-Jun-89	B&C	89060503	8270	0.016	0.140	<0.010	<0.010	<0.010	<0.005	<0.200	0.156	
Duplicate	02-Jun-89	B&C	89060504	8270	0.009	0.095	<0.010	<0.010	<0.010	<0.005	<0.200	0.104	
LF-4	06-Dec-89	B&C	12-174-1	8270	<0.002	0.015	<0.010	<0.005	<0.010	<0.005	*<0.170	0.015	
Duplicate	06-Dec-89	B&C	12-174-6	8270	<0.002	0.007	<0.010	<0.005	<0.010	<0.005	*<0.170	0.007	
LF-4	20-Jul-90	B&C	07-506-3	8270	<0.002	0.010	0.015	<0.005	<0.010	<0.005	<0.020	0.025	
LF-5	01-Jun-89	B&C	89060192	8270	<0.004	0.020	<0.020	0.220	0.600	<0.005	<0.040	0.840	
LF-5	06-Dec-89	B&C	12-174-4	8270	<0.002	0.025	0.056	0.280	0.790	0.039	*<0.170	1.190	
LF-5	20-Jul-90	B&C	07-506-2	8270	<0.020	<0.020	<0.100	0.280	0.850	<0.050	<0.200	1.350	#2
LF-6	05-Dec-89	B&C	12-128-5	8270	<0.040	0.060	0.380	0.160	1.000	<0.100	<0.400	1.600	
LF-6	20-Jul-90	B&C	07-506-2	8270	<0.020	<0.020	0.200	0.280	0.850	<0.050	<0.200	1.330	
LF-7	01-Jun-89	B&C	89060191	8270	<0.004	0.008	<0.020	<0.010	<0.010	<0.005	<0.040	0.008	
LF-7	06-Dec-89	B&C	12-174-3	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	*<0.170	<0.040	
LF-7	08-Aug-90	B&C	08-171-3	8270	----	<0.002	<0.010	----	----	<0.005	<0.020	<0.020	
LF-8	05-Dec-89	B&C	12-128-4	8270	<0.002	0.060	0.380	<0.005	<0.010	<0.005	*<0.170	0.440	

TABLE 5

HISTORICAL WATER-QUALITY DATA SUMMARY

SEMIVOLATILE ORGANIC COMPOUNDS, EPA METHOD 8270

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	Lab I.D.	Type of Analysis	2-Methyl-naptha-lene	Naphtha-lene	Phenol	2-Methyl-phenol	4-Methyl-phenol	2,4-Di-methyl-phenol	Bis(2-ethyl-hexyl)-phthalate	Total All Quantified Concentrations	Notes
LF-8	08-Aug-90	B&C	08-171-4	8270	----	<0.002	<0.010	----	----	<0.005	<0.020	<0.020	
LF-8	21-Dec-90	B&C	12-529-3	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-9	05-Dec-89	B&C	12-128-1	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	*<0.170	<0.020	
LF-9	19-Jul-90	B&C	07-485-6	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.002	<0.020	
LF-9	21-Dec-90	B&C	12-529-5	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-10	05-Dec-89	B&C	12-128-1	8270	<0.002	0.140	<0.010	<0.005	<0.010	<0.005	*<0.170	0.140	
LF-10D	19-Jul-90	B&C	07-485-8	8270	<0.005	<0.002	<0.010	<0.005	<0.010	<0.005	<0.002	<0.010	
LF-10	21-Dec-90	B&C	12-529-6	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-10D	21-Dec-90	B&C	12-529-7	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-11	05-Dec-89	B&C	12-128-2	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	*<0.170	<0.010	
LF-11	08-Aug-90	B&C	08-171-5	8270	----	<0.002	<0.010	----	----	<0.005	<0.020	<0.010	
LF-11	21-Dec-90	B&C	12-529-4	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	0.034	0.034	
LF-12	06-Dec-89	B&C	12-174-2	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	*<0.170	<0.020	
LF-12	18-Jul-90	B&C	07-444-5	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	0.028	0.028	
LF-12	19-Dec-90	B&C	12-474-5	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-13	06-Dec-89	B&C	12-174-7	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	*<0.170	<0.020	
LF-13	18-Jul-90	B&C	07-444-4	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.010	
LF-13	19-Dec-90	B&C	12-474-4	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-14	04-Sep-90	B&C	09-014-1	8270	<0.005	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-14	20-Dec-90	B&C	12-505-7	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-15	04-Sep-90	B&C	09-014-2	8270	<0.005	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-15	20-Dec-90	B&C	12-505-6	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	

TABLE 5

HISTORICAL WATER-QUALITY DATA SUMMARY

SEMIVOLATILE ORGANIC COMPOUNDS, EPA METHOD 8270

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	Lab I.D.	Type of Analysis	2-Methyl-naptha-lene	Naphtha-lene	Phenol	2-Methyl-phenol	4-Methyl-phenol	2,4-Di-methyl-phenol	Bis(2-ethyl-hexyl)-phthalate	Total All Quantified Concentrations	Notes
LF-16	04-Sep-90	B&C	09-014-3	8270	<0.005	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-16	20-Dec-90	B&C	12-505-5	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-B1	07-Dec-89	B&C	12-212-6	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	*<0.170	<0.175	
LF-B1	18-Jul-90	B&C	07-444-9	8270	<0.005	<0.002	0.460	<0.005	<0.010	<0.005	0.140	0.600	
LF-B1	20-Dec-90	B&C	12-505-4	8270	<0.002	<0.002	0.041	<0.005	<0.010	<0.005	0.045	0.086	
LF-B2	06-Dec-89	B&C	12-174-5	8270	<0.002	<0.002	<0.010	<0.005	<0.010	0.029	*<0.170	0.029	
LF-B2	18-Jul-90	B&C	07-444-6	8270	<0.005	<0.002	0.140	<0.005	<0.010	<0.005	0.032	0.172	
LF-B2D	18-Jul-90	B&C	07-444-7	8270	<0.005	<0.002	0.088	<0.005	<0.010	<0.005	0.060	0.148	
LF-B2	20-Dec-90	B&C	12-474-6	8270	<0.005	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-B3	07-Dec-89	B&C	12-212-1	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	*<0.170	<0.020	
LF-B3	18-Jul-90	B&C	07-444-6	8270	<0.005	<0.002	<0.010	<0.005	<0.010	<0.005	0.190	0.190	
LF-B3	20-Dec-90	B&C	12-505-3	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-B4	18-Jul-90	B&C	07-444-3	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	0.023	0.023	
LF-B4	19-Dec-90	B&C	12-474-3	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
FIELD & TRIP BLANKS													
LF-1-FB	01-Jun-86	B&C	89060195	8270	<0.004	<0.004	<0.020	<0.010	<0.010	<0.005	<0.040	<0.020	
LF-1-FB	07-Dec-89	B&C	12-212-2	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-B1-FB	07-Dec-89	B&C	12-212-7	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
Trip Blank	07-Dec-89	B&C	12-212-9	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	0.035	0.035	
LF-B4-TB	18-Jul-90	B&C	07-444-1	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-B4-BB	18-Jul-90	B&C	07-444-1	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	

TABLE 5
HISTORICAL WATER-QUALITY DATA SUMMARY
SEMIVOLATILE ORGANIC COMPOUNDS, EPA METHOD 8270
(All concentrations expressed in parts per million (ppm))

Well No.	Date	Lab	Lab I.D.	Type of Analysis	2-Methyl-naptha-lene	Naphtha-lene	Phenol	2-Methyl-phenol	4-Methyl-phenol	2,4-Di-methyl-phenol	Bis(2-ethyl-hexyl)-phthalate	Total All Quantified Concentrations	Notes
LF-7-BB	08-Aug-90	B&C	08-171-2	8270	----	<0.002	<0.010	<0.005	----	<0.005	<0.020	<0.020	
LF-B4-BR	19-Dec-90	B&C	12-474-2	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-B3-BR	20-Dec-90	B&C	12-505-2	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-8-TB	21-Dec-90	B&C	12-529-1	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	
LF-8-BR	21-Dec-90	B&C	12-529-2	8270	<0.002	<0.002	<0.010	<0.005	<0.010	<0.005	<0.020	<0.020	

Explanation of Symbols and Abbreviations used on Table 5:

* indicates value not accepted as valid based on positive results of 0.035 ppm for trip blank sample. (dectection limit reported as 5 times 0.035 ppm = 0.170 ppm for indicated reporting period).

---- indicates results not reported by laboratory.

8270 = EPA Method 8270 for semivolatile organic compounds.

Analytical Laboratories:

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

NOTES:

#1 LF-3 02/06/89 - Lab Data Reported the Following: Acenapthene at 0.016 ppm; Anthracene at 0.005 ppm; Benzo(a)anthracene at 0.005 ppm; Chrysene at 0.005 ppm; Dibenzofurena at 0.017 ppm; Fluoranthene at 0.016 ppm; Fluorene at 0.016 ppm; Phenanthrene at 0.044 ppm; Pyrene at 0.018 ppm.

#2 LF-5 07/20/90 - Benzoic Acid reported at 0.220 ppm.

TABLE 6

HISTORICAL WATER-QUALITY DATA SUMMARY

ARSENIC, CADMIUM, COPPER, LEAD, ZINC, AND BARIUM

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Cadmium	Copper	Lead	Zinc	Barium
LF-1	01-Jun-89	B&C	89060194	200/7000	200.000	<0.0400	<0.08	<0.300	0.590	NA
LF-1	07-Dec-89	B&C	12-212-1	200/7000	190.000	<0.0400	<0.08	<0.300	0.020	NA
LF-1	20-Jul-90	B&C	07-506-7	200/7000	120.000	<0.0500	<0.05	<0.200	0.260	0.060
LF-2	02-Jun-89	B&C	89060501	200/7000	2.600	<0.0400	<0.08	<0.300	0.010	NA
LF-2	07-Dec-89	B&C	12-212-3	200/7000	17.000	<0.0400	<0.08	<0.300	<0.010	NA
LF-2	20-Jul-90	B&C	07-506-5	200/7000	110.000	<0.0500	<0.05	<0.200	<0.050	0.450
LF-3	02-Jun-89	B&C	89060502	200/7000	27.000	<0.0400	<0.08	<0.300	<0.010	NA
LF-3	07-Dec-89	B&C	12-212-2	200/7000	30.000	<0.0400	<0.08	<0.300	<0.010	NA
LF-3	20-Jul-90	B&C	07-506-6	200/7000	21.000	<0.0500	<0.05	<0.200	<0.050	0.420
LF-4	02-Jun-89	B&C	89060503	200/7000	0.530	<0.0400	<0.08	<0.300	<0.010	NA
Duplicate	02-Jun-89	B&C	89060504	200/7000	0.580	<0.0400	<0.08	<0.300	7.000	NA
LF-4	06-Dec-89	B&C	12-174-1	200/7000	0.420	<0.0400	<0.08	<0.300	<0.010	NA
Duplicate	06-Dec-89	B&C	12-174-6	200/7000	0.550	<0.0400	<0.08	<0.300	0.010	NA
LF-4	20-Jul-90	B&C	07-506-3	200/7000	0.190	<0.0500	<0.05	<0.200	<0.050	0.160
LF-5	01-Jun-89	B&C	89060192	200/7000	0.017	<0.0400	<0.08	<0.300	0.040	NA
LF-5	06-Dec-89	B&C	12-174-2	200/7000	*<0.070	<0.0400	<0.08	<0.300	<0.010	NA
LF-5	20-Jul-90	B&C	07-506-2	200/7000	0.020	<0.0500	<0.05	<0.200	0.050	0.170
LF-6	01-Jun-89	B&C	89060193	200/7000	13.000	0.0900	<0.08	<0.300	0.120	NA
LF-6	05-Dec-89	B&C	12-128-3	200/7000	16.000	0.0600	<0.08	<0.300	<0.010	NA
LF-6	20-Jul-90	B&C	07-506-4	200/7000	14.000	<0.0500	<0.05	<0.200	0.060	0.210
LF-7	01-Jun-89	B&C	89060191	200/7000	0.008	<0.0400	<0.08	<0.300	<0.010	NA
LF-7	06-Dec-89	B&C	12-174-3	200/7000	*<0.070	<0.0400	<0.08	<0.300	0.020	NA
LF-7	19-Jul-90	B&C	07-485-4	200/7000	<0.002	<0.0500	<0.05	<0.200	<0.050	0.060
LF-8	05-Dec-89	B&C	12-128-4	200/7000	*<0.070	<0.0400	<0.08	<0.300	<0.010	NA

TABLE 6

HISTORICAL WATER-QUALITY DATA SUMMARY

ARSENIC, CADMIUM, COPPER, LEAD, ZINC, AND BARIUM

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Cadmium	Copper	Lead	Zinc	Barium
LF-8	19-Jul-90	B&C	07-485-4	200/7000	<0.002	<0.0500	<0.05	<0.200	<0.050	0.120
LF-8	21-Dec-90	B&C	12-529-3	200/7000	0.020	0.0015	0.09	<0.200	0.250	0.590
LF-9	05-Dec-89	B&C	12-128-1	200/7000	0.067	<0.0400	<0.08	<0.300	0.020	NA
LF-9	19-Jul-90	B&C	07-485-7	200/7000	0.008	<0.0500	<0.05	<0.200	<0.050	0.110
LF-9	21-Dec-90	B&C	12-529-5	200/7000	0.120	0.0029	<0.05	<0.200	0.730	0.270
LF-10	07-Dec-89	B&C	12-212-5	200/7000	0.650	<0.0400	<0.08	<0.300	<0.010	NA
LF-10	19-Jul-90	B&C	07-485-7	200/7000	0.012	<0.0500	<0.05	<0.200	<0.050	0.110
Duplicate	19-Jul-90	B&C	07-485-8	200/7000	0.008	<0.0500	<0.05	<0.300	0.070	0.140
LF-10	21-Dec-90	B&C	12-529-6	200/7000	1.000	0.0009	<0.05	<0.200	<0.050	0.330
Duplicate	21-Dec-90	B&C	12-529-7	200/7000	1.100	0.0007	<0.05	<0.300	0.070	0.350
LF-11	05-Dec-89	B&C	12-128-2	200/7000	*<0.070	<0.0400	<0.08	<0.300	0.020	NA
LF-11	19-Jul-90	B&C	07-485-5	200/7000	0.007	<0.0500	<0.05	<0.200	<0.050	0.120
LF-11	21-Dec-90	B&C	12-529-4	200/7000	0.011	0.0006	<0.05	<0.200	<0.050	0.180
LF-12	06-Dec-89	B&C	12-174-2	200/7000	*<0.070	<0.0400	<0.08	<0.300	0.020	NA
LF-12	18-Jul-90	B&C	07-444-5	200/7000	0.004	<0.0500	<0.05	<0.300	<0.200	0.060
LF-13	06-Dec-89	B&C	12-174-7	200/7000	*<0.070	<0.0400	<0.08	<0.300	0.020	NA
LF-13	18-Jul-90	B&C	07-444-4	200/7000	<0.002	<0.0500	<0.05	<0.200	<0.050	<0.050
LF-13	19-Dec-90	B&C	12-474-4	200/7000	<0.002	<0.0005	<0.05	<0.200	<0.050	0.100
LF-14	04-Sep-90	B&C	09-014-1	200/7000	0.092	<0.0005	<0.005	0.007	<0.050	0.060
LF-14	02-Oct-90	B&C	10-034-2	200/7000	0.077	NA	NA	NA	NA	NA
LF-14	20-Dec-90	B&C	12-505-7	200/7000	0.150	0.0036	<0.050	<0.200	0.410	0.470
LF-15	04-Sep-90	B&C	09-014-2	200/7000	0.002	<0.0005	<0.005	0.043	<0.050	0.060
LF-15	20-Dec-90	B&C	12-505-6	200/7000	0.007	0.0007	<0.05	<0.200	0.100	0.230

TABLE 6

HISTORICAL WATER-QUALITY DATA SUMMARY

ARSENIC, CADMIUM, COPPER, LEAD, ZINC, AND BARIUM

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Cadmium	Copper	Lead	Zinc	Barium
LF-16	04-Sep-90	B&C	09-014-3	200/7000	0.003	<0.0005	<0.005	<0.002	<0.050	0.060
LF-16	20-Dec-90	B&C	12-505-5	200/7000	0.003	0.0007	<0.05	<0.200	0.070	0.170
LF-B1	07-Dec-89	B&C	12-212-6	200/7000	*<0.070	<0.0400	<0.08	<0.300	<0.010	NA
LF-B1	18-Jul-90	B&C	7-444-6	200/7000	0.007	<0.0500	<0.05	<0.2	<0.050	0.08
LF-B1	20-Dec-90	B&C	12-505-4	200/7000	0.005	0.0010	<0.05	<0.200	<0.050	0.100
LF-B2	06-Dec-89	B&C	12-174-5	200/7000	*<0.070	<0.0400	<0.08	<0.300	0.020	NA
LF-B2	18-Jul-90	B&C	7-444-9	200/7000	0.005	<0.0500	<0.05	<0.200	<0.050	0.140
Duplicate	18-Jul-90	B&C	7-444-__	200/7000	0.004	<0.0500	<0.05	<0.200	<0.050	0.150
LF-B2	19-Dec-90	B&C	12-474-6	200/7000	0.008	0.0026	<0.05	<0.200	0.170	0.320
LF-B3	07-Dec-89	B&C	12-212-6	200/7000	*<0.070	<0.0400	<0.08	<0.300	0.010	NA
LF-B3	18-Jul-90	B&C	7-444-8	200/7000	0.003	<0.0500	<0.05	<0.200	<0.050	0.100
LF-B3	20-Dec-90	B&C	12-505-3	200/7000	0.002	<0.0005	<0.05	<0.200	<0.050	0.160
LF-B4	17-Jul-90	B&C	07-444-3	200/7000	0.003	<0.0500	<0.05	<0.200	<0.050	0.080
LF-B4	19-Dec-90	B&C	12-474-3	200/7000	<0.002	0.0014	<0.05	<0.200	0.080	0.080
FIELD & TRIP BLANKS										
LF-1-FB	01-Jun-89	B&C	89060195	200/7000	0.012	<0.0400	<0.08	<0.300	<0.010	NA
LF-1-FB	07-Dec-89	B&C	12-212-2	200/7000	0.003	<0.0400	<0.08	<0.300	<0.010	NA
LF-B1-FB	07-Dec-89	B&C	12-212-7	200/7000	0.014	<0.0400	<0.08	<0.300	<0.010	NA
Trip Blank	07-Dec-89	B&C	12-212-9	200/7000	0.013	<0.0400	<0.08	<0.300	<0.010	NA
LF-B4-TB	18-Jul-90	B&C	07-444-1	200/7000	<0.002	<0.0500	<0.05	<0.200	<0.050	NA
LF-B4-BB	18-Jul-90	B&C	07-444-2	200/7000	<0.002	<0.0500	<0.05	<0.200	0.060	NA
LF-11-TB	19-Jul-90	B&C	07-485-1	200/7000	<0.002	<0.0500	<0.05	0.200	<0.050	NA

TABLE 6

HISTORICAL WATER-QUALITY DATA SUMMARY

ARSENIC, CADMIUM, COPPER, LEAD, ZINC, AND BARIUM

(All concentrations expressed in parts per million [ppm])

Well No.	Date	Lab	Lab I.D. No.	Type of Analysis	Arsenic	Cadmium	Copper	Lead	Zinc	Barium
LF-11-BB	19-Jul-90	B&C	07-485-2	200/7000	<0.002	<0.0500	<0.05	<0.200	<0.050	NA
LF-5- TB	20-Jul-90	B&C	07-506-1	200/7000	0.002	<0.0500	<0.05	<0.200	<0.050	NA
LF-16-TB	04-Sep-90	B&C	09-014-4	200/7000	<0.002	<0.0005	<0.005	0.005	<0.050	NA
LF-B4-TB	19-Dec-90	B&C	12-474-1	200/7000	<0.002	<0.0005	<0.05	<0.200	<0.050	<0.050
LF-B4-BB	19-Dec-90	B&C	12-474-2	200/7000	<0.002	<0.0005	<0.05	<0.200	0.060	<0.050
LF-B3-TB	20-Dec-90	B&C	12-505-1	200/7000	<0.002	<0.0005	<0.05	<0.200	<0.050	<0.050
LF-B3-BR	20-Dec-90	B&C	12-505-2	200/7000	<0.002	<0.0005	<0.05	<0.200	<0.050	<0.050
LF-8-TB	21-Dec-90	B&C	12-529-1	200/7000	<0.002	<0.0005	<0.05	<0.200	<0.050	<0.050
LF-8-BR	21-Dec-90	B&C	12-529-2	200/7000	<0.002	<0.0005	<0.05	<0.200	<0.050	<0.050

Notes to Table 6:

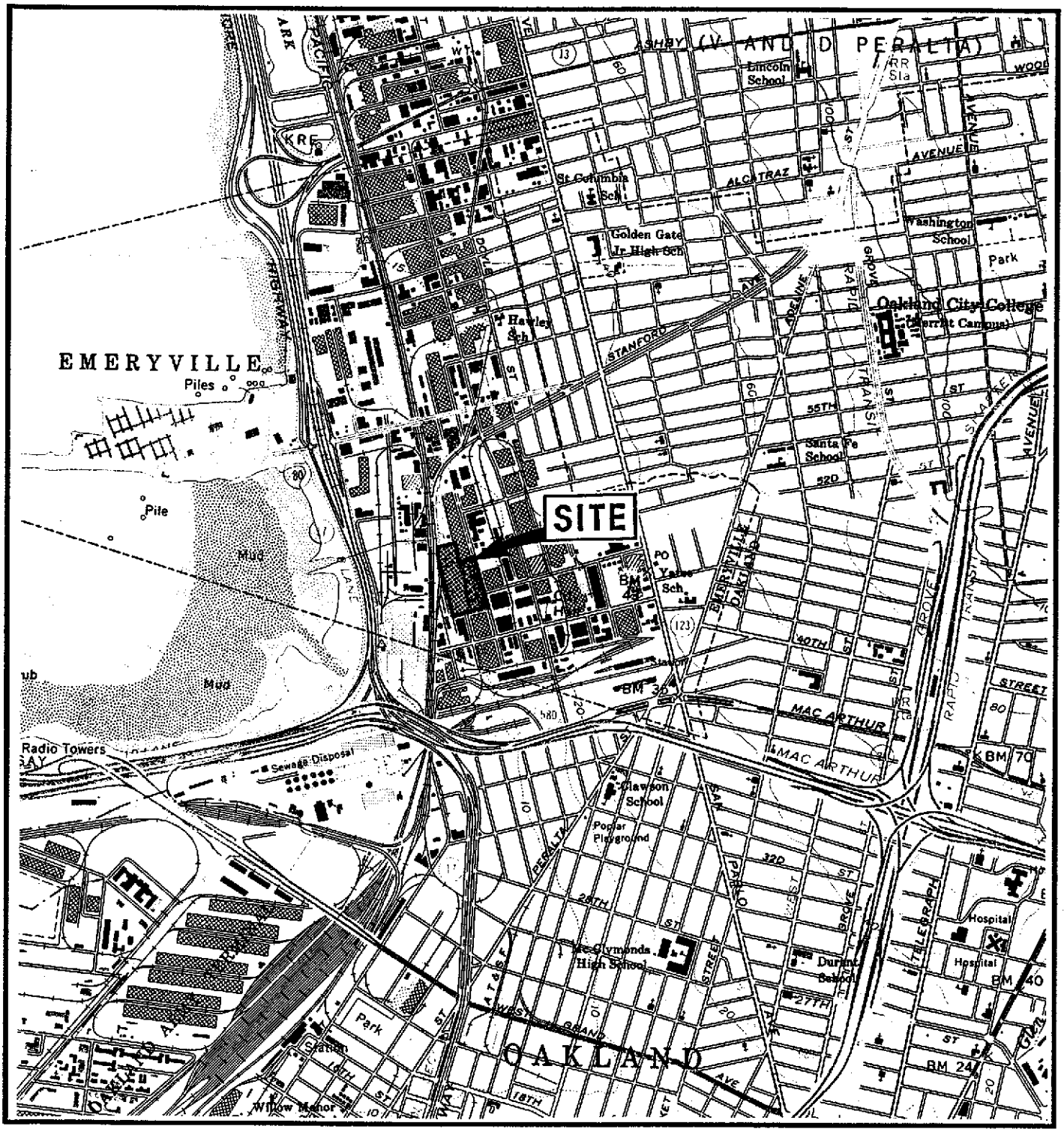
* = Data not validated based on positive results of trip blank (0.014 ppm) or bailer rinsate blank (0.013 ppm) of submitted
Detection Limit for arsenic for this sampling period set at 0.070 or 5 times the reported value of 0.014 ppm for trip b

NA = Not Analyzed

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

Analytical Laboratories:

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



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

Figure 1 : SITE LOCATION MAP

Project No. 1563

JDR11JUL89em

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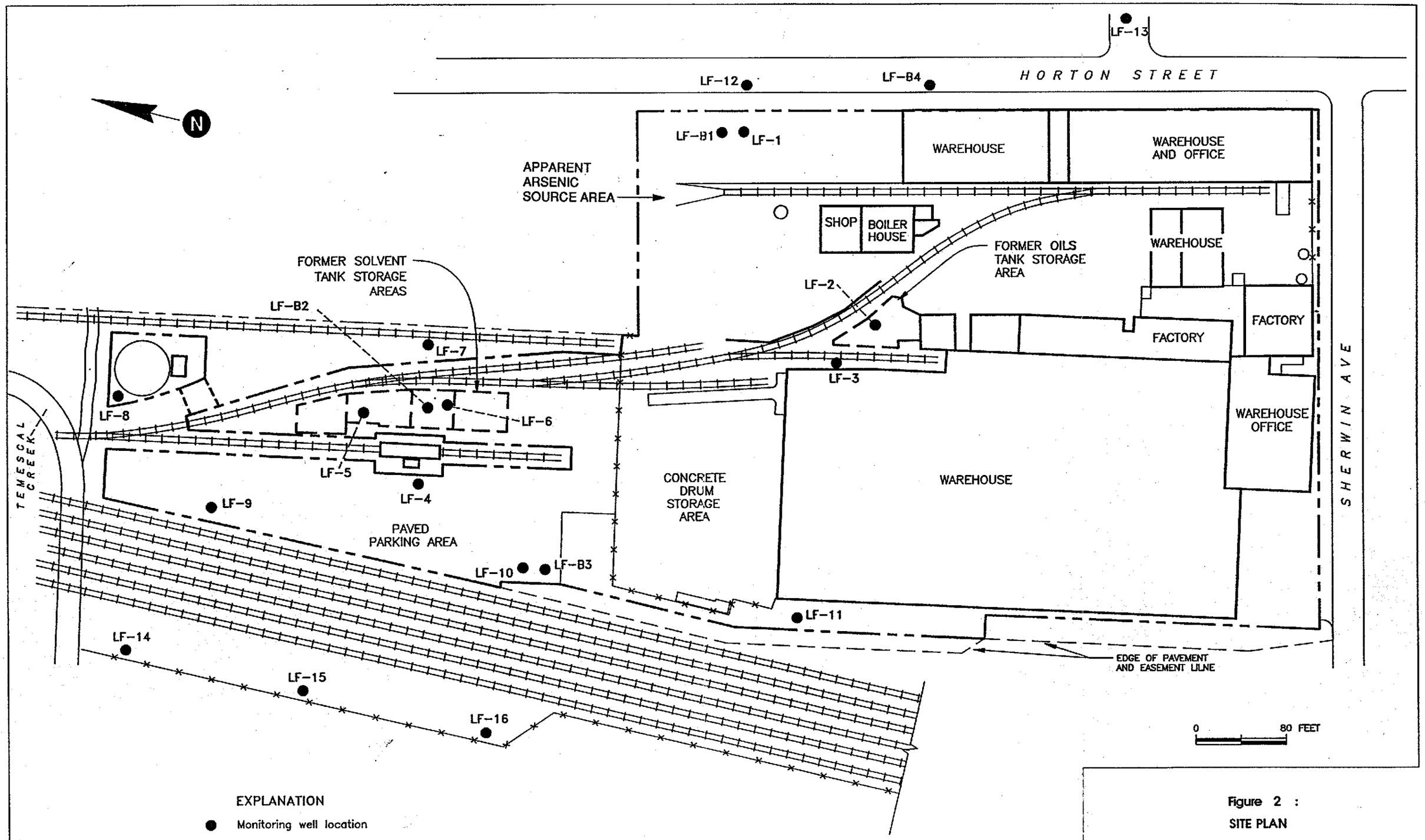

