

February 19, 1997

3018.95-021

Ms. Juliett Chin  
Alameda County Health Care Services Agency  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, California 94501

Subject: Quarterly Groundwater Monitoring Report for the Period from October 1 to December 31, 1996, 5050 Coliseum Way and 750-50th Avenue, Oakland, California

Dear Ms. Chin:

This quarterly report is submitted by Levine·Fricke·Recon Inc. (LFR; formerly Levine·Fricke, Inc. and Recon Environmental) on behalf of Volvo GM Heavy Truck Corporation for the subject site. During this quarterly period, depth-to-water measurements were collected in 22 monitoring wells and groundwater samples were collected from 10 wells.

If you have any questions regarding this report, please call me at (510) 652-4500 or Mr. Robert Whelen of Volvo GM at (910) 279-2544).

Sincerely,



Kathleen A. Isaacson, R.G.  
Principal Hydrogeologist

Enclosure

cc: Bob Whelen, Volvo GM Heavy Truck Corp.

**Quarterly Groundwater Monitoring Report for the  
Period from October 1 to December 31, 1996  
5050 Coliseum Way and 750-50th Avenue  
Oakland, California**

**February 19, 1997  
3018.95-021**

Prepared for  
Volvo GM Heavy Truck Corporation  
7900 National Service Road  
P.O. Box 26115  
Greensboro, North Carolina 27402-6115

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

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**CERTIFICATION**

All hydrogeologic and geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by an LFR California Registered Geologist.



2/19/97  
Date

Kathleen A. Isaacson  
Principal Hydrogeologist  
California Registered Geologist (5106)

## 1.0 INTRODUCTION

This report, prepared by Levine·Fricke·Recon Inc. (LFR), presents results of quarterly groundwater monitoring activities conducted during the period from October 1 through December 31, 1996, for the properties located at 5050 Coliseum Way and 750-50th Avenue, Oakland, California (collectively referenced as "the Site"; Figure 1). This report was prepared on behalf of Volvo GM Heavy Truck Corporation ("Volvo GM") in accordance with our work plan dated January 6, 1993, and submitted to the Alameda County Health Care Services Agency (ACHCSA). This report includes graphic illustrations of potentiometric head (water-level) data and presents historical summaries of groundwater elevation and groundwater quality data collected at the Site.

## 2.0 WATER-LEVEL MEASUREMENTS AND GROUNDWATER FLOW DIRECTION

The top of each well casing at the Site has been surveyed relative to mean sea level by a state-licensed land surveyor. Water-level measurements were collected from 22 wells at the Site on December 18, 1996. A historical summary of depth-to-water measurements and groundwater elevations for the Site is presented in Table 1. Groundwater elevation contours for December 18, 1996, are presented in Figure 2.

Groundwater elevation data for December 18, 1996, indicate that the groundwater flow direction was generally toward the west, which is consistent with historical groundwater flow data. Groundwater elevation data indicate an average horizontal hydraulic gradient of approximately 0.006 foot per foot (ft/ft; as calculated between wells LF-5 and LF-7) across the Site. The gradient in the western portion of the Site, as measured between wells LF-15 and LF-5, is approximately 0.008 ft/ft.

Approximately 0.10 foot of free product was measured in well LF-13 using a product-thickness bailer. This measurement is consistent with previous measurements for the Site (Table 1). Since September 1995, droplets of oily material have been reported for well LF-16, located within the building. However, no measurable product thickness has been observed. Samples collected from well LF-16 during the recent sampling round were submitted for analysis of petroleum hydrocarbons. As discussed in Section 3.2.3, only total petroleum hydrocarbons as diesel (TPHd) was detected at a concentration of 0.25 parts per million (ppm).

## 3.0 GROUNDWATER QUALITY

Groundwater samples were collected from 10 monitoring wells (LF-1, LF-2, LF-3, LF-5, LF-8, LF-11, LF-12, LF-14, LF-16, and MW-3) on December 18 and 19, 1996,

as shown in Figure 3. Well LF-13, located on the southeastern property boundary, contained free product and therefore was not sampled.

Groundwater samples were submitted to the laboratory for metals analysis using EPA Method 200 series. Samples collected from wells LF-1, LF-3, LF-5, LF-8, LF-14, and LF-16 were also submitted for analysis of total petroleum hydrocarbons as gasoline (TPHg) by EPA Method 5030, TPH as diesel (TPHd) and as oil (TPHo) by EPA Method 3510, and benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020. Laboratory certificates and a chain-of-custody form are included in Appendix A.

Analytical results for groundwater samples collected during this recent round of sampling were generally consistent with results reported historically for the Site. Groundwater quality results are discussed in Section 3.2. Analytical results for metals analysis are presented in Table 2 and Figure 3. Analytical results for TPHg, TPHd, and TPHo are presented on Tables 3 and 4.

### 3.1 Sampling Procedures

Before groundwater samples were collected, approximately 3 to 5 well casing volumes of water were removed from each well using a centrifugal pump or a Teflon bailer. Specific conductance, pH, and temperature of the purged water were measured during this purging process to aid in evaluating overall groundwater quality. These parameters were recorded in the field on water-quality sampling forms. Groundwater samples were collected after these parameters stabilized to within 15 percent of the previous measurement.

Groundwater samples were collected using a Teflon bailer. Groundwater samples for metals analysis were filtered in the field, placed in an ice-chilled cooler immediately after collection, and transported to American Environmental Network, Inc. (AEN), of Pleasant Hill, California, a state-certified laboratory, for analysis. The samples were preserved by the laboratory on arrival.

For quality assurance/quality control measures, a duplicate sample was collected for wells LF-3 (LF-103) and LF-11 (LF-111) and submitted to AEN for petroleum hydrocarbon and metals analysis, respectively.

The pH values for groundwater samples collected from each monitoring well were measured and recorded in the field during sampling activities.

## 3.2 Groundwater Quality Results

### 3.2.1 Metals

Analytical results for Title 22 metals in groundwater samples collected during this recent round of sampling were generally consistent with results reported historically for those wells. These results, shown on Figure 3, are as follows.

Silver, barium, molybdenum, selenium, thallium, and vanadium were generally reported below detection limits, or at concentrations below 1.0 ppm.

Zinc was detected in all 10 wells at concentrations ranging from 0.030 ppm in LF-8 to 31,000 ppm in LF-11. Zinc was detected in downgradient well LF-12 at a concentration of 2,600 ppm. The highest concentration of lead (0.80 ppm) was detected in the sample from LF-1.

The highest concentration of cadmium (93 ppm) was detected in the sample collected from LF-11, and the highest concentration of copper (16 ppm) was detected in the sample collected from LF-16. The highest concentrations of cobalt (5 ppm) and nickel (19 ppm) were detected in the sample collected from LF-11. Of the downgradient wells that were sampled, LF-12 contained the highest concentrations of the metals cadmium (2.9 ppm), cobalt (2.1 ppm), nickel (6.1 ppm), and copper (1.2 ppm).

Arsenic was detected in samples collected from five wells, with the highest concentration, 3.6 ppm, reported for LF-3. Arsenic was detected in well LF-1, located downgradient from well LF-3, at a concentration of 0.92 ppm.

### 3.2.2 Petroleum Hydrocarbons

Analytical results for petroleum hydrocarbons in the samples collected from LF-3, LF-8, and LF-14 were similar to previous sampling events (Tables 3 and 4). TPHg was reported in samples collected from LF-8 and LF-14 at concentrations of 0.21 ppm and 0.71 ppm, respectively. Benzene (0.0012 ppm) and ethylbenzene (0.002 ppm) were detected in well LF-8, and benzene (0.0006 ppm) and xylenes (0.006 ppm) were detected in well LF-14. No TPHg or BTEX was not detected above the detection limits in the sample collected from LF-3. TPHo was not detected in any of the samples. TPHd was detected in the samples collected from LF-3, LF-8, and LF-14, at concentrations of 0.52 ppm, 3.2 ppm, and 0.56 ppm, respectively.

### 3.2.3 Former Waste-Oil Tank

No TPHg, BTEX, or TPHo was detected in the groundwater sample collected from well LF-1, located approximately 50 feet downgradient from the former waste-oil underground storage tank (UST). A low concentration of TPHd (0.61 ppm) was detected in well LF-1. These results are similar to previous results and indicate that



shallow groundwater quality has not been significantly affected by a possible release of petroleum hydrocarbons from the former UST.

To assess whether groundwater down or crossgradient from the former UST (and from LF-1) may have been affected by petroleum hydrocarbons, samples were additionally collected from wells LF-5 and LF-16, respectively. Oil droplets had been noted in well LF-16 during previous sampling events.

Analytical results for wells LF-5 and LF-16 do not indicate the presence of TPHg, BTEX, or TPHo above laboratory detection limits. TPHd was not detected in the sample collected from well LF-5. A low concentration of diesel (0.25 ppm) was detected in the sample collected from well LF-16.

### **3.2.4 Volatile Organic Compounds**

No samples were analyzed for volatile organic compounds (VOCs) this quarter.

### **3.2.5 Semivolatile Organic Compounds**

No samples were analyzed for semivolatile organic compounds (SVOCs) this quarter.

### **3.2.6 Measurements of pH**

Measurements of groundwater pH are shown in Figure 3. Recent monitoring results indicate that pH values for shallow groundwater beneath the Site were generally consistent with historical values and indicate that pH is variable across the Site. The lowest pH (3.58) was measured in the sample from well LF-11.

### **3.2.7 Quality Assurance/Quality Control**

Analytical results for the duplicate samples collected from wells LF-3 (LF-103) and LF-11 (LF-111) generally showed similar petroleum hydrocarbon and metals concentrations, respectively, when compared to the primary sample collected from those wells (Table 2).

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
LF-1	LF-1	7.56	07-Nov-91	6.79			0.77
LF-1			26-Oct-92	4.69			2.87
LF-1			04-Mar-93	3.94			3.62
LF-1			14-Apr-93	3.41			4.15
LF-1			24-May-93	3.07			4.49
LF-1			14-Jun-93	3.41			4.15
LF-1			30-Jul-93	3.46			4.10
LF-1			31-Aug-93	3.67			3.89
LF-1			27-Sep-93	3.76			3.80
LF-1			25-Oct-93	3.74			3.82
LF-1			02-Nov-93	4.26			3.30
LF-1			08-Dec-93	4.42			3.14
LF-1			28-Jan-94	4.06			3.50
LF-1			15-Feb-94	3.94			3.62
LF-1			24-May-94	3.81			3.75
LF-1			21-Sep-94	3.75			3.81
LF-1			19-Dec-94	3.51			4.05
LF-1			13-Mar-95	2.33			5.23
LF-1			07-Jun-95	2.49			5.07
LF-1			05-Sep-95	2.78			4.78
LF-1			18-Dec-95	3.21			4.35
LF-1			28-Feb-96	2.51			5.05
LF-1			02-May-96	2.35			5.21
LF-1			23-Sep-96	2.80			4.76
LF-1			18-Dec-96	3.52			4.04
LF-2	LF-2	9.84	07-Nov-91	7.26			2.58
LF-2			26-Oct-92	6.28			3.56
LF-2			04-Mar-93	5.14			4.70
LF-2			14-Apr-93	4.95			4.89
LF-2			24-May-93	5.09			4.75
LF-2			14-Jun-93	5.21			4.63
LF-2			30-Jul-93	5.38			4.46
LF-2			31-Aug-93	5.57			4.27
LF-2			27-Sep-93	5.70			4.14
LF-2			25-Oct-93	5.80			4.04
LF-2			02-Nov-93	5.86			3.98
LF-2			08-Dec-93	6.21			3.63
LF-2			28-Jan-94	6.12			3.72
LF-2			15-Feb-94	6.07			3.77
LF-2			24-May-94	5.65			4.19
LF-2			21-Sep-94	6.00			3.84
LF-2			19-Dec-94	5.91			3.93
LF-2			13-Mar-95	4.30			5.54
LF-2			07-Jun-95	4.36			5.48
LF-2			05-Sep-95	5.12			4.72
LF-2			18-Dec-95	5.56			4.28

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
LF-2			28-Feb-96	4.51			5.33
LF-2			02-May-96	4.41			5.43
LF-2			23-Sep-96	5.24			4.60
LF-2			18-Dec-96	5.48			4.36
LF-3	LF-3	10.98	07-Nov-91	7.55			3.43
LF-3			26-Oct-92	7.05			3.93
LF-3			04-Mar-93	5.83			5.15
LF-3			14-Apr-93	5.48			5.50
LF-3			24-May-93	5.61			5.37
LF-3			14-Jun-93	5.75			5.23
LF-3			30-Jul-93	5.96			5.02
LF-3			31-Aug-93	6.18			4.80
LF-3			27-Sep-93	6.33			4.65
LF-3			25-Oct-93	6.46			4.52
LF-3			02-Nov-93	6.62			4.36
LF-3			08-Dec-93	6.71			4.27
LF-3			28-Jan-94	6.72			4.26
LF-3			15-Feb-94	6.50			4.48
LF-3			24-May-94	6.15			4.83
LF-3			21-Sep-94	6.56			4.42
LF-3			19-Dec-94	6.06			4.92
LF-3			13-Mar-95	4.85			6.13
LF-3			07-Jun-95	4.58			6.40
LF-3			05-Sep-95	5.38			5.60
LF-3			18-Dec-95	5.75			5.23
LF-3			28-Feb-96	4.80			6.18
LF-3			02-May-96	4.64			6.34
LF-3			23-Sep-96	5.53			5.45
LF-3			18-Dec-96	5.63			5.35
LF-4	LF-4	10.36	07-Nov-91	11.63			-1.27
LF-4			26-Oct-92	7.31			3.05
LF-4			04-Mar-93	5.58			4.78
LF-4			14-Apr-93	5.21			5.15
LF-4			24-May-93	5.48			4.88
LF-4			14-Jun-93	5.63			4.73
LF-4			30-Jul-93	5.92			4.44
LF-4			31-Aug-93	6.16			4.20
LF-4			27-Sep-93	6.36			4.00
LF-4			25-Oct-93	6.54			3.82
LF-4			02-Nov-93	7.00			3.36
LF-4			08-Dec-93	6.96			3.40
LF-4			28-Jan-94	7.04			3.32
LF-4			15-Feb-94	6.84			3.52
LF-4			24-May-94	5.99			4.37
LF-4			21-Sep-94	6.62			3.74

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
LF-4			19-Dec-94	6.75			3.61
LF-4			13-Mar-95	5.67			4.69
LF-4			07-Jun-95	4.48			5.88
LF-4			05-Sep-95	5.38			4.98
LF-4			18-Dec-95	5.96			4.40
LF-4			28-Feb-96	4.31			6.05
LF-4			02-May-96	4.40			5.96
LF-4			23-Sep-96	5.60			4.76
LF-4			18-Dec-96	5.75			4.61
LF-5	LF-5	8.03	07-Nov-91	7.34			0.69
LF-5			26-Oct-92	7.05			0.98
LF-5			04-Mar-93	6.05			1.98
LF-5			14-Apr-93	6.25			1.78
LF-5			24-May-93	6.61			1.42
LF-5			14-Jun-93	6.97			1.06
LF-5			30-Jul-93	6.72			1.31
LF-5			31-Aug-93	6.84			1.19
LF-5			27-Sep-93	7.10			0.93
LF-5			25-Oct-93	7.11			0.92
LF-5			02-Nov-93	7.04			0.99
LF-5			08-Dec-93	7.27			0.76
LF-5			28-Jan-94	6.82			1.21
LF-5			15-Feb-94	6.85			1.18
LF-5			24-May-94	6.76			1.27
LF-5			21-Sep-94	7.05			0.98
LF-5			19-Dec-94	6.48			1.55
LF-5			13-Mar-95	5.25			2.78
LF-5			07-Jun-95	5.98			2.05
LF-5			05-Sep-95	6.42			1.61
LF-5			18-Dec-95	5.87			2.16
LF-5			28-Feb-96	4.58			3.45
LF-5			02-May-96	5.72			2.31
LF-5			23-Sep-96	6.33			1.70
LF-5			18-Dec-96	5.63			2.40
LF-6	LF-6	11.59	07-Nov-91	8.59			3.00
LF-6			26-Oct-92	8.82			2.77
LF-6			04-Mar-93	5.79			5.80
LF-6			14-Apr-93	5.41			6.18
LF-6			24-May-93	6.05			5.54
LF-6			14-Jun-93	6.29			5.30
LF-6			30-Jul-93	6.83			4.76
LF-6			31-Aug-93	7.27			4.32
LF-6			27-Sep-93	7.61			3.98
LF-6			25-Oct-93	7.79			3.80
LF-6			02-Nov-93	8.07			3.52

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
LF-6			08-Dec-93	7.34			4.25
LF-6			28-Jan-94	6.37			5.22
LF-6			15-Feb-94	5.98			5.61
LF-6			24-May-94	6.14			5.45
LF-6			21-Sep-94	7.39			4.20
LF-6			19-Dec-94	6.12			5.47
LF-6			13-Mar-95	4.98			6.61
LF-6			07-Jun-95	5.03			6.56
LF-6			05-Sep-95	6.23			5.36
LF-6			18-Dec-95	5.71			5.88
LF-6			28-Feb-96	4.75			6.84
LF-6			02-May-96	5.08			6.51
LF-6			23-Sep-96	6.45			5.14
LF-6			18-Dec-96	5.52			6.07
LF-7	LF-7	10.65	07-Nov-91	8.54			2.11
LF-7			26-Oct-92	7.98			2.67
LF-7			04-Mar-93	4.92			5.73
LF-7			14-Apr-93	4.80			5.85
LF-7			24-May-93	5.03			5.62
LF-7			14-Jun-93	5.18			5.47
LF-7			30-Jul-93	5.51			5.14
LF-7			31-Aug-93	5.82			4.83
LF-7			27-Sep-93	6.14			4.51
LF-7			25-Oct-93	6.39			4.26
LF-7			02-Nov-93	6.60			4.05
LF-7			08-Dec-93	6.74			3.91
LF-7			28-Jan-94	6.03			4.62
LF-7			15-Feb-94	5.59			5.06
LF-7			24-May-94	5.46			5.19
LF-7			21-Sep-94	6.40			4.25
LF-7			19-Dec-94	5.59			5.06
LF-7			13-Mar-95	4.16			6.49
LF-7			07-Jun-95	4.07			6.58
LF-7			05-Sep-95	4.81			5.84
LF-7			18-Dec-95	4.99			5.66
LF-7			28-Feb-96	4.22			6.43
LF-7			02-May-96	4.09			6.56
LF-7			23-Sep-96	4.97			5.68
LF-7			18-Dec-96	4.95			5.70
LF-8	LF-8	10.91	02-Nov-93	6.18			4.73
LF-8			08-Dec-93	6.29			4.62
LF-8			28-Jan-94	6.38			4.53
LF-8			15-Feb-94	6.37			4.54
LF-8			24-May-94	6.15			4.76
LF-8			21-Sep-94	6.33			4.58