Figure 2 :
SITE PLAN

Project No. 1563.05

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1563.02\FCMR13.JML90DAT

EXPLANATION

- Monitoring well location
- Location of water-level measuring point for Temescal Creek
- Property line
- 9.10 Ground-water elevation (feet)
- 9.0 Ground-water elevation contour (feet)

HORTON STREET

SHERWIN AVE

TEMESCAL CREEK

LF-13 10.92

LF-12 10.88

LF-B4

LF-B1

LF-1 10.81

10.5

10.0

9.5

WAREHOUSE

WAREHOUSE AND OFFICE

SHOP

BOILER HOUSE

FORMER OILS TANK STORAGE AREA

WAREHOUSE

FACTORY

FACTORY

WAREHOUSE OFFICE

FORMER SOLVENT TANK STORAGE AREAS

LF-B2

LF-2 9.50

LF-3 9.73

LF-7 9.12

LF-8 8.29

LF-6

LF-5

LF-4 8.68

3.65

7.91 LF-9

CONCRETE DRUM STORAGE AREA

WAREHOUSE

PAVED PARKING AREA

9.03 LF-10

LF-B3

9.25 LF-11

EDGE OF PAVEMENT AND EASEMENT LINE

LF-14 7.00

LF-15 7.64

9.26 LF-16

7.0

7.5

8.0

8.5

9.0

N

0 80 FEET

Figure 3 :

A-ZONE GROUND-WATER ELEVATION MAP
JANUARY 30, 1991

Project No. 1563.06

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

JDR25FEB91em

1563.02\FCMR*3.JML90DAT

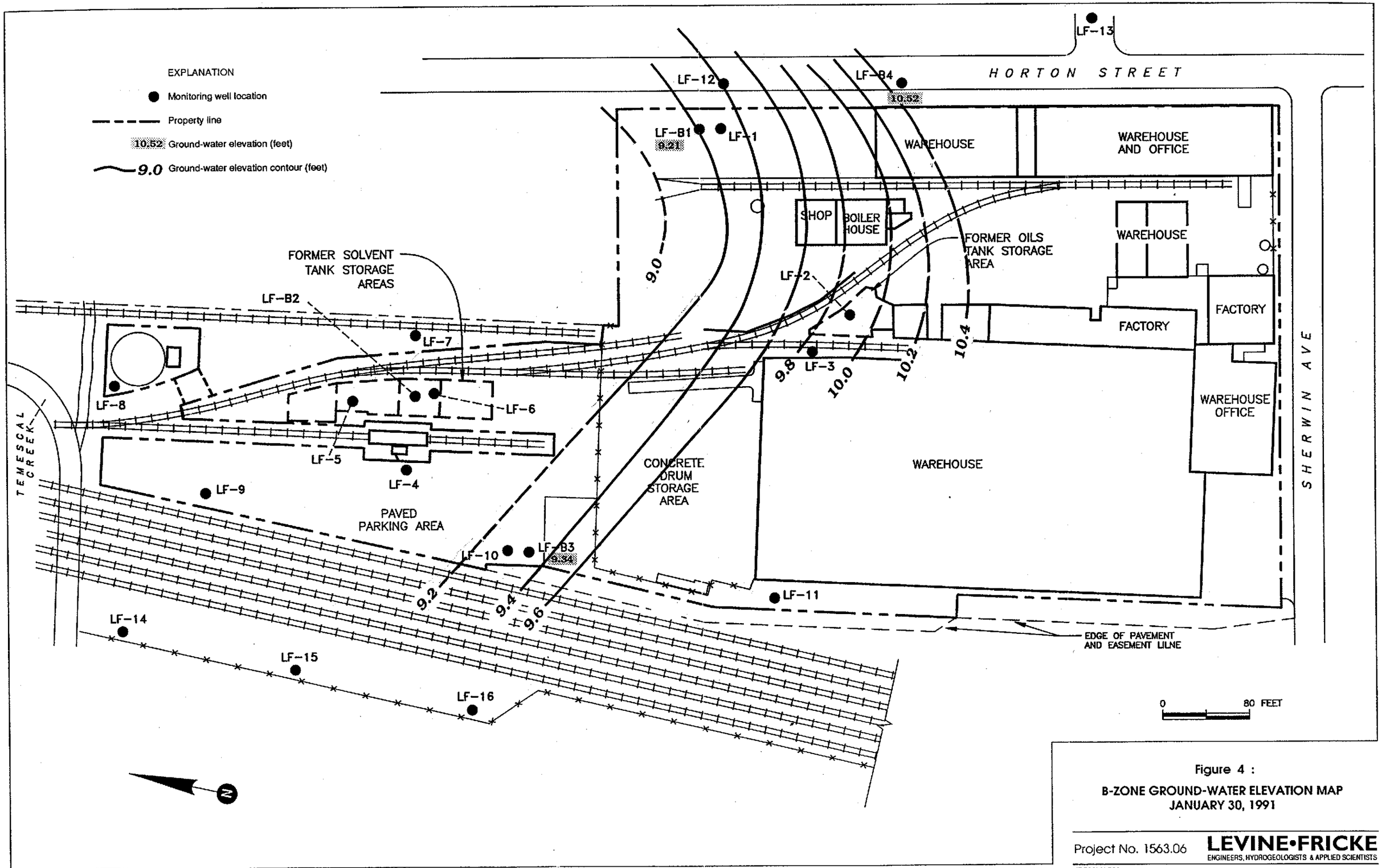


Figure 4 :

B-ZONE GROUND-WATER ELEVATION MAP
JANUARY 30, 1991

Project No. 1563.06

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

JDR18MAR91em

1563.02\FCMR13.JML90DAT

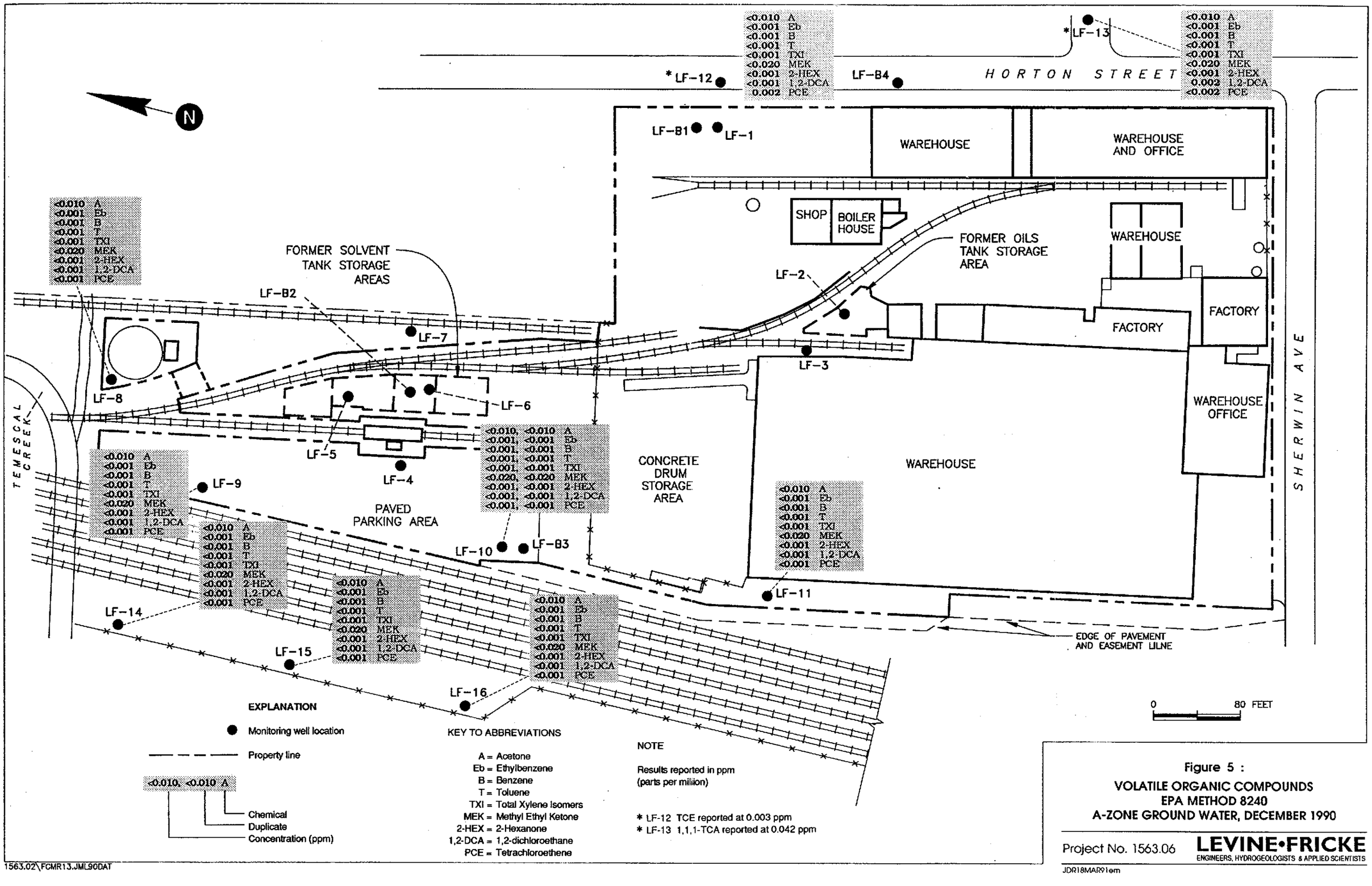


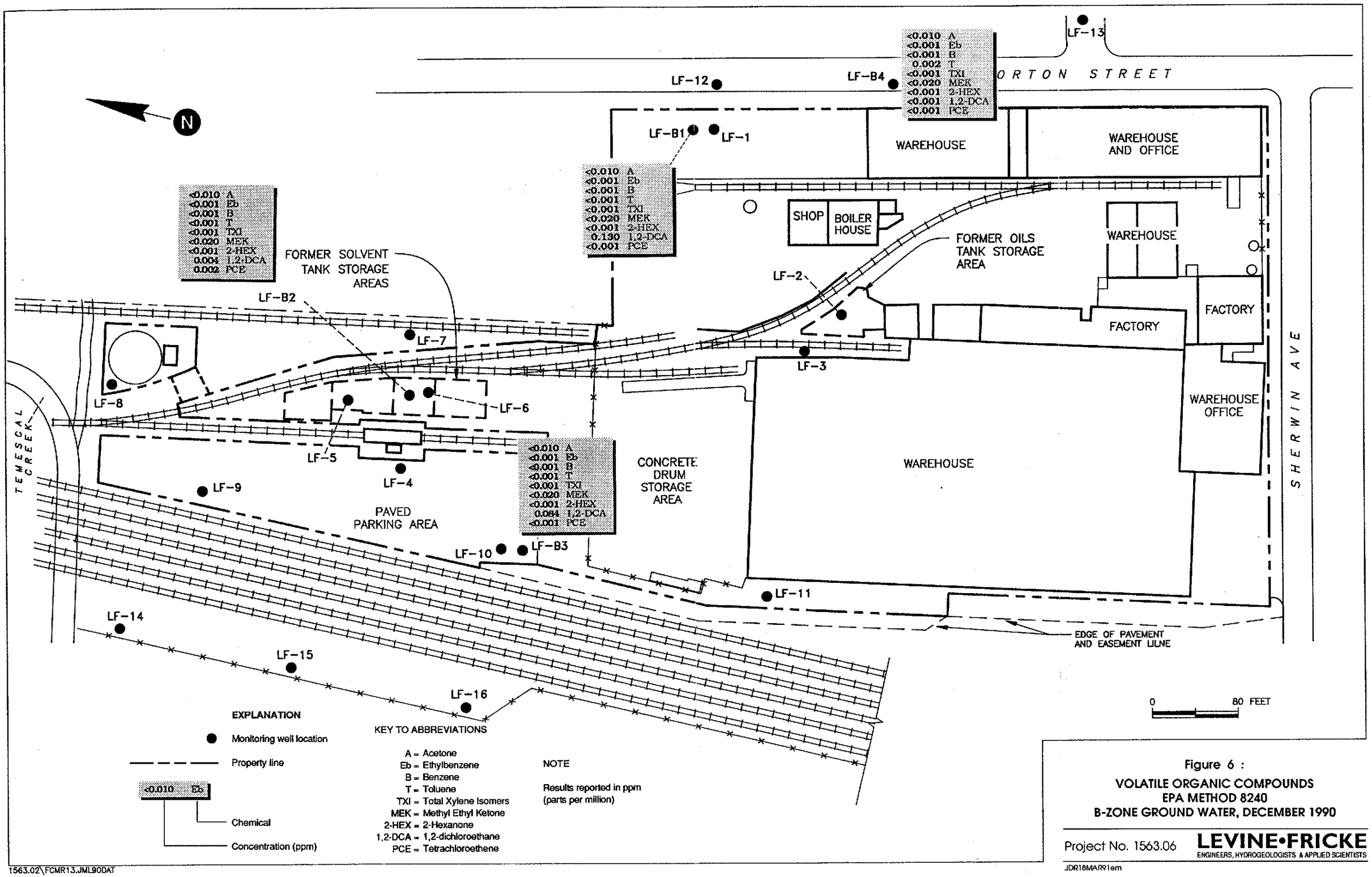
Figure 5 :
VOLATILE ORGANIC COMPOUNDS
EPA METHOD 8240
A-ZONE GROUND WATER, DECEMBER 1990

Project No. 1563.06

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

1563.02\FCMR13.JML90DAT

JDR18MAR91em



1563.02\FCMR13.JML90DAT

Figure 6 :

VOLATILE ORGANIC COMPOUNDS
EPA METHOD 8240
B-ZONE GROUND WATER, DECEMBER 1990

Project No. 1563.06

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

JDR18MAR91em

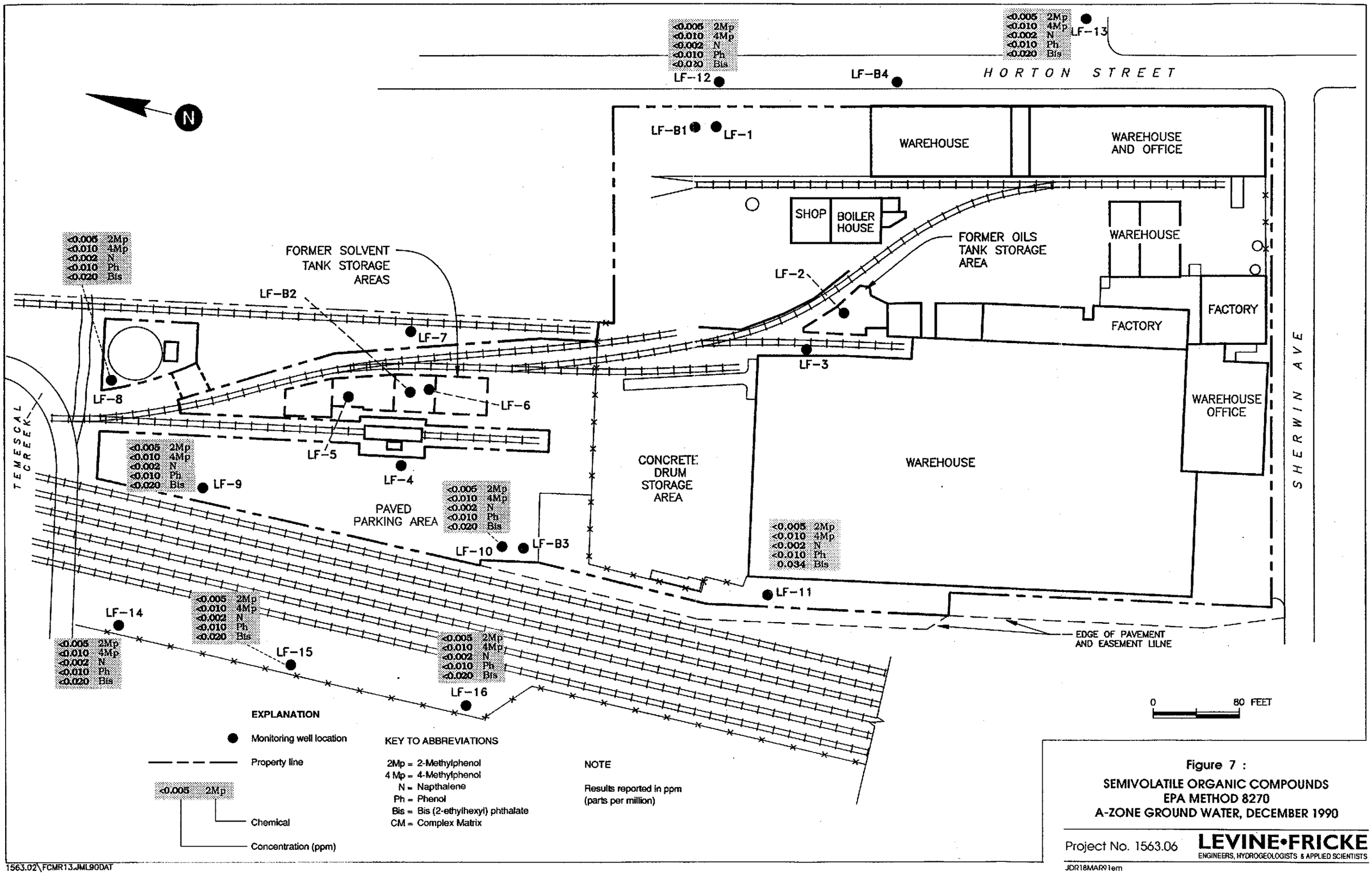


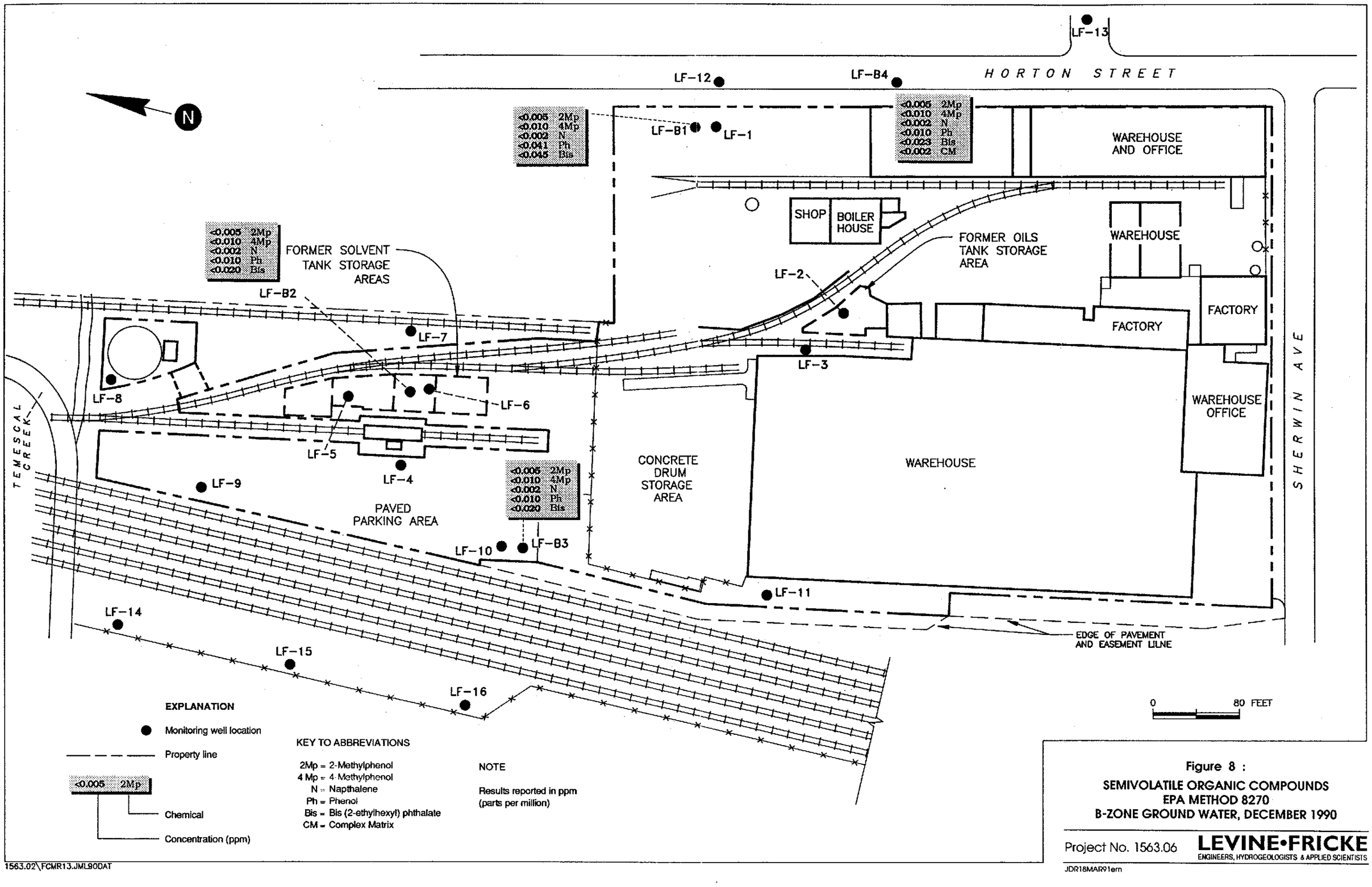
Figure 7 :
SEMIVOLATILE ORGANIC COMPOUNDS
EPA METHOD 8270
A-ZONE GROUND WATER, DECEMBER 1990

Project No. 1563.06

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

1563.02\FCMR13.JML90DAT

JDR18MAR91em



1563.02\FCMR13.JML90DAT

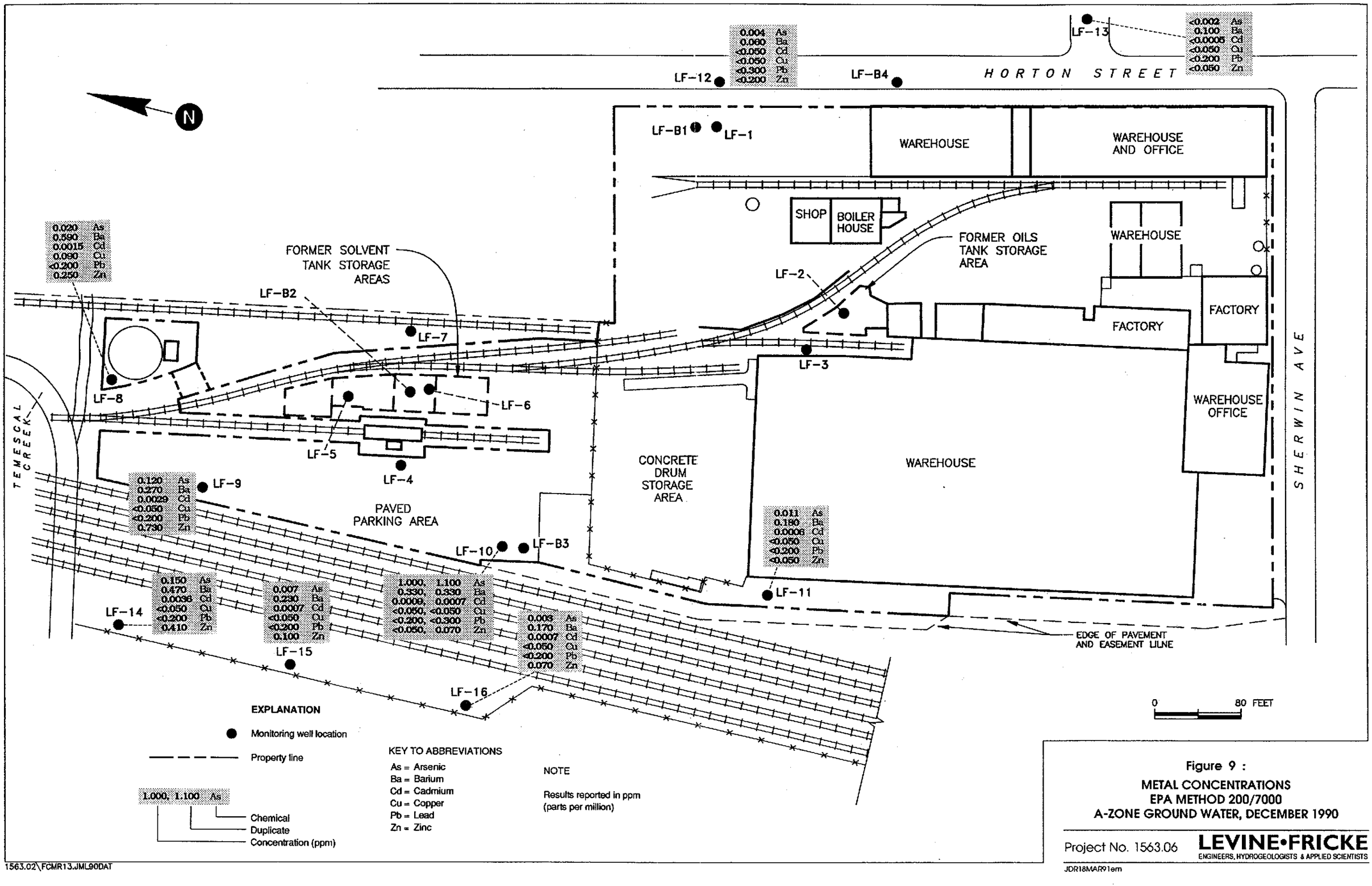
Figure 8 :

SEMIVOLATILE ORGANIC COMPOUNDS
EPA METHOD 8270
B-ZONE GROUND WATER, DECEMBER 1990

Project No. 1563.06

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

JDR18MAR91ern



1563.02\FCMR13.JML90DAT

Figure 9 :

METAL CONCENTRATIONS
EPA METHOD 200/7000
A-ZONE GROUND WATER, DECEMBER 1990

Project No. 1563.06

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

JDR18MAR91em

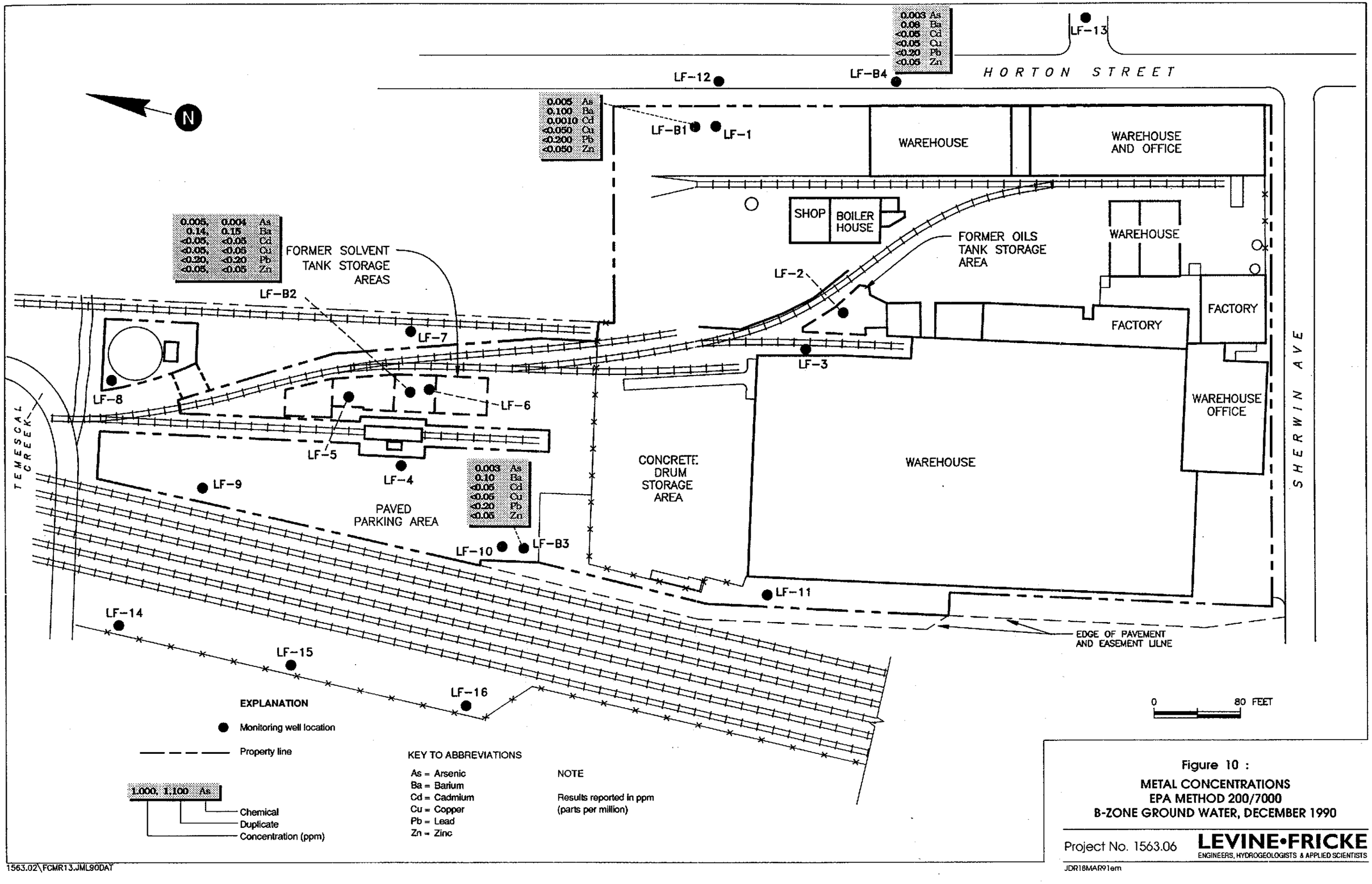


Figure 10 :
METAL CONCENTRATIONS
EPA METHOD 200/7000
B-ZONE GROUND WATER, DECEMBER 1990

Project No. 1563.06

LEVINE•FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

1563.02\FCMR13.JML90DAT

JDR18MAR91em

APPENDIX A

GROUND-WATER SAMPLING FIELD DATA SHEETS

LEVINE • FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name SHERWIN Williams Project No. 1563.06

Date 12.20.90 Sample No. LF·B1

Samplers Name SCH/ROT

Sampling Location LF·B1

Sampling Method Cent. pump/ disposable bailer

Analyses Requested 8240, 8270, As, Cad., Cu, Pb, Zn, Bar.