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
LF-8			19-Dec-94	6.31			4.60
LF-8			13-Mar-95	4.48			6.43
LF-8			07-Jun-95	4.46			6.45
LF-8			05-Sep-95	5.08			5.83
LF-8			18-Dec-95	5.63			5.28
LF-8			28-Feb-96	4.57			6.34
LF-8			02-May-96	4.41			6.50
LF-8			23-Sep-96	5.20			5.71
LF-8			18-Dec-96	5.48			5.43
LF-9	LF-9	11.70	02-Nov-93	6.76			4.94
LF-9			08-Dec-93	6.91			4.79
LF-9			28-Jan-94	6.88			4.82
LF-9			15-Feb-94	6.80			4.90
LF-9			24-May-94	6.80			4.90
LF-9			21-Sep-94	6.98			4.72
LF-9			19-Dec-94	6.34			5.36
LF-9			13-Mar-95	5.12			6.58
LF-9			07-Jun-95	5.31			6.39
LF-9			05-Sep-95	5.90			5.80
LF-9			18-Dec-95	6.80			4.90
LF-9			28-Feb-96	5.23			6.47
LF-9			02-May-96	5.16			6.54
LF-9			23-Sep-96	5.95			5.75
LF-9			18-Dec-96	6.00			5.70
LF-10	LF-10	9.43	02-Nov-93	8.14			1.29
LF-10			08-Dec-93	7.82			1.61
LF-10			28-Jan-94	NM			NM
LF-10			15-Feb-94	7.47			1.96
LF-10			24-May-94	7.11			2.32
LF-10			21-Sep-94	7.90			1.53
LF-10			19-Dec-94	7.21			2.22
LF-10			13-Mar-95	5.68			3.75
LF-10			07-Jun-95	5.92			3.51
LF-10			05-Sep-95	6.61			2.82
LF-10			18-Dec-95	6.92			2.51
LF-10			28-Feb-96	5.62			3.81
LF-10			02-May-96	6.00			3.43
LF-10			23-Sep-96	6.81			2.62
LF-10			18-Dec-96	7.45			1.98
LF-11	LF-11	9.07	02-Nov-93	11.68			-2.61
LF-11			08-Dec-93	5.35			3.72
LF-11			28-Jan-94	5.27			3.80
LF-11			15-Feb-94	5.04			4.03
LF-11			24-May-94	4.20			4.87
LF-11			21-Sep-94	4.70			4.37

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
LF-11			19-Dec-94	4.72			4.35
LF-11			13-Mar-95	3.27			5.80
LF-11			07-Jun-95	3.75			5.32
LF-11			05-Sep-95	3.70			5.37
LF-11			18-Dec-95	4.20			4.87
LF-11			28-Feb-96	2.88			6.19
LF-11			02-May-96	2.84			6.23
LF-11			23-Sep-96	3.78			5.29
LF-11			18-Dec-96	3.80			5.27
LF-12	LF-12	8.70	02-Nov-93	7.87			0.83
LF-12			08-Dec-93	7.90			0.80
LF-12			28-Jan-94	7.46			1.24
LF-12			15-Feb-94	7.66			1.04
LF-12			21-Sep-94	7.80			0.90
LF-12			19-Dec-94	7.32			1.38
LF-12			13-Mar-95	6.00			2.70
LF-12			07-Jun-95	7.40			1.30
LF-12			05-Sep-95	7.45			1.25
LF-12			18-Dec-95	6.71			1.99
LF-12			28-Feb-96	6.28			2.42
LF-12			02-May-96	7.09			1.61
LF-12			23-Sep-96	7.35			1.35
LF-12			18-Dec-96	6.07			2.63
LF-13	LF-13	9.75	08-Dec-93	5.94			3.81 (1)
LF-13			28-Jan-94	4.94			4.81 (1)
LF-13			15-Feb-94	4.84	4.83	0.01	4.92 (1)
LF-13			24-May-94	4.81	4.75	0.06	4.99 (1)
LF-13			21-Sep-94	6.32	5.17	1.15 (2)	4.41 (1)
LF-13			19-Dec-94	4.67	4.57	0.10	5.17 (1)
LF-13			13-Mar-95	3.22	3.12	0.10	6.62 (1)
LF-13			07-Jun-95	3.32	3.22	0.10	6.52 (1)
LF-13			05-Sep-95	3.90	3.80	0.10	5.94 (1)
LF-13			18-Dec-95	4.13	4.03	0.10	5.71 (1)
LF-13			28-Feb-96	3.48	3.38	0.10	6.36 (1)
LF-13			02-May-96	3.44	3.34	0.10	6.40 (1)
LF-13			23-Sep-96	4.05	3.95	0.10	5.79 (1)
LF-13			18-Dec-96	4.00	3.90	0.10	5.84 (1)
LF-14	LF-14	11.72	08-Dec-93	7.96			3.76
LF-14			28-Jan-94	8.02			3.70
LF-14			15-Feb-94	7.85			3.87
LF-14			24-May-94	7.68			4.04
LF-14			21-Sep-94	7.69			4.03
LF-14			19-Dec-94	7.71			4.01
LF-14			13-Mar-95	6.68			5.04

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
LF-14			07-Jun-95	6.03			5.69
LF-14			05-Sep-95	6.51			5.21
LF-14			18-Dec-95	7.39			4.33
LF-14			28-Feb-96	5.95			5.77
LF-14			02-May-96	NM			NM
LF-14			23-Sep-96	6.78			4.94
LF-14			18-Dec-96	6.92			4.80
LF-15	LF-15	11.62	08-Dec-93	7.91			3.71
LF-15			28-Jan-94	7.74			3.88
LF-15			15-Feb-94	7.58			4.04
LF-15			24-May-94	8.07			3.55
LF-15			21-Sep-94	8.58			3.04
LF-15			19-Dec-94	NM			NM
LF-15			13-Mar-95	6.32			5.30
LF-15			07-Jun-95	6.44			5.18
LF-15			05-Sep-95	6.08			5.54
LF-15			18-Dec-95	11.01			0.61 (3)
LF-15			28-Feb-96	5.92			5.70
LF-15			02-May-96	8.70			2.92 (3)
LF-15			23-Sep-96	6.20			5.42
LF-15			18-Dec-96	6.47			5.15
LF-16	LF-16	11.56	08-Dec-93	8.35			3.21
LF-16			28-Jan-94	8.40			3.16
LF-16			15-Feb-94	8.21			3.35
LF-16			24-May-94	8.01			3.55
LF-16			21-Sep-94	7.64			3.92
LF-16			19-Dec-94	8.60			2.96
LF-16			13-Mar-95	6.22			5.34
LF-16			07-Jun-95	6.88			4.68
LF-16			05-Sep-95	7.37			4.19
LF-16			18-Dec-95	9.21			2.35 (3)
LF-16			28-Feb-96	6.26			5.30
LF-16			02-May-96	6.24			5.32
LF-16			23-Sep-96	7.18			4.38
LF-16			18-Dec-96	7.08			4.48
LF-17	LF-17	9.71	08-Dec-93	6.72			2.99
LF-17			28-Jan-94	5.86			3.85
LF-17			15-Feb-94	5.87			3.84
LF-17			24-May-94	6.00			3.71
LF-17			21-Sep-94	6.88			2.83
LF-17			19-Dec-94	5.45			4.26
LF-17			13-Mar-95	4.68			5.03
LF-17			07-Jun-95	6.52			3.19
LF-17			05-Sep-95	7.02			2.69



**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
LF-17			18-Dec-95	5.11			4.60
LF-17			28-Feb-96	4.63			5.08
LF-17			02-May-96	5.90			3.81
LF-17			23-Sep-96	7.04			2.67
LF-17			18-Dec-96	5.27			4.44
LF-F1	LF-F1	8.82	08-Dec-93	4.08			4.74
LF-F1			28-Jan-94	4.03			4.79
LF-F1			15-Feb-94	3.90			4.92
LF-F1			24-May-94	3.60			5.22
LF-F1			21-Sep-94	4.05			4.77
LF-F1			19-Dec-94	3.45			5.37
LF-F1			13-Mar-95	2.22			6.60
LF-F1			07-Jun-95	2.28			6.54
LF-F1			05-Sep-95	2.92			5.90
LF-F1			18-Dec-95	3.18			5.64
LF-F1			28-Feb-96	2.31			6.51
LF-F1			02-May-96	2.27			6.55
LF-F1			23-Sep-96	3.10			5.72
LF-F1			18-Dec-96	3.02			5.80
MW-1	MW-1	10.21	07-Nov-91	6.29			4.24
MW-1			26-Oct-92	6.38			2.63
MW-1			04-Mar-93	3.57			6.64
MW-1			14-Apr-93	3.57			6.64
MW-1			24-May-93	4.59			5.62
MW-1			14-Jun-93	4.86			5.35
MW-1			30-Jul-93	5.72			4.49
MW-1			31-Aug-93	6.38			3.83
MW-1			27-Sep-93	6.85			3.36
MW-1			25-Oct-93	7.03			3.18
MW-1			02-Nov-93	7.30			2.91
MW-1			08-Dec-93	6.51			3.70
MW-1			28-Jan-94	5.00			5.21
MW-1			15-Feb-94	4.46			5.75
MW-1			24-May-94	4.65			5.56
MW-1			21-Sep-94	6.35			3.86
MW-1			19-Dec-94	3.70			6.51
MW-1			13-Mar-95	2.71			7.50
MW-1			07-Jun-95	4.02			6.19
MW-1			05-Sep-95	5.67			4.54
MW-1			18-Dec-95	4.47			5.74
MW-1			28-Feb-96	2.53			7.68
MW-1			02-May-96	3.72			6.49
MW-1			23-Sep-96	6.00			4.21
MW-1			18-Dec-96	3.70			6.51

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
MW-2	MW-2	8.86	07-Nov-91	5.93			2.93
MW-2			26-Oct-92	5.41			3.45
MW-2			04-Mar-93	4.26			4.60
MW-2			14-Apr-93	3.83			5.03
MW-2			24-May-93	3.78			5.08
MW-2			14-Jun-93	3.89			4.97
MW-2			30-Jul-93	4.10			4.76
MW-2			31-Aug-93	4.37			4.49
MW-2			27-Sep-93	4.72			4.14
MW-2			25-Oct-93	4.81			4.05
MW-2			02-Nov-93	4.96			3.90
MW-2			08-Dec-93	5.13			3.73
MW-2			28-Jan-94	5.18			3.68
MW-2			15-Feb-94	5.02			3.84
MW-2			24-May-94	4.43			4.43
MW-2			21-Sep-94	5.82			3.04
MW-2			12-Dec-94	4.75			4.11
MW-2			13-Mar-95	3.28			5.58
MW-2			07-Jun-95	3.12			5.74
MW-2			05-Sep-95	3.90			4.96
MW-2			18-Dec-95	4.55			4.31
MW-2			28-Feb-96	3.12			5.74
MW-2			02-May-96	3.03			5.83
MW-2			23-Sep-96	4.07			4.79
MW-2			18-Dec-96	4.43			4.43
MW-3	MW-3	9.01	07-Nov-91	6.94			2.07
MW-3			26-Oct-92	7.29			1.72
MW-3			04-Mar-93	5.07			3.94
MW-3			14-Apr-93	5.21			3.80
MW-3			24-May-93	5.95			3.06
MW-3			14-Jun-93	6.23			2.78
MW-3			27-Sep-93	6.46			2.55
MW-3			25-Oct-93	6.47			2.54
MW-3			02-Nov-93	6.62			2.39
MW-3			08-Dec-93	6.23			2.78
MW-3			28-Jan-94	5.58			3.43
MW-3			15-Feb-94	5.70			3.31
MW-3			24-May-94	5.59			3.42
MW-3			21-Sep-94	6.46			2.55
MW-3			19-Dec-94	5.46			3.55
MW-3			13-Mar-95	4.37			4.64
MW-3			07-Jun-95	5.61			3.40
MW-3			05-Sep-95	6.38			2.63
MW-3			18-Dec-95	4.91			4.10
MW-3			28-Feb-96	4.37			4.64

**Table 1**  
**Historical Summary of Groundwater Elevation Data**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

Well Number	Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet)	Depth to Product (feet)	Product Thickness (ft)	Groundwater Elevation (feet msl)
MW-3			02-May-96	5.23			3.78
MW-3			23-Sep-96	6.34			2.67
MW-3			18-Dec-96	5.31			3.70
MW-4	MW-4	10.75	07-Nov-91	10.26			0.49
MW-4			26-Oct-92	9.04			1.71
MW-4			04-Mar-93	5.77			4.98
MW-4			14-Apr-93	4.71			6.04
MW-4			24-May-93	5.60			5.15
MW-4			14-Jun-93	5.94			4.81
MW-4			30-Jul-93	6.72			4.03
MW-4			31-Aug-93	7.25			3.50
MW-4			27-Sep-93	7.66			3.09
MW-4			25-Oct-93	7.79			2.96
MW-4			02-Nov-93	7.97			2.78
MW-4			08-Dec-93	7.18			3.57
MW-4			28-Jan-94	5.50			5.25
MW-4			15-Feb-94	5.17			5.58
MW-4			24-May-94	5.46			5.29
MW-4			21-Sep-94	7.52			3.23
MW-4			19-Dec-94	4.42			6.33
MW-4			13-Mar-95	3.48			7.27
MW-4			07-Jun-95	4.93			5.82
MW-4			05-Sep-95	6.34			4.41
MW-4			18-Dec-95	4.61			6.14
MW-4			28-Feb-96	3.36			7.39
MW-4			02-May-96	4.53			6.22
MW-4			18-Dec-96	4.35			6.40

Data entered by PRW. Data proofed by JJB

**NOTES**

All elevations are measured relative to the mean-sea-level (msl) datum.

The top of casing elevations were measured from the north side of each PVC casing.

(1) Groundwater elevation for well LF-13 is corrected for the presence of free product as indicated in note (2). Product thickness measurement is approximate due to the viscous nature of the product. Groundwater elevation corrected for the presence of free product using the following equation:  $G = W + [(PT \cdot D) - DW]$  where G is the groundwater elevation, W is the well elevation, PT is the product thickness, D is the product density (g/ml), and DW is the depth-to-water. For purposes of this calculation, D = 0.85 will be used.

(2) In general, product thickness measurements for well LF-13 are approximate due to the viscous nature of the product. Specifically, the measurement reported for September 21, 1994, was measured using an electronic oil/water interface probe only, which likely resulted in an incorrect measurement.

(3) Groundwater elevations appear to be anomalous.

Table 2  
**Metals Detected in Groundwater Samples**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**

*(Concentrations reported in parts per million [ppm])*

Sample ID	Sample Date	Silver	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Mercury	Molybdenum	Nickel	Lead	Antimony	Selenium	Thallium	Vanadium	Zinc
LF-1	4-Nov-91	0.054	0.004	0.046	0.11	130	5.7	<0.01	1.9	<0.0003	0.11	20	0.5	<0.2	<0.004	<1	<0.005	40000
LF-1	27-Oct-92	<0.5	0.007	<0.5	<0.2	57	4.1	<1	1	<0.0003	<1	19	<4	<2	0.027	<10	<0.5	16000
LF-1	5-Mar-93	<0.5	0.22	<0.05	<0.2	43	3.6	<1	0.47	<0.0003	<1	11	<4	<2	<0.01	<10	<0.5	14000
Duplicate	5-Mar-93	<0.5	0.26	<0.05	<0.2	44	3.9	<1	0.5	<0.0003	<1	11	<4	<2	<0.01	<10	<0.5	14000
LF-1	25-May-93	<0.5	0.12	<0.05	<0.2	40	4.7	<1	1	<0.0003	<1	16	<0.4	<2	<0.004	<10	<0.5	19000
Duplicate	25-May-93	<0.03	0.36	<0.05	0.02	9.6	0.81	<0.05	0.15	<0.0003	<0.05	3	0.3	<0.1	<0.004	<0.5	<0.03	4700
LF-1	31-Aug-93	<0.5	0.072	<0.05	<0.2	32	2.3	<1	<1	<0.0003	<1	9	<4	<2	<0.004	<10	<0.5	13000
Duplicate	31-Aug-93	<0.5	0.66	<0.05	<0.2	13	1	<1	<1	<0.0003	<1	5	<4	<2	<0.004	<10	<0.5	7200
LF-1	26-Oct-93	<0.05	0.4	<0.5	0.02	15	1.3	0.6	0.9	<0.0003	<0.1	4.9	0.4	<0.2	<0.04	<1	<0.05	7100
Duplicate	26-Oct-93	<0.1	1.3	<1	<0.04	12	1	<0.2	0.3	<0.0003	<0.2	3.7	<0.8	<0.4	<0.08	<2	<0.1	5900
LF-1	18-Feb-94	<0.05	0.57	<0.5	<0.02	2.6	0.33	<0.1	<0.1	<0.0002	<0.1	1.4	0.8	<0.2	<0.004	<1	<0.05	2600
LF-1	25-May-94	<0.05	0.49	<0.05	<0.2	7.9	0.9	<1	<1	<0.0002	<1	3	0.79	<3	<0.004	<10	<0.5	5000
LF-1	22-Sep-94	<0.05	0.77	<0.05	<0.02	6.1	0.67	<0.1	<0.1	<0.0002	<0.1	2.5	0.91	<0.2	<0.02	<1	<0.05	4100
LF-1	20-Dec-94	<0.05	0.65	<0.5	<0.02	4.2	0.45	<0.1	<0.1	<0.0002	<0.1	1.7	0.6	<0.2	<0.04	<1	<0.05	3700
LF-1	15-Mar-95	<0.05	0.39	<0.1	<0.02	8.5	0.81	<0.1	0.2	<0.0002	<0.1	3.4	0.41	<0.2	<0.004	<0.5	<0.05	4700
LF-1	8-Jun-95	<0.5	0.33	<1	<0.2	11	0.9	<1	<1	<0.0002	<1	4	1.5	<2	<0.02	<5	<0.5	6500
Duplicate	8-Jun-95	<0.5	0.41	<1	<0.2	23	1.8	<1	<1	<0.0002	<1	7	0.76	<2	<0.02	<5	<0.5	10000
LF-1	7-Sep-95	<0.05	0.30	<0.1	0.03	23	2.0	<0.1	0.5	<0.0002	<0.1	7.3	0.67	<0.2	<0.1	0.6	<0.05	10000
LF-1	19-Dec-95	<0.5	0.34	<1	<0.3	12	1.1	<1	<1	<0.0002	<1	4	0.26	<2	0.036	<5	<0.5	6200
LF-1	29-Feb-96	<0.05	0.65	<0.1	<0.02	5.6	0.6	<0.1	<0.1	<0.0002	<0.1	2.4	0.97	<0.2	<0.02	<0.5	<0.05	4600
LF-1	2-May-96	<0.5	0.40	<1	<0.2	9.9	1.0	<1	<1	<0.0002	<1	3	0.95	<2	<0.004	<5	<0.5	6700
LF-1	24-Sep-96	<0.05	1.40	<0.1	<0.02	4.7	0.5	<0.1	0.2	<0.0002	0.2	1.6	<0.01	<0.2	<0.004	<0.5	<0.05	1900
LF-1	19-Dec-96	<0.05	0.92	<0.1	<0.03	5.2	0.62	<0.1	0.1	<0.0002	0.1	2.1	0.80	<0.2	<0.04	<0.5	<0.05	4000
LF-2	4-Nov-91	<0.002	0.028	0.026	<0.001	0.009	0.18	<0.01	0.008	<0.0003	<0.01	0.52	<0.005	<0.02	<0.004	<0.1	<0.005	4.2
LF-2	27-Oct-92	0.006	0.007	<0.05	<0.002	0.006	0.12	<0.01	0.02	<0.0003	<0.01	0.22	<0.04	<0.02	0.005	<0.1	<0.005	3.3
LF-2	4-Mar-93	<0.005	0.003	<0.05	<0.002	<0.005	0.1	<0.01	<0.01	<0.0003	<0.01	0.12	<0.04	<0.02	<0.004	<0.1	<0.005	1.9
LF-2	24-May-93	<0.005	0.005	<0.05	<0.002	<0.005	0.061	<0.01	<0.01	<0.0003	<0.01	0.08	<0.04	<0.02	<0.004	<0.1	<0.005	1.4
LF-2	31-Aug-93	<0.005	5	<0.05	0.003	0.021	0.016	<0.01	<0.01	<0.0003	0.14	<0.01	<0.04	<0.02	<0.004	<0.1	<0.005	8.6
LF-2	25-Oct-93	<0.005	0.004	<0.05	<0.002	0.009	0.055	<0.01	0.02	<0.0003	<0.01	0.11	<0.04	<0.02	<0.004	<0.1	<0.005	1.9
LF-2	16-Feb-94	<0.005	<0.002	<0.05	<0.002	<0.005	<0.005	<0.1	<0.01	<0.0002	<0.01	0.04	<0.04	<0.02	<0.004	<0.1	<0.005	0.41
LF-2	24-May-94	<0.001	<0.002	0.02	<0.0005	<0.001	0.037	<0.002	0.003	<0.0002	<0.002	0.024	<0.003	<0.005	<0.004	<0.02	<0.001	0.3
LF-2	22-Sep-94	<0.001	<0.002	0.02	<0.0005	<0.001	0.038	<0.002	0.006	<0.0002	<0.002	0.038	<0.005	0.007	<0.004	<0.02	0.001	0.59
LF-2	20-Dec-94	0.001	<0.002	0.02	<0.0005	<0.001	0.04	<0.002	0.006	<0.0002	<0.002	0.03	<0.002	<0.005	<0.004	<0.02	<0.001	0.39
LF-2	15-Mar-95	<0.001	<0.002	0.017	<0.0005	<0.001	0.033	<0.002	0.004	<0.0002	<0.002	0.031	<0.002	<0.004	<0.004	<0.01	0.002	0.49
Duplicate	16-Mar-95	<0.001	<0.002	0.017	<0.0005	<0.001	0.036	<0.002	0.005	<0.0002	<0.002	0.024	<0.002	<0.004	<0.004	<0.01	0.001	0.37
LF-2	7-Jun-95	<0.001	<0.002	0.017	<0.0005	<0.001	0.037	<0.002	0.006	<0.0002	<0.002	0.04	<0.002	<0.004	<0.004	<0.01	0.002	0.62
LF-2	7-Sep-95	<0.001	<0.002	0.019	<0.0005	0.001	0.040	<0.002	0.004	<0.0002	<0.002	0.032	<0.002	<0.004	<0.004	<0.01	<0.001	0.50
Duplicate	7-Sep-95	<0.001	<0.002	0.020	<0.0005	<0.001	0.042	<0.002	0.005	<0.0002	<0.002	0.027	<0.002	<0.004	<0.004	<0.01	<0.001	0.50
LF-2	19-Dec-95	<0.001	<0.002	0.020	<0.0005	<0.001	0.043	<0.002	0.002	<0.0002	<0.002	0.045	<0.002	<0.004	<0.004	<0.01	0.001	0.74
LF-2	1-Mar-96	<0.001	0.002	0.018	<0.0005	<0.001	0.039	<0.002	0.004	<0.0002	<0.002	0.036	<0.005	<0.004	<0.004	0.01	0.001	0.65
LF-2	2-May-96	0.001	<0.002	0.018	<0.0005	<0.001	0.034	<0.002	0.003	<0.0002	<0.002	0.026	<0.002	<0.004	<0.004	0.02	<0.001	0.53
Duplicate	2-May-96	0.001	<0.002	0.019	<0.0005	<0.001	0.035	<0.002	0.005	<0.0002	0.002	0.02	<0.002	<0.004	<0.004	<0.01	<0.001	0.37
LF-2	24-Sep-96	<0.001	<0.002	0.018	<0.0005	<0.001	0.035	<0.002	0.003	<0.0002	<0.002	0.026	<0.005	<0.004	<0.004	<0.01	<0.001	0.45
LF-2	18-Dec-96	<0.001	0.002	0.022	<0.0005	<0.001	0.042	<0.002	0.004	<0.0002	<0.002	0.025	<0.002	<0.004	<0.004	<0.01	<0.001	0.48
LF-3	4-Nov-91	<0.002	3.1	0.077	0.001	<0.005	0.016	<0.01	<0.004	<0.0003	0.16	0.012	<0.005	<0.02	<0.004	<0.1	0.006	3.1
LF-3	27-Oct-92	<0.005	3.6	0.11	0.004	0.013	0.029	<0.01	<0.01	<0.0003	0.22	0.02	<0.04	<0.02	0.018	<0.1	<0.005	12
LF-3	4-Mar-93	<0.005	4.9	0.07	0.003	0.012	0.023	<0.01	<0.01	<0.0003	0.18	0.04	<0.04	<0.02	<0.02	<0.1	<0.005	15
LF-3	25-May-93	<0.005	3.4	0.11	<0.002	0.04	0.01	<0.01	<0.01	<0.0003	0.13	0.01	<0.04	<0.02	<0.004	<0.1	<0.005	5.8
LF-3	31-Aug-93	<0.005	4.9	<0.05	0.003	0.023	0.019	<0.01	<0.01	<0.0003	0.15	0.01	<0.04	<0.02	<0.004	<0.1	<0.005	8.6
LF-3	25-Oct-93	<0.005	7.3	0.08	<0.002	0.005	0.013	<0.01	<0.01	<0.0003	0.13	0.02	<0.04	<0.02	<0.02	<0.1	<0.005	6.2

**Table 2**  
**Metals Detected in Groundwater Samples**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**  
*(Concentrations reported in parts per million [ppm])*

Sample ID	Sample Date	Silver	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Mercury	Molybdenum	Nickel	Lead	Antimony	Selenium	Thallium	Vanadium	Zinc
LF-3	16-Feb-94	<0.005	3.4	0.1	<0.002	<0.005	0.012	<0.01	<0.01	<0.0002	0.11	0.01	<0.04	<0.02	<0.01	<0.1	<0.005	5
LF-3	25-May-94	<0.001	2.4	0.08	0.0009	<0.001	0.009	0.002	<0.002	<0.0002	0.091	0.006	<0.003	<0.005	<0.02	<0.02	<0.001	4.1
Duplicate	25-May-94	0.001	2.8	0.08	0.0013	<0.001	0.011	<0.002	<0.002	<0.0002	0.11	0.008	<0.003	<0.005	<0.02	<0.02	<0.001	5.2
LF-3	23-Sep-94	<0.001	2.2	0.05	0.0014	<0.001	0.011	0.002	<0.002	<0.0002	0.11	0.008	<0.005	<0.005	<0.2	<0.02	0.004	5.5
Duplicate	23-Sep-94	<0.001	2.3	0.06	0.001	<0.001	0.009	0.004	0.007	<0.0002	0.095	0.007	<0.005	<0.005	<0.2	<0.02	0.003	4.1
LF-3	20-Dec-94	<0.001	3.6	0.09	0.0013	<0.001	0.012	0.005	0.026	<0.0002	0.11	0.011	<0.002	<0.005	<0.04	<0.02	0.012	6.2
Duplicate	20-Dec-94	<0.001	4.5	0.04	0.0017	<0.001	0.014	0.003	0.003	<0.0002	0.13	0.011	<0.002	<0.005	<0.04	0.02	0.01	8.5
LF-3	15-Mar-95	<0.001	2.8	0.15	0.001	<0.001	0.008	0.004	0.003	<0.0002	0.086	0.007	<0.002	<0.004	<0.04	<0.01	0.011	4.3
LF-3	7-Jun-95	<0.001	5.6	0.057	0.0018	<0.001	0.014	0.003	0.003	<0.0002	0.13	0.012	<0.002	<0.004	<0.04	<0.01	0.013	9.9
LF-3	7-Sep-95	<0.001	3.0	0.13	0.0017	<0.001	0.011	0.004	<0.002	<0.0002	0.12	0.008	<0.002	<0.004	<0.2	0.02	0.013	5.4
LF-3	18-Dec-95	<0.001	4.2	0.06	0.002	0.015	0.013	0.004	<0.002	<0.0002	0.13	0.012	<0.005	<0.004	0.019	<0.01	0.01	8.4
Duplicate	18-Dec-95	<0.001	4.2	0.12	0.001	0.011	0.009	0.005	<0.002	<0.0002	0.098	0.01	<0.005	<0.004	<0.02	<0.01	0.011	5.1
LF-3	1-Mar-96	<0.001	2.7	0.096	0.001	<0.001	0.008	0.002	<0.002	<0.0002	0.08	0.007	<0.005	<0.004	<0.1	0.01	0.01	3.7
LF-3	2-May-96	<0.001	3.3	0.11	<0.0005	0.002	0.009	<0.002	<0.002	<0.0002	0.082	0.007	<0.005	<0.004	<0.004	0.02	0.001	5.2
LF-3	24-Sep-96	<0.001	4.6	0.068	0.001	0.051	0.009	<0.002	<0.002	<0.0002	0.096	0.008	<0.005	<0.004	<0.1	0.02	<0.001	4.8
LF-3	19-Dec-96	<0.001	3.6	0.12	0.0012	0.035	0.010	<0.002	<0.002	<0.0002	0.098	0.011	<0.002	<0.004	<0.2	<0.01	<0.001	6.6
LF-4	4-Nov-91	<0.002	0.026	0.082	<0.001	<0.005	<0.005	<0.01	<0.004	<0.0003	<0.01	0.013	<0.005	0.03	<0.004	<0.1	0.01	0.034
LF-4	27-Oct-92	<0.005	0.034	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	0.03	<0.04	<0.02	<0.004	<0.1	<0.005	0.012
LF-4	4-Mar-93	<0.005	0.017	0.11	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	0.05	<0.04	0.02	<0.004	<0.1	0.008	0.04
LF-4	24-May-93	<0.005	0.013	0.22	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	0.03	<0.04	<0.02	<0.004	<0.1	<0.005	0.035
LF-4	31-Aug-93	<0.005	0.052	0.08	<0.002	<0.005	0.006	<0.01	<0.01	<0.0003	<0.01	0.04	<0.04	<0.02	<0.004	<0.1	0.009	0.038
LF-4	25-Oct-93	<0.005	0.014	0.12	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	0.04	<0.04	<0.02	<0.004	<0.1	0.015	0.068
LF-4	16-Feb-94	<0.005	0.008	0.29	<0.002	<0.005	0.006	<0.01	<0.01	<0.0002	<0.01	0.04	<0.04	<0.02	<0.004	<0.1	<0.005	0.05
LF-4	22-Sep-94	<0.001	0.005	0.19	<0.0005	0.001	0.003	<0.002	0.003	<0.0002	<0.002	0.037	<0.005	0.007	<0.004	<0.02	0.007	0.067
LF-4	15-Mar-95	<0.001	0.008	0.34	<0.0005	0.001	0.005	<0.002	<0.002	<0.0002	<0.002	0.037	<0.002	<0.004	<0.004	<0.01	0.002	0.064
LF-4	7-Sep-95	<0.001	0.012	0.15	<0.0005	0.001	0.004	<0.002	<0.002	<0.0002	<0.002	0.048	<0.002	<0.004	<0.004	<0.01	0.002	0.24
LF-4	1-Mar-96	<0.001	0.013	0.13	<0.0005	<0.001	0.004	<0.002	<0.002	<0.0002	<0.002	0.048	<0.005	<0.004	<0.004	<0.01	0.002	0.031
Duplicate	1-Mar-96	<0.001	0.007	0.36	<0.0005	<0.001	0.005	<0.002	<0.002	<0.0002	<0.002	0.026	<0.005	<0.004	<0.004	<0.01	0.002	0.047
LF-4	24-Sep-96	<0.001	0.013	0.12	<0.0005	<0.001	0.003	<0.002	<0.002	<0.0002	<0.002	0.031	<0.002	<0.004	<0.004	<0.01	0.001	0.053
LF-5	4-Nov-91	0.004	<0.002	0.018	<0.001	0.049	0.03	<0.01	<0.005	0.0004	<0.01	0.23	<0.005	<0.02	<0.004	<0.1	<0.005	11
LF-5	27-Oct-92	0.022	0.005	<0.05	<0.002	0.24	1.4	<0.01	<0.01	<0.0003	<0.01	5.4	<0.04	<0.02	0.017	<0.1	<0.005	35
LF-5	4-Mar-93	0.021	<0.005	<0.05	<0.002	0.21	1.1	<0.01	<0.01	<0.0003	<0.01	5	<0.04	<0.02	<0.01	<0.1	<0.005	36
LF-5	25-May-93	0.01	<0.002	<0.05	<0.002	0.17	0.84	<0.01	<0.01	<0.0003	<0.01	3.2	<0.04	<0.02	<0.004	0.2	<0.005	23
LF-5	31-Aug-93	0.013	0.02	<0.05	<0.002	0.25	1.3	<0.01	<0.01	<0.0003	<0.01	4.6	<0.04	<0.02	<0.02	0.2	<0.005	38
LF-5	26-Oct-93	0.011	0.052	<0.05	<0.002	0.28	1.4	<0.01	0.01	<0.0003	<0.01	5.3	0.07	<0.02	<0.04	0.3	0.01	51
LF-5	16-Feb-94	0.009	<0.02	<0.05	<0.002	0.16	0.95	<0.01	<0.01	<0.0002	<0.01	3.3	<0.04	<0.02	<0.04	0.1	<0.005	28
LF-5	24-May-94	0.008	<0.005	0.01	<0.0005	0.14	0.71	<0.002	<0.002	<0.0002	<0.002	2.4	<0.01	<0.005	<0.01	0.09	0.002	23
LF-5	21-Sep-94	0.006	<0.01	0.01	<0.0005	0.17	0.81	0.003	0.003	<0.0002	<0.002	2.5	<0.01	<0.005	<0.02	0.03	<0.001	25
LF-5	19-Dec-94	0.007	<0.01	0.01	<0.0005	0.25	1.2	0.003	0.004	<0.0002	<0.002	3.8	<0.008	<0.005	0.02	0.08	<0.001	58
LF-5	14-Mar-95	0.004	<0.02	0.013	<0.0005	0.11	0.61	0.004	0.003	<0.0002	<0.002	2.6	<0.01	<0.004	<0.04	0.06	0.003	25
LF-5	7-Jun-95	0.006	<0.01	0.015	<0.0005	0.31	1.5	0.006	0.005	<0.0002	<0.002	5	<0.02	<0.004	<0.02	0.05	0.001	76
LF-5	7-Sep-95	0.004	<0.005	0.014	<0.0005	0.31	1.5	0.006	0.005	<0.0002	<0.002	4.8	<0.01	<0.004	<0.004	0.04	<0.001	38
LF-5	18-Dec-95	0.003	<0.005	0.017	<0.0005	0.2	0.99	0.004	0.002	<0.0002	<0.002	3.1	<0.005	<0.004	<0.01	0.12	0.003	47
LF-5	29-Feb-96	<0.001	<0.01	0.11	<0.0005	0.01	0.034	<0.002	0.002	<0.0002	<0.002	0.17	<0.01	<0.004	<0.02	<0.01	0.002	2.6
LF-5	2-May-96	0.019	<0.005	0.012	<0.0005	0.72	4	<0.002	0.007	<0.0002	<0.002	12	<0.005	<0.004	<0.01	0.07	<0.001	150
LF-5	24-Sep-96	0.014	<0.01	0.014	<0.0005	0.32	1.3	<0.002	0.009	<0.0002	<0.002	3.8	<0.01	<0.004	<0.02	0.03	<0.001	64
LF-5	19-Dec-96	0.004	<0.01	0.048	<0.0005	0.11	0.58	<0.002	0.003	<0.0002	0.002	1.9	<0.005	<0.004	<0.02	<0.01	0.003	26
LF-6	5-Nov-91	0.011	0.008	0.019	<0.001	0.079	0.58	<0.01	<0.005	0.0009	<0.01	2.1	0.009	<0.02	<0.004	<0.1	<0.005	8.1
LF-6	27-Oct-92	0.02	0.022	<0.05	<0.002	0.17	1.6	<0.01	<0.01	<0.0003	<0.01	5.5	<0.04	<0.02	0.012	<0.1	<0.005	23

Table 2

Metals Detected in Groundwater Samples  
5050 Coliseum Way and 750-50th Avenue  
Oakland, California

(Concentrations reported in parts per million [ppm])