Number and Types of Sample Bottles used 2 VOA, 2 amber L, 1 Plastic L

Method of Shipment Hand deliver

54.40
10.60
43.80
.16
7.008

GROUND WATER

Well No. LF·B1

Well Diameter (in.) 2

Depth to Water, Static (ft) 10.60

Water in Well Box Yes

Well Depth (ft) 54.40

Height of Water Column in Well 43.80

Water Volume in Well 7.00 gal

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1033								start
1037		7	17.8	7.07	803			slightly turbid
1040		14	18.5	7.03	821			clear
1043		21	19.1	6.99	825			pump off/clear
1100								sampled
1105	12.09							

Suggested Method for Purging Well

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Sherwin Wms. Project No. 1563.06

Date: 12-19-90 Sample No. LF-B2

Samplers Name: TUST / SCIT

Sampling Location: LF-B2

Sampling Method: Cent. pump / disposable Bailer

Analyses Requested: EPA 8240, 8270, Metals

Number and Types of Sample Bottles used: 2 VOA 2 L amber, 1 L plastic

Method of Shipment: Hand Delivered

GROUND WATER

Well No. LF-B2

Well Diameter (in.) 2"

* Depth to Water, Static (ft) 3.72

Water in Well Box NO

Well Depth (ft) 37.50

Height of Water Column in Well 33.78

Water Volume in Well 5.40

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

37.50
3.72
33.78
.16
20268
3378
5.4048

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1527								START
1530		5.5	7.4	6.73	881			
1531		11.0	18.0	6.98	870			
1531:30		16.5	18.1	6.97	905			Pump off/sl turbid
1545	2.82							Sampled

Suggested Method for Purging Well

* Mistread solinst tape should have been 3.72

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Sherwin Williams — Project No. 1563.06

Date 12.20.90 — Sample No. LF-B3BR, LF-B3

Samplers Name SCH / ROT

Sampling Location LF-B3

Sampling Method Cent. pump/disposable bailer

Analyses Requested 8240, 8270, As, Cad, Cu, Pb, Zn, Ber.

Number and Types of Sample Bottles used 4 VOA, 4 imber L, 2 plast 1L

Method of Shipment hand deliver

39.05
- 3.39
35.66
x .16
21396
35660
5.7056

GROUND WATER

Well No. LF-B3

Well Diameter (in.) 2

Depth to Water, Static (ft) 3.39

Water in Well Box NO

Well Depth (ft) 39.05

Height of Water Column in Well 35.66

Water Volume in Well 5.70 ≅ 6 gal

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
0836								start
0837		6	17.2	6.98	880			sl. turbid
0839		12	18.2	6.98	899			v. slightly turbid
0840		18	16.5	6.88	929			Pump off / v. slightly turbid
9:30								BR
9:40								Sample
0954	3.33							

Suggested Method for Purging Well

LEVINE • FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Sherwin Williams — Project No. 1563.06

Date 12·19·90 — Sample No. B4, B4-BR

Samplers Name SCH/ROT

Sampling Location B4

Sampling Method Cent. pump/disposable bailer

Analyses Requested 8240, 8270, Metals: As, Cd, Cu, Pb, Zn, Ba

Number and Types of Sample Bottles used 4 VOA, 4 glass 1 liter, 2 Plastic 1 Liter

Method of Shipment Hand deliver

45.00
6.38
38.62
x .16
6.18

GROUND WATER		SURFACE WATER	
Well No.	B4	Stream Width	
Well Diameter (in.)	2"	Stream Depth	
Depth to Water, Static (ft)	6.38	Stream Velocity	
Water in Well Box	yes	Rained recently ?	
Well Depth (ft)	45.00	Other	
Height of Water Column in Well	38.62		
Water Volume in Well	6.18 ≈ 6.5 gal		

2-inch casing = 0.16 gal/ft
4-inch casing = 0.65 gal/ft
5-inch casing = 1.02 gal/ft
6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1050								
1053		6.5	17.0	6.53	691			turbid
1054		13.0	17.9	6.99	720			slightly turbid
1055		19.5	17.6	6.98	719			pump off/clear
1145	6							
1115								BLANK
1120								Sample

Suggested Method for Purging Well

10-30-89
LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name SHERWIN Williams Project No. 1563.06

Date 12.20.90 Sample No. LF.8, LF.8BR

Samplers Name SCH/ROT

Sampling Location LF.8

Sampling Method Cent. pump/ disposable bailers

Analyses Requested 8240, 8270, As, Cad., Cu, Pb, Zn, Bar.

Number and Types of Sample Bottles used 4 VOA, 4 amber L, 1 plastic L

Method of Shipment hand deliver

17.02
6.72
10.30
.16
6180
10300
16480

GROUND WATER

Well No. LF.8

Well Diameter (in.) 2

Depth to Water, Static (ft) 6.72

Water in Well Box

Well Depth (ft) 17.02

Height of Water Column in Well 10.3

Water Volume in Well 1.65
≈ 2 gal

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft
4-inch casing = 0.65 gal/ft
5-inch casing = 1.02 gal/ft
6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
0824								Start
0827		1.5	8.7	6.90	938			pump off/dry/ turbid
0846								pump on
0849		2.75						pump off/dry
0858								pump on
0900		3.5	10.0	7.38	1183			pump off/dry/ turbid
0923								pump on
0936		5.0	9.7	7.14	1339			pump off/dry/turbid
9:40								Bailer rinse
9:45								sample
1002	12.50							

Suggested Method for Purging Well

purge water # 0901 2201 G, 8240 Bailer rinse

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Sherwin Williams — Project No. 1563.06

Date 12-21-90 — Sample No. LF-9

Samplers Name RDT / SCH

Sampling Location LF-9

Sampling Method Centrifugal Pump / disposable bailer

Analyses Requested EPA 8240, 8270, metals

Number and Types of Sample Bottles used 2 VOA, 2 1 liter, 1 1L plastic

Method of Shipment

15.12
4.72
10.40
.16
6240
1040
16640

LOCATION MAP

GROUND WATER

Well No. LF-9

Well Diameter (in.) 2"

Depth to Water, Static (ft) 4.72

Water in Well Box Yes

Well Depth (ft) 15.12

Height of Water Column in Well 10.40

Water Volume in Well 1.66 ≈ 1.75

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1240								start
1241		1.75	15.7	6.83	1381			sl. turbid
1242		3.50	18.1	6.92	1488			sl. turbid
1244		5.25	19.1	6.95	1556			pump off / turbid
1248	sheen observed on discharge water in bucket							
1255								Sampled
1309	5.10							

Suggested Method for Purging Well

LEVINE • FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Sherwin Wms. Project No. 1563.06

Date: 12-21-90 Sample No. LF-10, LF-10D

Samplers Name: RDT/SCH

Sampling Location: LF-10

Sampling Method: centrifugal Pump / disposable bailer

Analyses Requested: EPA 8240, 8270, Metals

Number and Types of Sample Bottles used: 4 VOA, 4 1 l amber, 2 - 1 l plastic

Method of Shipment: hand delivered

GROUND WATER

Well No. LF-10

Well Diameter (in.) 2"

Depth to Water, Static (ft) 3.66

Water in Well Box ✓

Well Depth (ft) 15.30

Height of Water Column in Well 11.64

Water Volume in Well 1.86 ≈ 2.0

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

15.30
3.66
11.64
.16
6984
1164
18624

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1328								START
1329		2.0	17.6	7.73	1647			Turbid
1329:30		4.0	17.7	7.00	1915			Sl. turbid
1330		6.0	19.1	6.82	1960			Sl. turbid/ pump off
1333								pump on
1334		8.0	18.9	6.79	1969			Pump off/Sl. turbid
1345								sampled
1355								Duplicate
1402	sheen	observed	on discharge	water	in	bucket		
1406	3.67							

Suggested Method for Purging Well

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Sherwin Wms. Project No. 1565.06

Date: 12-21-90 Sample No. LF-11

Samplers Name: RDT/SCH

Sampling Location: LF-11

Sampling Method: Cent. pump / disposable bailer

Analyses Requested: EPA 8240, 8270, Metals

Number and Types of Sample Bottles used: 2 VOA 2 1L amber 1 1L plastic

Method of Shipment: Hand Delivered

GROUND WATER

Well No. LF-11

Well Diameter (in.) 2"

Depth to Water, Static (ft) 3.23

Water in Well Box ✓

Well Depth (ft) 15.15

Height of Water Column in Well 11.92

Water Volume in Well 1.90 ≈ 2.0

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

15.15
-3.23
11.92
.16
1.9072
1.192
1.9072

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1030								START
1031		2.0	14.0	7.00	2380			turbid
1032		4.0	16.2	7.01	2300			turbid
1032:30		6.0	18.0	6.83	2450			pump off/turbid
1034:30								pump on
1035		8.0	18.3	6.83	*			pump off/SI turbid
1040								SAMPLE
1059	3.24							

Suggested Method for Purging Well

*Conductivit, meter not working properly

LEVINE • FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name SHERWIN Williams Project No. 1563.06

Date 12.19.90 Sample No. LF.12

Samplers Name SCH/ROT

Sampling Location LF.12

Sampling Method Centr. pump / disposable bailer

Analyses Requested 8240, 8270, As, Cad, Cu, Pb, Zn, Bar.

Number and Types of Sample Bottles used 2 VOA, 2 amber L, 1 plastic L

Method of Shipment hand deliver

17.00
6.41
10.59
.16
6354
1059
1.694

LOCATION MAP

GROUND WATER

Well No. LF.12

Well Diameter (in.) 2

Depth to Water, Static (ft) 6.41

Water in Well Box yes

Well Depth (ft) 17.00

Height of Water Column in Well 10.59

Water Volume in Well 1.69 ≅ 1.75

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1414								START
1415		175	17.2	6.34	667			turbid
1415:30		3.5	18.3	6.27	679			turbid
1416		5.25	19.5	6.58	688			turbid/run-off
1417								slant
1418:30		7.00	19.5	6.57	696			Turbid/run-off
1430								Sample d.
1417	6.43							

Suggested Method for Purging Well

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Sherwin Wms.

Project No.: 1563.96

Date: 12-19-90

Sample No.: LF-13

Samplers Name: RJST / SCH

Sampling Location: LF-13

Sampling Method: Cent. pump / disposable bailer

Analyses Requested: EPA 8240, 8270, metals

Number and Types of Sample Bottles used: 2 VOA 2 1l amber, 1 plastic l

Method of Shipment: Lab Delivery

19.08
6.17
10.91
.16
6546
1091
1.7456

GROUND WATER

Well No.: LF-13

Well Diameter (in.): 2"

Depth to Water, Static (ft): 6.17

Water in Well Box: —

Well Depth (ft): 19.08

Height of Water Column in Well: 10.91

Water Volume in Well: 1.74

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1313								
1315		2	17.2	6.60	575			Pump off / sl. turbid
1318								
1319		4	17.8	6.82	645			sl. turbid
1321		6	18.7	6.74	6[illegible]			pump off / sl turbid
1330								sampled
1345	6.33							

Suggested Method for Purging Well

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name SHERWIN Williams Project No. 1563.06

Date 12.20.90 Sample No. LF.14

Samplers Name SCH/ROT

Sampling Location LF.14

Sampling Method Cent. pump/disposable bailer

Analyses Requested 8240, 8270, As, Cd, Cu, Pb, Zn, Ba.

Number and Types of Sample Bottles used 2 VOA, 2 amber L, 2 plastic L

Method of Shipment hand deliver

GROUND WATER

Well No. LF.14

Well Diameter (in.) 2

Depth to Water, Static (ft) 5.86

Water in Well Box NO

Well Depth (ft) 18.35

Height of Water Column in Well 12.49

Water Volume in Well 2.0 gal

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

18.35
5.86
12.49
.16
7494
12490
19984

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1526								Start
1527		2	15.0	6.72	981			Sl. turbid
1528		4	15.9	6.66	1017			Sl. turbid
1529		6	16.5	6.84	1060			Sl. turbid/pump off
1530								Start
1532		8	16.6	6.90	1041			Pump off/turbid
1545								Sampled LF.14
1550	5.91							

Suggested Method for Purging Well

LEVINE • FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name SHERWIN Williams — Project No. 1563.06

Date 12·20·90 — Sample No. LF·15

Samplers Name SCH/ROT

Sampling Location LF·15

Sampling Method Cent. Pump/disposable bailer

Analyses Requested 8240, 8270, As, Cad., Cu, Pb, Zn, Per

Number and Types of Sample Bottles used 2 VOA, 2 amber L, 1 plastic L

Method of Shipment hand deliver

18.62
4.61
14.01
·16
8406
1401 0
2.241 6

GROUND WATER

Well No. LF 15

Well Diameter (in.) 2

Depth to Water, Static (ft) 4.61

Water in Well Box NO

Well Depth (ft) 18.62

Height of Water Column in Well 14.01

Water Volume in Well 2.2 gal
≈ 2.25

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1427								Start
1428		2.25	16.0	6.88	847			
1429		4.5	17.2	6.76	808			turbid
1430		6.75	17.7	6.73	822			Pump off/turbid
1445	4.70							sampled

Suggested Method for Purging Well

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Sherwin Wms. | Project No. 1563.06

Date: 12-20-90 | Sample No. LF-16

Samplers Name: RJT / SCH

Sampling Location: LF-16

Sampling Method: centrifugal pump / disposable bailer

Analyses Requested: EPA 8240, 8270, metals

Number and Types of Sample Bottles used: 2 VOA, 2 1L amber, 1 L plastic

Method of Shipment: hand delivered

GROUND WATER

Well No. LF-16

Well Diameter (in.) 2"

Depth to Water, Static (ft) 4.29

Water in Well Box /

Well Depth (ft) 18.62

Height of Water Column in Well 14.33

Water Volume in Well 2.29 ≈ 2.5

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently? /

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

18.62
4.29
14.33
.16
8598
1433
22928

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1343								START
1344		2.5	16.1	6.88	825			Sl. turbid
1345		5.0	17.5	6.76	848			Sl. turbid
1346		7.5	18.0	6.75	861			Pump off/ Sl. turbid
1400								Sampled
1407	4.14							

Suggested Method for Purging Well

APPENDIX B

LABORATORY CERTIFICATES

Analytical Report

FILE
1563.06

LOG NO: E90-12-474

Received: 19 DEC 90
Reported: 18 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-474-1	LF-B4-TB	19 DEC 90
12-474-2	LF-B4 BR	19 DEC 90
12-474-3	LF-B4	19 DEC 90
12-474-4	LF-13	19 DEC 90
12-474-5	LF-12	19 DEC 90

PARAMETER	12-474-1	12-474-2	12-474-3	12-474-4	12-474-5
Arsenic, mg/L	<0.002	<0.002	<0.002	<0.002	0.026
Cadmium, mg/L	<0.0005	<0.0005	0.0014	<0.0005	<0.0005
Barium, mg/L	<0.05	<0.05	0.08	0.10	0.41
Copper, mg/L	<0.05	<0.05	<0.05	<0.05	0.08
Lead, mg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc, mg/L	<0.05	<0.05	0.08	<0.05	0.33
Nitric Acid Digestion, Date	01.02.91	01.02.91	01.02.91	01.02.91	01.02.91
Nitric Acid Digestion, Date	01.02.91	01.02.91	01.02.91	01.02.91	01.02.91

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-474-1	LF-B4-TB	19 DEC 90
12-474-2	LF-B4 BR	19 DEC 90
12-474-3	LF-B4	19 DEC 90
12-474-4	LF-13	19 DEC 90
12-474-5	LF-12	19 DEC 90

PARAMETER	12-474-1	12-474-2	12-474-3	12-474-4	12-474-5
B/N,A Ext.Pri.Poll. (EPA-8270)					
Date Analyzed	---	01.16.91	01.16.91	01.16.91	01.16.91
Date Extracted	---	12.26.90	12.26.90	12.26.90	12.26.90
Dilution Factor, Times	---	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	---	<2	<2	<2	<2
1,2-Dichlorobenzene, ug/L	---	<2	<2	<2	<2
1,2-Diphenylhydrazine, ug/L	---	<10	<10	<10	<10
1,3-Dichlorobenzene, ug/L	---	<2	<2	<2	<2
1,4-Dichlorobenzene, ug/L	---	<2	<2	<2	<2
2,4,5-Trichlorophenol, ug/L	---	<10	<10	<10	<10
2,4,6-Trichlorophenol, ug/L	---	<10	<10	<10	<10
2,4-Dichlorophenol, ug/L	---	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	---	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	---	<20	<20	<20	<20
2,4-Dinitrotoluene, ug/L	---	<20	<20	<20	<20
2,6-Dinitrotoluene, ug/L	---	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	---	<2	<2	<2	<2
2-Chlorophenol, ug/L	---	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	---	<20	<20	<20	<20
2-Methylnaphthalene, ug/L	---	<2	<2	<2	<2
2-Methylphenol (o-Cresol), ug/L	---	<5	<5	<5	<5
2-Nitroaniline, ug/L	---	<20	<20	<20	<20

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12-474-1	LF-B4-TB	19 DEC 90
12-474-2	LF-B4 BR	19 DEC 90
12-474-3	LF-B4	19 DEC 90
12-474-4	LF-13	19 DEC 90
12-474-5	LF-12	19 DEC 90

PARAMETER	12-474-1	12-474-2	12-474-3	12-474-4	12-474-5
2-Nitrophenol, ug/L	---	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	---	<20	<20	<20	<20
3-Nitroaniline, ug/L	---	<20	<20	<20	<20
4-Bromophenylphenylether, ug/L	---	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	---	<10	<10	<10	<10
4-Chloroaniline, ug/L	---	<10	<10	<10	<10
4-Chlorophenylphenylether, ug/L	---	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	---	<10	<10	<10	<10
4-Nitroaniline, ug/L	---	<20	<20	<20	<20
4-Nitrophenol, ug/L	---	<50	<50	<50	<50
Acenaphthene, ug/L	---	<2	<2	<2	<2
Acenaphthylene, ug/L	---	<2	<2	<2	<2
Aniline, ug/L	---	<20	<20	<20	<20
Anthracene, ug/L	---	<2	<2	<2	<2
Benzidine, ug/L	---	<200	<200	<200	<200
Benzo(a)anthracene, ug/L	---	<2	<2	<2	<2
Benzo(a)pyrene, ug/L	---	<2	<2	<2	<2
Benzo(b)fluoranthene, ug/L	---	<2	<2	<2	<2
Benzo(g,h,i)perylene, ug/L	---	<2	<2	<2	<2
Benzo(k)fluoranthene, ug/L	---	<2	<2	<2	<2
Benzyl alcohol, ug/L	---	<10	<10	<10	<10

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-474-1	LF-B4-TB	19 DEC 90
12-474-2	LF-B4 BR	19 DEC 90
12-474-3	LF-B4	19 DEC 90
12-474-4	LF-13	19 DEC 90
12-474-5	LF-12	19 DEC 90

PARAMETER	12-474-1	12-474-2	12-474-3	12-474-4	12-474-5
Benzoic acid, ug/L	---	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	---	<10	<10	<10	<10
Chrysene, ug/L	---	<2	<2	<2	<2
Di-n-octylphthalate, ug/L	---	<10	<10	<10	<10
Dibenzo(a,h)anthracene, ug/L	---	<2	<2	<2	<2
Dibenzofuran, ug/L	---	<5	<5	<5	<5
Dibutylphthalate, ug/L	---	<10	<10	<10	<10
Diethylphthalate, ug/L	---	<10	<10	<10	<10
Dimethylphthalate, ug/L	---	<10	<10	<10	<10
Fluoranthene, ug/L	---	<2	<2	<2	<2
Fluorene, ug/L	---	<2	<2	<2	<2
Hexachlorobenzene, ug/L	---	<2	<2	<2	<2
Hexachlorobutadiene, ug/L	---	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	---	<50	<50	<50	<50
Hexachloroethane, ug/L	---	<10	<10	<10	<10
Indeno(1,2,3-c,d)pyrene, ug/L	---	<2	<2	<2	<2
Isophorone, ug/L	---	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	---	<5	<5	<5	<5
N-Nitrosodiphenylamine, ug/L	---	<5	<5	<5	<5
N-Nitrosodi-n-propylamine, ug/L	---	<5	<5	<5	<5
Nitrobenzene, ug/L	---	<2	<2	<2	<2

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12-474-1	LF-B4-TB	19 DEC 90
12-474-2	LF-B4 BR	19 DEC 90
12-474-3	LF-B4	19 DEC 90
12-474-4	LF-13	19 DEC 90
12-474-5	LF-12	19 DEC 90

PARAMETER	12-474-1	12-474-2	12-474-3	12-474-4	12-474-5
Naphthalene, ug/L	---	<2	<2	<2	<2
Phenanthrene, ug/L	---	<2	<2	<2	<2
Phenol, ug/L	---	<10	<10	<10	<10
Pentachlorophenol, ug/L	---	<20	<20	<20	<20
Pyrene, ug/L	---	<2	<2	<2	<2
Bis(2-chloroethoxy)methane, ug/L	---	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	---	<2	<2	<2	<2
Bis(2-chloroisopropyl)ether, ug/L	---	<5	<5	<5	<5
Bis(2-ethylhexyl)phthalate, ug/L	---	<20	<20	<20	<20
Other B/N,A Ext.Pri.Poll. (EPA-8270)	---	---	---	---	---

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12-474-2	LF-B4 BR	19 DEC 90
12-474-3	LF-B4	19 DEC 90
12-474-4	LF-13	19 DEC 90
12-474-5	LF-12	19 DEC 90

PARAMETER	12-474-1	12-474-2	12-474-3	12-474-4	12-474-5
Purgeable Priority Pollutants					
Date Analyzed	---	01.02.91	01.02.91	01.02.91	01.02.91
Date Extracted	---	01.02.91	01.02.91	01.02.91	01.02.91
Dilution Factor, Times	---	1	1	1	1
1,1,1-Trichloroethane, ug/L	---	<1	<1	42	<1
1,1,2,2-Tetrachloroethane, ug/L	---	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	---	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	---	<1	<1	2	<1
1,1-Dichloroethene, ug/L	---	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	---	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	---	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	---	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	---	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	---	<1	<1	<1	<1
2-Chloroethylvinylether, ug/L	---	<1	<1	<1	<1
2-Hexanone, ug/L	---	<1	<1	<1	<1
4-Methyl-2-Pentanone, ug/L	---	<1	<1	<1	<1
Acetone, ug/L	---	<10	<10	<10	<10
Acrolein, ug/L	---	<10	<10	<10	<10
Acrylonitrile, ug/L	---	<10	<10	<10	<10
Bromodichloromethane, ug/L	---	<1	<1	<1	<1
Bromomethane, ug/L	---	<1	<1	<1	<1

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12-474-1	LF-B4-TB	19 DEC 90
12-474-2	LF-B4 BR	19 DEC 90
12-474-3	LF-B4	19 DEC 90
12-474-4	LF-13	19 DEC 90
12-474-5	LF-12	19 DEC 90

PARAMETER	12-474-1	12-474-2	12-474-3	12-474-4	12-474-5
Benzene, ug/L	---	<1	<1	<1	<1
Bromoform, ug/L	---	<1	<1	<1	<1
Chlorobenzene, ug/L	---	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	---	<1	<1	<1	<1
Chloroethane, ug/L	---	<1	<1	<1	<1
Chloroform, ug/L	---	<1	<1	<1	<1
Chloromethane, ug/L	---	<1	<1	<1	<1
Carbon Disulfide, ug/L	---	<1	<1	<1	<1
Dibromochloromethane, ug/L	---	<1	<1	<1	<1
Ethylbenzene, ug/L	---	<1	<1	<1	<1
Freon 113, ug/L	---	<1	<1	<1	<1
Methyl ethyl ketone, ug/L	---	<20	<20	<20	<20
Methylene chloride, ug/L	---	<5	<5	<5	<5
Styrene, ug/L	---	<1	<1	<1	<1
Trichloroethene, ug/L	---	<1	<1	<1	3
Trichlorofluoromethane, ug/L	---	<1	<1	<1	<1
Toluene, ug/L	---	<1	2	<1	<1
Tetrachloroethene, ug/L	---	<1	<1	2	2
Vinyl acetate, ug/L	---	<1	<1	<1	<1
Vinyl chloride, ug/L	---	<1	<1	<1	<1
Total Xylene Isomers, ug/L	---	<1	<1	<1	<1
cis-1,2-Dichloroethene, ug/L	---	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	---	<1	<1	<1	<1

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12-474-1	LF-B4-TB	19 DEC 90
12-474-2	LF-B4 BR	19 DEC 90
12-474-3	LF-B4	19 DEC 90
12-474-4	LF-13	19 DEC 90
12-474-5	LF-12	19 DEC 90

'ARAMETER	12-474-1	12-474-2	12-474-3	12-474-4	12-474-5
trans-1,2-Dichloroethene, ug/L	---	<1	<1	<1	<1
trans-1,3-Dichloropropene, ug/L	---	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-474-6	LF-2B	19 DEC 90