Sample ID	Sample Date	Silver	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Mercury	Molybdenum	Nickel	Lead	Antimony	Selenium	Thallium	Vanadium	Zinc
LF-6	4-Mar-93	0.013	0.007	<0.05	0.003	0.13	1.2	<0.01	<0.01	<0.0003	<0.01	4.2	<0.04	<0.02	<0.004	<0.1	<0.005	17
LF-6	24-May-93	0.008	<0.002	<0.05	<0.002	0.13	0.97	<0.01	0.01	<0.0003	<0.01	3.4	<0.04	<0.02	<0.004	0.1	<0.005	13
LF-6	31-Aug-93	0.009	0.014	<0.05	0.003	0.13	1	<0.01	0.01	<0.0003	<0.01	3.7	<0.04	<0.02	<0.004	0.1	<0.005	14
LF-6	26-Oct-93	0.005	<0.002	<0.05	0.003	0.15	1	<0.01	0.02	<0.0003	<0.01	3.7	<0.04	<0.02	<0.004	0.1	<0.005	17
LF-6	16-Feb-94	0.007	0.016	<0.05	0.003	0.11	0.97	<0.01	<0.01	<0.0002	<0.01	3.4	<0.04	<0.02	<0.004	0.1	<0.005	13
LF-6	21-Sep-94	0.004	<0.002	0.01	0.0023	0.099	0.84	<0.002	0.011	<0.0002	<0.002	2.8	<0.005	<0.005	<0.004	0.02	<0.001	11
LF-6	16-Mar-95	0.003	<0.002	0.01	0.0023	0.091	0.74	0.002	0.01	<0.0002	<0.002	2.6	<0.005	<0.004	<0.004	0.06	0.001	10
LF-6	6-Sep-95	0.002	<0.002	0.011	0.0022	0.094	0.79	0.004	0.009	<0.0002	<0.002	2.8	<0.005	<0.004	<0.004	0.07	<0.001	10
LF-6	29-Feb-96	0.003	<0.002	0.009	0.0024	0.098	0.81	<0.002	0.009	<0.0002	<0.002	2.8	<0.005	<0.004	<0.004	0.05	<0.001	11
LF-6	25-Sep-96	0.007	<0.002	0.013	0.0022	0.093	0.83	<0.002	0.009	<0.0002	<0.002	2.9	<0.002	<0.004	<0.004	0.04	<0.001	11
LF-7	5-Nov-91	<0.002	0.004	0.13	<0.001	<0.005	<0.005	<0.01	0.006	0.0011	<0.01	0.01	<0.005	<0.02	<0.004	<0.1	0.006	<0.005
LF-7	27-Oct-92	<0.005	0.03	0.11	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	0.01	0.01	<0.04	<0.02	<0.004	<0.1	0.008	0.021
LF-7	4-Mar-93	<0.005	0.025	0.08	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	0.01	0.01	<0.04	<0.02	<0.01	<0.1	0.009	0.01
LF-7	24-May-93	<0.005	0.003	0.08	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	0.006	0.007
LF-7	31-Aug-93	<0.005	0.013	0.08	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	0.006	0.021
LF-7	25-Oct-93	<0.005	<0.002	0.09	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	0.006	0.011
LF-7	16-Feb-94	<0.005	0.014	0.12	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0002	<0.01	0.02	<0.04	<0.02	<0.004	<0.1	0.005	0.01
LF-7	21-Sep-94	<0.001	<0.002	0.1	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	0.006	0.01	<0.005	0.005	<0.004	<0.02	0.006	0.012
LF-7	15-Mar-95	<0.001	0.004	0.24	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	0.005	0.011	<0.005	<0.004	<0.004	<0.01	0.006	0.053
LF-7	6-Sep-95	<0.001	0.017	0.18	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	0.006	0.012	<0.005	<0.004	<0.004	<0.01	0.007	0.001
LF-7	28-Feb-96	<0.001	0.035	0.3	<0.0005	<0.001	0.001	<0.002	0.003	<0.0002	0.007	0.013	<0.005	<0.004	<0.004	<0.01	0.006	0.006
LF-7	25-Sep-96	<0.001	0.035	0.24	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	0.007	0.014	<0.002	<0.004	<0.004	<0.01	0.007	0.023
LF-8	27-Oct-93	<0.005	2.6	0.16	<0.002	<0.005	0.005	<0.01	<0.01	<0.0003	<0.01	0.01	<0.04	<0.02	<0.004	<0.1	<0.005	0.022
LF-8	16-Feb-94	<0.005	2.3	0.33	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0002	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	<0.005	<0.01
LF-8	24-May-94	<0.001	2.5	0.2	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	0.004	<0.003	<0.003	<0.005	<0.02	<0.02	0.004	0.015
LF-8	23-Sep-94	<0.001	3.4	0.32	<0.0005	0.002	<0.001	<0.002	<0.002	<0.0002	<0.002	0.003	<0.005	0.005	<0.004	<0.02	0.005	0.024
LF-8	20-Dec-94	<0.001	2	0.39	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	0.004	<0.002	<0.005	<0.04	<0.02	0.004	0.015
LF-8	15-Mar-95	<0.001	2	0.072	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	0.002	0.003	<0.002	<0.004	<0.04	<0.01	0.002	0.017
LF-8	9-Jun-95	<0.001	3.2	0.093	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	0.003	<0.002	<0.004	<0.04	<0.01	0.003	0.052
LF-8	7-Sep-95	<0.001	2.4	0.092	<0.0005	<0.001	0.001	<0.002	<0.002	<0.0002	<0.002	<0.002	<0.002	<0.004	<0.2	<0.01	0.003	0.02
LF-8	18-Dec-95	<0.001	3.4	0.17	<0.0005	0.007	<0.001	<0.002	<0.002	<0.0002	<0.002	<0.002	<0.005	<0.004	<0.02	<0.01	0.002	0.013
LF-8	29-Feb-96	<0.001	1.7	0.1	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	0.005	<0.005	<0.004	<0.004	<0.01	0.002	0.066
LF-8	2-May-96	<0.001	2.1	0.066	<0.0005	0.001	0.001	<0.002	<0.002	<0.0002	<0.002	0.003	<0.002	<0.004	<0.004	<0.01	<0.001	0.02
LF-8	25-Sep-96	<0.001	3.2	0.058	<0.0005	0.025	<0.001	<0.002	<0.002	<0.0002	<0.002	0.002	<0.002	<0.004	<0.004	<0.01	<0.001	0.036
LF-8	18-Dec-96	<0.001	3.0	0.10	<0.0005	0.022	<0.001	<0.002	<0.002	<0.0002	0.003	0.004	<0.002	<0.004	<0.004	<0.01	<0.001	0.030
LF-9	1-Nov-93	<0.005	0.009	<0.05	<0.002	0.041	0.56	<0.01	0.02	<0.0003	<0.01	0.86	<0.04	<0.02	<0.02	<0.1	<0.005	14
Duplicate	1-Nov-93	<0.005	0.015	<0.05	<0.002	0.034	0.46	<0.01	<0.01	<0.0003	<0.01	0.71	<0.04	<0.02	<0.02	<0.1	<0.005	14
LF-9	17-Feb-94	<0.005	0.064	<0.05	<0.002	0.12	0.016	<0.01	<0.01	<0.0002	<0.01	0.1	<0.04	<0.02	<0.004	<0.1	<0.005	31
LF-9	21-Sep-94	<0.001	0.18	0.02	<0.0005	0.008	0.023	<0.002	<0.002	<0.0002	0.004	0.072	<0.005	0.006	<0.01	<0.02	0.002	20
LF-9	13-Mar-95	<0.001	0.15	0.021	<0.0005	0.01	0.028	<0.002	0.004	<0.0002	0.003	0.085	<0.005	<0.004	<0.004	<0.01	0.003	26
LF-9	8-Sep-95	<0.001	0.19	0.014	<0.0005	0.020	0.026	<0.002	<0.002	<0.0002	0.005	0.087	<0.005	<0.004	<0.02	<0.01	0.003	25
LF-9	29-Feb-96	<0.001	0.16	0.014	<0.0005	0.054	0.025	<0.002	<0.002	<0.0002	0.003	0.099	<0.005	0.006	<0.01	0.02	0.002	34
LF-9	25-Sep-96	<0.001	0.22	0.015	<0.0005	0.048	0.031	<0.002	<0.002	<0.0002	0.005	0.096	<0.002	<0.004	<0.01	0.02	<0.001	33
LF-10	28-Oct-93	<0.005	0.04	0.77	<0.002	0.02	0.019	0.07	0.04	<0.0003	<0.01	0.17	<0.04	<0.02	<0.04	<0.1	0.048	2
LF-10	16-Feb-94	<0.005	<0.005	<0.05	<0.002	0.005	0.018	<0.01	<0.01	<0.0002	<0.01	0.12	<0.04	<0.02	<0.01	<0.1	0.008	0.21
LF-10	22-Sep-94	0.001	<0.005	0.02	<0.0005	0.002	0.008	<0.002	0.005	<0.0002	<0.002	0.083	<0.01	<0.005	<0.01	<0.02	0.006	0.075
LF-10	15-Mar-95	<0.001	<0.02	0.018	<0.0005	0.001	0.018	<0.002	0.006	<0.0002	<0.002	0.13	<0.01	0.004	<0.04	0.02	0.004	0.13
LF-10	7-Sep-95	<0.001	<0.005	0.016	<0.0005	0.002	0.007	<0.002	0.007	<0.0002	<0.002	0.083	<0.01	<0.004	<0.01	<0.01	0.005	0.29

**Table 2**  
**Metals Detected in Groundwater Samples**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**  
*(Concentrations reported in parts per million [ppm])*

Sample ID	Sample Date	Silver	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Mercury	Molybdenum	Nickel	Lead	Antimony	Selenium	Thallium	Vanadium	Zinc
LF-10	29-Feb-96	<0.001	0.006	0.014	<0.0005	0.001	0.007	<0.002	0.007	<0.0002	<0.002	0.092	0.011	<0.004	<0.01	<0.01	0.004	0.2
LF-10	24-Sep-96	<0.001	<0.005	0.013	<0.0005	<0.001	0.007	<0.002	0.010	<0.0002	<0.002	0.083	<0.002	<0.004	<0.01	0.01	0.004	0.061
LF-11	28-Oct-93	<0.005	0.07	0.1	<0.002	120	5.9	<0.01	3	<0.0003	<0.01	28	6	<0.02	<0.04	<0.1	2	47000
LF-11	18-Feb-94	<0.5	<0.02	<5	<0.2	140	8.4	<1	4	<0.0002	<1	37	<4	<2	<0.02	<10	<0.5	44000
Duplicate	18-Feb-94	<0.5	<0.02	<5	<0.2	140	9.4	<1	4	<0.0002	<1	40	<4	<2	<0.02	<10	<0.5	46000
LF-11	23-Sep-94	0.5	<0.02	<0.01	0.2	130	7.1	<1	5	<0.0002	<1	32	0.41	<2	<0.04	<10	<0.5	33000
LF-11	15-Mar-95	<0.5	<0.01	<1	<0.2	91	4.9	<1	3	<0.0002	<1	22	0.08	<2	<0.02	<5	<0.5	37000
LF-11	8-Jun-95	<5	<0.02	<1	<3	99	<5	<10	<10	<0.0002	<10	21	0.09	<20	<0.04	<50	<5	37000
LF-11	7-Sep-95	<0.5	<0.01	<1	<0.2	120	6.5	<1	5	<0.0002	<1	26	0.04	<2	<0.02	<5	<0.5	37000
LF-11	18-Dec-95	<5	0.31	<1	<3	110	6	<10	<10	<0.0002	<10	25	0.021	<20	<0.08	<50	<5	37000
LF-11	29-Feb-96	<0.5	<0.01	<1	<0.2	120	6.2	<1	5	<0.0002	<1	25	0.13	<2	<0.02	<5	<0.5	42000
LF-11	2-May-96	<0.5	<0.02	<1	<0.2	96	6	<1	4	<0.0002	1	21	0.07	<2	<0.004	<5	<0.5	34000
LF-11	25-Sep-96	<1	<0.01	<2	<0.4	130	7	<2	5	<0.0002	<2	24	<0.1	<4	<0.02	<10	<1	40000
Duplicate	25-Sep-96	<1	<0.01	<2	<0.4	130	6	<2	5	<0.0002	2	24	<0.1	<4	<0.02	<10	<1	40000
LF-11	19-Dec-96	<0.5	<0.02	<1	<0.2	93	5	<1	3	<0.0002	2	19	<0.02	<2	<0.04	<5	<0.5	31000
Duplicate	19-Dec-96	<0.5	<0.02	<1	<0.2	80	4	<1	3	<0.0002	1	17	0.10	<2	<0.04	<5	<0.5	29000
LF-12	1-Nov-93	<0.05	0.022	<0.5	<0.02	3.7	2.7	<0.1	0.9	<0.0003	<0.1	8.1	<0.4	<0.2	0.014	<1	<0.05	3400
LF-12	17-Feb-94	<0.05	0.004	<0.5	<0.02	2.9	1.9	<0.1	0.7	<0.0002	<0.1	5.9	<0.4	<0.2	0.014	<1	<0.05	2700
LF-12	24-May-94	<0.05	0.008	<0.05	<0.02	3.6	2.4	<0.1	1	<0.0002	<0.1	7.1	0.049	<0.3	0.017	<1	<0.05	3100
LF-12	22-Sep-94	<0.05	<0.005	<0.05	0.02	3.4	2.2	<0.1	1.1	<0.0002	<0.1	6.7	0.02	<0.2	0.02	<1	<0.05	3100
LF-12	19-Dec-94	<0.05	<0.005	<0.5	0.02	3.5	2.3	<0.1	1.1	<0.0002	<0.1	6.9	0.01	<0.2	0.03	<1	<0.05	3200
LF-12	15-Mar-95	<0.05	<0.002	<0.1	0.02	3	2	<0.1	1	<0.0002	<0.1	6.7	<0.005	<0.2	0.019	<0.5	<0.05	2600
LF-12	7-Jun-95	<0.05	<0.005	<0.1	0.03	3.3	2.1	<0.1	1.2	<0.0002	<0.1	6.6	<0.005	<0.2	0.04	<0.5	<0.05	2900
LF-12	6-Sep-95	<0.05	<0.005	<0.1	0.02	3.2	2.2	<0.1	1.3	<0.0002	<0.1	6.4	0.01	<0.2	<0.01	<0.5	<0.05	2900
LF-12	18-Dec-95	<0.05	<0.002	<0.1	<0.03	3.8	2.1	<0.1	1.1	<0.0002	<0.1	6.6	<0.005	<0.2	0.055	<0.5	<0.05	3000
LF-12	29-Feb-96	<0.05	<0.002	<0.1	0.02	3	2	<0.1	1.1	0.0002	<0.1	6.1	0.007	<0.2	0.048	<0.5	<0.05	2700
LF-12	2-May-96	<0.05	<0.002	<0.1	<0.02	3	2	<0.1	1.2	<0.0002	<0.1	5.7	0.008	<0.2	0.039	<0.5	<0.05	2800
LF-12	24-Sep-96	<0.05	<0.002	<0.1	0.03	3	2.2	<0.1	1.3	0.0006	0.1	6.1	<0.005	<0.2	0.041	<0.5	<0.05	2700
LF-12	18-Dec-96	0.06	<0.002	<0.1	0.02	2.9	2.1	<0.1	1.2	0.0003	0.1	6.1	<0.002	<0.2	0.043	<0.5	<0.05	2600
LF-13	6-Dec-93	<0.005	3.3	0.24	<0.002	<0.005	0.007	<0.01	<0.01	<0.0003	0.04	0.03	<0.04	<0.02	<0.2	<0.1	0.061	0.03
LF-14	8-Dec-93	<0.005	0.005	<0.05	<0.002	0.12	0.67	<0.01	0.68	0.0016	<0.01	1.6	<0.04	<0.02	<0.02	<0.1	<0.005	230
LF-14	17-Feb-94	<0.005	<0.002	<0.05	0.002	0.16	0.96	<0.01	2.1	<0.0002	<0.01	2.4	<0.04	<0.02	<0.004	<0.1	<0.005	300
LF-14	25-May-94	<0.005	0.004	<0.05	0.002	0.14	1	<0.01	3.5	<0.0002	<0.01	2.4	0.027	<0.03	<0.004	0.1	<0.005	340
LF-14	21-Sep-94	<0.005	<0.002	<0.05	<0.002	0.065	0.59	<0.01	1.1	<0.0002	<0.01	1.4	0.022	<0.02	<0.004	<0.1	<0.005	240
LF-14	19-Dec-94	<0.005	0.004	<0.05	0.004	0.12	0.96	<0.01	2.9	<0.0002	<0.01	2.3	0.03	<0.02	<0.004	<0.1	0.042	370
LF-14	15-Mar-95	<0.005	<0.002	0.01	0.004	0.12	0.86	<0.01	3.4	<0.0002	<0.01	2.3	0.017	<0.02	<0.004	<0.05	<0.005	340
LF-14	8-Jun-95	<0.005	0.005	0.01	0.002	0.14	0.95	<0.01	1.7	<0.0002	<0.01	2.4	0.037	<0.02	<0.004	0.07	0.008	290
LF-14	8-Sep-95	<0.005	<0.002	0.01	0.002	0.086	0.78	<0.01	2.8	<0.0002	<0.01	1.9	0.017	<0.02	<0.004	0.10	0.015	310
LF-14	18-Dec-95	<0.005	0.018	0.01	<0.003	0.13	1.1	<0.01	1.4	<0.0002	<0.01	2.6	0.003	<0.02	<0.004	<0.05	0.011	290
LF-14	1-Mar-96	<0.005	0.008	0.01	0.004	0.12	0.9	<0.01	3.5	<0.0002	<0.01	2.3	0.025	<0.02	<0.004	0.09	0.007	340
LF-14	24-Sep-96	<0.005	<0.002	0.01	0.004	0.13	0.92	<0.01	3.8	<0.0002	<0.01	2.3	0.008	<0.02	<0.004	0.12	<0.005	340
LF-14	19-Dec-96	<0.005	0.004	0.01	0.002	0.083	0.75	<0.01	1.5	<0.0002	<0.01	1.8	0.014	<0.02	<0.004	0.07	<0.005	280
LF-15	6-Dec-93	0.032	<0.05	0.28	0.017	1.7	8.1	<0.01	0.14	<0.0003	<0.01	23	1.1	<0.02	<0.1	0.9	<0.005	640
LF-15	18-Feb-94	<0.05	0.006	<0.5	<0.02	1.7	7.4	<0.1	<0.1	<0.0002	<0.1	20	0.6	<0.2	<0.04	<1	<0.05	660
LF-15	21-Sep-94	0.02	<0.01	<0.05	0.027	2	11	<0.01	<0.01	<0.0002	<0.01	29	0.21	<0.02	<0.02	1.1	<0.005	620
LF-15	13-Mar-95	<0.005	<0.002	0.01	0.019	1.5	8.8	<0.01	<0.01	<0.0002	<0.01	24	0.33	<0.02	<0.02	0.66	<0.005	550

Table 2  
**Metals Detected in Groundwater Samples**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**  
*(Concentrations reported in parts per million (ppm))*

Sample ID	Sample Date	Silver	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Mercury	Molybdenum	Nickel	Lead	Antimony	Selenium	Thallium	Vanadium	Zinc
LF-15	8-Sep-95	<0.05	<0.01	<0.1	<0.02	2.1	14	<0.1	<0.1	<0.0002	<0.1	37	0.07	<0.2	<0.02	0.9	<0.05	570
LF-15	29-Feb-96	0.014	0.003	0.01	0.031	1.8	12	<0.01	0.03	<0.0002	<0.01	32	0.078	<0.02	<0.02	1.4	<0.005	590
LF-15	24-Sep-96	0.056	<0.01	0.01	0.024	1.8	11	<0.01	<0.01	<0.0002	<0.01	30	0.19	<0.02	<0.02	2.0	<0.005	550
LF-16	7-Dec-93	<0.05	<0.05	<0.5	<0.02	10	5.9	<0.1	0.4	<0.003	<0.1	16	<0.4	<0.2	<0.1	<1	<0.05	3400
LF-16	17-Feb-94	<0.05	<0.002	<0.5	0.04	15	8.3	<0.1	21	<0.0002	<0.1	24	<0.4	<0.2	<0.04	<1	<0.05	5200
LF-16	25-May-94	<0.05	<0.002	<0.5	0.02	12	7	<0.1	25	<0.0002	<0.1	20	<0.01	<0.3	<0.004	<1	<0.05	4100
LF-16	21-Sep-94	<0.05	<0.005	<0.05	0.03	11	6.2	<0.1	22	<0.0002	<0.1	17	<0.05	<0.2	<0.01	<1	<0.05	3700
LF-16	19-Dec-94	<0.05	<0.005	<0.5	0.03	10	6	<0.1	22	<0.0002	<0.1	17	<0.2	<0.2	<0.01	<1	0.08	3300
LF-16	15-Mar-95	<0.05	<0.02	<0.1	0.03	8.2	4.9	<0.1	21	<0.0002	<0.1	16	<0.05	<0.2	<0.04	<0.5	<0.05	3300
LF-16	8-Jun-95	<0.05	0.015	<0.1	0.03	8.2	5.1	<0.1	19	<0.0002	<0.1	15	<0.05	<0.2	<0.01	<0.5	0.06	2900
LF-16	8-Sep-95	<0.05	0.006	0.3	0.02	8.4	5.6	<0.1	18	<0.0002	<0.1	15	<0.02	<0.2	<0.01	0.7	<0.05	2800
LF-16	19-Dec-95	<0.05	<0.005	<0.1	0.02	7.5	4.6	<0.1	18	<0.0002	<0.1	13	<0.005	<0.2	<0.01	<0.5	0.07	2700
LF-16	29-Feb-96	<0.05	0.01	<0.1	0.03	7.8	5.1	<0.1	16	<0.0002	<0.1	14	<0.005	<0.2	0.004	<0.5	0.05	2700
LF-16	2-May-96	<0.05	<0.005	<0.1	<0.02	6.8	4.9	<0.1	16	<0.0002	<0.1	13	<0.005	<0.2	<0.01	<0.5	<0.05	2300
LF-16	24-Sep-96	<0.05	<0.005	<0.1	0.02	7.1	4.6	<0.1	17	<0.0002	<0.1	12	<0.005	<0.2	<0.01	0.7	<0.05	2400
LF-16	19-Dec-96	<0.05	<0.005	<0.1	0.02	6.9	4.3	<0.1	16	<0.0002	<0.1	12	<0.02	<0.2	<0.01	<0.5	<0.05	2400
LF-17	8-Dec-93	<0.005	0.004	0.11	<0.002	<0.005	0.011	<0.01	<0.01	<0.0003	<0.01	0.04	<0.04	<0.02	<0.004	<0.1	0.008	0.1
LF-17	15-Feb-94	<0.005	<0.002	0.05	<0.002	<0.005	0.009	<0.01	<0.01	<0.0002	<0.01	0.03	<0.04	<0.02	<0.004	<0.1	0.007	0.05
LF-17	22-Sep-94	<0.001	<0.002	0.06	<0.0005	<0.001	0.005	<0.002	<0.002	<0.0002	0.003	0.015	<0.005	0.005	<0.004	<0.02	0.006	0.035
LF-17	14-Mar-95	<0.001	<0.002	0.065	<0.0005	<0.001	0.006	<0.002	<0.002	<0.002	<0.002	0.022	<0.002	<0.004	<0.004	0.01	0.003	0.056
LF-17	6-Sep-95	<0.001	<0.002	0.057	<0.0005	<0.001	0.004	<0.002	<0.002	<0.0002	0.002	0.017	<0.002	<0.004	<0.004	0.01	0.004	<0.01
LF-17	28-Feb-96	<0.001	0.002	0.087	<0.0005	0.005	0.007	0.01	<0.002	<0.0002	<0.002	0.023	<0.002	<0.004	<0.004	<0.01	0.003	0.092
LF-17	25-Sep-96	<0.001	0.003	0.066	<0.0005	0.002	0.004	<0.002	<0.002	<0.0002	0.002	0.018	<0.002	<0.004	<0.004	<0.01	0.004	0.041
LF-F1	8-Dec-93	<0.005	0.012	0.07	<0.002	0.049	0.055	<0.01	<0.01	<0.0003	<0.01	0.07	<0.04	<0.02	<0.04	<0.1	0.008	13
LF-F1	18-Feb-94	<0.005	0.004	<0.05	<0.002	0.065	0.062	<0.01	<0.01	<0.0002	0.02	0.07	<0.04	<0.02	<0.004	<0.1	<0.005	20
LF-F1	23-Sep-94	0.002	0.21	0.02	<0.0005	<0.005	0.2	<0.002	<0.002	<0.0002	0.006	0.13	<0.005	<0.02	<0.004	<0.1	<0.005	39
LF-F1	15-Mar-95	0.001	0.092	0.021	<0.0005	0.02	0.1	<0.002	<0.002	<0.0002	0.009	0.05	<0.002	<0.02	<0.004	<0.05	0.001	14
LF-F1	7-Sep-95	<0.001	0.09	0.020	<0.0005	0.038	0.11	<0.002	<0.002	<0.0002	0.011	0.076	<0.002	<0.004	<0.02	<0.01	<0.001	17
LF-F1	29-Feb-96	<0.001	0.023	0.026	<0.0005	0.26	0.054	<0.002	<0.002	<0.0002	0.01	0.061	<0.005	<0.004	<0.004	<0.01	<0.001	37
LF-F1	25-Sep-96	0.001	0.22	0.021	<0.0005	0.078	0.099	<0.002	<0.002	<0.0002	0.013	0.078	<0.002	<0.004	<0.004	0.02	<0.001	30
MW-1	5-Nov-91	<0.002	0.073	0.085	<0.001	<0.005	0.008	<0.01	<0.005	<0.0003	0.02	0.032	<0.005	<0.02	<0.004	<0.1	<0.005	2.7
MW-1	27-Oct-92	<0.005	0.084	0.09	<0.002	0.031	0.052	<0.01	<0.01	<0.0003	<0.01	0.3	<0.04	<0.02	<0.004	<0.1	0.007	42
MW-1	5-Mar-93	<0.005	0.024	0.05	<0.002	0.008	0.015	<0.01	<0.01	<0.0003	<0.01	0.11	<0.04	<0.02	<0.004	<0.1	0.006	16
MW-1	25-May-93	<0.005	0.064	0.06	<0.002	<0.005	0.008	<0.01	<0.01	<0.0003	0.02	0.02	<0.04	0.03	<0.004	<0.1	0.007	1.6
MW-1	1-Sep-93	<0.005	0.097	0.07	<0.002	<0.005	0.009	<0.01	<0.01	<0.0003	0.02	0.02	<0.04	<0.02	<0.004	<0.1	0.005	2.3
MW-1	26-Oct-93	<0.005	0.03	0.08	<0.002	0.009	0.012	<0.01	<0.01	<0.0003	<0.01	0.1	<0.04	<0.02	<0.004	<0.1	<0.005	13
MW-1	18-Feb-94	<0.005	0.052	0.1	<0.002	<0.005	0.011	<0.01	<0.01	<0.0002	0.01	0.02	<0.04	<0.02	<0.004	<0.1	0.007	2.8
MW-1	22-Sep-94	<0.001	0.029	0.08	<0.0005	0.005	0.009	<0.002	<0.002	<0.0002	0.007	0.051	<0.005	0.017	<0.01	<0.02	0.01	5
MW-1	14-Mar-95	<0.001	0.033	0.092	<0.0005	<0.001	0.02	<0.002	0.004	<0.0002	0.013	0.019	<0.002	0.079	<0.004	<0.01	0.009	1.8
MW-1	5-Sep-95	<0.001	0.12	0.12	<0.0005	0.002	0.018	0.002	<0.002	<0.0002	0.018	0.014	<0.005	0.029	<0.01	<0.01	0.019	1.4
MW-1	29-Feb-96	<0.001	0.041	0.07	<0.0005	<0.001	0.018	<0.002	0.003	<0.0002	0.009	0.019	<0.002	0.077	<0.004	<0.01	0.009	1.7
MW-1	25-Sep-96	<0.001	0.098	0.084	<0.0005	0.005	0.015	<0.002	<0.002	<0.0002	0.013	0.016	<0.002	0.032	<0.004	<0.01	0.008	2.6
MW-2	5-Nov-92	0.008	2.1	0.013	0.002	7	0.42	<0.01	0.093	0.0055	0.01	1.2	<0.2	<0.2	<0.004	<0.1	<0.005	4200
MW-2	27-Oct-92	<0.05	1.5	<0.5	<0.02	10	1.5	<0.1	0.2	<0.0003	<0.1	4.9	<0.4	<0.2	0.014	<1	<0.05	6000
MW-2 (1)	5-Mar-93	<0.005	0.011	<0.05	<0.002	0.28	0.24	<0.01	0.14	<0.0003	<0.1	1	<0.04	<0.02	<0.01	<0.1	<0.005	290
MW-2	25-May-93	<0.05	1.8	<0.05	<0.02	5.2	0.85	<0.1	<0.1	<0.0003	<0.1	2.4	<0.4	<0.2	<0.004	<1	<0.05	3000
MW-2	1-Sep-93	<0.05	2.1	<0.05	<0.02	5.2	0.77	<0.1	<0.1	<0.0003	<0.1	2.3	<0.4	<0.2	<0.004	<1	<0.05	2700



**Table 2**  
**Metals Detected in Groundwater Samples**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**  
*(Concentrations reported in parts per million [ppm])*

Sample ID	Sample Date	Silver	Arsenic	Barium	Beryllium	Cadmium	Cobalt	Chromium	Copper	Mercury	Molybdenum	Nickel	Lead	Antimony	Selenium	Thallium	Vanadium	Zinc
MW-2	26-Oct-93	<0.05	4	<0.5	<0.02	5.1	0.73	0.3	0.3	<0.0003	<0.1	2.2	<0.4	<0.2	<0.04	<1	<0.05	2600
MW-2	18-Feb-94	<0.05	1.5	<0.5	<0.02	4.6	0.62	<0.1	<0.1	<0.0002	<0.1	2	<0.4	<0.2	<0.004	<1	<0.05	2600
MW-2	22-Sep-94	<0.05	2.1	<0.05	<0.02	5	0.65	<0.1	0.1	<0.0002	<0.1	2	<0.01	<0.2	<0.2	<1	<0.05	2300
MW-2	14-Mar-95	<0.05	1.4	<0.1	<0.02	4.1	0.52	<0.1	<0.1	<0.0002	<0.1	1.8	<0.02	<0.2	<0.04	<0.5	<0.05	2200
MW-2	5-Sep-95	<0.05	1.3	<0.1	<0.02	5.2	0.55	<0.1	0.2	<0.0002	<0.1	1.9	0.02	<0.2	<0.2	<0.5	<0.05	2300
MW-2	29-Feb-96	<0.05	1.7	<0.1	<0.02	3	0.3	<0.1	<0.1	<0.0002	<0.1	1	<0.02	<0.2	<0.1	<0.5	<0.05	1700
MW-2 (1)	24-Sep-96	<0.05	0.91	<0.1	0.03	14	1.4	<0.1	0.4	<0.0002	0.3	4.8	<0.05	<0.2	<0.02	<0.5	<0.05	6300
MW-3	5-Nov-92	0.005	<0.002	0.017	0.001	0.57	0.42	<0.01	0.28	0.0028	<0.01	1.2	0.005	<0.02	<0.004	<0.1	<0.005	600
MW-3	27-Oct-92	0.009	0.004	<0.05	0.003	0.73	0.74	<0.01	0.3	<0.0003	<0.01	2.6	<0.04	<0.02	0.011	<0.1	<0.005	730
MW-3 (1)	5-Mar-93	<0.05	1.6	<0.05	<0.02	5.8	1	<0.1	0.07	<0.0003	<0.1	3.1	<0.4	<0.2	<0.02	<1	<0.05	3000
MW-3	25-May-93	<0.005	<0.002	<0.05	<0.002	0.28	0.24	<0.01	0.07	<0.0003	<0.01	0.83	<0.04	<0.02	<0.004	<0.1	<0.005	260
MW-3	1-Sep-93	<0.005	0.011	<0.05	<0.002	0.32	0.3	<0.01	0.2	<0.0003	<0.01	1.1	<0.04	<0.02	<0.004	<0.1	<0.005	360
MW-3	26-Oct-93	<0.005	<0.002	<0.05	0.002	0.44	0.49	<0.01	0.32	<0.0003	<0.01	1.7	<0.04	<0.02	<0.004	<0.1	<0.005	560
MW-3	18-Feb-94	<0.005	<0.002	<0.05	<0.002	0.22	0.25	<0.01	0.19	<0.0002	<0.01	0.77	<0.04	<0.02	<0.004	<0.1	<0.005	230
MW-3	24-May-94	<0.005	<0.002	<0.05	<0.002	0.1	0.14	<0.01	0.12	<0.0002	<0.01	0.42	<0.003	<0.03	<0.004	<0.1	<0.005	120
MW-3	22-Sep-94	<0.005	<0.002	<0.05	<0.002	0.21	0.25	<0.01	0.2	<0.0002	<0.01	0.75	<0.005	<0.02	<0.004	<0.1	<0.005	230
MW-3	19-Dec-94	<0.005	<0.002	<0.05	<0.002	0.094	0.089	<0.01	0.06	<0.0002	<0.01	0.36	<0.002	<0.02	<0.004	<0.1	<0.005	100
MW-3	14-Mar-95	<0.005	<0.002	0.02	<0.002	0.13	0.14	<0.01	0.1	<0.0002	<0.01	0.59	<0.002	<0.02	<0.004	<0.05	<0.005	220
MW-3	7-Jun-95	<0.005	<0.002	0.02	0.002	0.33	0.47	<0.01	0.32	<0.0002	<0.01	1.5	<0.005	<0.02	<0.004	<0.05	<0.005	500
MW-3	5-Sep-95	<0.005	<0.002	0.03	0.004	0.84	1.3	<0.01	0.90	<0.0002	0.01	3.8	<0.002	<0.02	0.004	<0.05	<0.005	1100
MW-3	18-Dec-95	<0.05	<0.002	0.01	<0.03	1.7	1.2	<0.1	0.70	<0.0002	<0.1	3.9	<0.002	<0.2	<0.004	<0.5	<0.05	1200
MW-3	1-Mar-96	<0.005	0.002	0.01	<0.002	0.31	0.21	<0.01	0.09	<0.0002	<0.01	0.6	<0.002	<0.02	<0.004	<0.05	<0.005	170
MW-3	2-May-96	<0.05	<0.002	<0.1	<0.02	0.48	0.82	<0.1	0.40	<0.0002	<0.1	2.3	<0.002	<0.2	<0.004	<0.5	<0.05	630
MW-3	24-Sep-96	0.011	<0.002	0.02	0.005	0.88	1.4	<0.01	0.89	<0.0002	0.04	3.9	<0.002	<0.02	<0.004	<0.05	<0.005	1100
MW-3	18-Dec-96	<0.005	<0.002	0.01	0.003	0.50	0.81	<0.01	0.49	<0.0002	0.03	2.4	0.002	<0.02	<0.004	<0.05	<0.005	710
MW-4	5-Nov-92	<0.002	0.007	0.017	<0.001	<0.005	<0.005	<0.01	<0.005	0.0027	<0.01	0.012	<0.005	<0.02	<0.004	<0.1	<0.005	<0.005
MW-4	27-Oct-92	<0.005	<0.002	<0.05	<0.002	0.006	<0.005	<0.01	0.02	<0.0003	<0.01	0.02	<0.04	<0.02	0.004	<0.1	0.011	0.047
MW-4	4-Mar-93	<0.005	<0.002	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	0.02	<0.04	<0.02	<0.004	<0.1	0.01	0.03
MW-4	25-May-93	<0.005	<0.002	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	0.006	0.008
MW-4	1-Sep-93	<0.005	0.009	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	<0.005	0.016
MW-4	26-Oct-93	<0.005	0.003	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	<0.005	0.15
MW-4	18-Feb-94	<0.005	<0.002	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0002	<0.01	0.02	<0.04	<0.02	<0.004	<0.1	<0.005	0.17
MW-4	22-Sep-94	<0.001	<0.002	0.02	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	0.025	<0.005	<0.005	<0.004	<0.02	0.004	0.039
MW-4	14-Mar-95	<0.001	<0.002	0.02	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	0.02	<0.002	<0.004	<0.004	<0.01	0.004	0.05
MW-4	6-Sep-95	<0.001	<0.002	0.019	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	0.016	<0.002	<0.004	<0.004	0.01	0.004	0.02
MW-4	29-Feb-96	<0.001	0.003	0.017	<0.0005	0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	0.021	<0.002	<0.004	<0.004	<0.01	0.003	0.24
LF-1-FB	26-Oct-93	<0.005	<0.002	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	<0.005	0.035
LF-9-FB	1-Nov-93	<0.005	<0.002	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	<0.005	0.038
LF-17-FB	8-Dec-93	<0.005	<0.002	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0003	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	<0.005	0.1
LF-11-FB	18-Feb-94	<0.005	<0.002	<0.05	<0.002	<0.005	<0.005	<0.01	<0.01	<0.0002	<0.01	<0.01	<0.04	<0.02	<0.004	<0.1	<0.005	0.05
LF-3-BB	25-May-94	<0.001	<0.002	<0.01	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	<0.002	<0.003	<0.005	<0.004	<0.02	<0.001	0.015
LF-15-BB	8-Sep-95	<0.001	<0.002	<0.002	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	<0.002	<0.002	0.005	<0.004	<0.01	<0.001	0.02
LF-11FB	2-May-96	<0.001	<0.002	<0.002	<0.0005	<0.001	<0.001	<0.002	<0.002	<0.0002	<0.002	<0.002	<0.002	<0.004	<0.004	<0.01	<0.001	<0.01

Data entered by M.W.. Data proofed by JRB. QA/QC by SXS.

**NOTES**

(1) Labeling errors in the field or laboratory may account for the anomalous data reported for wells MW-2 and MW-3.

**Table 3**  
**Gasoline Hydrocarbons and BTEX Detected in Groundwater Samples**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**  
*(concentrations reported in parts per million [ppm])*

Sample ID	Sample Date	TPHg	Benzene	Ethylbenzene	Toluene	Xylenes
LF-1	04-Nov-91	<0.05	<0.005	<0.005	<0.005	<0.01
LF-1	02-May-96	<0.05	<0.0005	<0.0005	<0.0005	<0.002
LF-1	19-Dec-96	<0.05	<0.0005	<0.0005	<0.0005	<0.002
LF-2	04-Nov-91	<0.05	<0.005	<0.005	<0.005	<0.01
LF-3	04-Nov-91	<0.05	<0.005	<0.005	<0.005	<0.01
LF-3	25-May-94	<0.05	NA	NA	NA	NA
Duplicate	25-May-94	<0.05	NA	NA	NA	NA
LF-3	23-Sep-94	<0.05	NA	NA	NA	NA
Duplicate	23-Sep-94	<0.05	NA	NA	NA	NA
LF-3	20-Dec-94	<0.05	<0.0005	<0.0005	<0.0005	<0.002
Duplicate	20-Dec-94	<0.05	<0.0005	<0.0005	<0.0005	<0.002
LF-3	15-Mar-95	<0.05	<0.0005	<0.0005	<0.0005	<0.002
LF-3	07-Sep-95	<0.05	<0.0005	<0.0005	<0.0005	<0.002
LF-3	01-Mar-96	<0.05	<0.0005	<0.0005	<0.0005	<0.002
LF-3	02-May-96	<0.05	<0.0005	<0.0005	<0.0005	<0.002
LF-3	24-Sep-96	<0.05	NA	NA	NA	NA
LF-3	18-Dec-96	<0.05	<0.0005	<0.0005	<0.0005	<0.002
Duplicate	18-Dec-96	<0.05	<0.0005	<0.0005	<0.0005	<0.002
LF-4	04-Nov-91	0.59	<0.005	<0.005	<0.005	<0.01
LF-5	04-Nov-91	NA	<0.005	<0.005	<0.005	<0.01
LF-5	19-Dec-96	<0.05	<0.005	<0.005	<0.005	<0.02
LF-6	04-Nov-91	NA	<0.005	<0.005	<0.005	<0.01
LF-7	04-Nov-91	NA	<0.005	<0.005	<0.005	<0.01
LF-8	28-Oct-93	<1.0	NA	NA	NA	NA
LF-8	24-May-94	0.7	NA	NA	NA	NA
LF-8	23-Sep-94	0.4	NA	NA	NA	NA
LF-8	20-Dec-94	0.4	0.003	0.0065	0.0009	0.004
LF-8	15-Mar-95	0.3	0.002	0.003	0.0006	0.003
LF-8	09-Jun-95	0.3	0.001	0.003	0.0006	0.003
LF-8	07-Sep-95	0.4	0.001	0.003	0.0006	0.003
LF-8	18-Dec-95	0.3	0.001	0.003	0.0006	0.003
LF-8	29-Feb-96	0.3	0.0026	0.0031	0.0019	0.0032
LF-8	02-May-96	0.18	0.0008	0.0034	<0.0005	<0.002
LF-8	25-Sep-96	0.21	NA	NA	NA	NA
LF-8	18-Dec-96	0.21	0.0012	0.002	<0.0005	<0.002
LF-9	01-Nov-93	<0.1	NA	NA	NA	NA
Duplicate	01-Nov-93	<0.1	NA	NA	NA	NA
LF-9	23-Sep-94	NA	<0.005	<0.005	<0.005	<0.01
LF-11	28-Oct-93	<0.1	NA	NA	NA	NA
LF-13	06-Dec-93	0.05	<0.0005	<0.0005	<0.0005	<0.002
Duplicate	06-Dec-93	0.06	<0.0005	<0.0005	<0.0005	<0.002
LF-14	21-Sep-94	1.4	NA	NA	NA	NA
LF-14	19-Dec-94	1	0.001	<0.0005	0.002	0.012
LF-14	15-Mar-95	1.2	0.001	<0.0005	0.0006	0.015
LF-14	08-Sep-95	1.4	0.0009	<0.0005	0.0007	0.002
LF-14	01-Mar-96	0.8	0.0007	<0.0005	<0.0005	0.0084
LF-14	24-Sep-96	0.9	NA	NA	NA	NA
LF-14	19-Dec-96	0.71	0.0008	<0.0005	<0.0005	0.006
LF-16	19-Dec-96	<0.05	<0.0005	<0.0005	<0.0005	<0.002
MW-2	05-Nov-91	NA	<0.0003	<0.0003	<0.0003	<0.001
LF-9-FB	01-Nov-93	<0.1	NA	NA	NA	NA
LF-4-BB	04-Nov-91	<0.05	<0.005	<0.005	<0.005	<0.01
LF-3-BB	25-May-94	<0.05	NA	NA	NA	NA
Trip Blank	28-Sep-94	<0.05	NA	NA	NA	NA
Trip Blank	16-Mar-95	<0.05	<0.0005	<0.0005	<0.0005	<0.002

Data entered by PRC. Data proofed by JAB. QA/QC by SXS.