PARAMETER	12-474-6
Arsenic, mg/L	0.008
Cadmium, mg/L	0.0026
Barium, mg/L	0.32
Copper, mg/L	<0.05
Lead, mg/L	<0.2
Zinc, mg/L	0.17
Nitric Acid Digestion, Date	01.02.91
Nitric Acid Digestion, Date	01.02.91

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12-474-6	LF-2B	19 DEC 90

PARAMETER	12-474-6
B/N,A Ext.Pri.Poll. (EPA-8270)	
Date Analyzed	01.17.91
Date Extracted	12.26.90
Dilution Factor, Times	1
1,2,4-Trichlorobenzene, ug/L	<2
1,2-Dichlorobenzene, ug/L	<2
1,2-Diphenylhydrazine, ug/L	<10
1,3-Dichlorobenzene, ug/L	<2
1,4-Dichlorobenzene, ug/L	<2
2,4,5-Trichlorophenol, ug/L	<10
2,4,6-Trichlorophenol, ug/L	<10
2,4-Dichlorophenol, ug/L	<5
2,4-Dimethylphenol, ug/L	<5
2,4-Dinitrophenol, ug/L	<20
2,4-Dinitrotoluene, ug/L	<20
2,6-Dinitrotoluene, ug/L	<5
2-Chloronaphthalene, ug/L	<2
2-Chlorophenol, ug/L	<5
2-Methyl-4,6-dinitrophenol, ug/L	<20
2-Methylnaphthalene, ug/L	<2
2-Methylphenol (o-Cresol), ug/L	<5
2-Nitroaniline, ug/L	<20
2-Nitrophenol, ug/L	<5
3,3'-Dichlorobenzidine, ug/L	<20
3-Nitroaniline, ug/L	<20
4-Bromophenylphenylether, ug/L	<5
4-Chloro-3-methylphenol, ug/L	<10

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-474-6	LF-2B	19 DEC 90

PARAMETER	12-474-6
4-Chloroaniline, ug/L	<10
4-Chlorophenylphenylether, ug/L	<5
4-Methylphenol (p-Cresol), ug/L	<10
4-Nitroaniline, ug/L	<20
4-Nitrophenol, ug/L	<50
Acenaphthene, ug/L	<2
Acenaphthylene, ug/L	<2
Aniline, ug/L	<20
Anthracene, ug/L	<2
Benzidine, ug/L	<200
Benzo(a)anthracene, ug/L	<2
Benzo(a)pyrene, ug/L	<2
Benzo(b)fluoranthene, ug/L	<2
Benzo(g,h,i)perylene, ug/L	<2
Benzo(k)fluoranthene, ug/L	<2
Benzyl alcohol, ug/L	<10
Benzoic acid, ug/L	<50
Butylbenzylphthalate, ug/L	<10
Chrysene, ug/L	<2
Di-n-octylphthalate, ug/L	<10
Dibenzo(a,h)anthracene, ug/L	<2
Dibenzofuran, ug/L	<5
Dibutylphthalate, ug/L	<10
Diethylphthalate, ug/L	<10
Dimethylphthalate, ug/L	<10
Fluoranthene, ug/L	<2
Fluorene, ug/L	<2

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-474-6	LF-2B	19 DEC 90

PARAMETER	12-474-6
Hexachlorobenzene, ug/L	<2
Hexachlorobutadiene, ug/L	<5
Hexachlorocyclopentadiene, ug/L	<50
Hexachloroethane, ug/L	<10
Indeno(1,2,3-c,d)pyrene, ug/L	<2
Isophorone, ug/L	<5
N-Nitrosodimethylamine, ug/L	<5
N-Nitrosodiphenylamine, ug/L	<5
N-Nitrosodi-n-propylamine, ug/L	<5
Nitrobenzene, ug/L	<2
Naphthalene, ug/L	<2
Phenanthrene, ug/L	<2
Phenol, ug/L	<10
Pentachlorophenol, ug/L	<20
Pyrene, ug/L	<2
Bis(2-chloroethoxy)methane, ug/L	<5
Bis(2-chloroethyl)ether, ug/L	<2
Bis(2-chloroisopropyl)ether, ug/L	<5
Bis(2-ethylhexyl)phthalate, ug/L	<20
Other B/N,A Ext.Pri.Poll. (EPA-8270)	---
Semi-Quantified Results **	
Total C15-C30Hydrocarbon, ug/L	100

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-12-474

Received: 19 DEC 90
Reported: 18 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-474-6	LF-2B	19 DEC 90

PARAMETER	12-474-6
Purgeable Priority Pollutants	
Date Analyzed	01.02.91
Date Extracted	01.02.91
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	<1
1,1,2,2-Tetrachloroethane, ug/L	<1
1,1,2-Trichloroethane, ug/L	<1
1,1-Dichloroethane, ug/L	<1
1,1-Dichloroethene, ug/L	<1
1,2-Dichloroethane, ug/L	4
1,2-Dichlorobenzene, ug/L	<1
1,2-Dichloropropane, ug/L	<1
1,3-Dichlorobenzene, ug/L	<1
1,4-Dichlorobenzene, ug/L	<1
2-Chloroethylvinylether, ug/L	<1
2-Hexanone, ug/L	<1
4-Methyl-2-Pentanone, ug/L	<1
Acetone, ug/L	<10
Acrolein, ug/L	<10
Acrylonitrile, ug/L	<10
Bromodichloromethane, ug/L	<1
Bromomethane, ug/L	<1
Benzene, ug/L	<1
Bromoform, ug/L	<1
Chlorobenzene, ug/L	<1
Carbon Tetrachloride, ug/L	<1
Chloroethane, ug/L	<1

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-12-474

Received: 19 DEC 90
Reported: 18 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-474-6	LF-2B	19 DEC 90

PARAMETER	12-474-6
Chloroform, ug/L	<1
Chloromethane, ug/L	<1
Carbon Disulfide, ug/L	<1
Dibromochloromethane, ug/L	<1
Ethylbenzene, ug/L	<1
Freon 113, ug/L	<1
Methyl ethyl ketone, ug/L	<20
Methylene chloride, ug/L	<5
Styrene, ug/L	<1
Trichloroethene, ug/L	<1
Trichlorofluoromethane, ug/L	<1
Toluene, ug/L	<1
Tetrachloroethene, ug/L	2
Vinyl acetate, ug/L	<1
Vinyl chloride, ug/L	<1
Total Xylene Isomers, ug/L	<1
cis-1,2-Dichloroethene, ug/L	<1
cis-1,3-Dichloropropene, ug/L	<1
trans-1,2-Dichloroethene, ug/L	<1
trans-1,3-Dichloropropene, ug/L	<1
Semi-Quantified Results **	
Unidentified, ug/L	50

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

Lim D. Lessley, Ph.D., Laboratory Director

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

: ORDER PLACED FOR CLIENT: Levine - Fricke 9012474 :
BC ANALYTICAL : EMVL LAB : 13:39:28 23 JAN 1991 - P. 1 :

AMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.... ANALYZED	METHOD.....	EQUIP.	BATCH	ID.NO
2474*1	LF-B4-TB	AS	01.03.91	7060	514-01	1	7266
		CD,GFA	01.09.91	213.2	514-05	1	7379
		BA	01.08.91	6010	515-01	2	7708
		CU	01.08.91	6010	515-01	2	7708
		PB	01.08.91	6010	515-01	2	7708
		ZN	01.09.91	7950	514-02	2	7648
		DIG,AQ	01.02.91	3010		2	7877
		DIG,AQ,GFA	01.02.91	3020		1	7877
012474*2	LF-B4 BR	AS	01.03.91	7060	514-01	1	7266
		CD,GFA	01.09.91	213.2	514-05	1	7379
		BA	01.08.91	6010	515-01	2	7708
		CU	01.08.91	6010	515-01	2	7708
		PB	01.08.91	6010	515-01	2	7708
		ZN	01.09.91	7950	514-02	2	7648
		DIG,AQ	01.02.91	3010		2	7877
		DIG,AQ,GFA	01.02.91	3020		1	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.02.91	8240	517-04	003	7038
012474*3	LF-B4	AS	01.08.91	7060	514-01	1	7266
		CD,GFA	01.09.91	213.2	514-05	1	7379
		BA	01.08.91	6010	515-01	2	7708
		CU	01.08.91	6010	515-01	2	7708
		PB	01.08.91	6010	515-01	2	7708
		ZN	01.09.91	7950	514-02	2	7648
		DIG,AQ	01.02.91	3010		2	7877
		DIG,AQ,GFA	01.02.91	3010		1	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.02.91	8240	517-04	003	7038
012474*4	LF-13	AS	01.03.91	7060	514-01	1	7266
		CD,GFA	01.09.91	7131	514-05	1	7379
		BA	01.08.91	6010	515-01	2	7708
		CU	01.08.91	6010	515-01	2	7708
		PB	01.08.91	6010	515-01	2	7708
		ZN	01.09.91	7950	514-02	2	7648
		DIG,AQ	01.02.91	3010		2	7877
		DIG,AQ,GFA	01.02.91	3020		1	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.02.91	8240	517-04	003	7038
012474*5	LF-12	AS	01.08.91	7060	514-01	1	7266
		CD,GFA	01.09.91	7131	514-05	1	7379
		BA	01.08.91	6010	515-01	2	7708
		CU	01.08.91	6010	515-01	2	7708
		PB	01.08.91	6010	515-01	2	7708
		ZN	01.09.91	7950	514-02	2	7648

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

AMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.... ANALYZED	METHOD.....	EQUIP.	BATCH	ID.NO
		DIG,AQ	01.02.91	3010		2	7877
		DIG,AQ,GFA	01.02.91	3020		1	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.02.91	8240	517-04	003	7038
012474*6	LF-2B	AS	01.08.91	7060	514-01	1	7266
		CD,GFA	01.09.91	7131	514-05	1	7379
		BA	01.08.91	6010	515-01	2	7708
		CU	01.08.91	6010	515-01	2	7708
		PB	01.08.91	6010	515-01	2	7708
		ZN	01.09.91	7950	514-02	2	7648
		DIG,AQ	01.02.91	3010		2	7877
		DIG,AQ,GFA	01.02.91	3020		1	7877
		BNA.8270	01.17.91	8270	517-01	241	6192
		VOA.8240	01.07.91	8240	517-04	003	

**

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

ATE REPORTED : 01/23/91

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
rsenic	01.03.91	1	0.028	0.025	mg/L	112
admium	01.09.91	1	0.0015	0.0015	mg/L	100
Barium	01.08.91	2	1.0	1.0	mg/L	100
Copper	01.08.91	2	5.0	5.0	mg/L	100
ead	01.08.91	2	11	10	mg/L	110
Zinc	01.09.91	2	9.4	10	mg/L	94
B/N,A Ext.Pri.Poll. (EPA-625)						
Dilution Factor	01.11.91	241	1	1	Times	100
1,2,4-Trichlorobenzene	01.11.91	241	23	50	ug/L	46
1,4-Dichlorobenzene	01.11.91	241	18	50	ug/L	36
2,4-Dinitrotoluene	01.11.91	241	19	50	ug/L	38
2-Chlorophenol	01.11.91	241	59	100	ug/L	59
4-Chloro-3-methylphenol	01.11.91	241	58	100	ug/L	58
4-Nitrophenol	01.11.91	241	67	100	ug/L	67
Acenaphthene	01.11.91	241	25	50	ug/L	50
Dibutylphthalate	01.11.91	241	34	50	ug/L	68
N-Nitrosodi-n-propylamine	01.11.91	241	20	50	ug/L	40
Phenol	01.11.91	241	16	100	ug/L	16
Pentachlorophenol	01.11.91	241	73	100	ug/L	73
Pyrene	01.11.91	241	35	50	ug/L	70
Purgeable Priority Pollutants						
Dilution Factor	01.02.91	003	1	1	Times	100
1,1,1-Trichloroethane	01.02.91	003	36	50	ug/L	72
1,1,2,2-Tetrachloroethane	01.02.91	003	53	50	ug/L	106
1,1,2-Trichloroethane	01.02.91	003	56	50	ug/L	112
1,1-Dichloroethane	01.02.91	003	36	50	ug/L	72
1,1-Dichloroethene	01.02.91	003	34	50	ug/L	68
1,2-Dichloroethane	01.02.91	003	41	50	ug/L	82
1,2-Dichlorobenzene	01.02.91	003	49	50	ug/L	98
1,2-Dichloropropane	01.02.91	003	40	50	ug/L	80
1,3-Dichlorobenzene	01.02.91	003	46	50	ug/L	92
1,4-Dichlorobenzene	01.02.91	003	49	50	ug/L	98
2-Chloroethylvinylether	01.02.91	003	57	50	ug/L	114
2-Hexanone	01.02.91	003	59	50	ug/L	118
4-Methyl-2-Pentanone	01.02.91	003	53	50	ug/L	106
Acetone	01.02.91	003	54	50	ug/L	108
Acrolein	01.02.91	003	150	250	ug/L	60
Acrylonitrile	01.02.91	003	220	250	ug/L	88
Bromodichloromethane	01.02.91	003	42	50	ug/L	84

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

ATE REPORTED : 01/23/91

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Bromomethane	01.02.91	003	43	50	ug/L	86
Benzene	01.02.91	003	36	50	ug/L	72
Bromoform	01.02.91	003	47	50	ug/L	94
Chlorobenzene	01.02.91	003	48	50	ug/L	96
Carbon Tetrachloride	01.02.91	003	.37	50	ug/L	1
Chloroethane	01.02.91	003	46	50	ug/L	92
Chloroform	01.02.91	003	38	50	ug/L	76
Chloromethane	01.02.91	003	36	50	ug/L	72
Carbon Disulfide	01.02.91	003	36	50	ug/L	72
Dibromochloromethane	01.02.91	003	48	50	ug/L	96
Ethylbenzene	01.02.91	003	45	50	ug/L	90
Freon 113	01.02.91	003	46	50	ug/L	92
Methyl ethyl ketone	01.02.91	003	61	50	ug/L	122
Methylene chloride	01.02.91	003	36	50	ug/L	72
Styrene	01.02.91	003	44	50	ug/L	88
Trichloroethene	01.02.91	003	39	50	ug/L	78
Trichlorofluoromethane	01.02.91	003	35	50	ug/L	70
Toluene	01.02.91	003	42	50	ug/L	84
Tetrachloroethene	01.02.91	003	39	50	ug/L	78
Vinyl acetate	01.02.91	003	47	50	ug/L	94
Vinyl chloride	01.02.91	003	42	50	ug/L	84
Total Xylene Isomers	01.02.91	003	84	100	ug/L	84
cis-1,2-Dichloroethene	01.02.91	003	40	50	ug/L	80
cis-1,3-Dichloropropene	01.02.91	003	47	50	ug/L	94
trans-1,2-Dichloroethene	01.02.91	003	31	50	ug/L	62
trans-1,3-Dichloropropene	01.02.91	003	43	50	ug/L	86

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

ATE REPORTED : 01/23/91

MATRIX QC PRECISION (DUPLICATES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	R1 RESULT	R2 RESULT	UNIT	RELATIVE %DIFF
rsenic	01.08.91	1	<0.002	0.002	mg/L	NA
admium	01.09.91	1	0.20	0.19	mg/L	5
Barium	01.08.91	2	<0.05	<0.05	mg/L	NA
Barium	01.08.91	2	0.10	0.10	mg/L	0
opper	01.08.91	2	<0.05	<0.05	mg/L	NA
opper	01.08.91	2	<0.05	<0.05	mg/L	NA
Lead	01.08.91	2	<0.2	<0.2	mg/L	NA
ead	01.08.91	2	<0.2	<0.2	mg/L	NA
inc	01.09.91	2	0.86	0.85	mg/L	1
Zinc	01.09.91	2	<0.05	<0.05	mg/L	NA

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

TE REPORTED : 01/23/91

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE %DIFF
N,A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	01.18.91	241	1	1	Times	0
1,2,4-Trichlorobenzene	01.18.91	241	31	21	ug/L	38
1,4-Dichlorobenzene	01.18.91	241	28	19	ug/L	38
2,4-Dinitrotoluene	01.18.91	241	34	24	ug/L	34
2-Chlorophenol	01.18.91	241	53	50	ug/L	6
4-Chloro-3-methylphenol	01.18.91	241	41	33	ug/L	22
4-Nitrophenol	01.18.91	241	64	56	ug/L	13
Acenaphthene	01.18.91	241	34	26	ug/L	27
Dibutylphthalate	01.18.91	241	44	34	ug/L	26
N-Nitrosodi-n-propylamine	01.18.91	241	35	23	ug/L	41
Phenol	01.18.91	241	25	22	ug/L	13
Pentachlorophenol	01.18.91	241	42	33	ug/L	24
Pyrene	01.18.91	241	46	34	ug/L	30
N,A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	01.16.91	241	1	1	Times	0
1,2,4-Trichlorobenzene	01.16.91	241	34	34	ug/L	0
1,4-Dichlorobenzene	01.16.91	241	32	31	ug/L	3
',4-Dinitrotoluene	01.16.91	241	30	35	ug/L	15
2-Chlorophenol	01.16.91	241	56	57	ug/L	2
4-Chloro-3-methylphenol	01.16.91	241	42	60	ug/L	35
4-Nitrophenol	01.16.91	241	60	71	ug/L	17
Acenaphthene	01.16.91	241	33	35	ug/L	6
Dibutylphthalate	01.16.91	241	19	20	ug/L	5
N-Nitrosodi-n-propylamine	01.16.91	241	32	32	ug/L	0
Phenol	01.16.91	241	49	55	ug/L	12
Pentachlorophenol	01.16.91	241	45	50	ug/L	11
Pyrene	01.16.91	241	34	37	ug/L	8
rgeable Priority Pollutants						
Dilution Factor	01.02.91	003	1	1	Times	0
1,1-Dichloroethene	01.02.91	003	44	43	ug/L	2
Benzene	01.02.91	003	56	53	ug/L	6
Chlorobenzene	01.02.91	003	55	57	ug/L	4
Trichloroethene	01.02.91	003	62	58	ug/L	7
Toluene	01.02.91	003	59	60	ug/L	2
1,2-Dichloroethane-d4 Reported	01.02.91	003	53	55	ug/L	4
1,2-Dichloroethane-d4 Theo.	01.02.91	003	50	50	ug/L	0
4-Bromofluorobenzene Reported	01.02.91	003	46	45	ug/L	2
4-Bromofluorobenzene Theo.	01.02.91	003	50	50	ug/L	0
Toluene-d8 Reported	01.02.91	003	50	52	ug/L	4

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

ATE REPORTED : 01/23/91

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE %DIFF
Toluene-d8 Theo.	01.02.91	003	50	50	ug/L	0

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

ATE REPORTED : 01/23/91

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVER
rsenic	01.08.91	1	0.024	0.025	<0.002	mg/L	9
admium	01.09.91	1	0.19	0.20	0.195	mg/L	SO
Barium	01.08.91	2	1.1	1.0	<0.05	mg/L	11
arium	01.08.91	2	1.1	1.1	0.1	mg/L	10
opper	01.08.91	2	4.7	5.0	<0.05	mg/L	9
Copper	01.08.91	2	5.1	5.0	<0.05	mg/L	10
Lead	01.08.91	2	12	10	<0.2	mg/L	12
ead	01.08.91	2	13	10	<0.2	mg/L	13
inc	01.09.91	2	11	11	0.855	mg/L	1C
Zinc	01.09.91	2	10	10	<0.05	mg/L	1C
/N,A Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.16.91	241	26	50	<2	ug/L	5
1,4-Dichlorobenzene	01.16.91	241	23.5	50	<2	ug/L	4
2,4-Dinitrotoluene	01.16.91	241	29	50	<20	ug/L	5
2-Chlorophenol	01.16.91	241	51.5	100	<5	ug/L	5
4-Chloro-3-methylphenol	01.16.91	241	37	100	<10	ug/L	3
4-Nitrophenol	01.16.91	241	60	100	<50	ug/L	6
Acenaphthene	01.16.91	241	30	50	<2	ug/L	6
Dibutylphthalate	01.16.91	241	39	50	<10	ug/L	7
N-Nitrosodi-n-propylamine	01.16.91	241	29	50	<5	ug/L	5
Phenol	01.16.91	241	23.5	100	<10	ug/L	2
Pentachlorophenol	01.16.91	241	37.5	100	<20	ug/L	3
Pyrene	01.16.91	241	40	50	<2	ug/L	8
B/N,A Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.16.91	241	34	50	<2	ug/L	6
1,4-Dichlorobenzene	01.16.91	241	31.5	50	<2	ug/L	6
2,4-Dinitrotoluene	01.16.91	241	32.5	50	<20	ug/L	6
2-Chlorophenol	01.16.91	241	56.5	100	<5	ug/L	5
4-Chloro-3-methylphenol	01.16.91	241	51	100	<10	ug/L	5
4-Nitrophenol	01.16.91	241	65.5	100	<50	ug/L	6
Acenaphthene	01.16.91	241	34	50	<2	ug/L	6
Dibutylphthalate	01.16.91	241	19.5	50	<10	ug/L	3
N-Nitrosodi-n-propylamine	01.16.91	241	32	50	<5	ug/L	6
Phenol	01.16.91	241	52	100	<10	ug/L	5
Pentachlorophenol	01.16.91	241	47.5	100	<20	ug/L	4
Pyrene	01.16.91	241	35.5	50	<2	ug/L	7
Purgeable Priority Pollutants							
1,1-Dichloroethene	01.02.91	003	43.5	50	<1	ug/L	8
Benzene	01.02.91	003	54.5	50	<1	ug/L	1C
Chlorobenzene	01.02.91	003	56	50	<1	ug/L	11

SOR = Spike Out of Range
relative to high sample concentration)

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

ATE REPORTED : 01/23/91

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVER
Trichloroethene	01.02.91	003	60	50	<1	ug/L	12
Toluene	01.02.91	003	59.5	50	<1	ug/L	11

OR = Spike Out of Range
(relative to high sample concentration)

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

ATE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
rsenic	01.03.91	1	0.0001	0.002	mg/L
admium	01.09.91	1	0	0.0005	mg/L
Barium	01.08.91	2	0.007	0.05	mg/L
Copper	01.08.91	2	0	0.05	mg/L
ead	01.08.91	2	0.068	0.2	mg/L
inc	01.09.91	2	0.025	0.05	mg/L
B/N,A Ext.Pri.Poll. (EPA-625)					
Date Analyzed	01.11.91	241	01.11.91	NA	Date
Date Extracted	01.11.91	241	12.26.90	NA	Date
Dilution Factor	01.11.91	241	1	NA	Times
1,2,4-Trichlorobenzene	01.11.91	241	0	2	ug/L
1,2-Dichlorobenzene	01.11.91	241	0	2	ug/L
1,2-Diphenylhydrazine	01.11.91	241	0	10	ug/L
1,3-Dichlorobenzene	01.11.91	241	0	2	ug/L
1,4-Dichlorobenzene	01.11.91	241	0	2	ug/L
2,4,5-Trichlorophenol	01.11.91	241	0	10	ug/L
2,4,6-Trichlorophenol	01.11.91	241	0	10	ug/L
2,4-Dichlorophenol	01.11.91	241	0	5	ug/L
?,4-Dimethylphenol	01.11.91	241	0	5	ug/L
2,4-Dinitrophenol	01.11.91	241	0	20	ug/L
2,4-Dinitrotoluene	01.11.91	241	0	20	ug/L
2,6-Dinitrotoluene	01.11.91	241	0	5	ug/L
2-Chloronaphthalene	01.11.91	241	0	2	ug/L
2-Chlorophenol	01.11.91	241	0	5	ug/L
2-Methyl-4,6-dinitrophenol	01.11.91	241	0	20	ug/L
2-Methylnaphthalene	01.11.91	241	0	2	ug/L
2-Methylphenol (o-Cresol)	01.11.91	241	0	5	ug/L
2-Nitroaniline	01.11.91	241	0	20	ug/L
2-Nitrophenol	01.11.91	241	0	5	ug/L
3,3'-Dichlorobenzidine	01.11.91	241	0	20	ug/L
3-Nitroaniline	01.11.91	241	0	20	ug/L
4-Bromophenylphenylether	01.11.91	241	0	5	ug/L
4-Chloro-3-methylphenol	01.11.91	241	0	10	ug/L
4-Chloroaniline	01.11.91	241	0	10	ug/L
4-Chlorophenylphenylether	01.11.91	241	0	5	ug/L
4-Methylphenol (p-Cresol)	01.11.91	241	0	10	ug/L
4-Nitroaniline	01.11.91	241	0	20	ug/L
4-Nitrophenol	01.11.91	241	0	50	ug/L

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012474

ATE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Acenaphthene	01.11.91	241	0	2	ug/L
Acenaphthylene	01.11.91	241	0	2	ug/L
Aniline	01.11.91	241	0	20	ug/L
Anthracene	01.11.91	241	0	2	ug/L
Benzidine	01.11.91	241	0	200	ug/L
Benzo(a)anthracene	01.11.91	241	0	2	ug/L
Benzo(a)pyrene	01.11.91	241	0	2	ug/L
Benzo(b)fluoranthene	01.11.91	241	0	2	ug/L
Benzo(g,h,i)perylene	01.11.91	241	0	2	ug/L
Benzo(k)fluoranthene	01.11.91	241	0	2	ug/L
Benzyl alcohol	01.11.91	241	0	10	ug/L
Benzoic acid	01.11.91	241	0	50	ug/L
Butylbenzylphthalate	01.11.91	241	0	10	ug/L
Chrysene	01.11.91	241	0	2	ug/L
Di-n-octylphthalate	01.11.91	241	0	10	ug/L
Dibenzo(a,h)anthracene	01.11.91	241	0	2	ug/L
Dibenzofuran	01.11.91	241	0	5	ug/L
Dibutylphthalate	01.11.91	241	0	10	ug/L
Diethylphthalate	01.11.91	241	0	10	ug/L
Dimethylphthalate	01.11.91	241	0	10	ug/L
Fluoranthene	01.11.91	241	0	2	ug/L
Fluorene	01.11.91	241	0	2	ug/L
Hexachlorobenzene	01.11.91	241	0	2	ug/L
Hexachlorobutadiene	01.11.91	241	0	5	ug/L
Hexachlorocyclopentadiene	01.11.91	241	0	50	ug/L
Hexachloroethane	01.11.91	241	0	10	ug/L
Indeno(1,2,3-c,d)pyrene	01.11.91	241	0	2	ug/L
Isophorone	01.11.91	241	0	5	ug/L
N-Nitrosodimethylamine	01.11.91	241	0	5	ug/L
N-Nitrosodiphenylamine	01.11.91	241	0	5	ug/L
N-Nitrosodi-n-propylamine	01.11.91	241	0	5	ug/L
Nitrobenzene	01.11.91	241	0	2	ug/L
Naphthalene	01.11.91	241	0	2	ug/L
Phenanthrene	01.11.91	241	0	2	ug/L
Phenol	01.11.91	241	0	10	ug/L
Pentachlorophenol	01.11.91	241	0	20	ug/L
Pyrene	01.11.91	241	0	2	ug/L