**NOTES**

Samples analyzed by American Environmental Network, Pleasant Hill, California.

FB/BB - Field Blank

NA - not analyzed

TPHg - Total petroleum hydrocarbons as gasoline (EPA Method 5030)

Benzene, ethylbenzene, toluene, and xylenes (BTEX) analyzed using modified EPA Method 8015 or by EPA Method 8240.

**Table 4**  
**Petroleum Hydrocarbons Detected in Groundwater Samples**  
**5050 Coliseum Way and 750-50th Avenue**  
**Oakland, California**  
*(concentrations reported in parts per million [ppm])*

Sample ID	Sample Date	TPHd	TPHo	TOG	Hydrocarbons
LF-1	4-Nov-91	0.09	NA	<0.5	<0.5
LF-1	2-May-96	0.3	<0.2	NA	NA
LF-1	19-Dec-96	0.61	<0.2	NA	NA
LF-2	4-Nov-91	0.3	NA	NA	NA
LF-3	4-Nov-91	0.2	NA	NA	NA
LF-3	25-May-94	0.3	0.4	NA	NA
Duplicate	25-May-94	0.3	0.4	NA	NA
LF-3	23-Sep-94	1.2	<0.2	NA	NA
Duplicate	23-Sep-94	1	<0.2	NA	NA
LF-3	20-Dec-94	0.89	0.2	NA	NA
Duplicate	20-Dec-94	0.88	0.2	NA	NA
LF-3	15-Mar-95	0.8	<0.2	NA	NA
LF-3	7-Sep-95	0.62	0.4	NA	NA
LF-3	1-Mar-96	0.65	0.2	NA	NA
LF-3	2-May-96	0.61	<0.2	NA	NA
LF-3	24-Sep-96	0.37	<0.2	NA	NA
LF-3	19-Dec-96	0.52	<0.2	NA	NA
Duplicate	19-Dec-96	0.44	<0.2	NA	NA
LF-4	4-Nov-91	0.1	NA	NA	NA
LF-5	19-Dec-96	<0.05	<0.2	NA	NA
LF-8	28-Oct-93	9.8	NA	2	1
LF-8	24-May-94	4.5	0.6	NA	NA
LF-8	23-Sep-94	6.7	<0.2	NA	NA
LF-8	20-Dec-94	5.6	0.4	NA	NA
LF-8	15-Mar-95	4.1	0.2	NA	NA
LF-8	9-Jun-95	3.8	<0.2	NA	NA
LF-8	7-Sep-95	4.7	0.3	NA	NA
LF-8	18-Dec-95	3.9	0.4	NA	NA
LF-8	29-Feb-96	3.9	0.3	NA	NA
LF-8	2-May-96	2.3	<0.2	NA	NA
LF-8	25-Sep-96	2.5	<0.2	NA	NA
LF-8	18-Dec-96	3.2	<0.2	NA	NA
LF-9	1-Nov-93	0.2	NA	<0.5	<0.5
Duplicate	1-Nov-93	0.2	NA	<0.5	<0.5
LF-11	28-Oct-93	<0.05	NA	<0.5	<0.5
LF-13 (*)	6-Dec-93	0.5	0.4	1	<0.5
Duplicate	6-Dec-93	0.6	0.4	NA	NA
LF-14	21-Sep-94	<0.3	<0.2	NA	NA
LF-14	19-Dec-94	0.65	<0.2	NA	NA
LF-14	15-Mar-95	0.3	<0.2	NA	NA
LF-14	8-Sep-95	<0.05	<0.2	NA	NA
LF-14	1-Mar-96	0.14	<0.2	NA	NA
LF-14	24-Sep-96	0.17	<0.2	NA	NA
LF-14	19-Dec-96	0.56	<0.2	NA	NA
LF-16	19-Dec-96	0.25	<0.2	NA	NA
MW-2	4-Nov-91	<0.05	NA	NA	NA
LF-3-BB	25-May-94	<0.05	<0.2	NA	NA

Data entered by FRU . Data proofed by JS . QA/QC by SK

**NOTES**

Analyses performed by American Environmental Network, Pleasant Hill, CA

BB - Field Blank

NA - not analyzed

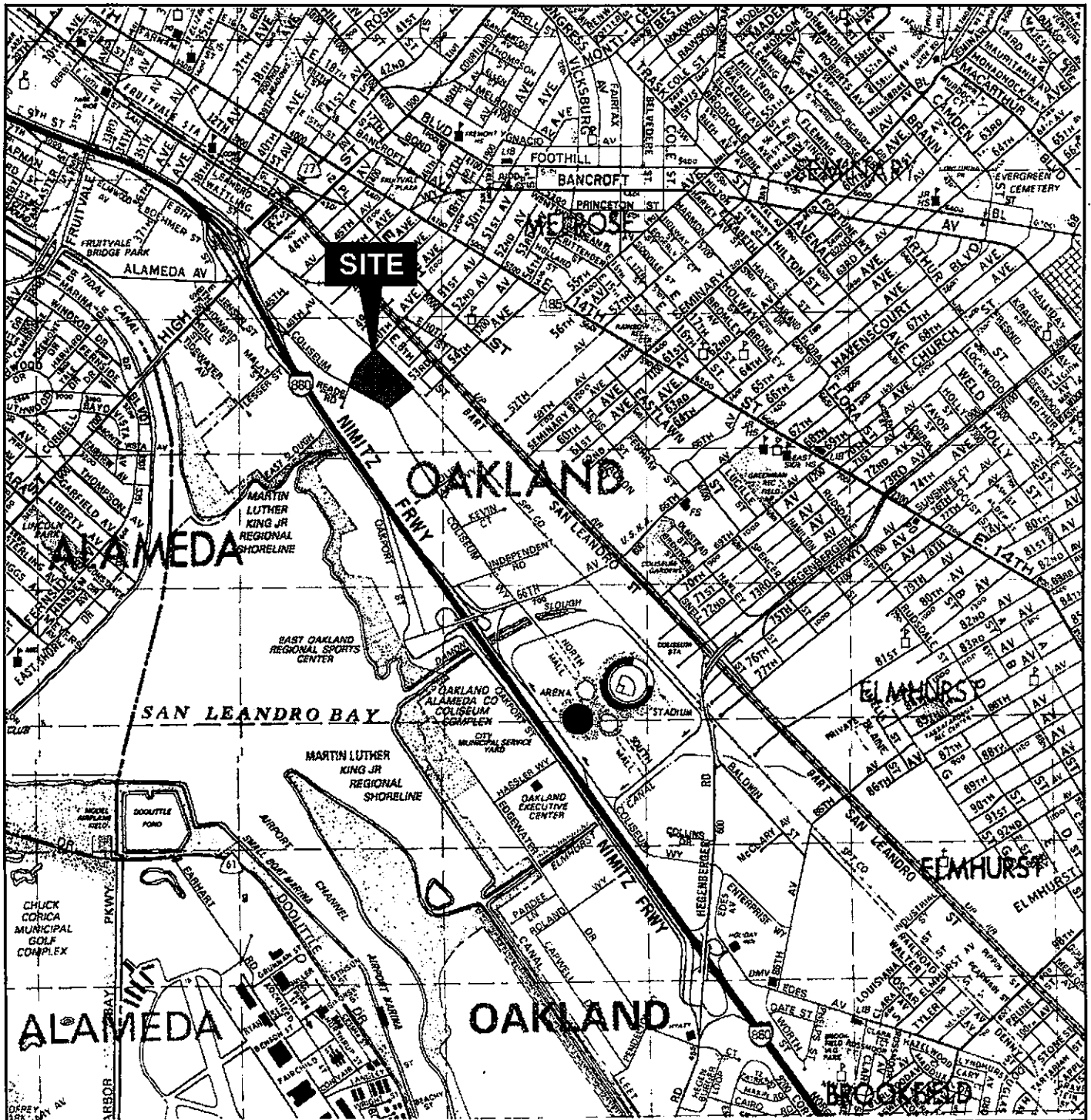
TPHd - Total petroleum hydrocarbons as diesel (EPA Method 3510)

TPHo - Total petroleum hydrocarbons as oil (EPA Method 3510)

TOG - Total oil and grease (Standard Method 5520b)

Hydrocarbons - Total hydrocarbons (Standard Method 5520f)

(\*) - Free product measured in February 1994.



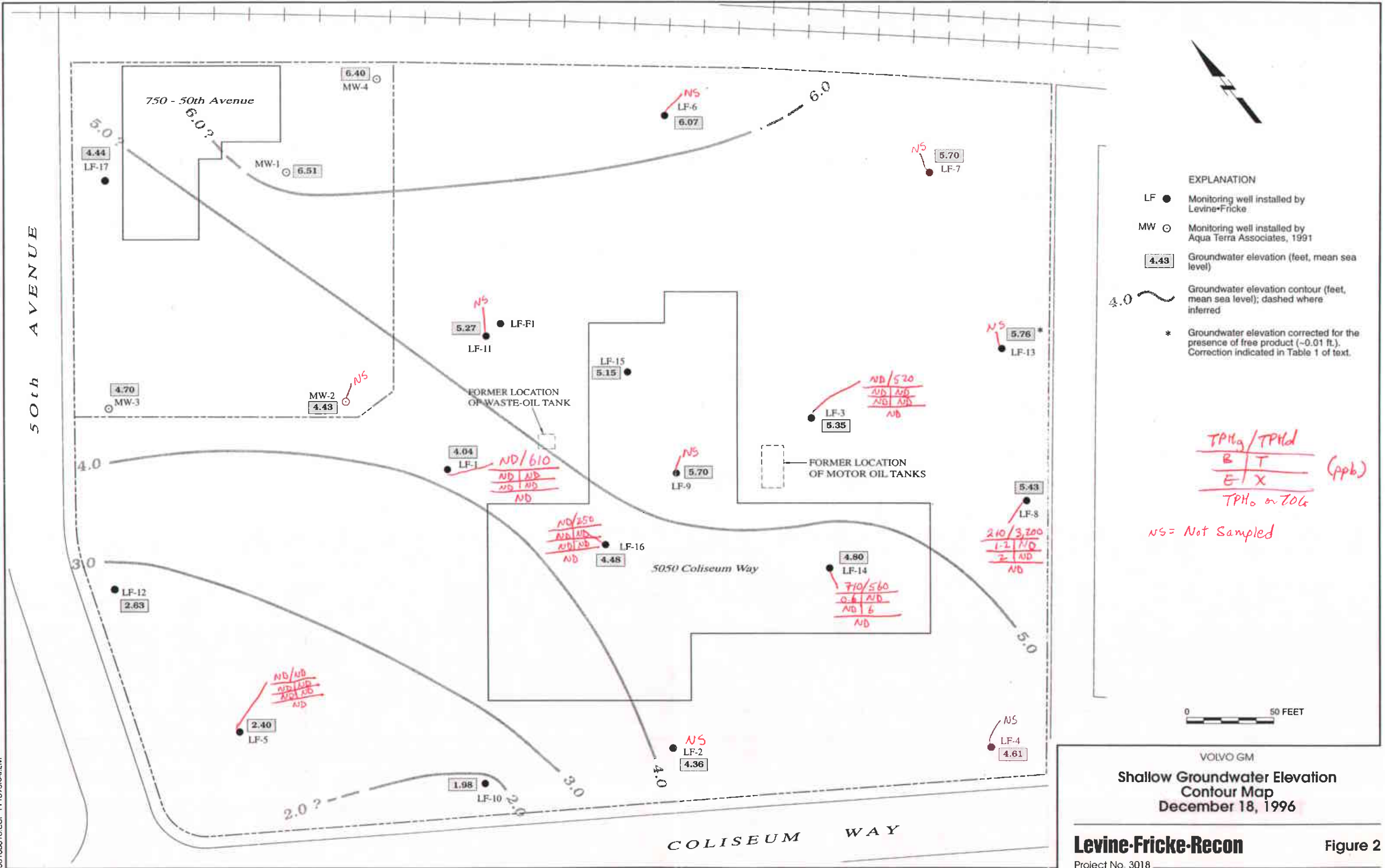
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 Alameda County  
 1995 Edition



VOLVO GM  
**Site Location**  
 5050 Coliseum Way and 750-50th Avenue,  
 Oakland, California

**Levine-Fricke-Recon** Figure 1  
 Project No. 3018

3018SV01.CDR 111496dat



VOLVO GM  
**Shallow Groundwater Elevation Contour Map**  
 December 18, 1996

**Levine-Fricke-Recon** Figure 2  
 Project No. 3018



VOLVO GM  
**Concentrations of Metals Detected in Shallow Groundwater (ppm) December 18 and 19, 1996**  
**Levine-Fricke-Recon** Figure 3  
 Project No. 3018

Table 6 Groundwater Sample Analytical Chemistry Results  
Volvo - GM  
750 50th Avenue  
Oakland, CA

Chemical	EPA Method	Monitoring Wells:		MW1	MW2	MW3	MW4	MCL <sup>1</sup>	(ppb, Basin Plan)	
Volatile Organics	8240	Nat'l Toxics Rule (ppb)		ND	ND	ND	ND		4-day Avg.	1-hr Avg.
Semi Volatile Organics	8270	Acute	Chronic	ND	ND	ND	ND			
Silver	6010	2.3	None	ND	ND	ND	ND	0.05	2.3 <sup>1</sup>	
Arsenic	6010	69	36	ND	0.0667	ND	ND	0.05	36	69
Barium	7060	Not listed		ND	ND	ND	ND	1.0		
Beryllium	6010		(0.031)	ND	ND	ND	ND	---		
Cadmium	6010		(170)	0.016	5.1	0.429	ND	0.01	9.3	43
Cobalt	6010	Not listed		ND	1.72	0.557	ND	---		
Chromium, total	6010	1100*	50*	ND	ND	ND	ND	0.05	50*	1100*
Copper	6010	2.9	2.9	ND	0.159	0.506	ND	1.0 <sup>3</sup>		
Mercury	7470	2.1	0.025	ND	ND	ND	ND	0.002	0.025	2.1
Molybdenum	6010	Not listed		ND	ND	ND	ND	---		
Nickel	6010	75	8.3	0.308	4.64	1.62	ND	---	(7.1 <sup>1</sup> )	140 <sup>1</sup>
Lead	7421	220	8.5	ND	ND	ND	ND	0.005	5.6	140
Antimony	6010		(4300)	ND	ND	ND	ND	---		
Selenium	7740	300	71	ND	ND	ND	ND	0.01		
Thallium	7841		(6.3)	ND	ND	ND	ND	---		
Vanadium	6010	Not listed		ND	ND	ND	ND	---		
Zinc	6010	95	86	31.8	2720	426	0.134	5.0 <sup>3</sup>	(58 <sup>1</sup> )	170 <sup>1</sup>

All units are mg/L

↑ Values for Saltwater  
( ) = values for "other waters", for fish consumption only.

- 1 MCL = Maximum Contaminant Level
- 2 --- = No standard established
- 3 Secondary drinking water standard values provide acceptable aesthetic and taste characteristics

1 - values for 24-hr Avg. + Instantaneous Max.

**Appendix A**

**Laboratory Certificates  
and Chain-of-Custody Form**



# American Environmental Network

ISO 9115 Certification: 11-92

ANETLA/ANET/SG/01/01/96/01/01/01

PAGE 1

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

REPORT DATE: 01/09/97

DATE(S) SAMPLED: 12/18/96-12/19/96

DATE RECEIVED: 12/20/96

ATTN: JENIFER BEATTY  
CLIENT PROJ. ID: 3018.95.21  
CLIENT PROJ. NAME: VOLVO/GM  
C.O.C. NUMBER: 1027

AEN WORK ORDER: 9612348

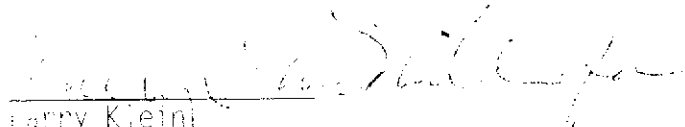
## PROJECT SUMMARY:

On December 20, 1996, this laboratory received 12 water sample(s).

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

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

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

  
Larry Klein  
Laboratory Director

LEVINE-FRICKE-RECON

SAMPLE ID: LF-12  
 AEN LAB NO: 9612348.01  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/18/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag	Silver	EPA 200.7	0.06 *	0.05 mg/L	01/06/97
As	Arsenic	EPA 206.2	ND	0.002 mg/L	12/31/96
Ba	Barium	EPA 200.7	ND	0.1 mg/L	01/06/97
Be	Beryllium	EPA 200.7	0.02 *	0.02 mg/L	01/06/97
Cd	Cadmium	EPA 200.7	2.9 *	0.05 mg/L	01/06/97
Co	Cobalt	EPA 200.7	2.1 *	0.05 mg/L	01/06/97
Cr	Chromium	EPA 200.7	ND	0.1 mg/L	01/06/97
Cu	Copper	EPA 200.7	1.2 *	0.1 mg/L	01/06/97
Hg	Mercury	EPA 245.1	0.0003 *	0.0002 mg/L	12/26/96
Mo	Molybdenum	EPA 200.7	0.1 *	0.1 mg/L	01/06/97
Ni	Nickel	EPA 200.7	6.1 *	0.1 mg/L	01/06/97
Pb	Lead	EPA 239.2	ND	0.002 mg/L	12/31/96
Sb	Antimony	EPA 200.7	ND	0.2 mg/L	01/06/97
Se	Selenium	EPA 270.2	0.043 *	0.004 mg/L	12/31/96
Tl	Thallium	EPA 200.7	ND	0.5 mg/L	01/06/97
V	Vanadium	EPA 200.7	ND	0.05 mg/L	01/06/97
Zn	Zinc	EPA 200.7	2,600 *	0.1 mg/L	01/06/97

Reporting limits elevated for metals due to matrix interference.