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Bis(2-chloroethoxy)methane	01.11.91	241	0	5	ug/L
Bis(2-chloroethyl)ether	01.11.91	241	0	2	ug/L
Bis(2-chloroisopropyl)ether	01.11.91	241	0	5	ug/L
Bis(2-ethylhexyl)phthalate	01.11.91	241	3.4	20	ug/L
urgeable Priority Pollutants					
Date Analyzed	01.02.91	003	01.02.91	NA	Date
Date Extracted	01.02.91	003	01.02.91	NA	Date
Dilution Factor	01.02.91	003	1	NA	Times
1,1,1-Trichloroethane	01.02.91	003	0	1	ug/L
1,1,2,2-Tetrachloroethane	01.02.91	003	0	1	ug/L
1,1,2-Trichloroethane	01.02.91	003	0	1	ug/L
1,1-Dichloroethane	01.02.91	003	0	1	ug/L
1,1-Dichloroethene	01.02.91	003	0	1	ug/L
1,2-Dichloroethane	01.02.91	003	0	1	ug/L
1,2-Dichlorobenzene	01.02.91	003	0	1	ug/L
1,2-Dichloropropane	01.02.91	003	0	1	ug/L
1,3-Dichlorobenzene	01.02.91	003	0	1	ug/L
1,4-Dichlorobenzene	01.02.91	003	0	1	ug/L
2-Chloroethylvinylether	01.02.91	003	0	1	ug/L
2-Hexanone	01.02.91	003	0	1	ug/L
4-Methyl-2-Pentanone	01.02.91	003	0	1	ug/L
Acetone	01.02.91	003	0	10	ug/L
Acrolein	01.02.91	003	0	10	ug/L
Acrylonitrile	01.02.91	003	0	10	ug/L
Bromodichloromethane	01.02.91	003	0	1	ug/L
Bromomethane	01.02.91	003	0	1	ug/L
Benzene	01.02.91	003	0	1	ug/L
Bromoform	01.02.91	003	0	1	ug/L
Chlorobenzene	01.02.91	003	0	1	ug/L
Carbon Tetrachloride	01.02.91	003	0	1	ug/L
Chloroethane	01.02.91	003	0	1	ug/L
Chloroform	01.02.91	003	0	1	ug/L
Chloromethane	01.02.91	003	0	1	ug/L
Carbon Disulfide	01.02.91	003	0	1	ug/L
Dibromochloromethane	01.02.91	003	0	1	ug/L
Ethylbenzene	01.02.91	003	0	1	ug/L
Freon 113	01.02.91	003	0	1	ug/L
Methyl ethyl ketone	01.02.91	003	0	20	ug/L

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Methylene chloride	01.02.91	003	6.1	5	ug/L
Styrene	01.02.91	003	0	1	ug/L
Trichloroethene	01.02.91	003	0	1	ug/L
Trichlorofluoromethane	01.02.91	003	0	1	ug/L
Toluene	01.02.91	003	0	1	ug/L
Tetrachloroethene	01.02.91	003	0	1	ug/L
Vinyl acetate	01.02.91	003	0	1	ug/L
Vinyl chloride	01.02.91	003	0	1	ug/L
Total Xylene Isomers	01.02.91	003	0	1	ug/L
cis-1,2-Dichloroethene	01.02.91	003	0	1	ug/L
cis-1,3-Dichloropropene	01.02.91	003	0	1	ug/L
trans-1,2-Dichloroethene	01.02.91	003	0	1	ug/L
trans-1,3-Dichloropropene	01.02.91	003	0	1	ug/L
1,2-Dichloroethane-d4 Reported	01.02.91	003	48	NA	ug/L
1,2-Dichloroethane-d4 Theo.	01.02.91	003	50	NA	ug/L
4-Bromofluorobenzene Reported	01.02.91	003	44	NA	ug/L
4-Bromofluorobenzene Theo.	01.02.91	003	50	NA	ug/L
Toluene-d8 Reported	01.02.91	003	53	NA	ug/L
Toluene-d8 Theo.	01.02.91	003	50	NA	ug/L

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1563.06	Field Logbook No.:	Date: 12.19.90	Serial No.: № 4099
Project Name: Sherwin Williams	Project Location: Emeryville, CA		
Sampler (Signature): Prescott C. Heald			Samplers: SCH/RDT

SAMPLES / ANALYSES

	SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240 2 VOAS	8270 2 amber L	metals 1 Plastic L		HOLD	RUSH	REMARKS
-1	LF·B4·TB	12·19·90	1030		1	Water					X				metals = arsenic, cadmium,
-2	LF·B4 BR	↓	1115		5	↓			X	X	X				Copper, lead, Zinc, Barium
-3	LF·B4	↓	1120		5	↓			X	X	X				with a detection limit of
															0.010 ppm for cadmium
-4	LF·13	12·19·90	1330		5	Water			X	X	X				
															Normal turnaround
-5	LF·12	12·19·90	1430		5	Water			X	X	X				
															Results to Glenn Leong
-6	LF·2B	12·19·90	1545		5	Water			X	X	X				CC: John De Reamer

RELINQUISHED BY: (Signature) Prescott C. Heald	DATE 12·19·90	TIME 17:55	RECEIVED BY: (Signature) [signature]	DATE 12/19/90	TIME 17:55
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Hand Deliver	DATE	TIME	LAB COMMENTS:		

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

Analytical Laboratory: BC Analytical LOG # 9012474

Shipping C (White) Lab Copy (Green) File Copy (Yellow) F 'd Copy (Pink) FORM NO 96/COC/ARF

Analytical Report

FILE
1563.06

LOG NO: E90-12-529

Received: 21 DEC 90
Reported: 22 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-1	LF-8TB	21 DEC 90
12-529-2	LF-8BR	21 DEC 90
12-529-3	LF-8	21 DEC 90
12-529-4	LF-11	21 DEC 90
12-529-5	LF-9	21 DEC 90

PARAMETER	12-529-1	12-529-2	12-529-3	12-529-4	12-529-5
Arsenic, mg/L	<0.002	<0.002	0.020	0.011	0.12
Cadmium, mg/L	<0.0005	<0.0005	0.0015	0.0006	0.0029
Barium, mg/L	<0.05	<0.05	0.59	0.18	0.27
Copper, mg/L	<0.05	<0.05	0.09	<0.05	<0.05
Lead, mg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc, mg/L	<0.05	<0.05	0.25	<0.05	0.73
Nitric Acid Digestion, Date	01.04.91	01.04.91	01.04.91	01.04.91	01.04.91
Nitric Acid Digestion, Date	01.02.91	01.02.91	01.03.91	01.03.91	01.02.91

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-12-529

Received: 21 DEC 90
Reported: 22 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-1	LF-8TB	21 DEC 90
12-529-2	LF-8BR	21 DEC 90
12-529-3	LF-8	21 DEC 90
12-529-4	LF-11	21 DEC 90
12-529-5	LF-9	21 DEC 90

PARAMETER	12-529-1	12-529-2	12-529-3	12-529-4	12-529-5
B/N,A Ext.Pri.Poll. (EPA-8270)					
Date Analyzed	01.16.91	01.16.91	01.18.91	01.18.91	01.18.91
Date Extracted	12.27.90 *	12.27.90	12.28.90	12.28.90	12.28.90
Dilution Factor, Times	1	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	<2	<2	<2	<2	<2
1,2-Dichlorobenzene, ug/L	<2	<2	<2	<2	<2
1,2-Diphenylhydrazine, ug/L	<10	<10	<10	<10	<10
1,3-Dichlorobenzene, ug/L	<2	<2	<2	<2	<2
1,4-Dichlorobenzene, ug/L	<2	<2	<2	<2	<2
2,4,5-Trichlorophenol, ug/L	<10	<10	<10	<10	<10
2,4,6-Trichlorophenol, ug/L	<10	<10	<10	<10	<10
2,4-Dichlorophenol, ug/L	<5	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	<20	<20	<20	<20	<20
2,4-Dinitrotoluene, ug/L	<20	<20	<20	<20	<20
2,6-Dinitrotoluene, ug/L	<5	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	<2	<2	<2	<2	<2
2-Chlorophenol, ug/L	<5	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<20	<20	<20	<20	<20
2-Methylnaphthalene, ug/L	<2	<2	<2	<2	<2
2-Methylphenol (o-Cresol), ug/L	<5	<5	<5	<5	<5
2-Nitroaniline, ug/L	<20	<20	<20	<20	<20

* Note: The acid fraction of method 8270 for this sample was accidentally boiled to dryness during the solvent evaporation step. As a result, this fraction was re-extracted on 12.31.91, three days past recommended holding time.

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-12-529

Received: 21 DEC 90
Reported: 22 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-1	LF-8TB	21 DEC 90
12-529-2	LF-8BR	21 DEC 90
12-529-3	LF-8	21 DEC 90
12-529-4	LF-11	21 DEC 90
12-529-5	LF-9	21 DEC 90

PARAMETER	12-529-1	12-529-2	12-529-3	12-529-4	12-529-5
2-Nitrophenol, ug/L	<5	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20	<20	<20	<20
3-Nitroaniline, ug/L	<20	<20	<20	<20	<20
4-Bromophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	<10	<10	<10	<10	<10
4-Chloroaniline, ug/L	<10	<10	<10	<10	<10
4-Chlorophenylphenylether, ug/L	<5	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	<10	<10	<10	<10	<10
4-Nitroaniline, ug/L	<20	<20	<20	<20	<20
4-Nitrophenol, ug/L	<50	<50	<50	<50	<50
Acenaphthene, ug/L	<2	<2	<2	<2	<2
Acenaphthylene, ug/L	<2	<2	<2	<2	<2
Aniline, ug/L	<20	<20	<20	<20	<20
Anthracene, ug/L	<2	<2	<2	<2	<2
Benzidine, ug/L	<200	<200	<200	<200	<200
Benzo(a)anthracene, ug/L	<2	<2	<2	<2	<2
Benzo(a)pyrene, ug/L	<2	<2	<2	<2	<2
Benzo(b)fluoranthene, ug/L	<2	<2	<2	<2	<2
Benzo(g,h,i)perylene, ug/L	<2	<2	<2	<2	<2
Benzo(k)fluoranthene, ug/L	<2	<2	<2	<2	<2
Benzyl alcohol, ug/L	<10	<10	<10	<10	<10

Analytical Report

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Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-1	LF-8TB	21 DEC 90
12-529-2	LF-8BR	21 DEC 90
12-529-3	LF-8	21 DEC 90
12-529-4	LF-11	21 DEC 90
12-529-5	LF-9	21 DEC 90

PARAMETER	12-529-1	12-529-2	12-529-3	12-529-4	12-529-5
Benzoic acid, ug/L	<50	<50	<50	<50	<50
Butylbenzylphthalate, ug/L	<10	<10	<10	<10	<10
Chrysene, ug/L	<2	<2	<2	<2	<2
Di-n-octylphthalate, ug/L	<10	<10	<10	<10	<10
Dibenzo(a,h)anthracene, ug/L	<2	<2	<2	<2	<2
Dibenzofuran, ug/L	<5	<5	<5	<5	<5
Dibutylphthalate, ug/L	<10	<10	<10	<10	<10
Diethylphthalate, ug/L	<10	<10	<10	<10	<10
Dimethylphthalate, ug/L	<10	<10	<10	<10	<10
Fluoranthene, ug/L	<2	<2	<2	<2	<2
Fluorene, ug/L	<2	<2	<2	<2	<2
Hexachlorobenzene, ug/L	<2	<2	<2	<2	<2
Hexachlorobutadiene, ug/L	<5	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	<50	<50	<50	<50	<50
Hexachloroethane, ug/L	<10	<10	<10	<10	<10
Indeno(1,2,3-c,d)pyrene, ug/L	<2	<2	<2	<2	<2
Isophorone, ug/L	<5	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	<5	<5	<5	<5	<5
N-Nitrosodiphenylamine, ug/L	<5	<5	<5	<5	<5
N-Nitrosodi-n-propylamine, ug/L	<5	<5	<5	<5	<5
Nitrobenzene, ug/L	<2	<2	<2	<2	<2

Analytical Report

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Reported: 22 JAN 91

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1900 Powell Street 12th Floor
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CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-1	LF-8TB	21 DEC 90
12-529-2	LF-8BR	21 DEC 90
12-529-3	LF-8	21 DEC 90
12-529-4	LF-11	21 DEC 90
12-529-5	LF-9	21 DEC 90

PARAMETER	12-529-1	12-529-2	12-529-3	12-529-4	12-529-5
Naphthalene, ug/L	<2	<2	<2	<2	<2
Phenanthrene, ug/L	<2	<2	<2	<2	<2
Phenol, ug/L	<10	<10	<10	<10	<10
Pentachlorophenol, ug/L	<20	<20	<20	<20	<20
Pyrene, ug/L	<2	<2	<2	<2	<2
Bis(2-chloroethoxy)methane, ug/L	<5	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	<2	<2	<2	<2	<2
Bis(2-chloroisopropyl)ether, ug/L	<5	<5	<5	<5	<5
Bis(2-ethylhexyl)phthalate, ug/L	<20	<20	<20	34	<20
Other B/N,A Ext.Pri.Poll. (EPA-8270)	---	---	---	---	---
Semi-Quantified Results **					
C15-C35 Hc Matrix, ug/L	---	---	900	---	---
C9-C20 Hydrocarbon Matrix, ug/L	---	---	---	---	2000
Unidentified Compound, ug/L	---	---	100	90	100

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

Analytical Report

LOG NO: E90-12-529

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Reported: 22 JAN 91

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Levine - Fricke
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CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-1	LF-8TB	21 DEC 90
12-529-2	LF-8BR	21 DEC 90
12-529-3	LF-8	21 DEC 90
12-529-4	LF-11	21 DEC 90
12-529-5	LF-9	21 DEC 90

PARAMETER	12-529-1	12-529-2	12-529-3	12-529-4	12-529-5
Purgeable Priority Pollutants					
Date Analyzed	01.04.91	01.04.91	01.04.91	01.04.91	01.04.91
Date Extracted	01.04.91	01.04.91	01.04.91	01.04.91	01.04.91
Dilution Factor, Times	1	1	1	1	1
1,1,1-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	<1	<1	<1	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	<1	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1	<1	<1	<1
2-Chloroethylvinylether, ug/L	<1	<1	<1	<1	<1
2-Hexanone, ug/L	<1	<1	<1	<1	<1
4-Methyl-2-Pentanone, ug/L	<1	<1	<1	<1	<1
Acetone, ug/L	<10	<10	<10	<10	<10
Acrolein, ug/L	<10	<10	<10	<10	<10
Acrylonitrile, ug/L	<10	<10	<10	<10	<10
Bromodichloromethane, ug/L	<1	<1	<1	<1	<1
Bromomethane, ug/L	<1	<1	<1	<1	<1

Analytical Report

LOG NO: E90-12-529

Received: 21 DEC 90
Reported: 22 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-1	LF-8TB	21 DEC 90
12-529-2	LF-8BR	21 DEC 90
12-529-3	LF-8	21 DEC 90
12-529-4	LF-11	21 DEC 90
12-529-5	LF-9	21 DEC 90

PARAMETER	12-529-1	12-529-2	12-529-3	12-529-4	12-529-5
Benzene, ug/L	<1	<1	<1	<1	<1
Bromoform, ug/L	<1	<1	<1	<1	<1
Chlorobenzene, ug/L	<1	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	<1	<1	<1	<1	<1
Chloroethane, ug/L	<1	<1	<1	<1	<1
Chloroform, ug/L	<1	<1	<1	<1	<1
Chloromethane, ug/L	<1	<1	<1	<1	<1
Carbon Disulfide, ug/L	<1	<1	<1	<1	<1
Dibromochloromethane, ug/L	<1	<1	<1	<1	<1
Ethylbenzene, ug/L	<1	<1	<1	<1	<1
Freon 113, ug/L	<1	<1	<1	<1	<1
Methyl ethyl ketone, ug/L	<20	<20	<20	<20	<20
Methylene chloride, ug/L	<5	<5	<5	<5	<5
Styrene, ug/L	<1	<1	<1	<1	<1
Trichloroethene, ug/L	<1	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	<1	<1	<1	<1	<1
Toluene, ug/L	<1	<1	<1	<1	<1
Tetrachloroethene, ug/L	<1	<1	<1	<1	<1
Vinyl acetate, ug/L	<1	<1	<1	<1	<1
Vinyl chloride, ug/L	<1	<1	<1	<1	<1
Total Xylene Isomers, ug/L	<1	<1	<1	<1	<1
cis-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1

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BCA B C Analytical

Analytical Report

LOG NO: E90-12-529

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Reported: 22 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-1	LF-8TB	21 DEC 90
12-529-2	LF-8BR	21 DEC 90
12-529-3	LF-8	21 DEC 90
12-529-4	LF-11	21 DEC 90
12-529-5	LF-9	21 DEC 90

PARAMETER	12-529-1	12-529-2	12-529-3	12-529-4	12-529-5
trans-1,2-Dichloroethene, ug/L	<1	<1	<1	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1	<1	<1	<1
Semi-Quantified Results **					
Tot C8-C10 Hydrocarbon, ug/L	---	---	---	---	80

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

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B C Analytical

Analytical Report

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Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
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Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-6	LF-10	21 DEC 90
12-529-7	LF-10D	21 DEC 90

PARAMETER	12-529-6	12-529-7
Arsenic, mg/L	1.0	1.1
Cadmium, mg/L	0.0009	0.0007
Barium, mg/L	0.33	0.35
Copper, mg/L	<0.05	<0.05
Lead, mg/L	<0.2	<0.2
Zinc, mg/L	<0.05	<0.05
Nitric Acid Digestion, Date	01.04.91	01.04.91
Nitric Acid Digestion, Date	01.03.91	01.03.91

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Emeryville, CA 94608

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B C Analytical

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CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-6	LF-10	21 DEC 90
12-529-7	LF-10D	21 DEC 90

PARAMETER	12-529-6	12-529-7
B/N,A Ext.Pri.Poll. (EPA-8270)		
Date Analyzed	01.18.91	01.18.91
Date Extracted	12.28.90	12.28.90
Dilution Factor, Times	1	1
1,2,4-Trichlorobenzene, ug/L	<2	<2
1,2-Dichlorobenzene, ug/L	<2	<2
1,2-Diphenylhydrazine, ug/L	<10	<10
1,3-Dichlorobenzene, ug/L	<2	<2
1,4-Dichlorobenzene, ug/L	<2	<2
2,4,5-Trichlorophenol, ug/L	<10	<10
2,4,6-Trichlorophenol, ug/L	<10	<10
2,4-Dichlorophenol, ug/L	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5
2,4-Dinitrophenol, ug/L	<20	<20
2,4-Dinitrotoluene, ug/L	<20	<20
2,6-Dinitrotoluene, ug/L	<5	<5
2-Chloronaphthalene, ug/L	<2	<2
2-Chlorophenol, ug/L	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<20	<20
2-Methylnaphthalene, ug/L	<2	<2
2-Methylphenol (o-Cresol), ug/L	<5	<5
2-Nitroaniline, ug/L	<20	<20
2-Nitrophenol, ug/L	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20
3-Nitroaniline, ug/L	<20	<20
4-Bromophenylphenylether, ug/L	<5	<5

Analytical Report

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Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-6	LF-10	21 DEC 90
12-529-7	LF-10D	21 DEC 90

PARAMETER	12-529-6	12-529-7
4-Chloro-3-methylphenol, ug/L	<10	<10
4-Chloroaniline, ug/L	<10	<10
4-Chlorophenylphenylether, ug/L	<5	<5
4-Methylphenol (p-Cresol), ug/L	<10	<10
4-Nitroaniline, ug/L	<20	<20
4-Nitrophenol, ug/L	<50	<50
Acenaphthene, ug/L	<2	<2
Acenaphthylene, ug/L	<2	<2
Aniline, ug/L	<20	<20
Anthracene, ug/L	<2	<2
Benzidine, ug/L	<200	<200
Benzo(a)anthracene, ug/L	<2	<2
Benzo(a)pyrene, ug/L	<2	<2
Benzo(b)fluoranthene, ug/L	<2	<2
Benzo(g,h,i)perylene, ug/L	<2	<2
Benzo(k)fluoranthene, ug/L	<2	<2
Benzyl alcohol, ug/L	<10	<10
Benzoic acid, ug/L	<50	<50
Butylbenzylphthalate, ug/L	<10	<10
Chrysene, ug/L	<2	<2
Di-n-octylphthalate, ug/L	<10	<10
Dibenzo(a,h)anthracene, ug/L	<2	<2
Dibenzofuran, ug/L	<5	<5
Dibutylphthalate, ug/L	<10	<10
Diethylphthalate, ug/L	<10	<10
Dimethylphthalate, ug/L	<10	<10

Analytical Report

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Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-6	LF-10	21 DEC 90
12-529-7	LF-10D	21 DEC 90

PARAMETER	12-529-6	12-529-7
Fluoranthene, ug/L	<2	<2
Fluorene, ug/L	<2	<2
Hexachlorobenzene, ug/L	<2	<2
Hexachlorobutadiene, ug/L	<5	<5
Hexachlorocyclopentadiene, ug/L	<50	<50
Hexachloroethane, ug/L	<10	<10
Indeno(1,2,3-c,d)pyrene, ug/L	<2	<2
Isophorone, ug/L	<5	<5
N-Nitrosodimethylamine, ug/L	<5	<5
N-Nitrosodiphenylamine, ug/L	<5	<5
N-Nitrosodi-n-propylamine, ug/L	<5	<5
Nitrobenzene, ug/L	<2	<2
Naphthalene, ug/L	<2	<2
Phenanthrene, ug/L	<2	<2
Phenol, ug/L	<10	<10
Pentachlorophenol, ug/L	<20	<20
Pyrene, ug/L	<2	<2
Bis(2-chloroethoxy)methane, ug/L	<5	<5
Bis(2-chloroethyl)ether, ug/L	<2	<2
Bis(2-chloroisopropyl)ether, ug/L	<5	<5
Bis(2-ethylhexyl)phthalate, ug/L	<20	<20
Other B/N,A Ext.Pri.Poll. (EPA-8270)	---	---
Semi-Quantified Results **		
Total C9-C15 Hydrocarbons, ug/L	200	70
Unidentified Compound, ug/L	---	100

1255 Powell Street
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BCA B C Analytical

Analytical Report

LOG NO: E90-12-529

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Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-6	LF-10	21 DEC 90
12-529-7	LF-10D	21 DEC 90

PARAMETER	12-529-6	12-529-7

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

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B C Analytical

Analytical Report

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CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-6	LF-10	21 DEC 90
12-529-7	LF-10D	21 DEC 90

PARAMETER	12-529-6	12-529-7
Purgeable Priority Pollutants		
Date Analyzed	01.04.91	01.04.91
Date Extracted	01.04.91	01.04.91
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
2-Chloroethylvinylether, ug/L	<1	<1
2-Hexanone, ug/L	<1	<1
4-Methyl-2-Pentanone, ug/L	<1	<1
Acetone, ug/L	<10	<10
Acrolein, ug/L	<10	<10
Acrylonitrile, ug/L	<10	<10
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1

Analytical Report

LOG NO: E90-12-529

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Levine - Fricke
1900 Powell Street 12th Floor
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CC: Mr. John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-529-6	LF-10	21 DEC 90
12-529-7	LF-10D	21 DEC 90

PARAMETER	12-529-6	12-529-7
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1
Carbon Disulfide, ug/L	<1	<1
Dibromochloromethane, ug/L	<1	<1
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<1	<1
Methyl ethyl ketone, ug/L	<20	<20
Methylene chloride, ug/L	<5	<5
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<1	<1
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<1	<1
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1
Semi-Quantified Results **		
Tot C8-C10 Hydrocarbon, ug/L	200	200

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

Sim D. Lessley, Ph.D., Laboratory Director

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

B C Analytical

: ORDER PLACED FOR CLIENT: Levine - Fricke 9012529 :
: BC ANALYTICAL : EMVL LAB : 09:09:54 23 JAN 1991 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.... ANALYZED	METHOD.....	EQUIP.	BATCH	ID.NO
9 2529*1	LF-8TB	AS	01.04.91	7060	514-01	3	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.07.91	6010	515-01	7	7708
		CU	01.07.91	6010	515-01	7	7708
		PB	01.07.91	6010	515-01	7	7708
		ZN	01.07.91	6010	515-01	7	7708
		DIG,AQ	01.04.91	3010		7	7877
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.16.91	8270	517-01	243	6192
		VOA.8240	01.04.91	8240	517-04	007	7038
9 2529*2	LF-8BR	AS	01.04.91	7060	514-01	3	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.07.91	6010	515-01	7	7708
		CU	01.07.91	6010	515-01	7	7708
		PB	01.07.91	6010	515-01	7	7708
		ZN	01.07.91	6010	515-01	7	7708
		DIG,AQ	01.04.91	3010		7	7877
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.16.91	8270	517-01	243	6192
		VOA.8240	01.04.91	8240	517-04	007	7038
9 2529*3	LF-8	AS	01.04.91	7060	514-01	3	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.07.91	6010	515-01	7	7708
		CU	01.07.91	6010	515-01	7	7708
		PB	01.07.91	6010	515-01	7	7708
		ZN	01.07.91	6010	515-01	7	7708
		DIG,AQ	01.04.91	3010		7	7877
		DIG,AQ,GFA	01.03.91	3010	.	3	7414
		BNA.8270	01.18.91	8270	517-01	244	3002
		VOA.8240	01.04.91	8240	517-04	007	7038
9 2529*4	LF-11	AS	01.04.91	7060	514-01	3	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.07.91	6010	515-01	7	7708
		CU	01.07.91	6010	515-01	7	7708
		PB	01.07.91	6010	515-01	7	7708
		ZN	01.07.91	6010	515-01	7	7708
		DIG,AQ	01.04.91	3010		7	7877
		DIG,AQ,GFA	01.03.91	3010		3	7414
		BNA.8270	01.18.91	8270	517-01	244	3002
		VOA.8240	01.04.91	8240	517-04	007	7038
9 2529*5	LF-9	AS	01.04.91	7060	514-01	3	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.07.91	6010	515-01	7	7708
		CU	01.07.91	6010	515-01	7	7708

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.... ANALYZED	METHOD.....	EQUIP.	BATCH	ID.NO
		PB	01.07.91	6010	515-01	7	7708
		ZN	01.07.91	6010	515-01	7	7708
		DIG,AQ	01.04.91	3010		7	7877
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.18.91	8270	517-01	244	3002
		VOA.8240	01.04.91	8240	517-04	007	7038
9012529*6	LF-10	AS	01.04.91	7060	514-01	3	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.07.91	6010	515-01	7	7708
		CU	01.07.91	6010	515-01	7	7708
		PB	01.07.91	6010	515-01	7	7708
		ZN	01.07.91	6010	515-01	7	7708
		DIG,AQ	01.04.91	3010		7	7877
		DIG,AQ,GFA	01.03.91	3010		3	7414
		BNA.8270	01.18.91	8270	517-01	244	3002
		VOA.8240	01.04.91	8240	517-04	007	7038
9012529*7	LF-10D	AS	01.04.91	7060	514-01	3	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.07.91	6010	515-01	7	7708
		CU	01.07.91	6010	515-01	7	7708
		PB	01.07.91	6010	515-01	7	7708
		ZN	01.07.91	6010	515-01	7	7708
		DIG,AQ	01.04.91	3010		7	7877
		DIG,AQ,GFA	01.03.91	3010		3	7414
		BNA.8270	01.18.91	8270	517-01	244	3002
		VOA.8240	01.04.91	8240	517-04	007	7038