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

LEVINE-FRICKE-RECON

SAMPLE ID: MW-3  
 AEN LAB NO: 9612348-02  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/18/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag	Silver EPA 200.7	ND	0.005	mg/L	01/06/97
As	Arsenic EPA 206.2	ND	0.002	mg/L	12/31/96
Ba	Barium EPA 200.7	0.01 *	0.01	mg/L	01/06/97
Be	Beryllium EPA 200.7	0.003 *	0.002	mg/L	01/06/97
Cd	Cadmium EPA 200.7	0.50 *	0.005	mg/L	01/06/97
Co	Cobalt EPA 200.7	0.81 *	0.005	mg/L	01/06/97
Cr	Chromium EPA 200.7	ND	0.01	mg/L	01/06/97
Cu	Copper EPA 200.7	0.49 *	0.01	mg/L	01/06/97
Hg	Mercury EPA 245.1	ND	0.0002	mg/L	12/23/96
Mo	Molybdenum EPA 200.7	0.03 *	0.01	mg/L	01/06/97
Ni	Nickel EPA 200.7	2.4 *	0.01	mg/L	01/06/97
Pb	Lead EPA 239.2	0.002 *	0.002	mg/L	12/31/96
Sb	Antimony EPA 200.7	ND	0.02	mg/L	01/06/97
Se	Selenium EPA 270.2	ND	0.004	mg/L	12/31/96
Tl	Thallium EPA 200.7	ND	0.05	mg/L	01/06/97
V	Vanadium EPA 200.7	ND	0.005	mg/L	01/06/97
Zn	Zinc EPA 200.7	710 *	0.01	mg/L	01/06/97

Reporting limits elevated for metals due to matrix interference.

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

LEVINE-FRICKE-RECON

SAMPLE ID: LF-2  
 AEN LAB NO: 9612348-03  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/18/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag	Silver	EPA 200.7	ND	0.001 mg/L	01/03/97
As	Arsenic	EPA 206.2	0.002 *	0.002 mg/L	12/31/96
Ba	Barium	EPA 200.7	0.022 *	0.002 mg/L	01/03/97
Be	Beryllium	EPA 200.7	ND	0.0005 mg/L	01/03/97
Cd	Cadmium	EPA 200.7	ND	0.001 mg/L	01/03/97
Co	Cobalt	EPA 200.7	0.042 *	0.001 mg/L	01/03/97
Cr	Chromium	EPA 200.7	ND	0.002 mg/L	01/03/97
Cu	Copper	EPA 200.7	0.004 *	0.002 mg/L	01/03/97
Hg	Mercury	EPA 245.1	ND	0.0002 mg/L	12/26/96
Mo	Molybdenum	EPA 200.7	ND	0.002 mg/L	01/03/97
Ni	Nickel	EPA 200.7	0.025 *	0.002 mg/L	01/03/97
Pb	Lead	EPA 239.2	ND	0.002 mg/L	12/31/96
Sb	Antimony	EPA 200.7	ND	0.004 mg/L	01/03/97
Se	Selenium	EPA 270.2	ND	0.004 mg/L	12/31/96
Tl	Thallium	EPA 200.7	ND	0.01 mg/L	01/03/97
V	Vanadium	EPA 200.7	ND	0.001 mg/L	01/03/97
Zn	Zinc	EPA 200.7	0.48 *	0.005 mg/L	01/03/97

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

## LEVINE - FRICKE - RECON

SAMPLE ID: LF-8  
 AEN LAB NO: 9612348-04  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/18/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	1.2 *	0.5 ug/L		12/27/96
Toluene	108-88-3	ND	0.5 ug/L		12/27/96
Ethylbenzene	100-41-4	2.0 *	0.5 ug/L		12/27/96
Xylenes, Total	1330-20-7	ND	2 ug/L		12/27/96
Purgeable HCs as Gasoline	5030/GCFID	0.21 *	0.05 mg/L		12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	3.2 *	0.05 mg/L		12/30/96
TPH as Oil	GC-FID	ND	0.2 mg/L		12/30/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.001 mg/L		01/03/97
As Arsenic	EPA 206.2	3.0 *	0.002 mg/L		12/31/96
Ba Barium	EPA 200.7	0.10 *	0.002 mg/L		01/03/97
Be Beryllium	EPA 200.7	ND	0.0005 mg/L		01/03/97
Cd Cadmium	EPA 200.7	0.022 *	0.001 mg/L		01/03/97
Co Cobalt	EPA 200.7	ND	0.001 mg/L		01/03/97
Cr Chromium	EPA 200.7	ND	0.002 mg/L		01/03/97
Cu Copper	EPA 200.7	ND	0.002 mg/L		01/03/97
Hg Mercury	EPA 245.1	ND	0.0002 mg/L		12/26/96
Mo Molybdenum	EPA 200.7	0.003 *	0.002 mg/L		01/03/97
Ni Nickel	EPA 200.7	0.004 *	0.002 mg/L		01/03/97
Pb Lead	EPA 239.2	ND	0.002 mg/L		12/31/96
Sb Antimony	EPA 200.7	ND	0.004 mg/L		01/03/97
Se Selenium	EPA 270.2	ND	0.004 mg/L		12/31/96
Tl Thallium	EPA 200.7	ND	0.01 mg/L		01/03/97
V Vanadium	EPA 200.7	ND	0.001 mg/L		01/03/97
Zn Zinc	EPA 200.7	0.030 *	0.005 mg/L		01/03/97

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-3  
 AEN LAB NO: 9612348-05  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	ND	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.52 *	0.05	mg/L	12/27/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/27/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.001	mg/L	01/03/97
As Arsenic	EPA 206.2	3.6 *	0.002	mg/L	12/31/96
Ba Barium	EPA 200.7	0.12 *	0.002	mg/L	01/03/97
Be Beryllium	EPA 200.7	0.0012 *	0.0005	mg/L	01/03/97
Cd Cadmium	EPA 200.7	0.035 *	0.001	mg/L	01/03/97
Co Cobalt	EPA 200.7	0.010 *	0.001	mg/L	01/03/97
Cr Chromium	EPA 200.7	ND	0.002	mg/L	01/03/97
Cu Copper	EPA 200.7	ND	0.002	mg/L	01/03/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	0.098 *	0.002	mg/L	01/03/97
Ni Nickel	EPA 200.7	0.011 *	0.002	mg/L	01/03/97
Pb Lead	EPA 239.2	ND	0.002	mg/L	12/31/96
Sb Antimony	EPA 200.7	ND	0.004	mg/L	01/03/97
Se Selenium	EPA 270.2	ND	0.2	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	0.01	mg/L	01/03/97
V Vanadium	EPA 200.7	ND	0.001	mg/L	01/03/97
Zn Zinc	EPA 200.7	6.6 *	0.005	mg/L	01/03/97

Reporting limit elevated for selenium due to matrix interference.

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

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-103  
AEN LAB NO: 9612348-06  
AEN WORK ORDER: 9612348  
CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
DATE RECEIVED: 12/20/96  
REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5 ug/L		12/27/96
Toluene	108-88-3	ND	0.5 ug/L		12/27/96
Ethylbenzene	100-41-4	ND	0.5 ug/L		12/27/96
Xylenes, Total	1330-20-7	ND	2 ug/L		12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05 mg/L		12/27/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.44 *	0.05 mg/L		12/27/96
TPH as Oil	GC-FID	ND	0.2 mg/L		12/27/96

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

## LEVINE - FRICKE - RECON

SAMPLE ID: LF-14  
 AEN LAB NO: 9612348.07  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
<b>BTEX &amp; Gasoline HCs</b>					
Benzene	EPA 8020 71-43-2	0.6 *	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	6 *	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID	0.71 *	0.05	mg/L	12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.56 *	0.05	mg/L	12/30/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/30/96
<b>CCR 17 Metals (Low Level)</b>					
Ag Silver	EPA 200.7	ND	0.005	mg/L	01/06/97
As Arsenic	EPA 206.2	0.004 *	0.002	mg/L	12/31/96
Ba Barium	EPA 200.7	0.01 *	0.01	mg/L	01/06/97
Be Beryllium	EPA 200.7	0.002 *	0.002	mg/L	01/06/97
Cd Cadmium	EPA 200.7	0.083 *	0.005	mg/L	01/06/97
Co Cobalt	EPA 200.7	0.75 *	0.005	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	0.01	mg/L	01/06/97
Cu Copper	EPA 200.7	1.5 *	0.01	mg/L	01/06/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	ND	0.01	mg/L	01/06/97
Ni Nickel	EPA 200.7	1.8 *	0.01	mg/L	01/06/97
Pb Lead	EPA 239.2	0.014 *	0.002	mg/L	12/31/96
Sb Antimony	EPA 200.7	ND	0.02	mg/L	01/06/97
Se Selenium	EPA 270.2	ND	0.004	mg/L	12/31/96
Tl Thallium	EPA 200.7	0.07 *	0.05	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.005	mg/L	01/06/97
Zn Zinc	EPA 200.7	280 *	0.01	mg/L	01/06/97

Reporting limits elevated for metals due to matrix interference.

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



LEVINE-FRICKE-RECON

SAMPLE ID: LF-11  
 AEN LAB NO: 9612348.08  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.5	mg/L	01/06/97
As Arsenic	EPA 206.2	ND	0.02	mg/L	12/31/96
Ba Barium	EPA 200.7	ND	1	mg/L	01/06/97
Be Beryllium	EPA 200.7	ND	0.2	mg/L	01/06/97
Cd Cadmium	EPA 200.7	93 *	0.5	mg/L	01/06/97
Co Cobalt	EPA 200.7	5 *	0.5	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	1	mg/L	01/06/97
Cu Copper	EPA 200.7	3 *	1	mg/L	01/06/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	2 *	1	mg/L	01/06/97
Ni Nickel	EPA 200.7	19 *	1	mg/L	01/06/97
Pb Lead	EPA 239.2	ND	0.02	mg/L	01/02/97
Sb Antimony	EPA 200.7	ND	2	mg/L	01/06/97
Se Selenium	EPA 270.2	ND	0.04	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	5	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.5	mg/L	01/06/97
Zn Zinc	EPA 200.7	31,000 *	1	mg/L	01/06/97

Reporting limit elevated for metals due to matrix interference.

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

LEVINE - FRICKE - RECON

SAMPLE ID: LF-111  
 AEN LAB NO: 9612348.09  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.5	mg/L	01/06/97
As Arsenic	EPA 206.2	ND	0.02	mg/L	12/31/96
Ba Barium	EPA 200.7	ND	1	mg/L	01/06/97
Be Beryllium	EPA 200.7	ND	0.2	mg/L	01/06/97
Cd Cadmium	EPA 200.7	80 *	0.5	mg/L	01/06/97
Co Cobalt	EPA 200.7	4 *	0.5	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	1	mg/L	01/06/97
Cu Copper	EPA 200.7	3 *	1	mg/L	01/06/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	1 *	1	mg/L	01/06/97
Ni Nickel	EPA 200.7	17 *	1	mg/L	01/06/97
Pb Lead	EPA 239.2	0.10 *	0.05	mg/L	01/02/97
Sb Antimony	EPA 200.7	ND	2	mg/L	01/06/97
Se Selenium	EPA 270.2	ND	0.04	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	5	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.5	mg/L	01/06/97
Zn Zinc	EPA 200.7	29,000 *	1	mg/L	01/06/97

Reporting limit elevated for metals due to matrix interference.

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-16  
 AEN LAB NO: 9612348-10  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
<b>BTEX &amp; Gasoline HCs</b>					
Benzene	EPA 8020 71-43-2	ND	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	ND	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.25 *	0.05	mg/L	12/30/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/30/96
<b>CCR 17 Metals (Low Level)</b>					
Ag Silver	EPA 200.7	ND	0.05	mg/L	01/06/97
As Arsenic	EPA 206.2	ND	0.005	mg/L	12/31/96
Ba Barium	EPA 200.7	ND	0.1	mg/L	01/06/97
Be Beryllium	EPA 200.7	0.02 *	0.02	mg/L	01/06/97
Cd Cadmium	EPA 200.7	6.9 *	0.05	mg/L	01/06/97
Co Cobalt	EPA 200.7	4.3 *	0.05	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	0.1	mg/L	01/06/97
Cu Copper	EPA 200.7	16 *	0.1	mg/L	01/06/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	ND	0.1	mg/L	01/06/97
Ni Nickel	EPA 200.7	12 *	0.1	mg/L	01/06/97
Pb Lead	EPA 239.2	ND	0.02	mg/L	01/02/97
Sb Antimony	EPA 200.7	ND	0.2	mg/L	01/06/97
Se Selenium	EPA 270.2	ND	0.01	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	0.5	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.05	mg/L	01/06/97
Zn Zinc	EPA 200.7	2,400 *	0.1	mg/L	01/06/97

Reporting limit elevated for metals due to matrix interference.

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

LEVINE-FRICKE-RECON

SAMPLE ID: LF-5  
 AEN LAB NO: 9612348-11  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
<b>BTEX &amp; Gasoline HCs</b>					
Benzene	EPA 8020 71-43-2	ND	0.5 ug/L		12/27/96
Toluene	108-88-3	ND	0.5 ug/L		12/27/96
Ethylbenzene	100-41-4	ND	0.5 ug/L		12/27/96
Xylenes, Total	1330-20-7	ND	2 ug/L		12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05 mg/L		12/27/96
#Digestion/G. Furnace	EPA 200.0	-	Prep Date		12/30/96
#Digestion/ICP	EPA 200.0	-	Prep Date		12/30/96
#Extraction for TPH	EPA 3510	-	Extrn Date		12/27/96
TPH as Diesel	GC-FID	ND	0.05 mg/L		12/28/96
TPH as Oil	GC-FID	ND	0.2 mg/L		12/28/96
<b>CCR 17 Metals (Low Level)</b>					
Ag Silver	EPA 200.7	0.004 *	0.001 mg/L		01/03/97
As Arsenic	EPA 206.2	ND	0.01 mg/L		12/31/96
Ba Barium	EPA 200.7	0.048 *	0.002 mg/L		01/03/97
Be Beryllium	EPA 200.7	ND	0.0005 mg/L		01/03/97
Cd Cadmium	EPA 200.7	0.11 *	0.001 mg/L		01/03/97
Co Cobalt	EPA 200.7	0.58 *	0.001 mg/L		01/03/97
Cr Chromium	EPA 200.7	ND	0.002 mg/L		01/03/97
Cu Copper	EPA 200.7	0.003 *	0.002 mg/L		01/03/97
Hg Mercury	EPA 245.1	ND	0.0002 mg/L		12/26/96
Mo Molybdenum	EPA 200.7	0.002 *	0.002 mg/L		01/03/97
Ni Nickel	EPA 200.7	1.9 *	0.002 mg/L		01/03/97
Pb Lead	EPA 239.2	ND	0.005 mg/L		01/02/97
Sb Antimony	EPA 200.7	ND	0.004 mg/L		01/03/97
Se Selenium	EPA 270.2	ND	0.02 mg/L		12/31/96
Tl Thallium	EPA 200.7	ND	0.01 mg/L		01/03/97
V Vanadium	EPA 200.7	0.003 *	0.001 mg/L		01/03/97
Zn Zinc	EPA 200.7	26 *	0.005 mg/L		01/03/97

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

LEVINE-FRICKE-RECON

SAMPLE ID: LF-1  
 AEN LAB NO: 9612348-12  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
<b>BTEX &amp; Gasoline HCs</b>					
Benzene	EPA 8020 71-43-2	ND	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	ND	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.61 *	0.05	mg/L	12/30/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/30/96
<b>CCR 17 Metals (Low Level)</b>					
Ag Silver	EPA 200.7	ND	0.05	mg/L	01/06/97
As Arsenic	EPA 206.2	0.92 *	0.002	mg/L	12/31/96
Ba Barium	EPA 200.7	ND	0.1	mg/L	01/06/97
Be Beryllium	EPA 200.7	ND	0.03	mg/L	01/06/97
Cd Cadmium	EPA 200.7	5.2 *	0.05	mg/L	01/06/97
Co Cobalt	EPA 200.7	0.62 *	0.05	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	0.1	mg/L	01/06/97
Cu Copper	EPA 200.7	0.1 *	0.1	mg/L	01/06/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	0.1 *	0.1	mg/L	01/06/97
Ni Nickel	EPA 200.7	2.1 *	0.1	mg/L	01/06/97
Pb Lead	EPA 239.2	0.80 *	0.05	mg/L	12/31/96
Sb Antimony	EPA 200.7	ND	0.2	mg/L	01/06/97
Se Selenium	EPA 270.2	ND	0.04	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	0.5	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.05	mg/L	01/06/97
Zn Zinc	EPA 200.7	4,000 *	0.1	mg/L	01/06/97

Reporting limit elevated for metals due to matrix interference.