***

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Arsenic	01.04.91	3	0.022	0.025	mg/L	88
Cadmium	01.09.91	2	0.0016	0.0015	mg/L	107
Barium	01.07.91	7	0.91	1.0	mg/L	91
Barium	01.07.91	7	0.91	1.0	mg/L	91
Copper	01.07.91	7	4.6	5.0	mg/L	92
Lead	01.07.91	7	11	10	mg/L	110
Zinc	01.07.91	7	9.8	10	mg/L	98
Zinc	01.09.91	7	10	10	mg/L	100
B/N,A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	01.16.91	243	1	1	Times	100
1,2,4-Trichlorobenzene	01.16.91	243	40	50	ug/L	80
1,4-Dichlorobenzene	01.16.91	243	38	50	ug/L	76
2,4-Dinitrotoluene	01.16.91	243	33	50	ug/L	66
2-Chlorophenol	01.16.91	243	66	100	ug/L	66
4-Chloro-3-methylphenol	01.16.91	243	65	100	ug/L	65
4-Nitrophenol	01.16.91	243	58	100	ug/L	58
Acenaphthene	01.16.91	243	38	50	ug/L	76
butylphthalate	01.16.91	243	20	50	ug/L	40
Nitrosodi-n-propylamine	01.16.91	243	31	50	ug/L	62
Phenol	01.16.91	243	63	100	ug/L	63
Pentachlorophenol	01.16.91	243	69	100	ug/L	69
Pyrene	01.16.91	243	42	50	ug/L	84
Purgeable Priority Pollutants						
Dilution Factor	01.04.91	007	1	1	Times	100
1,1,1-Trichloroethane	01.04.91	007	45	50	ug/L	90
1,1,2,2-Tetrachloroethane	01.04.91	007	56	50	ug/L	112
1,1,2-Trichloroethane	01.04.91	007	58	50	ug/L	116
1,1-Dichloroethane	01.04.91	007	47	50	ug/L	94
1,1-Dichloroethene	01.04.91	007	44	50	ug/L	88
1,2-Dichloroethane	01.04.91	007	45	50	ug/L	90
1,2-Dichlorobenzene	01.04.91	007	50	50	ug/L	100
1,2-Dichloropropane	01.04.91	007	52	50	ug/L	104
1,3-Dichlorobenzene	01.04.91	007	46	50	ug/L	92
1,4-Dichlorobenzene	01.04.91	007	48	50	ug/L	96
2-Chloroethylvinylether	01.04.91	007	52	50	ug/L	104
2-Hexanone	01.04.91	007	55	50	ug/L	110
4-Methyl-2-Pentanone	01.04.91	007	52	50	ug/L	104
Acetone	01.04.91	007	47	50	ug/L	94
Acrolein	01.04.91	007	250	250	ug/L	100

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Acrylonitrile	01.04.91	007	260	250	ug/L	104
Bromodichloromethane	01.04.91	007	46	50	ug/L	92
Bromomethane	01.04.91	007	45	50	ug/L	90
Benzene	01.04.91	007	50	50	ug/L	100
Bromoform	01.04.91	007	52	50	ug/L	104
Chlorobenzene	01.04.91	007	50	50	ug/L	100
Carbon Tetrachloride	01.04.91	007	46	50	ug/L	92
Chloroethane	01.04.91	007	42	50	ug/L	84
Chloroform	01.04.91	007	46	50	ug/L	92
Chloromethane	01.04.91	007	48	50	ug/L	96
Carbon Disulfide	01.04.91	007	46	50	ug/L	92
Dibromochloromethane	01.04.91	007	54	50	ug/L	108
Ethylbenzene	01.04.91	007	50	50	ug/L	100
Freon 113	01.04.91	007	46	50	ug/L	92
Methyl ethyl ketone	01.04.91	007	52	50	ug/L	104
Methylene chloride	01.04.91	007	46	50	ug/L	92
Styrene	01.04.91	007	47	50	ug/L	94
Tetrachloroethene	01.04.91	007	54	50	ug/L	108
Trichlorofluoromethane	01.04.91	007	44	50	ug/L	88
Toluene	01.04.91	007	50	50	ug/L	100
Trichloroethene	01.04.91	007	49	50	ug/L	98
Vinyl acetate	01.04.91	007	44	50	ug/L	88
Vinyl chloride	01.04.91	007	51	50	ug/L	102
Total Xylene Isomers	01.04.91	007	96	100	ug/L	96
cis-1,2-Dichloroethene	01.04.91	007	48	50	ug/L	96
cis-1,3-Dichloropropene	01.04.91	007	53	50	ug/L	106
trans-1,2-Dichloroethene	01.04.91	007	47	50	ug/L	94
trans-1,3-Dichloropropene	01.04.91	007	51	50	ug/L	102

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

MATRIX QC PRECISION (DUPLICATES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	R1 RESULT	R2 RESULT	UNIT	RELATIVE %DIFF
Arsenic	01.09.91	3	<0.002	<0.002	mg/L	NA
Cadmium	01.11.91	2	<0.001	<0.001	mg/L	NA
Barium	01.07.91	7	<0.05	<0.05	mg/L	NA
Barium	01.07.91	7	<0.05	<0.05	mg/L	NA
Copper	01.07.91	7	<0.05	<0.05	mg/L	NA
Lead	01.07.91	7	<0.2	<0.2	mg/L	NA
Zinc	01.07.91	7	<0.05	<0.05	mg/L	NA

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE %DIFF
3/[illegible]A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	01.16.91	243	1	1	Times	0
1,2,4-Trichlorobenzene	01.16.91	243	34	34	ug/L	0
1,4-Dichlorobenzene	01.16.91	243	32	31	ug/L	3
2,4-Dinitrotoluene	01.16.91	243	30	35	ug/L	15
2-Chlorophenol	01.16.91	243	56	57	ug/L	2
4-Chloro-3-methylphenol	01.16.91	243	42	60	ug/L	35
4-Nitrophenol	01.16.91	243	60	71	ug/L	17
Acenaphthene	01.16.91	243	33	35	ug/L	6
Dibutylphthalate	01.16.91	243	19	20	ug/L	5
N-Nitrosodi-n-propylamine	01.16.91	243	32	32	ug/L	0
Phenol	01.16.91	243	49	55	ug/L	12
Pentachlorophenol	01.16.91	243	45	50	ug/L	11
Pyrene	01.16.91	243	34	37	ug/L	8
[illegible]geable Priority Pollutants						
Dilution Factor	01.04.91	007	1	1	Times	0
1,1-Dichloroethene	01.04.91	007	38	38	ug/L	0
[illegible]nzene	01.04.91	007	46	47	ug/L	2
[illegible]lorobenzene	01.04.91	007	57	57	ug/L	0
Trichloroethene	01.04.91	007	48	47	ug/L	2
Toluene	01.04.91	007	53	54	ug/L	2
1,2-Dichloroethane-d4 Reported	01.04.91	007	55	52	ug/L	6
1,2-Dichloroethane-d4 Theo.	01.04.91	007	50	50	ug/L	0
4-Bromofluorobenzene Reported	01.04.91	007	47	48	ug/L	2
4-Bromofluorobenzene Theo.	01.04.91	007	50	50	ug/L	0
Toluene-d8 Reported	01.04.91	007	49	50	ug/L	2
Toluene-d8 Theo.	01.04.91	007	50	50	ug/L	0

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
Cadmium	01.11.91	2	0.0015	0.0015	<0.001	mg/L	100
Barium	01.07.91	7	1.1	1.0	<0.05	mg/L	110
Barium	01.07.91	7	0.89	1.0	<0.05	mg/L	89
Copper	01.07.91	7	4.7	5.0	<0.05	mg/L	94
Lead	01.07.91	7	12	10	<0.2	mg/L	120
Zinc	01.07.91	7	10	10	<0.05	mg/L	100
BN,A Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.16.91	243	34	50	<2	ug/L	68
1,4-Dichlorobenzene	01.16.91	243	31.5	50	<2	ug/L	63
2,4-Dinitrotoluene	01.16.91	243	32.5	50	<20	ug/L	65
2-Chlorophenol	01.16.91	243	56.5	100	<5	ug/L	57
4-Chloro-3-methylphenol	01.16.91	243	51	100	<10	ug/L	51
4-Nitrophenol	01.16.91	243	65.5	100	<50	ug/L	66
Acenaphthene	01.16.91	243	34	50	<2	ug/L	68
Dibutylphthalate	01.16.91	243	19.5	50	<10	ug/L	39
N-Nitrosodi-n-propylamine	01.16.91	243	32	50	<5	ug/L	64
Phenol	01.16.91	243	52	100	<10	ug/L	52
Pentachlorophenol	01.16.91	243	47.5	100	<20	ug/L	48
Pyrene	01.16.91	243	35.5	50	<2	ug/L	71
Purgeable Priority Pollutants							
1,1-Dichloroethene	01.04.91	007	38	50	<1	ug/L	76
Benzene	01.04.91	007	46.5	50	<1	ug/L	93
Chlorobenzene	01.04.91	007	57	50	<1	ug/L	114
Trichloroethene	01.04.91	007	47.5	50	<1	ug/L	95
Toluene	01.04.91	007	53.5	50	<1	ug/L	107

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Arsenic	01.03.91	3	0	0.002	mg/L
Cadmium	01.09.91	2	0.000017	0.0005	mg/L
Barium	01.07.91	7	0	0.05	mg/L
Barium	01.07.91	7	0	0.05	mg/L
Copper	01.07.91	7	0	0.05	mg/L
Lead	01.07.91	7	0	0.2	mg/L
Zinc	01.07.91	7	0	0.05	mg/L
Zinc	01.09.91	7	0.0069	0.05	mg/L
B/N,A Ext.Pri.Poll. (EPA-8270)					
Date Analyzed	01.16.91	243	01.16.91	NA	Date
Date Extracted	01.16.91	243	12.27.90	NA	Date
Dilution Factor	01.16.91	243	1	NA	Times
1,2,4-Trichlorobenzene	01.16.91	243	0	2	ug/L
1,2-Dichlorobenzene	01.16.91	243	0	2	ug/L
1,2-Diphenylhydrazine	01.16.91	243	0	10	ug/L
1,3-Dichlorobenzene	01.16.91	243	0	2	ug/L
1,4-Dichlorobenzene	01.16.91	243	0	2	ug/L
4,5-Trichlorophenol	01.16.91	243	0	10	ug/L
2,4,6-Trichlorophenol	01.16.91	243	0	10	ug/L
2,4-Dichlorophenol	01.16.91	243	0	5	ug/L
2,4-Dimethylphenol	01.16.91	243	0	5	ug/L
2,4-Dinitrophenol	01.16.91	243	0	20	ug/L
2,4-Dinitrotoluene	01.16.91	243	0	20	ug/L
2,6-Dinitrotoluene	01.16.91	243	0	5	ug/L
2-Chloronaphthalene	01.16.91	243	0	2	ug/L
2-Chlorophenol	01.16.91	243	0	5	ug/L
2-Methyl-4,6-dinitrophenol	01.16.91	243	0	20	ug/L
2-Methylnaphthalene	01.16.91	243	0	2	ug/L
2-Methylphenol (o-Cresol)	01.16.91	243	0	5	ug/L
2-Nitroaniline	01.16.91	243	0	20	ug/L
2-Nitrophenol	01.16.91	243	0	5	ug/L
3,3'-Dichlorobenzidine	01.16.91	243	0	20	ug/L
3-Nitroaniline	01.16.91	243	0	20	ug/L
4-Bromophenylphenylether	01.16.91	243	0	5	ug/L
4-Chloro-3-methylphenol	01.16.91	243	0	10	ug/L
4-Chloroaniline	01.16.91	243	0	10	ug/L
4-Chlorophenylphenylether	01.16.91	243	0	5	ug/L
4-Methylphenol (p-Cresol)	01.16.91	243	0	10	ug/L

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
4-Nitroaniline	01.16.91	243	0	20	ug/L
4-Nitrophenol	01.16.91	243	0	50	ug/L
Acenaphthene	01.16.91	243	0	2	ug/L
Acenaphthylene	01.16.91	243	0	2	ug/L
Aniline	01.16.91	243	0	20	ug/L
Anthracene	01.16.91	243	0	2	ug/L
Benzidine	01.16.91	243	0	200	ug/L
Benzo(a)anthracene	01.16.91	243	0	2	ug/L
Benzo(a)pyrene	01.16.91	243	0	2	ug/L
Benzo(b)fluoranthene	01.16.91	243	0	2	ug/L
Benzo(g,h,i)perylene	01.16.91	243	0	2	ug/L
Benzo(k)fluoranthene	01.16.91	243	0	2	ug/L
Benzyl alcohol	01.16.91	243	0	10	ug/L
Benzoic acid	01.16.91	243	0	50	ug/L
Butylbenzylphthalate	01.16.91	243	0	10	ug/L
Chrysene	01.16.91	243	0	2	ug/L
Di-n-octylphthalate	01.16.91	243	0	10	ug/L
benzo(a,h)anthracene	01.16.91	243	0	2	ug/L
benzofuran	01.16.91	243	0	5	ug/L
Dibutylphthalate	01.16.91	243	0	10	ug/L
Diethylphthalate	01.16.91	243	0	10	ug/L
Dimethylphthalate	01.16.91	243	0	10	ug/L
Fluoranthene	01.16.91	243	0	2	ug/L
Fluorene	01.16.91	243	0	2	ug/L
Hexachlorobenzene	01.16.91	243	0	2	ug/L
Hexachlorobutadiene	01.16.91	243	0	5	ug/L
Hexachlorocyclopentadiene	01.16.91	243	0	50	ug/L
Hexachloroethane	01.16.91	243	0	10	ug/L
Indeno(1,2,3-c,d)pyrene	01.16.91	243	0	2	ug/L
Isophorone	01.16.91	243	0	5	ug/L
N-Nitrosodimethylamine	01.16.91	243	0	5	ug/L
N-Nitrosodiphenylamine	01.16.91	243	0	5	ug/L
N-Nitrosodi-n-propylamine	01.16.91	243	0	5	ug/L
Nitrobenzene	01.16.91	243	0	2	ug/L
Naphthalene	01.16.91	243	0	2	ug/L
Phenanthrene	01.16.91	243	0	2	ug/L
Phenol	01.16.91	243	0	10	ug/L

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Pentachlorophenol	01.16.91	243	0	20	ug/L
Pyrene	01.16.91	243	0	2	ug/L
Bis(2-chloroethoxy)methane	01.16.91	243	0	5	ug/L
Bis(2-chloroethyl)ether	01.16.91	243	0	2	ug/L
Bis(2-chloroisopropyl)ether	01.16.91	243	0	5	ug/L
Bis(2-ethylhexyl)phthalate	01.16.91	243	8.5	20	ug/L
Purgeable Priority Pollutants					
Date Analyzed	01.04.91	007	01.04.91	NA	Date
Date Extracted	01.04.91	007	01.04.91	NA	Date
Dilution Factor	01.04.91	007	1	NA	Times
1,1,1-Trichloroethane	01.04.91	007	0	1	ug/L
1,1,2,2-Tetrachloroethane	01.04.91	007	0	1	ug/L
1,1,2-Trichloroethane	01.04.91	007	0	1	ug/L
1,1-Dichloroethane	01.04.91	007	0	1	ug/L
1,1-Dichloroethene	01.04.91	007	0	1	ug/L
1,2-Dichloroethane	01.04.91	007	0	1	ug/L
1,2-Dichlorobenzene	01.04.91	007	0.44	1	ug/L
1,2-Dichloropropane	01.04.91	007	0	1	ug/L
1,3-Dichlorobenzene	01.04.91	007	0.42	1	ug/L
1,4-Dichlorobenzene	01.04.91	007	0.37	1	ug/L
2-Chloroethylvinylether	01.04.91	007	0	1	ug/L
2-Hexanone	01.04.91	007	0	1	ug/L
4-Methyl-2-Pentanone	01.04.91	007	0	1	ug/L
Acetone	01.04.91	007	0	10	ug/L
Acrolein	01.04.91	007	0	10	ug/L
Acrylonitrile	01.04.91	007	0	10	ug/L
Bromodichloromethane	01.04.91	007	0	1	ug/L
Bromomethane	01.04.91	007	0	1	ug/L
Benzene	01.04.91	007	0	1	ug/L
Bromoform	01.04.91	007	0	1	ug/L
Chlorobenzene	01.04.91	007	0	1	ug/L
Carbon Tetrachloride	01.04.91	007	0	1	ug/L
Chloroethane	01.04.91	007	0	1	ug/L
Chloroform	01.04.91	007	0	1	ug/L
Chloromethane	01.04.91	007	0	1	ug/L
Carbon Disulfide	01.04.91	007	0	1	ug/L
Dibromochloromethane	01.04.91	007	0	1	ug/L
Ethylbenzene	01.04.91	007	0	1	ug/L

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012529

DATE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Freon 113	01.04.91	007	0	1	ug/L
Methyl ethyl ketone	01.04.91	007	0	20	ug/L
Methylene chloride	01.04.91	007	2.5	5	ug/L
Styrene	01.04.91	007	0	1	ug/L
Trichloroethene	01.04.91	007	0	1	ug/L
Trichlorofluoromethane	01.04.91	007	0.15	1	ug/L
Toluene	01.04.91	007	0	1	ug/L
Tetrachloroethene	01.04.91	007	0.42	1	ug/L
Vinyl acetate	01.04.91	007	0	1	ug/L
Vinyl chloride	01.04.91	007	0	1	ug/L
Total Xylene Isomers	01.04.91	007	0	1	ug/L
cis-1,2-Dichloroethene	01.04.91	007	0	1	ug/L
cis-1,3-Dichloropropene	01.04.91	007	0	1	ug/L
trans-1,2-Dichloroethene	01.04.91	007	0	1	ug/L
trans-1,3-Dichloropropene	01.04.91	007	0	1	ug/L
1,2-Dichloroethane-d4 Reported	01.04.91	007	51	NA	ug/L
1,2-Dichloroethane-d4 Theo.	01.04.91	007	50	NA	ug/L
Bromofluorobenzene Reported	01.04.91	007	44	NA	ug/L
4-Bromofluorobenzene Theo.	01.04.91	007	50	NA	ug/L
Toluene-d8 Reported	01.04.91	007	50	NA	ug/L
Toluene-d8 Theo.	01.04.91	007	50	NA	ug/L

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

LOG # 901-529

Project No.: 563.06	Field Logbook No.:	Date: 12·21·90	Serial No.: № 4103
Project Name: SHERWIN Williams	Project Location: Emeryville		
Sampler (Signature): Prescott C. Heald			Samplers: SCH/RDT

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240/8020	8270	Metals in plastic		HOLD	RUSH	REMARKS
LF·8TB	12·21·90	0845		5	Water			X	X	X				Metals = Arsenic, Cadmium,
LF·8BR		0940		5				X	X	X				Copper, Lead, Zinc, Barium
LF·8		0945		5				X	X	X				with a detection limit
LF·11		1040		5				X	X	X				of 0.010 ppm for Cadmium
LF·9		1255		5				X	X	X				
LF·10		1345		5				X	X	X				
LF·10D		1355		5				X	X	X				Normal TAT
														Contact John DeReamer
														and Glenn Leong w/ results

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
Prescott C. Heald	12·21·90	1600	[signature]	12/21/90	1600
METHOD OF SHIPMENT: Hand Deliver			LAB COMMENTS:		

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

Analytical Laboratory: BC Analytical

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

FORM NO. 86/COC/ARF

Analytical Report

FILE
1563.06

LOG NO: E90-12-505

Received: 20 DEC 90
Reported: 17 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-1	LF-B3TB	20 DEC 90
12-505-2	LF-B3BR	20 DEC 90
12-505-3	LF-B3	20 DEC 90
12-505-4	LF-B1	20 DEC 90
12-505-5	LF-16	20 DEC 90

PARAMETER	12-505-1	12-505-2	12-505-3	12-505-4	12-505-5
Arsenic, mg/L	<0.002	<0.002	0.002	0.005	0.003
Cadmium, mg/L	<0.0005	<0.0005	<0.0005	0.0010	0.0007
Barium, mg/L	<0.05	<0.05	0.16	0.10	0.17
Copper, mg/L	<0.05	<0.05	<0.05	<0.05	<0.05
Lead, mg/L	<0.2	<0.2	<0.2	<0.2	<0.2
Zinc, mg/L	<0.05	<0.05	<0.05	<0.05	0.07
Nitric Acid Digestion, Date	01.02.91	01.02.91	01.02.91	01.02.91	01.02.91
Nitric Acid Digestion, Date	01.03.91	01.03.91	01.03.91	01.03.91	01.03.91

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

BCA B C Analytical

Analytical Report

LOG NO: E90-12-505

Received: 20 DEC 90
Reported: 17 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-1	LF-B3TB	20 DEC 90
12-505-2	LF-B3BR	20 DEC 90
12-505-3	LF-B3	20 DEC 90
12-505-4	LF-B1	20 DEC 90
12-505-5	LF-16	20 DEC 90

PARAMETER	12-505-1	12-505-2	12-505-3	12-505-4	12-505-5
'N,A Ext.Pri.Poll. (EPA-8270)					
ate Analyzed	---	01.09.91	01.16.91	01.16.91	01.16.91
Date Extracted	---	12.27.90	12.27.90	12.27.90	12.27.90
Dilution Factor, Times	---	1	1	1	1
1,2,4-Trichlorobenzene, ug/L	---	<2	<2	<2	<2
1,2-Dichlorobenzene, ug/L	---	<2	<2	<2	<2
1,2-Diphenylhydrazine, ug/L	---	<10	<10	<10	<10
1,3-Dichlorobenzene, ug/L	---	<2	<2	<2	<2
1,4-Dichlorobenzene, ug/L	---	<2	<2	<2	<2
2,4,5-Trichlorophenol, ug/L	---	<10	<10	<10	<10
2,4,6-Trichlorophenol, ug/L	---	<10	<10	<10	<10
2,4-Dichlorophenol, ug/L	---	<5	<5	<5	<5
2,4-Dimethylphenol, ug/L	---	<5	<5	<5	<5
2,4-Dinitrophenol, ug/L	---	<20	<20	<20	<20
2,4-Dinitrotoluene, ug/L	---	<20	<20	<20	<20
2,6-Dinitrotoluene, ug/L	---	<5	<5	<5	<5
2-Chloronaphthalene, ug/L	---	<2	<2	<2	<2
2-Chlorophenol, ug/L	---	<5	<5	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	---	<20	<20	<20	<20
2-Methylnaphthalene, ug/L	---	<2	<2	<2	<2
2-Methylphenol (o-Cresol), ug/L	---	<5	<5	<5	<5
2-Nitroaniline, ug/L	---	<20	<20	<20	<20

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Analytical Report

LOG NO: E90-12-505

Received: 20 DEC 90
Reported: 17 JAN 91

Mr. Glenn Leong
Levine - Fricke
1900 Powell Street 12th Floor
Emeryville, California 94608
CC: John DeReamer

Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-1	LF-B3TB	20 DEC 90
12-505-2	LF-B3BR	20 DEC 90
12-505-3	LF-B3	20 DEC 90
12-505-4	LF-B1	20 DEC 90
12-505-5	LF-16	20 DEC 90

PARAMETER	12-505-1	12-505-2	12-505-3	12-505-4	12-505-5
2-Nitrophenol, ug/L	---	<5	<5	<5	<5
3,3'-Dichlorobenzidine, ug/L	---	<20	<20	<20	<20
3-Nitroaniline, ug/L	---	<20	<20	<20	<20
4-Bromophenylphenylether, ug/L	---	<2	<5	<5	<5
4-Chloro-3-methylphenol, ug/L	---	<10	<10	<10	<10
4-Chloroaniline, ug/L	---	<10	<10	<10	<10
4-Chlorophenylphenylether, ug/L	---	<5	<5	<5	<5
4-Methylphenol (p-Cresol), ug/L	---	<10	<10	<10	<10
4-Nitroaniline, ug/L	---	<20	<20	<20	<20
4-Nitrophenol, ug/L	---	<50	<50	<50	<50
Acenaphthene, ug/L	---	<2	<2	<2	<2
Acenaphthylene, ug/L	---	<2	<2	<2	<2
Aniline, ug/L	---	<20	<20	<20	<20
Anthracene, ug/L	---	<2	<2	<2	<2
Benzidine, ug/L	---	<200	<200	<200	<200
Benzo(a)anthracene, ug/L	---	<2	<2	<2	<2
Benzo(a)pyrene, ug/L	---	<2	<2	<2	<2
Benzo(b)fluoranthene, ug/L	---	<2	<2	<2	<2
Benzo(g,h,i)perylene, ug/L	---	<2	<2	<2	<2
Benzo(k)fluoranthene, ug/L	---	<2	<2	<2	<2
Benzyl alcohol, ug/L	---	<10	<10	<10	<10

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-1	LF-B3TB	20 DEC 90
12-505-2	LF-B3BR	20 DEC 90
12-505-3	LF-B3	20 DEC 90
12-505-4	LF-B1	20 DEC 90
12-505-5	LF-16	20 DEC 90

PARAMETER	12-505-1	12-505-2	12-505-3	12-505-4	12-505-5
Benzoic acid, ug/L	---	<50	<50	78	<50
Butylbenzylphthalate, ug/L	---	<10	<10	<10	<10
Chrysene, ug/L	---	<2	<2	<2	<2
Di-n-octylphthalate, ug/L	---	<10	<10	<10	<10
Dibenzo(a,h)anthracene, ug/L	---	<2	<2	<2	<2
Dibenzofuran, ug/L	---	<5	<5	<5	<5
Dibutylphthalate, ug/L	---	<10	<10	<10	<10
Diethylphthalate, ug/L	---	<10	<10	<10	<10
Dimethylphthalate, ug/L	---	<10	<10	<10	<10
Fluoranthene, ug/L	---	<2	<2	<2	<2
Fluorene, ug/L	---	<2	<2	<2	<2
Hexachlorobenzene, ug/L	---	<20	<2	<2	<2
Hexachlorobutadiene, ug/L	---	<5	<5	<5	<5
Hexachlorocyclopentadiene, ug/L	---	<50	<50	<50	<50
Hexachloroethane, ug/L	---	<10	<10	<10	<10
Indeno(1,2,3-c,d)pyrene, ug/L	---	<2	<2	<2	<2
Isophorone, ug/L	---	<5	<5	<5	<5
N-Nitrosodimethylamine, ug/L	---	<5	<5	<5	<5
N-Nitrosodiphenylamine, ug/L	---	<5	<5	<5	<5
N-Nitrosodi-n-propylamine, ug/L	---	<5	<5	<5	<5
Nitrobenzene, ug/L	---	<2	<2	<2	<2

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-1	LF-B3TB	20 DEC 90
12-505-2	LF-B3BR	20 DEC 90
12-505-3	LF-B3	20 DEC 90
12-505-4	LF-B1	20 DEC 90
12-505-5	LF-16	20 DEC 90

PARAMETER	12-505-1	12-505-2	12-505-3	12-505-4	12-505-5
Naphthalene, ug/L	---	<2	<2	<2	<2
Phenanthrene, ug/L	---	<2	<2	<2	<2
Phenol, ug/L	---	<10	<10	41	<10
Pentachlorophenol, ug/L	---	<2	<20	<20	<20
Pyrene, ug/L	---	<2	<2	<2	<2
Bis(2-chloroethoxy)methane, ug/L	---	<5	<5	<5	<5
Bis(2-chloroethyl)ether, ug/L	---	<2	<2	<2	<2
Bis(2-chloroisopropyl)ether, ug/L	---	<5	<5	<5	<5
Bis(2-ethylhexyl)phthalate, ug/L	---	<20	<20	45	<20
Other B/N,A Ext.Pri.Poll. (EPA-8270)	---	---	---	---	---
Semi-Quantified Results **					
C18H1602, ug/L	---	---	---	8	---
Unidentified Compound, ug/L	---	---	---	60	30

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-1	LF-B3TB	20 DEC 90
12-505-2	LF-B3BR	20 DEC 90
12-505-3	LF-B3	20 DEC 90
12-505-4	LF-B1	20 DEC 90
12-505-5	LF-16	20 DEC 90

PARAMETER	12-505-1	12-505-2	12-505-3	12-505-4	12-505-5
Purgeable Priority Pollutants					
Date Analyzed	---	01.03.90	01.03.91	01.03.91	01.03.91
Date Extracted	---	01.03.90	01.03.91	01.03.91	01.03.91
Dilution Factor, Times	---	1	1	1	1
1,1,1-Trichloroethane, ug/L	---	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	---	<1	<1	<1	<1
1,1,2-Trichloroethane, ug/L	---	<1	<1	<1	<1
1,1-Dichloroethane, ug/L	---	<1	<1	<1	<1
1,1-Dichloroethene, ug/L	---	<1	<1	<1	<1
1,2-Dichloroethane, ug/L	---	<1	84	130	<1
1,2-Dichlorobenzene, ug/L	---	<1	<1	<1	<1
1,2-Dichloropropane, ug/L	---	<1	<1	<1	<1
1,3-Dichlorobenzene, ug/L	---	<1	<1	<1	<1
1,4-Dichlorobenzene, ug/L	---	<1	<1	<1	<1
2-Chloroethylvinylether, ug/L	---	<1	<1	<1	<1
2-Hexanone, ug/L	---	<1	<1	<1	<1
4-Methyl-2-Pentanone, ug/L	---	<1	<1	<1	<1
Acetone, ug/L	---	<10	<10	<10	<10
Acrolein, ug/L	---	<10	<10	<10	<10
Acrylonitrile, ug/L	---	<10	<10	<10	<10
Bromodichloromethane, ug/L	---	<1	<1	<1	<1
Bromomethane, ug/L	---	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-1	LF-B3TB	20 DEC 90
12-505-2	LF-B3BR	20 DEC 90
12-505-3	LF-B3	20 DEC 90
12-505-4	LF-B1	20 DEC 90
12-505-5	LF-16	20 DEC 90

PARAMETER	12-505-1	12-505-2	12-505-3	12-505-4	12-505-5
Benzene, ug/L	---	<1	<1	<1	<1
Bromoform, ug/L	---	<1	<1	<1	<1
Chlorobenzene, ug/L	---	<1	<1	<1	<1
Carbon Tetrachloride, ug/L	---	<1	<1	<1	<1
Chloroethane, ug/L	---	<1	<1	<1	<1
Chloroform, ug/L	---	<1	<1	<1	<1
Chloromethane, ug/L	---	<1	<1	<1	<1
Carbon Disulfide, ug/L	---	<1	<1	<1	<1
Dibromochloromethane, ug/L	---	<1	<1	<1	<1
Ethylbenzene, ug/L	---	<1	<1	<1	<1
Freon 113, ug/L	---	<1	<1	<1	<1
Methyl ethyl ketone, ug/L	---	<20	<20	<20	<20
Methylene chloride, ug/L	---	<5	<5	<5	<5
Styrene, ug/L	---	<1	<1	<1	<1
Trichloroethene, ug/L	---	<1	<1	<1	<1
Trichlorofluoromethane, ug/L	---	<1	<1	<1	<1
Toluene, ug/L	---	<1	<1	<1	<1
Tetrachloroethene, ug/L	---	<1	<1	<1	<1
Vinyl acetate, ug/L	---	<1	<1	<1	<1
Vinyl chloride, ug/L	---	<1	<1	<1	<1
Total Xylene Isomers, ug/L	---	<1	<1	<1	<1
cis-1,2-Dichloroethene, ug/L	---	<1	<1	<1	<1
cis-1,3-Dichloropropene, ug/L	---	<1	<1	<1	<1

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-1	LF-B3TB	20 DEC 90
12-505-2	LF-B3BR	20 DEC 90
12-505-3	LF-B3	20 DEC 90
12-505-4	LF-B1	20 DEC 90
12-505-5	LF-16	20 DEC 90

PARAMETER	12-505-1	12-505-2	12-505-3	12-505-4	12-505-5
trans-1,2-Dichloroethene, ug/L	---	<1	<1	<1	<1
trans-1,3-Dichloropropene, ug/L	---	<1	<1	<1	<1
Semi-Quantified Results **					
C5H12O, ug/L	---	---	10	6	---
Diisopropyl Ether, ug/L	---	---	100	100	---
Peroxide C8H12O2, ug/L	---	---	---	50	---

** Quantification based upon comparison of total ion count of the compound with that of the nearest internal standard.

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-6	LF-15	20 DEC 90
12-505-7	LF-14	20 DEC 90

PARAMETER	12-505-6	12-505-7
Arsenic, mg/L	0.007	0.15
admium, mg/L	0.0007	0.0036
Barium, mg/L	0.23	0.47
Copper, mg/L	<0.05	<0.05
Lead, mg/L	<0.2	<0.2
Zinc, mg/L	0.10	0.41
Nitric Acid Digestion, Date	01.02.91	01.02.91
Nitric Acid Digestion, Date	01.03.91	01.03.91

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-6	LF-15	20 DEC 90
12-505-7	LF-14	20 DEC 90

PARAMETER	12-505-6	12-505-7
B/N,A Ext.Pri.Poll. (EPA-8270)		
Date Analyzed	01.16.91	01.16.91
Date Extracted	12.27.90	12.27.90
Dilution Factor, Times	1	1
1,2,4-Trichlorobenzene, ug/L	<2	<2
1,2-Dichlorobenzene, ug/L	<2	<2
1,2-Diphenylhydrazine, ug/L	<10	<10
1,3-Dichlorobenzene, ug/L	<2	<2
1,4-Dichlorobenzene, ug/L	<2	<2
2,4,5-Trichlorophenol, ug/L	<10	<10
2,4,6-Trichlorophenol, ug/L	<10	<10
2,4-Dichlorophenol, ug/L	<5	<5
2,4-Dimethylphenol, ug/L	<5	<5
2,4-Dinitrophenol, ug/L	<20	<20
2,4-Dinitrotoluene, ug/L	<20	<20
2,6-Dinitrotoluene, ug/L	<5	<5
2-Chloronaphthalene, ug/L	<2	<2
2-Chlorophenol, ug/L	<5	<5
2-Methyl-4,6-dinitrophenol, ug/L	<20	<20
2-Methylnaphthalene, ug/L	<2	<2
2-Methylphenol (o-Cresol), ug/L	<5	<5
2-Nitroaniline, ug/L	<20	<20
2-Nitrophenol, ug/L	<5	<5
3,3'-Dichlorobenzidine, ug/L	<20	<20
3-Nitroaniline, ug/L	<20	<20
4-Bromophenylphenylether, ug/L	<5	<5

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-6	LF-15	20 DEC 90
12-505-7	LF-14	20 DEC 90

PARAMETER	12-505-6	12-505-7
4-Chloro-3-methylphenol, ug/L	<10	<10
4-Chloroaniline, ug/L	<10	<10
4-Chlorophenylphenylether, ug/L	<5	<5
4-Methylphenol (p-Cresol), ug/L	<10	<10
4-Nitroaniline, ug/L	<20	<20
4-Nitrophenol, ug/L	<50	<50
Acenaphthene, ug/L	<2	<2
Acenaphthylene, ug/L	<2	<2
Aniline, ug/L	<20	<20
Anthracene, ug/L	<2	<2
Benzidine, ug/L	<200	<200
Benzo(a)anthracene, ug/L	<2	<2
Benzo(a)pyrene, ug/L	<2	<2
Benzo(b)fluoranthene, ug/L	<2	<2
Benzo(g,h,i)perylene, ug/L	<2	<2
Benzo(k)fluoranthene, ug/L	<2	<2
Benzyl alcohol, ug/L	<10	<10
Benzoic acid, ug/L	<50	<50
Butylbenzylphthalate, ug/L	<10	<10
Chrysene, ug/L	<2	<2
Di-n-octylphthalate, ug/L	<10	<10
Dibenzo(a,h)anthracene, ug/L	<2	<2
Dibenzofuran, ug/L	<5	<5
Dibutylphthalate, ug/L	<10	<10
Diethylphthalate, ug/L	<10	<10
Dimethylphthalate, ug/L	<10	<10

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Project: 1563.06

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-6	LF-15	20 DEC 90
12-505-7	LF-14	20 DEC 90

PARAMETER	12-505-6	12-505-7
Fluoranthene, ug/L	<2	<2
Fluorene, ug/L	<2	<2
Hexachlorobenzene, ug/L	<2	<2
Hexachlorobutadiene, ug/L	<5	<5
Hexachlorocyclopentadiene, ug/L	<50	<50
Hexachloroethane, ug/L	<10	<10
Indeno(1,2,3-c,d)pyrene, ug/L	<2	<2
Isophorone, ug/L	<5	<5
N-Nitrosodimethylamine, ug/L	<5	<5
N-Nitrosodiphenylamine, ug/L	<5	<5
N-Nitrosodi-n-propylamine, ug/L	<5	<5
Nitrobenzene, ug/L	<2	<2
Naphthalene, ug/L	<2	<2
Phenanthrene, ug/L	<2	<2
Phenol, ug/L	<10	<10
Pentachlorophenol, ug/L	<20	<20
Pyrene, ug/L	<2	<2
Bis(2-chloroethoxy)methane, ug/L	<5	<5
Bis(2-chloroethyl)ether, ug/L	<2	<2
Bis(2-chloroisopropyl)ether, ug/L	<5	<5
Bis(2-ethylhexyl)phthalate, ug/L	<20	<20
Other B/N,A Ext.Pri.Poll. (EPA-8270)	---	---

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-6	LF-15	20 DEC 90
12-505-7	LF-14	20 DEC 90

PARAMETER	12-505-6	12-505-7
Purgeable Priority Pollutants		
Date Analyzed	01.03.91	01.03.91
Date Extracted	01.03.91	01.03.91
Dilution Factor, Times	1	1
1,1,1-Trichloroethane, ug/L	<1	<1
1,1,2,2-Tetrachloroethane, ug/L	<1	<1
1,1,2-Trichloroethane, ug/L	<1	<1
1,1-Dichloroethane, ug/L	<1	<1
1,1-Dichloroethene, ug/L	<1	<1
1,2-Dichloroethane, ug/L	<1	<1
1,2-Dichlorobenzene, ug/L	<1	<1
1,2-Dichloropropane, ug/L	<1	<1
1,3-Dichlorobenzene, ug/L	<1	<1
1,4-Dichlorobenzene, ug/L	<1	<1
2-Chloroethylvinylether, ug/L	<1	<1
2-Hexanone, ug/L	<1	<1
4-Methyl-2-Pentanone, ug/L	<1	<1
Acetone, ug/L	<10	<10
Acrolein, ug/L	<10	<10
Acrylonitrile, ug/L	<10	<10
Bromodichloromethane, ug/L	<1	<1
Bromomethane, ug/L	<1	<1
Benzene, ug/L	<1	<1
Bromoform, ug/L	<1	<1
Chlorobenzene, ug/L	<1	<1
Carbon Tetrachloride, ug/L	<1	<1

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
12-505-6	LF-15	20 DEC 90
12-505-7	LF-14	20 DEC 90

PARAMETER	12-505-6	12-505-7
Chloroethane, ug/L	<1	<1
Chloroform, ug/L	<1	<1
Chloromethane, ug/L	<1	<1
Carbon Disulfide, ug/L	<1	<1
Dibromochloromethane, ug/L	<1	<1
Ethylbenzene, ug/L	<1	<1
Freon 113, ug/L	<1	<1
Methyl ethyl ketone, ug/L	<20	<20
Methylene chloride, ug/L	<5	<5
Styrene, ug/L	<1	<1
Trichloroethene, ug/L	<1	<1
Trichlorofluoromethane, ug/L	<1	<1
Toluene, ug/L	<1	<1
Tetrachloroethene, ug/L	<1	<1
Vinyl acetate, ug/L	<1	<1
Vinyl chloride, ug/L	<1	<1
Total Xylene Isomers, ug/L	<1	<1
cis-1,2-Dichloroethene, ug/L	<1	<1
cis-1,3-Dichloropropene, ug/L	<1	<1
trans-1,2-Dichloroethene, ug/L	<1	<1
trans-1,3-Dichloropropene, ug/L	<1	<1

Sim D. Lessley, Ph.D., Laboratory Director

1255 Powell Street
Emeryville, CA 94608

415/428-2300
Fax: 415/547-3643

B C Analytical

ORDER PLACED FOR CLIENT: Levine - Fricke 9012505 :
BC ANALYTICAL : EMVL LAB : 14:11:09 23 JAN 1991 - P. 1 :

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.... ANALYZED	METHOD.....	EQUIP.	BATCH	ID.NO
9012505*1	LF-B3TB	AS	01.08.91	7060	514-01	2	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.05.91	6010	515-01	4	7708
		CU	01.05.91	6010	515-01	4	7708
		PB	01.05.91	6010	515-01	4	7708
		ZN	01.05.91	6010	515-01	4	7708
		DIG,AQ	01.03.91	3010		4	7414
		DIG,AQ,GFA	01.02.91	3020		2	7877
9012505*2	LF-B3BR	AS	01.08.91	7060	514-01	2	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.05.91	6010	515-01	4	7708
		CU	01.05.91	6010	515-01	4	7708
		PB	01.05.91	6010	515-01	4	7708
		ZN	01.05.91	6010	515-01	4	7708
		DIG,AQ	01.03.91	3010		4	7414
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.10.91	8270	517-01	242	3002
		VOA.8240	01.03.91	8240	517-03	005	5850
9012505*3	LF-B3	AS	01.08.91	7060	514-01	2	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.05.91	6010	515-01	4	7708
		CU	01.05.91	6010	515-01	4	7708
		PB	01.05.91	6010	515-01	4	7708
		ZN	01.05.91	6010	515-01	4	7708
		DIG,AQ	01.03.91	3010		4	7414
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.03.91	8240	517-03	005	5850
9012505*4	LF-B1	AS	01.08.91	7060	514-01	2	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.05.91	6010	515-01	4	7708
		CU	01.05.91	6010	515-01	4	7708
		PB	01.05.91	6010	515-01	4	7708
		ZN	01.05.91	6010	515-01	4	7708
		DIG,AQ	01.03.91	3010		4	7414
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.03.91	8240	517-03	005	5850
9012505*5	LF-16	AS	01.08.91	7060	514-01	2	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.05.91	6010	515-01	4	7708
		CU	01.05.91	6010	515-01	4	7708
		PB	01.05.91	6010	515-01	4	7708
		ZN	01.05.91	6010	515-01	4	7708

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

SAMPLES...	SAMPLE DESCRIPTION..	DETERM.....	DATE.... ANALYZED	METHOD.....	EQUIP.	BATCH	ID.NO
		DIG,AQ	01.03.91	3010		4	7414
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.03.91	8240	517-03	005	5850
9012505*6	LF-15	AS	01.08.91	7060	514-01	2	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.05.91	6010	515-01	4	7708
		CU	01.05.91	6010	515-01	4	7708
		PB	01.05.91	6010	515-01	4	7708
		ZN	01.05.91	6010	515-01	4	7708
		DIG,AQ	01.03.91	3010		4	7414
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.03.91	8240	517-03	005	5850
9012505*7	LF-14	AS	01.08.91	7060	514-01	2	7266
		CD,GFA	01.09.91	7131	514-05	2	7379
		BA	01.05.91	6010	515-01	4	7708
		CU	01.05.91	6010	515-01	4	7708
		PB	01.05.91	6010	515-01	4	7708
		ZN	01.05.91	6010	515-01	4	7708
		DIG,AQ	01.03.91	3010		4	7414
		DIG,AQ,GFA	01.02.91	3020		2	7877
		BNA.8270	01.16.91	8270	517-01	241	6192
		VOA.8240	01.03.91	8240	517-03	005	5850

***

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.

ID.NO = BC Analytical employee identification number of analyst.

BC Analytical

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

DATE REPORTED : 01/23/91

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Arsenic	01.08.91	2	0.027	0.025	mg/L	108
Cadmium	01.09.91	2	0.0016	0.0015	mg/L	107
BNA,A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	01.09.91	242	1	1	Times	100
1,2,4-Trichlorobenzene	01.09.91	242	21	50	ug/L	42
1,4-Dichlorobenzene	01.09.91	242	20	50	ug/L	40
2,4-Dinitrotoluene	01.09.91	242	24	50	ug/L	48
2-Chlorophenol	01.09.91	242	24	100	ug/L	24
4-Chloro-3-methylphenol	01.09.91	242	43	100	ug/L	43
4-Nitrophenol	01.09.91	242	13	100	ug/L	13
Acenaphthene	01.09.91	242	27	50	ug/L	54
Dibutylphthalate	01.09.91	242	40	50	ug/L	80
N-Nitrosodi-n-propylamine	01.09.91	242	36	50	ug/L	72
Phenol	01.09.91	242	13	100	ug/L	13
Pentachlorophenol	01.09.91	242	91	100	ug/L	91
Pyrene	01.09.91	242	50	50	ug/L	100
Volatile Organics (EPA 624)						
Analyst ID	01.03.91	005	5850	5850	No.	100
Detection Limit	01.03.91	005	1	1	ug/L	100
Dilution Factor	01.03.91	005	1	1	Times	100
1,1,1-Trichloroethane	01.03.91	005	46	50	ug/L	92
1,1,2,2-Tetrachloroethane	01.03.91	005	46	50	ug/L	92
1,1,2-Trichloroethane	01.03.91	005	50	50	ug/L	100
1,1-Dichloroethane	01.03.91	005	46	50	ug/L	92
1,1-Dichloroethene	01.03.91	005	47	50	ug/L	94
1,2-Dichloroethane	01.03.91	005	46	50	ug/L	92
1,2-Dichloroethene (Total)	01.03.91	005	93	100	ug/L	93
1,2-Dichloropropane	01.03.91	005	47	50	ug/L	94
1,3-Dichlorobenzene	01.03.91	005	49	50	ug/L	98
2-Chloroethylvinylether	01.03.91	005	47	50	ug/L	94
2-Hexanone	01.03.91	005	50	50	ug/L	100
4-Methyl-2-Pentanone	01.03.91	005	46	50	ug/L	92
Acetone	01.03.91	005	42	50	ug/L	84
Acrolein	01.03.91	005	240	250	ug/L	96
Acrylonitrile	01.03.91	005	240	250	ug/L	96
Bromodichloromethane	01.03.91	005	50	50	ug/L	100
Bromomethane	01.03.91	005	49	50	ug/L	98
Benzene	01.03.91	005	46	50	ug/L	92
Bromoform	01.03.91	005	44	50	ug/L	88

LABORATORY CONTROL STANDARDS

PARAMETER	DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
Chlorobenzene	01.03.91	005	46	50	ug/L	92
Carbon Tetrachloride	01.03.91	005	46	50	ug/L	92
Chloroethane	01.03.91	005	50	50	ug/L	100
Chloroform	01.03.91	005	47	50	ug/L	94
Chloromethane	01.03.91	005	52	50	ug/L	104
Carbon Disulfide	01.03.91	005	55	50	ug/L	110
Dibromochloromethane	01.03.91	005	46	50	ug/L	92
Ethylbenzene	01.03.91	005	46	50	ug/L	92
Freon 113	01.03.91	005	44	50	ug/L	88
Methyl ethyl ketone	01.03.91	005	48	50	ug/L	96
Methylene chloride	01.03.91	005	47	50	ug/L	94
Styrene	01.03.91	005	48	50	ug/L	96
Trichloroethene	01.03.91	005	47	50	ug/L	94
Trichlorofluoromethane	01.03.91	005	38	50	ug/L	76
Toluene	01.03.91	005	49	50	ug/L	98
Tetrachloroethene	01.03.91	005	48	50	ug/L	96
Vinyl acetate	01.03.91	005	48	50	ug/L	96
Vinyl chloride	01.03.91	005	55	50	ug/L	110
Total Xylene Isomers	01.03.91	005	94	100	ug/L	94
cis-1,2-Dichloroethene	01.03.91	005	47	50	ug/L	94
cis-1,3-Dichloropropene	01.03.91	005	49	50	ug/L	98
trans-1,2-Dichloroethene	01.03.91	005	46	50	ug/L	92
trans-1,3-Dichloropropene	01.03.91	005	48	50	ug/L	96
B/N,A Ext.Pri.Poll. (EPA-625)						
Dilution Factor	01.11.91	241	1	1	Times	100
1,2,4-Trichlorobenzene	01.11.91	241	23	50	ug/L	46
1,4-Dichlorobenzene	01.11.91	241	18	50	ug/L	36
2,4-Dinitrotoluene	01.11.91	241	19	50	ug/L	38
2-Chlorophenol	01.11.91	241	59	100	ug/L	59
4-Chloro-3-methylphenol	01.11.91	241	58	100	ug/L	58
4-Nitrophenol	01.11.91	241	67	100	ug/L	67
Acenaphthene	01.11.91	241	25	50	ug/L	50
Dibutylphthalate	01.11.91	241	34	50	ug/L	68
N-Nitrosodi-n-propylamine	01.11.91	241	20	50	ug/L	40
Phenol	01.11.91	241	16	100	ug/L	16
Pentachlorophenol	01.11.91	241	73	100	ug/L	73
Pyrene	01.11.91	241	35	50	ug/L	70
Fourteen CA Metals by ICAP						
Silver	01.05.91	4	1.9	2.0	mg/L	95
Barium	01.05.91	4	1.0	1.0	mg/L	100
Beryllium	01.05.91	4	0.22	0.25	mg/L	88
Cadmium	01.05.91	4	4.7	5.0	mg/L	94
Cobalt	01.05.91	4	1.8	2.0	mg/L	90
Chromium	01.05.91	4	4.4	5.0	mg/L	88
Copper	01.05.91	4	4.6	5.0	mg/L	92
Molybdenum	01.05.91	4	1.0	1.0	mg/L	100
Nickel	01.05.91	4	1.8	2.0	mg/L	90
Lead	01.05.91	4	11	10	mg/L	110
Antimony	01.05.91	4	1.0	1.0	mg/L	100
Thallium	01.05.91	4	0.9	1.0	mg/L	90
Vanadium	01.05.91	4	0.95	1.0	mg/L	95
Zinc	01.05.91	4	9.0	10	mg/L	90

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

ATE REPORTED : 01/23/91

MATRIX QC PRECISION (DUPLICATES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	R1 RESULT	R2 RESULT	UNIT	RELATIVE %DIFF
rsenic	01.08.91	2	<0.002	<0.002	mg/L	NA
admium	01.11.91	2	<0.001	<0.001	mg/L	NA
Zinc	01.05.91	4	0.19	0.18	mg/L	5
ourteen CA Metals by ICAP						
Silver	01.05.91	4	<0.05	<0.05	mg/L	NA
Barium	01.05.91	4	0.26	0.24	mg/L	8
Beryllium	01.05.91	4	<0.01	<0.01	mg/L	NA
Cadmium	01.05.91	4	<0.05	<0.05	mg/L	NA
Cobalt	01.05.91	4	<0.05	<0.05	mg/L	NA
Chromium	01.05.91	4	<0.05	<0.05	mg/L	NA
Copper	01.05.91	4	<0.05	<0.05	mg/L	NA
Molybdenum	01.05.91	4	<0.2	<0.2	mg/L	NA
Nickel	01.05.91	4	<0.1	<0.1	mg/L	NA
Lead	01.05.91	4	<0.2	<0.2	mg/L	NA
Antimony	01.05.91	4	<0.2	<0.2	mg/L	NA
Thallium	01.05.91	4	<0.2	<0.2	mg/L	NA
Vanadium	01.05.91	4	0.07	0.06	mg/L	15

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

DATE REPORTED : 01/23/91

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE %DIFF
Purgeable Priority Pollutants						
Dilution Factor	01.03.91	005	1	1	Times	0
1,1-Dichloroethene	01.03.91	005	34	26	ug/L	27
Benzene	01.03.91	005	55	56	ug/L	2
Chlorobenzene	01.03.91	005	54	58	ug/L	7
Trichloroethene	01.03.91	005	61	63	ug/L	3
Toluene	01.03.91	005	51	53	ug/L	4
1,2-Dichloroethane-d4 Reported	01.03.91	005	34	34	ug/L	0
1,2-Dichloroethane-d4 Theo.	01.03.91	005	50	50	ug/L	0
4-Bromofluorobenzene Reported	01.03.91	005	41	41	ug/L	0
4-Bromofluorobenzene Theo.	01.03.91	005	50	50	ug/L	0
Toluene-d8 Reported	01.03.91	005	45	45	ug/L	0
Toluene-d8 Theo.	01.03.91	005	50	50	ug/L	0
B/N,A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	01.18.91	241	1	1	Times	0
1,2,4-Trichlorobenzene	01.18.91	241	31	21	ug/L	38
1,4-Dichlorobenzene	01.18.91	241	28	19	ug/L	38
2,4-Dinitrotoluene	01.18.91	241	34	24	ug/L	34
.-Chlorophenol	01.18.91	241	53	50	ug/L	6
4-Chloro-3-methylphenol	01.18.91	241	41	33	ug/L	22
4-Nitrophenol	01.18.91	241	64	56	ug/L	13
Acenaphthene	01.18.91	241	34	26	ug/L	27
Dibutylphthalate	01.18.91	241	44	34	ug/L	26
N-Nitrosodi-n-propylamine	01.18.91	241	35	23	ug/L	41
Phenol	01.18.91	241	25	22	ug/L	13
Pentachlorophenol	01.18.91	241	42	33	ug/L	24
Pyrene	01.18.91	241	46	34	ug/L	30
B/N,A Ext.Pri.Poll. (EPA-8270)						
Dilution Factor	01.16.91	241	1	1	Times	0
1,2,4-Trichlorobenzene	01.16.91	241	34	34	ug/L	0
1,4-Dichlorobenzene	01.16.91	241	32	31	ug/L	3
2,4-Dinitrotoluene	01.16.91	241	30	35	ug/L	15
2-Chlorophenol	01.16.91	241	56	57	ug/L	2
4-Chloro-3-methylphenol	01.16.91	241	42	60	ug/L	35
4-Nitrophenol	01.16.91	241	60	71	ug/L	17
Acenaphthene	01.16.91	241	33	35	ug/L	6
Dibutylphthalate	01.16.91	241	19	20	ug/L	5
N-Nitrosodi-n-propylamine	01.16.91	241	32	32	ug/L	0
Phenol	01.16.91	241	49	55	ug/L	12
Pentachlorophenol	01.16.91	241	45	50	ug/L	11

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

ATE REPORTED : 01/23/91

MATRIX QC PRECISION (DUPLICATE SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	S1 RESULT	S2 RESULT	UNIT	RELATIVE %DIFF
Pyrene	01.16.91	241	34	37	ug/L	8

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

ATE REPORTED : 01/23/91

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
Arsenic	01.08.91	2	0.003	0.025	<0.002	mg/L	12
admium	01.11.91	2	0.0015	0.0015	<0.001	mg/L	10(
inc	01.05.91	4	9.9	10	0.185	mg/L	9(
B/N,A Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.10.91	242	34	50	<2	ug/L	6(
1,4-Dichlorobenzene	01.10.91	242	30	50	<2	ug/L	6(
2,4-Dinitrotoluene	01.10.91	242	27	50	<20	ug/L	5(
2-Chlorophenol	01.10.91	242	74	100	<5	ug/L	7(
4-Chloro-3-methylphenol	01.10.91	242	59	100	<10	ug/L	5(
4-Nitrophenol	01.10.91	242	46	100	<50	ug/L	4(
Acenaphthene	01.10.91	242	37	50	<2	ug/L	7(
Dibutylphthalate	01.10.91	242	41	50	<10	ug/L	8(
N-Nitrosodi-n-propylamine	01.10.91	242	36	50	<5	ug/L	7(
Phenol	01.10.91	242	39	100	<10	ug/L	3(
Pentachlorophenol	01.10.91	242	100	100	<2	ug/L	10(
Pyrene	01.10.91	242	46	50	<2	ug/L	9(
urgeable Priority Pollutants							
1,1-Dichloroethene	01.03.91	005	30	50	<1	ug/L	6(
enzene	01.03.91	005	55.5	50	<1	ug/L	11
Chlorobenzene	01.03.91	005	56	50	<1	ug/L	11(
Trichloroethene	01.03.91	005	62	50	<1	ug/L	12(
Toluene	01.03.91	005	52	50	<1	ug/L	10(
N,A Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.16.91	241	26	50	<2	ug/L	5(
1,4-Dichlorobenzene	01.16.91	241	23.5	50	<2	ug/L	4(
2,4-Dinitrotoluene	01.16.91	241	29	50	<20	ug/L	5(
2-Chlorophenol	01.16.91	241	51.5	100	<5	ug/L	5(
4-Chloro-3-methylphenol	01.16.91	241	37	100	<10	ug/L	3(
4-Nitrophenol	01.16.91	241	60	100	<50	ug/L	6(
Acenaphthene	01.16.91	241	30	50	<2	ug/L	6(
Dibutylphthalate	01.16.91	241	39	50	<10	ug/L	7(
N-Nitrosodi-n-propylamine	01.16.91	241	29	50	<5	ug/L	5(
Phenol	01.16.91	241	23.5	100	<10	ug/L	2(
Pentachlorophenol	01.16.91	241	37.5	100	<20	ug/L	3(
Pyrene	01.16.91	241	40	50	<2	ug/L	8(
N,A Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.16.91	241	34	50	<2	ug/L	6(
1,4-Dichlorobenzene	01.16.91	241	31.5	50	<2	ug/L	6(
2,4-Dinitrotoluene	01.16.91	241	32.5	50	<20	ug/L	6(
2-Chlorophenol	01.16.91	241	56.5	100	<5	ug/L	5(
4-Chloro-3-methylphenol	01.16.91	241	51	100	<10	ug/L	5

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

ATE REPORTED : 01/23/91

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVER
4-Nitrophenol	01.16.91	241	65.5	100	<50	ug/L	6
Acenaphthene	01.16.91	241	34	50	<2	ug/L	6
Dibutylphthalate	01.16.91	241	19.5	50	<10	ug/L	3
N-Nitrosodi-n-propylamine	01.16.91	241	32	50	<5	ug/L	6
Phenol	01.16.91	241	52	100	<10	ug/L	5
Pentachlorophenol	01.16.91	241	47.5	100	<20	ug/L	4
Pyrene	01.16.91	241	35.5	50	<2	ug/L	7
ourteen CA Metals by ICAP							
Silver	01.05.91	4	1.8	2.0	<0.05	mg/L	9
Barium	01.05.91	4	1.2	1.2	0.25	mg/L	10
Beryllium	01.05.91	4	0.21	0.25	<0.01	mg/L	8
Cadmium	01.05.91	4	4.1	5.0	<0.05	mg/L	8
Cobalt	01.05.91	4	1.8	2.0	<0.05	mg/L	9
Chromium	01.05.91	4	4.6	5.0	<0.05	mg/L	9
Copper	01.05.91	4	4.3	5.0	<0.05	mg/L	8
Molybdenum	01.05.91	4	1.0	1.0	<0.2	mg/L	10
Nickel	01.05.91	4	1.8	2.0	<0.1	mg/L	9
Lead	01.05.91	4	10	10	<0.2	mg/L	10
ntimony	01.05.91	4	0.9	1.0	<0.2	mg/L	9
Thallium	01.05.91	4	0.5	1.0	<0.2	mg/L	5
Vanadium	01.05.91	4	0.87	1.0	0.065	mg/L	8
Zinc	01.05.91	4	8.8	10	<0.05	mg/L	8

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

DATE REPORTED : 01/23/91

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
Arsenic	01.08.91	2	0.003	0.025	<0.002	mg/L	12
Cadmium	01.11.91	2	0.0015	0.0015	<0.001	mg/L	100
Zinc	01.05.91	4	9.9	10	0.185	mg/L	99
B/N,A Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.10.91	242	34	50	<2	ug/L	68
1,4-Dichlorobenzene	01.10.91	242	30	50	<2	ug/L	60
2,4-Dinitrotoluene	01.10.91	242	27	50	<20	ug/L	54
2-Chlorophenol	01.10.91	242	74	100	<5	ug/L	74
4-Chloro-3-methylphenol	01.10.91	242	59	100	<10	ug/L	59
4-Nitrophenol	01.10.91	242	46	100	<50	ug/L	46
Acenaphthene	01.10.91	242	37	50	<2	ug/L	74
Dibutylphthalate	01.10.91	242	41	50	<10	ug/L	82
N-Nitrosodi-n-propylamine	01.10.91	242	36	50	<5	ug/L	72
Phenol	01.10.91	242	39	100	<10	ug/L	39
Pentachlorophenol	01.10.91	242	100	100	<2	ug/L	100
Pyrene	01.10.91	242	46	50	<2	ug/L	92
Purgeable Priority Pollutants							
1,1-Dichloroethene	01.03.91	005	30	50	<1	ug/L	60
Benzene	01.03.91	005	55.5	50	<1	ug/L	111
Chlorobenzene	01.03.91	005	56	50	<1	ug/L	112
Trichloroethene	01.03.91	005	62	50	<1	ug/L	124
Toluene	01.03.91	005	52	50	<1	ug/L	104
B/NA Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.16.91	241	26	50	<2	ug/L	52
1,4-Dichlorobenzene	01.16.91	241	23.5	50	<2	ug/L	47
2,4-Dinitrotoluene	01.16.91	241	29	50	<20	ug/L	58
2-Chlorophenol	01.16.91	241	51.5	100	<5	ug/L	52
4-Chloro-3-methylphenol	01.16.91	241	37	100	<10	ug/L	37
4-Nitrophenol	01.16.91	241	60	100	<50	ug/L	60
Acenaphthene	01.16.91	241	30	50	<2	ug/L	60
Dibutylphthalate	01.16.91	241	39	50	<10	ug/L	78
N-Nitrosodi-n-propylamine	01.16.91	241	29	50	<5	ug/L	58
Phenol	01.16.91	241	23.5	100	<10	ug/L	24
Pentachlorophenol	01.16.91	241	37.5	100	<20	ug/L	38
Pyrene	01.16.91	241	40	50	<2	ug/L	80
B/NA Ext.Pri.Poll. (EPA-8270)							
1,2,4-Trichlorobenzene	01.16.91	241	34	50	<2	ug/L	68
1,4-Dichlorobenzene	01.16.91	241	31.5	50	<2	ug/L	63
2,4-Dinitrotoluene	01.16.91	241	32.5	50	<20	ug/L	65
2-Chlorophenol	01.16.91	241	56.5	100	<5	ug/L	57
4-Chloro-3-methylphenol	01.16.91	241	51	100	<10	ug/L	51

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

DATE REPORTED : 01/23/91

MATRIX QC ACCURACY (SPIKES)

PARAMETER	DATE ANALYZED	BATCH NUMBER	SBAR RESULT	TRUE RESULT	RBAR RESULT	UNIT	PERCENT RECOVERY
4-Nitrophenol	01.16.91	241	65.5	100	<50	ug/L	66
Acenaphthene	01.16.91	241	34	50	<2	ug/L	68
Dibutylphthalate	01.16.91	241	19.5	50	<10	ug/L	39
N-Nitrosodi-n-propylamine	01.16.91	241	32	50	<5	ug/L	64
Phenol	01.16.91	241	52	100	<10	ug/L	52
Pentachlorophenol	01.16.91	241	47.5	100	<20	ug/L	48
Pyrene	01.16.91	241	35.5	50	<2	ug/L	71
Fourteen CA Metals by ICAP							
Silver	01.05.91	4	1.8	2.0	<0.05	mg/L	90
Barium	01.05.91	4	1.2	1.2	0.25	mg/L	100
Beryllium	01.05.91	4	0.21	0.25	<0.01	mg/L	84
Cadmium	01.05.91	4	4.1	5.0	<0.05	mg/L	82
Cobalt	01.05.91	4	1.8	2.0	<0.05	mg/L	90
Chromium	01.05.91	4	4.6	5.0	<0.05	mg/L	92
Copper	01.05.91	4	4.3	5.0	<0.05	mg/L	86
Molybdenum	01.05.91	4	1.0	1.0	<0.2	mg/L	100
Nickel	01.05.91	4	1.8	2.0	<0.1	mg/L	90
Lead	01.05.91	4	10	10	<0.2	mg/L	100
Antimony	01.05.91	4	0.9	1.0	<0.2	mg/L	90
Thallium	01.05.91	4	0.5	1.0	<0.2	mg/L	50
Vanadium	01.05.91	4	0.87	1.0	0.065	mg/L	86
Zinc	01.05.91	4	8.8	10	<0.05	mg/L	88

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

DATE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Arsenic	01.08.91	2	0	0.002	mg/L
Cadmium	01.09.91	2	0.000017	0.0005	mg/L
B/N,A Ext.Pri.Poll. (EPA-8270)					
Date Analyzed	01.08.91	242	01.08.91	NA	Date
Date Extracted	01.08.91	242	12.27.90	NA	Date
Dilution Factor	01.08.91	242	1	NA	Times
1,2,4-Trichlorobenzene	01.08.91	242	0	2	ug/L
1,2-Dichlorobenzene	01.08.91	242	0	2	ug/L
1,2-Diphenylhydrazine	01.08.91	242	0	10	ug/L
1,3-Dichlorobenzene	01.08.91	242	0	2	ug/L
1,4-Dichlorobenzene	01.08.91	242	0	2	ug/L
2,4,5-Trichlorophenol	01.08.91	242	0	10	ug/L
2,4,6-Trichlorophenol	01.08.91	242	0	10	ug/L
2,4-Dichlorophenol	01.08.91	242	0	5	ug/L
2,4-Dimethylphenol	01.08.91	242	0	5	ug/L
2,4-Dinitrophenol	01.08.91	242	0	20	ug/L
2,4-Dinitrotoluene	01.08.91	242	0	20	ug/L
2,6-Dinitrotoluene	01.08.91	242	0	5	ug/L
2-Chloronaphthalene	01.08.91	242	0	2	ug/L
2-Chlorophenol	01.08.91	242	0	5	ug/L
2-Methyl-4,6-dinitrophenol	01.08.91	242	0	20	ug/L
2-Methylnaphthalene	01.08.91	242	0	2	ug/L
2-Methylphenol (o-Cresol)	01.08.91	242	0	5	ug/L
2-Nitroaniline	01.08.91	242	0	20	ug/L
2-Nitrophenol	01.08.91	242	0	5	ug/L
3,3'-Dichlorobenzidine	01.08.91	242	0	20	ug/L
3-Nitroaniline	01.08.91	242	0	20	ug/L
4-Bromophenylphenylether	01.08.91	242	0	5	ug/L
4-Chloro-3-methylphenol	01.08.91	242	0	10	ug/L
4-Chloroaniline	01.08.91	242	0	10	ug/L
4-Chlorophenylphenylether	01.08.91	242	0	5	ug/L
4-Methylphenol (p-Cresol)	01.08.91	242	0	10	ug/L
4-Nitroaniline	01.08.91	242	0	20	ug/L
4-Nitrophenol	01.08.91	242	0	50	ug/L
Acenaphthene	01.08.91	242	0	2	ug/L
Acenaphthylene	01.08.91	242	0	2	ug/L
Aniline	01.08.91	242	0	20	ug/L
Anthracene	01.08.91	242	0	2	ug/L

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Benzidine	01.08.91	242	0	200	ug/L
Benzo(a)anthracene	01.08.91	242	0	2	ug/L
Benzo(a)pyrene	01.08.91	242	1.0	2	ug/L
Benzo(b)fluoranthene	01.08.91	242	1.0	2	ug/L
Benzo(g,h,i)perylene	01.08.91	242	1.0	2	ug/L
Benzo(k)fluoranthene	01.08.91	242	1.0	2	ug/L
Benzyl alcohol	01.08.91	242	0	10	ug/L
Benzoic acid	01.08.91	242	0	50	ug/L
Butylbenzylphthalate	01.08.91	242	0	10	ug/L
Chrysene	01.08.91	242	1.0	2	ug/L
Di-n-octylphthalate	01.08.91	242	1.0	10	ug/L
Dibenzo(a,h)anthracene	01.08.91	242	1.0	2	ug/L
Dibenzofuran	01.08.91	242	0	5	ug/L
Dibutylphthalate	01.08.91	242	0	10	ug/L
Diethylphthalate	01.08.91	242	0	10	ug/L
Dimethylphthalate	01.08.91	242	0	10	ug/L
Fluoranthene	01.08.91	242	0	2	ug/L
Fluorene	01.08.91	242	0	2	ug/L
exachlorobenzene	01.08.91	242	0	2	ug/L
Hexachlorobutadiene	01.08.91	242	0	5	ug/L
Hexachlorocyclopentadiene	01.08.91	242	0	50	ug/L
Hexachloroethane	01.08.91	242	0	10	ug/L
Indeno(1,2,3-c,d)pyrene	01.08.91	242	1.0	2	ug/L
Isophorone	01.08.91	242	0	5	ug/L
N-Nitrosodimethylamine	01.08.91	242	0	5	ug/L
N-Nitrosodiphenylamine	01.08.91	242	0	5	ug/L
N-Nitrosodi-n-propylamine	01.08.91	242	0	5	ug/L
Nitrobenzene	01.08.91	242	0	2	ug/L
Naphthalene	01.08.91	242	0	2	ug/L
Phenanthrene	01.08.91	242	0	2	ug/L
Phenol	01.08.91	242	0	10	ug/L
Pentachlorophenol	01.08.91	242	0	20	ug/L
Pyrene	01.08.91	242	0	2	ug/L
Bis(2-chloroethoxy)methane	01.08.91	242	0	5	ug/L
Bis(2-chloroethyl)ether	01.08.91	242	0	2	ug/L
Bis(2-chloroisopropyl)ether	01.08.91	242	0	5	ug/L
Bis(2-ethylhexyl)phthalate	01.08.91	242	1.0	20	ug/L

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

TE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
latile Organics (EPA 624)					
Date Analyzed	01.03.91	005	01.03.91	NA	Date
Time Analyzed	01.03.91	005	15:06	NA	Hours
Date Extracted	01.03.91	005	01.03.91	NA	Date
Time Extracted	01.03.91	005	15:06	NA	Hours
Analyst ID	01.03.91	005	5850	NA	No.
Detection Limit	01.03.91	005	1	99999	ug/L
Dilution Factor	01.03.91	005	1	NA	Times
Instrument ID	01.03.91	005	517-03	NA	No.
1,1,1-Trichloroethane	01.03.91	005	0	1	ug/L
1,1,2,2-Tetrachloroethane	01.03.91	005	0	1	ug/L
1,1,2-Trichloroethane	01.03.91	005	0	1	ug/L
1,1-Dichloroethane	01.03.91	005	0	1	ug/L
1,1-Dichloroethene	01.03.91	005	0	1	ug/L
1,2-Dichloroethane	01.03.91	005	0	1	ug/L
1,2-Dichlorobenzene	01.03.91	005	0	1	ug/L
1,2-Dichloroethene (Total)	01.03.91	005	0	1	ug/L
1,2-Dichloropropane	01.03.91	005	0	1	ug/L
,3-Dichlorobenzene	01.03.91	005	0	1	ug/L
1,4-Dichlorobenzene	01.03.91	005	0	1	ug/L
2-Chloroethylvinylether	01.03.91	005	0	1	ug/L
2-Hexanone	01.03.91	005	0	1	ug/L
4-Methyl-2-Pentanone	01.03.91	005	0	1	ug/L
Acetone	01.03.91	005	0	10	ug/L
Acrolein	01.03.91	005	0	10	ug/L
Acrylonitrile	01.03.91	005	0	10	ug/L
Bromodichloromethane	01.03.91	005	0	1	ug/L
Bromomethane	01.03.91	005	0	1	ug/L
Benzene	01.03.91	005	0	1	ug/L
Bromoform	01.03.91	005	0	1	ug/L
Chlorobenzene	01.03.91	005	0	1	ug/L
Carbon Tetrachloride	01.03.91	005	0	1	ug/L
Chloroethane	01.03.91	005	0	1	ug/L
Chloroform	01.03.91	005	0	1	ug/L
Chloromethane	01.03.91	005	0	1	ug/L
Carbon Disulfide	01.03.91	005	0	1	ug/L
Dibromochloromethane	01.03.91	005	0	1	ug/L
Ethylbenzene	01.03.91	005	0	1	ug/L

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

TE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Freon 113	01.03.91	005	0	1	ug/L
Methyl ethyl ketone	01.03.91	005	0	20	ug/L
Methylene chloride	01.03.91	005	0	5	ug/L
Styrene	01.03.91	005	0	1	ug/L
Trichloroethene	01.03.91	005	0	1	ug/L
Trichlorofluoromethane	01.03.91	005	0	1	ug/L
Toluene	01.03.91	005	0	1	ug/L
Tetrachloroethene	01.03.91	005	0	1	ug/L
Vinyl acetate	01.03.91	005	0	1	ug/L
Vinyl chloride	01.03.91	005	0	1	ug/L
Total Xylene Isomers	01.03.91	005	0	1	ug/L
cis-1,2-Dichloroethene	01.03.91	005	0	1	ug/L
cis-1,3-Dichloropropene	01.03.91	005	0	1	ug/L
trans-1,2-Dichloroethene	01.03.91	005	0	1	ug/L
trans-1,3-Dichloropropene	01.03.91	005	0	1	ug/L
1,2-Dichloroethane-d4 Reported	01.03.91	005	33	NA	ug/L
1,2-Dichloroethane-d4 Theo.	01.03.91	005	50	NA	ug/L
4-Bromofluorobenzene Reported	01.03.91	005	44	NA	ug/L
-Bromofluorobenzene Theo.	01.03.91	005	50	NA	ug/L
oluene-d8 Reported	01.03.91	005	49	NA	ug/L
Toluene-d8 Theo.	01.03.91	005	50	NA	ug/L
N,A Ext.Pri.Poll. (EPA-625)					
Date Analyzed	01.11.91	241	01.11.91	NA	Date
Date Extracted	01.11.91	241	12.26.90	NA	Date
Dilution Factor	01.11.91	241	1	NA	Times
1,2,4-Trichlorobenzene	01.11.91	241	0	2	ug/L
1,2-Dichlorobenzene	01.11.91	241	0	2	ug/L
1,2-Diphenylhydrazine	01.11.91	241	0	10	ug/L
1,3-Dichlorobenzene	01.11.91	241	0	2	ug/L
1,4-Dichlorobenzene	01.11.91	241	0	2	ug/L
2,4,5-Trichlorophenol	01.11.91	241	0	10	ug/L
2,4,6-Trichlorophenol	01.11.91	241	0	10	ug/L
2,4-Dichlorophenol	01.11.91	241	0	5	ug/L
2,4-Dimethylphenol	01.11.91	241	0	5	ug/L
2,4-Dinitrophenol	01.11.91	241	0	20	ug/L
2,4-Dinitrotoluene	01.11.91	241	0	20	ug/L
2,6-Dinitrotoluene	01.11.91	241	0	5	ug/L
2-Chloronaphthalene	01.11.91	241	0	2	ug/L

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

TE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
2-Chlorophenol	01.11.91	241	0	5	ug/L
2-Methyl-4,6-dinitrophenol	01.11.91	241	0	20	ug/L
2-Methylnaphthalene	01.11.91	241	0	2	ug/L
2-Methylphenol (o-Cresol)	01.11.91	241	0	5	ug/L
2-Nitroaniline	01.11.91	241	0	20	ug/L
2-Nitrophenol	01.11.91	241	0	5	ug/L
3,3'-Dichlorobenzidine	01.11.91	241	0	20	ug/L
3-Nitroaniline	01.11.91	241	0	20	ug/L
4-Bromophenylphenylether	01.11.91	241	0	5	ug/L
4-Chloro-3-methylphenol	01.11.91	241	0	10	ug/L
4-Chloroaniline	01.11.91	241	0	10	ug/L
4-Chlorophenylphenylether	01.11.91	241	0	5	ug/L
4-Methylphenol (p-Cresol)	01.11.91	241	0	10	ug/L
4-Nitroaniline	01.11.91	241	0	20	ug/L
4-Nitrophenol	01.11.91	241	0	50	ug/L
Acenaphthene	01.11.91	241	0	2	ug/L
Acenaphthylene	01.11.91	241	0	2	ug/L
Aniline	01.11.91	241	0	20	ug/L
nthracene	01.11.91	241	0	2	ug/L
Benzidine	01.11.91	241	0	200	ug/L
Benzo(a)anthracene	01.11.91	241	0	2	ug/L
Benzo(a)pyrene	01.11.91	241	0	2	ug/L
Benzo(b)fluoranthene	01.11.91	241	0	2	ug/L
Benzo(g,h,i)perylene	01.11.91	241	0	2	ug/L
Benzo(k)fluoranthene	01.11.91	241	0	2	ug/L
Benzyl alcohol	01.11.91	241	0	10	ug/L
Benzoic acid	01.11.91	241	0	50	ug/L
Butylbenzylphthalate	01.11.91	241	0	10	ug/L
Chrysene	01.11.91	241	0	2	ug/L
Di-n-octylphthalate	01.11.91	241	0	10	ug/L
Dibenzo(a,h)anthracene	01.11.91	241	0	2	ug/L
Dibenzofuran	01.11.91	241	0	5	ug/L
Dibutylphthalate	01.11.91	241	0	10	ug/L
Diethylphthalate	01.11.91	241	0	10	ug/L
Dimethylphthalate	01.11.91	241	0	10	ug/L
Fluoranthene	01.11.91	241	0	2	ug/L
Fluorene	01.11.91	241	0	2	ug/L

BC ANALYTICAL

BATCH QC REPORT
ORDER: E9012505

DATE REPORTED : 01/23/91

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)

PARAMETER	DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT
Hexachlorobenzene	01.11.91	241	0	2	ug/L
Hexachlorobutadiene	01.11.91	241	0	5	ug/L
Hexachlorocyclopentadiene	01.11.91	241	0	50	ug/L
Hexachloroethane	01.11.91	241	0	10	ug/L
Indeno(1,2,3-c,d)pyrene	01.11.91	241	0	2	ug/L
Isophorone	01.11.91	241	0	5	ug/L
N-Nitrosodimethylamine	01.11.91	241	0	5	ug/L
N-Nitrosodiphenylamine	01.11.91	241	0	5	ug/L
N-Nitrosodi-n-propylamine	01.11.91	241	0	5	ug/L
Nitrobenzene	01.11.91	241	0	2	ug/L
Naphthalene	01.11.91	241	0	2	ug/L
Phenanthrene	01.11.91	241	0	2	ug/L
Phenol	01.11.91	241	0	10	ug/L
Pentachlorophenol	01.11.91	241	0	20	ug/L
Pyrene	01.11.91	241	0	2	ug/L
Bis(2-chloroethoxy)methane	01.11.91	241	0	5	ug/L
Bis(2-chloroethyl)ether	01.11.91	241	0	2	ug/L
Bis(2-chloroisopropyl)ether	01.11.91	241	0	5	ug/L
Bis(2-ethylhexyl)phthalate	01.11.91	241	3.4	20	ug/L
Fourteen CA Metals by ICAP					
Silver	01.05.91	4	0.017	0.05	mg/L
Barium	01.05.91	4	0.007	0.05	mg/L
Beryllium	01.05.91	4	0	0.01	mg/L
Cadmium	01.05.91	4	0	0.05	mg/L
Cobalt	01.05.91	4	0	0.05	mg/L
Chromium	01.05.91	4	0	0.05	mg/L
Copper	01.05.91	4	0	0.05	mg/L
Molybdenum	01.05.91	4	0.032	.02	mg/L
Nickel	01.05.91	4	0	0.1	mg/L
Lead	01.05.91	4	0.040	0.2	mg/L
Antimony	01.05.91	4	0	0.2	mg/L
Thallium	01.05.91	4	0	0.2	mg/L
Vanadium	01.05.91	4	0.031	0.05	mg/L
Zinc	01.05.91	4	0.016	0.05	mg/L

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 1563.06	Field Logbook No.:	Date: 12-20-90	Serial No.: Nº 4104
Project Name: Sherwin Williams	Project Location: Emeryville		
Sampler (Signature): Prescott C. Heald			

SAMPLES						ANALYSES								Samplers: SCH/RDT
SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	8240 2 VOAs	8270 2 amber	metals 1 plastic	HOLD	RUSH		REMARKS
1 LF-B3TB	12-20-90	0800		1	Water					X				Metals = Arsenic, Cadmium, Copper, Lead, Zinc, Barium
2 LF-B3BR	↓	~~1115~~ 0930		5	↓			X	X	X				
3 LF-B3		~~1230~~ 0940		5				X	X	X				Normal Turnaround
4 LF-B1		1100		5				X	X	X				
5 LF-16		1400		5				X	X	X				Results to Glenn Leong
6 LF-15		1445		5				X	X	X				cc: John De Reamer
7 LF-14	↓	1545		5	↓			X	X	X				

RELINQUISHED BY: (Signature) Prescott C. Heald	DATE 12-20-90	TIME 17:55	RECEIVED BY: (Signature)	DATE 12/20/90	TIME 17:55
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: HAND Deliver	DATE	TIME	LAB COMMENTS:		

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

Analytical Laboratory:
BC Analytical
Lot # 9012505

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

APPENDIX C

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) REVIEW OF GROUND-WATER QUALITY RESULTS

APPENDIX C

QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) REVIEW OF GROUND-WATER QUALITY RESULTS

Water-quality analyses were performed by BC Analytical of Emeryville, California, using EPA Method 8240 (volatile organic compounds), EPA Method 8270 (semivolatile organics), and EPA Methods 200/7000 (inorganics). A field duplicate was collected before the sampling of well LF-10 and analyzed by all three methods. Field blanks were prepared in the field by pouring nitrogen-purged deionized water into sampling bailers before sampling of wells LF-B4, LF-8, and LF-B3, and were analyzed by all three methods. Three trip blanks were prepared and sent to the field in the containers used for sample shipment. The trip blanks were submitted to the lab for analysis: one for all three analyses and the other two for inorganics only.

Data precision of analytical results for duplicate samples is assessed by the relative percent difference (RPD) parameter, which is defined as the absolute value of the difference between two values divided by their arithmetic mean. Results close to the analytical detection limit are generally subject to variability, and as such, the RPD may not be an appropriate parameter to evaluate in those applicable cases. RPD values for analyses of the duplicate sample indicated generally good data precision for the samples collected in the December 1990 sampling round (Table C-1) with all of the calculated RPD values less than 30 percent.

In addition to the split field duplicate, surrogate spike and matrix spikes were evaluated. Matrix spikes are samples prepared by taking an aliquot of an actual sample and adding known amounts of the target compounds prior to extraction and analysis. The total amount detected in the spike sample (less the amount in the original sample), divided by the theoretical amount added, expressed as a percent, is the matrix spike recovery. An RPD can be calculated for matrix spikes prepared in duplicate. Surrogate spikes are compounds that are similar in chemical structure to the target compounds but are not commonly found in environmental samples. These compounds are added to samples and the amount detected divided by the theoretical amount added, expressed as a percentage, is the surrogate spike recovery. Surrogate spike recoveries and matrix spikes recoveries and RPD values were found to be generally good with recoveries within BC Analytical's QC limits.

None of the blanks (field, trip, and laboratory method) were found to contain any of the target contaminants above the laboratory reported detection limit.

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

Well No.	Date	Lab	Lab I.D. No.	Acetone	MEK	Toluene	Total Xylenes	1,2-DCA	Ethyl-benzene	Bis (2-ethylhexyl) phthalate	Phenol	Barium	Arsenic	Zinc	Lead	Cadmium
LF-10	21-Dec-90	B & C	E90-12-529-6	ND	ND	ND	ND	ND	ND	ND	ND	0.33	1	ND	ND	0.0009
	21-Dec-90	B & C	E90-12-529-7	ND	ND	ND	ND	ND	ND	ND	ND	0.35	1.1	ND	ND	0.0007
	RPD(%)			NA	NA	NA	NA	NA	NA	NA	NA	5.9	9.5	NA	NA	25.0
FIELD BLANKS																
LF-B4	19-Dec-90	B & C	E90-12-474-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LF-8	21-Dec-90	B & C	E90-12-529-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LF-B3	20-Dec-90	B & C	E90-12-505-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
TRIP BLANKS																
LF-B4	19-Dec-90	B & C	E90-12-474-1	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND
LF-8	21-Dec-90	B & C	E90-12-529-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
LF-B3	20-Dec-90	B & C	E90-12-505-1	NA	NA	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND

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

NA = Not Analyzed
ND = Not Detected
ND(0.001) = Not Detected, with a detection limit of 0.001 ppm
RPD = Relative Percent Difference, defined as the difference between two values divided by their arithmetic mean

Analytical Laboratory: B & C = Brown and Caldwell Laboratories, Emeryville, California