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9612348

CLIENT PROJECT ID: 3018.95.21

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

## QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9612348  
AEN LAB NO: 1227-BLANK  
DATE EXTRACTED: 12/27/96  
DATE ANALYZED: 12/27/96  
INSTRUMENT: C  
MATRIX: WATER

## Method Blank

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

## QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9612348  
 DATE EXTRACTED: 12/27/96  
 INSTRUMENT: C  
 MATRIX: WATER

## Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			n-Pentacosane	
12/30/96	LF-8	04	91	
12/27/96	LF-3	05	83	
12/27/96	LF-103	06	90	
12/30/96	LF-14	07	88	
12/30/96	LF-16	10	91	
12/28/96	LF-5	11	75	
12/30/96	LF-1	12	91	
QC Limits:			65-125	

DATE EXTRACTED: 12/27/96  
 DATE ANALYZED: 12/27/96  
 SAMPLE SPIKED: 9612207-03  
 INSTRUMENT: C

## Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Diesel	4.00	90	<1	60-110	15



QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9612348  
AEN LAB NO: 1227-BLANK  
DATE ANALYZED: 12/27/96  
INSTRUMENT: F  
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9612348  
 INSTRUMENT: F  
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			Fluorobenzene	
12/27/96	LF-8	04	103	
12/27/96	LF-3	05	103	
12/27/96	LF-103	06	105	
12/27/96	LF-14	07	103	
12/27/96	LF-16	10	104	
12/27/96	LF-5	11	106	
12/27/96	LF-1	12	105	
QC Limits:			70-130	

DATE ANALYZED: 12/24/96  
 SAMPLE SPIKED: 9612338-07  
 INSTRUMENT: F

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Benzene	19.0	90	4	85-109	17
Toluene	64.5	90	4	87-111	16
Hydrocarbons as Gasoline	500	98	2	66-117	19

## QUALITY CONTROL DATA

AEN JOB NO: 9612348  
 SAMPLE SPIKED: DI WATER  
 DATE(S) ANALYZED: 12/26/96-01/03/97  
 MATRIX: WATER

## Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	Percent Recovery	RPD	QC Limits	
						Percent Recovery	RPD
Ag. Silver	ICP/200.7	ND	0.0075	90	3	75-125	16
As. Arsenic	4000/206.2	ND	0.04	114	2	82-140	13
Ba. Barium	ICP/200.7	ND	0.3	109	1	75-125	16
Cd. Cadmium	ICP/200.7	ND	0.015	113	1	75-125	16
Cr. Chromium	ICP/200.7	ND	0.03	101	1	75-125	16
Cu. Copper	ICP/200.7	ND	0.0375	108	<1	75-125	16
Hg. Mercury	Hg/245.1	ND	2.00 ug/L	101	1	89-121	10
Ni. Nickel	ICP/200.7	ND	0.075	109	<1	75-125	16
Pb. Lead	4000/239.2	ND	0.02	110	5	70-122	14
Se. Selenium	4000/270.2	ND	0.08	99	2	79-115	13
Zn. Zinc	ICP/200.7	ND	0.075	110	<1	75-125	16

\*\*\* END OF REPORT \*\*\*

C-3,S-2 R-3,S-1 R-5,S-A

9612348

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

Project No.: 3018.45.21 Project Location: OAKLAND, CA. Date: 12/19/96 Serial No.:  
 Project Name: VOLVO/GM Field Logbook No.: № 027

Sampler (Signature): *J.C. Re* ANALYSES Samplers: JCK, DRJ

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	ANALYSES					HOLD	RUSH	REMARKS
						TITLE 22 METALS	TPH-D	TPH-MO	TPH-S	BTEX			
LF-12	12/18/96	15:20		1		X							STD TAT
MW-3		14:40		1		X							
LF-2		15:50		1		X							
LF-8		16:25		6		X	X	X	X	X			RESULTS TO JENIFER BEATTY
LF-3	12/19/96	13:35		6		X	X	X	X	X			
LF-103		14:35		5		X	X	X	X	X			TITLE 22 METALS TO BASIN PLAN DETECTION
LF-14		13:45		6		X	X	X	X	X			LIMITS
LF-11		12:20		1		X							METALS SAMPLE FILTERED + PRESERVED IN FIELD
LF-111		13:20		1		X							
LF-16		12:15		6		X	X	X	X	X			
LF-5		11:00		6		X	X	X	X	X			
LF-1		11:40		6		X	X	X	X	X			

RELINQUISHED BY: <i>J.C. Re</i>	DATE: 12/20/96	TIME: 11:20	RECEIVED BY: <i>Richard A. Decker</i>	DATE: 12/20/96	TIME: 11:20
RELINQUISHED BY: <i>Richard A. Decker</i>	DATE: 12/20/96	TIME: 1400	RECEIVED BY: <i>Jane Redmond</i>	DATE: 12/20/96	TIME: 15:00
RELINQUISHED BY: _____	DATE: _____	TIME: _____	RECEIVED BY: _____	DATE: _____	TIME: _____

METHOD OF SHIPMENT: \_\_\_\_\_ DATE: \_\_\_\_\_ TIME: \_\_\_\_\_ LAB COMMENTS: \_\_\_\_\_

Sample Collector: LEVINE•FRICKE•RECON  
 1900 Powell Street, 12th Floor  
 Emeryville, California 94608-1827  
 (510) 652-4500

Analytical Laboratory: AEN  
 PLEASANT HILL, CA.

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

ADHA Accreditation: 01191

PAGE 1

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

REPORT DATE: 01/09/97

DATE(S) SAMPLED: 12/18/96-12/19/96

DATE RECEIVED: 12/20/96

ATTN: JENIFER BEATTY  
CLIENT PROJ. ID: 3018.95.21  
CLIENT PROJ. NAME: VOLVO/GM  
C.O.C. NUMBER: 1027

AEN WORK ORDER: 9612348

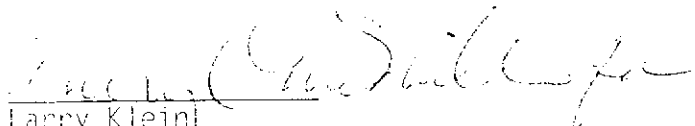
### PROJECT SUMMARY:

On December 20, 1996, this laboratory received 12 water sample(s).

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

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

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

  
Larry Klein  
Laboratory Director

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-12  
 AEN LAB NO: 9612348.01  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/18/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	0.06 *	0.05	mg/L	01/06/97
As Arsenic	EPA 206.2	ND	0.002	mg/L	12/31/96
Ba Barium	EPA 200.7	ND	0.1	mg/L	01/06/97
Be Beryllium	EPA 200.7	0.02 *	0.02	mg/L	01/06/97
Cd Cadmium	EPA 200.7	2.9 *	0.05	mg/L	01/06/97
Co Cobalt	EPA 200.7	2.1 *	0.05	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	0.1	mg/L	01/06/97
Cu Copper	EPA 200.7	1.2 *	0.1	mg/L	01/06/97
Hg Mercury	EPA 245.1	0.0003 *	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	0.1 *	0.1	mg/L	01/06/97
Ni Nickel	EPA 200.7	6.1 *	0.1	mg/L	01/06/97
Pb Lead	EPA 239.2	ND	0.002	mg/L	12/31/96
Sb Antimony	EPA 200.7	ND	0.2	mg/L	01/06/97
Se Selenium	EPA 270.2	0.043 *	0.004	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	0.5	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.05	mg/L	01/06/97
Zn Zinc	EPA 200.7	2,600 *	0.1	mg/L	01/06/97

Reporting limits elevated for metals due to matrix interference.

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEVINE - FRICKE - RECON

SAMPLE ID: MW-3  
 AEN LAB NO: 9612348-02  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/18/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag	Silver	EPA 200.7	ND	0.005 mg/L	01/06/97
As	Arsenic	EPA 206.2	ND	0.002 mg/L	12/31/96
Ba	Barium	EPA 200.7	0.01 *	0.01 mg/L	01/06/97
Be	Beryllium	EPA 200.7	0.003 *	0.002 mg/L	01/06/97
Cd	Cadmium	EPA 200.7	0.50 *	0.005 mg/L	01/06/97
Co	Cobalt	EPA 200.7	0.81 *	0.005 mg/L	01/06/97
Cr	Chromium	EPA 200.7	ND	0.01 mg/L	01/06/97
Cu	Copper	EPA 200.7	0.49 *	0.01 mg/L	01/06/97
Hg	Mercury	EPA 245.1	ND	0.0002 mg/L	12/23/96
Mo	Molybdenum	EPA 200.7	0.03 *	0.01 mg/L	01/06/97
Ni	Nickel	EPA 200.7	2.4 *	0.01 mg/L	01/06/97
Pb	Lead	EPA 239.2	0.002 *	0.002 mg/L	12/31/96
Sb	Antimony	EPA 200.7	ND	0.02 mg/L	01/06/97
Se	Selenium	EPA 270.2	ND	0.004 mg/L	12/31/96
Tl	Thallium	EPA 200.7	ND	0.05 mg/L	01/06/97
V	Vanadium	EPA 200.7	ND	0.005 mg/L	01/06/97
Zn	Zinc	EPA 200.7	710 *	0.01 mg/L	01/06/97

Reporting limits elevated for metals due to matrix interference.

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

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-2  
 AEN LAB NO: 9612348-03  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/18/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag	Silver	EPA 200.7	ND	0.001 mg/L	01/03/97
As	Arsenic	EPA 206.2	0.002 *	0.002 mg/L	12/31/96
Ba	Barium	EPA 200.7	0.022 *	0.002 mg/L	01/03/97
Be	Beryllium	EPA 200.7	ND	0.0005 mg/L	01/03/97
Cd	Cadmium	EPA 200.7	ND	0.001 mg/L	01/03/97
Co	Cobalt	EPA 200.7	0.042 *	0.001 mg/L	01/03/97
Cr	Chromium	EPA 200.7	ND	0.002 mg/L	01/03/97
Cu	Copper	EPA 200.7	0.004 *	0.002 mg/L	01/03/97
Hg	Mercury	EPA 245.1	ND	0.0002 mg/L	12/26/96
Mo	Molybdenum	EPA 200.7	ND	0.002 mg/L	01/03/97
Ni	Nickel	EPA 200.7	0.025 *	0.002 mg/L	01/03/97
Pb	Lead	EPA 239.2	ND	0.002 mg/L	12/31/96
Sb	Antimony	EPA 200.7	ND	0.004 mg/L	01/03/97
Se	Selenium	EPA 270.2	ND	0.004 mg/L	12/31/96
Tl	Thallium	EPA 200.7	ND	0.01 mg/L	01/03/97
V	Vanadium	EPA 200.7	ND	0.001 mg/L	01/03/97
Zn	Zinc	EPA 200.7	0.48 *	0.005 mg/L	01/03/97

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit



## LEVINE-FRICKE-RECON

SAMPLE ID: LF-8  
 AEN LAB NO: 9612348.04  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/18/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	1.2 *	0.5 ug/L		12/27/96
Toluene	108-88-3	ND	0.5 ug/L		12/27/96
Ethylbenzene	100-41-4	2.0 *	0.5 ug/L		12/27/96
Xylenes, Total	1330-20-7	ND	2 ug/L		12/27/96
Purgeable HCs as Gasoline	5030/GCFID	0.21 *	0.05 mg/L		12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	3.2 *	0.05 mg/L		12/30/96
TPH as Oil	GC-FID	ND	0.2 mg/L		12/30/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.001 mg/L		01/03/97
As Arsenic	EPA 206.2	3.0 *	0.002 mg/L		12/31/96
Ba Barium	EPA 200.7	0.10 *	0.002 mg/L		01/03/97
Be Beryllium	EPA 200.7	ND	0.0005 mg/L		01/03/97
Cd Cadmium	EPA 200.7	0.022 *	0.001 mg/L		01/03/97
Co Cobalt	EPA 200.7	ND	0.001 mg/L		01/03/97
Cr Chromium	EPA 200.7	ND	0.002 mg/L		01/03/97
Cu Copper	EPA 200.7	ND	0.002 mg/L		01/03/97
Hg Mercury	EPA 245.1	ND	0.0002 mg/L		12/26/96
Mo Molybdenum	EPA 200.7	0.003 *	0.002 mg/L		01/03/97
Ni Nickel	EPA 200.7	0.004 *	0.002 mg/L		01/03/97
Pb Lead	EPA 239.2	ND	0.002 mg/L		12/31/96
Sb Antimony	EPA 200.7	ND	0.004 mg/L		01/03/97
Se Selenium	EPA 270.2	ND	0.004 mg/L		12/31/96
Tl Thallium	EPA 200.7	ND	0.01 mg/L		01/03/97
V Vanadium	EPA 200.7	ND	0.001 mg/L		01/03/97
Zn Zinc	EPA 200.7	0.030 *	0.005 mg/L		01/03/97

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

LEVINE - FRICKE - RECON

SAMPLE ID: LF-3  
 AEN LAB NO: 9612348.05  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	ND	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.52 *	0.05	mg/L	12/27/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/27/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.001	mg/L	01/03/97
As Arsenic	EPA 206.2	3.6 *	0.002	mg/L	12/31/96
Ba Barium	EPA 200.7	0.12 *	0.002	mg/L	01/03/97
Be Beryllium	EPA 200.7	0.0012 *	0.0005	mg/L	01/03/97
Cd Cadmium	EPA 200.7	0.035 *	0.001	mg/L	01/03/97
Co Cobalt	EPA 200.7	0.010 *	0.001	mg/L	01/03/97
Cr Chromium	EPA 200.7	ND	0.002	mg/L	01/03/97
Cu Copper	EPA 200.7	ND	0.002	mg/L	01/03/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	0.098 *	0.002	mg/L	01/03/97
Ni Nickel	EPA 200.7	0.011 *	0.002	mg/L	01/03/97
Pb Lead	EPA 239.2	ND	0.002	mg/L	12/31/96
Sb Antimony	EPA 200.7	ND	0.004	mg/L	01/03/97
Se Selenium	EPA 270.2	ND	0.2	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	0.01	mg/L	01/03/97
V Vanadium	EPA 200.7	ND	0.001	mg/L	01/03/97
Zn Zinc	EPA 200.7	6.6 *	0.005	mg/L	01/03/97

Reporting limit elevated for selenium due to matrix interference.

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

LEVINE - FRICKE - RECON

SAMPLE ID: LF-103  
 AEN LAB NO: 9612348.06  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	ND	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID,	ND	0.05	mg/L	12/27/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.44 *	0.05	mg/L	12/27/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/27/96

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-14  
 AEN LAB NO: 9612348 07  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	0.6 *	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	6 *	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID	0.71 *	0.05	mg/L	12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.56 *	0.05	mg/L	12/30/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/30/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.005	mg/L	01/06/97
As Arsenic	EPA 206.2	0.004 *	0.002	mg/L	12/31/96
Ba Barium	EPA 200.7	0.01 *	0.01	mg/L	01/06/97
Be Beryllium	EPA 200.7	0.002 *	0.002	mg/L	01/06/97
Cd Cadmium	EPA 200.7	0.083 *	0.005	mg/L	01/06/97
Co Cobalt	EPA 200.7	0.75 *	0.005	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	0.01	mg/L	01/06/97
Cu Copper	EPA 200.7	1.5 *	0.01	mg/L	01/06/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	ND	0.01	mg/L	01/06/97
Ni Nickel	EPA 200.7	1.8 *	0.01	mg/L	01/06/97
Pb Lead	EPA 239.2	0.014 *	0.002	mg/L	12/31/96
Sb Antimony	EPA 200.7	ND	0.02	mg/L	01/06/97
Se Selenium	EPA 270.2	ND	0.004	mg/L	12/31/96
Tl Thallium	EPA 200.7	0.07 *	0.05	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.005	mg/L	01/06/97
Zn Zinc	EPA 200.7	280 *	0.01	mg/L	01/06/97

Reporting limits elevated for metals due to matrix interference.

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

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-11  
 AEN LAB NO: 9612348 08  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag	Silver	EPA 200.7	ND	0.5 mg/L	01/06/97
As	Arsenic	EPA 206.2	ND	0.02 mg/L	12/31/96
Ba	Barium	EPA 200.7	ND	1 mg/L	01/06/97
Be	Beryllium	EPA 200.7	ND	0.2 mg/L	01/06/97
Cd	Cadmium	EPA 200.7	93 *	0.5 mg/L	01/06/97
Co	Cobalt	EPA 200.7	5 *	0.5 mg/L	01/06/97
Cr	Chromium	EPA 200.7	ND	1 mg/L	01/06/97
Cu	Copper	EPA 200.7	3 *	1 mg/L	01/06/97
Hg	Mercury	EPA 245.1	ND	0.0002 mg/L	12/26/96
Mo	Molybdenum	EPA 200.7	2 *	1 mg/L	01/06/97
Ni	Nickel	EPA 200.7	19 *	1 mg/L	01/06/97
Pb	Lead	EPA 239.2	ND	0.02 mg/L	01/02/97
Sb	Antimony	EPA 200.7	ND	2 mg/L	01/06/97
Se	Selenium	EPA 270.2	ND	0.04 mg/L	12/31/96
Tl	Thallium	EPA 200.7	ND	5 mg/L	01/06/97
V	Vanadium	EPA 200.7	ND	0.5 mg/L	01/06/97
Zn	Zinc	EPA 200.7	31,000 *	1 mg/L	01/06/97

Reporting limit elevated for metals due to matrix interference.

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

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-111  
 AEN LAB NO: 9612348-09  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
CCR 17 Metals (Low Level)					
Ag	Silver	EPA 200.7	ND	0.5 mg/L	01/06/97
As	Arsenic	EPA 206.2	ND	0.02 mg/L	12/31/96
Ba	Barium	EPA 200.7	ND	1 mg/L	01/06/97
Be	Beryllium	EPA 200.7	ND	0.2 mg/L	01/06/97
Cd	Cadmium	EPA 200.7	80 *	0.5 mg/L	01/06/97
Co	Cobalt	EPA 200.7	4 *	0.5 mg/L	01/06/97
Cr	Chromium	EPA 200.7	ND	1 mg/L	01/06/97
Cu	Copper	EPA 200.7	3 *	1 mg/L	01/06/97
Hg	Mercury	EPA 245.1	ND	0.0002 mg/L	12/26/96
Mo	Molybdenum	EPA 200.7	1 *	1 mg/L	01/06/97
Ni	Nickel	EPA 200.7	17 *	1 mg/L	01/06/97
Pb	Lead	EPA 239.2	0.10 *	0.05 mg/L	01/02/97
Sb	Antimony	EPA 200.7	ND	2 mg/L	01/06/97
Se	Selenium	EPA 270.2	ND	0.04 mg/L	12/31/96
Tl	Thallium	EPA 200.7	ND	5 mg/L	01/06/97
V	Vanadium	EPA 200.7	ND	0.5 mg/L	01/06/97
Zn	Zinc	EPA 200.7	29,000 *	1 mg/L	01/06/97

Reporting limit elevated for metals due to matrix interference.

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

## LEVINE-FRICKE-RECON

SAMPLE ID: LF-16  
 AEN LAB NO: 9612348 10  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	ND	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.25 *	0.05	mg/L	12/30/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/30/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.05	mg/L	01/06/97
As Arsenic	EPA 206.2	ND	0.005	mg/L	12/31/96
Ba Barium	EPA 200.7	ND	0.1	mg/L	01/06/97
Be Beryllium	EPA 200.7	0.02 *	0.02	mg/L	01/06/97
Cd Cadmium	EPA 200.7	6.9 *	0.05	mg/L	01/06/97
Co Cobalt	EPA 200.7	4.3 *	0.05	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	0.1	mg/L	01/06/97
Cu Copper	EPA 200.7	16 *	0.1	mg/L	01/06/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	ND	0.1	mg/L	01/06/97
Ni Nickel	EPA 200.7	12 *	0.1	mg/L	01/06/97
Pb Lead	EPA 239.2	ND	0.02	mg/L	01/02/97
Sb Antimony	EPA 200.7	ND	0.2	mg/L	01/06/97
Se Selenium	EPA 270.2	ND	0.01	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	0.5	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.05	mg/L	01/06/97
Zn Zinc	EPA 200.7	2,400 *	0.1	mg/L	01/06/97

Reporting limit elevated for metals due to matrix interference.

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

## LEVINE - FRICKE - RECON

SAMPLE ID: LF 5  
 AEN LAB NO: 9612348 11  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5 ug/L		12/27/96
Toluene	108-88-3	ND	0.5 ug/L		12/27/96
Ethylbenzene	100-41-4	ND	0.5 ug/L		12/27/96
Xylenes, Total	1330-20-7	ND	2 ug/L		12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05 mg/L		12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	ND	0.05 mg/L		12/28/96
TPH as Oil	GC-FID	ND	0.2 mg/L		12/28/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	0.004 *	0.001 mg/L		01/03/97
As Arsenic	EPA 206.2	ND	0.01 mg/L		12/31/96
Ba Barium	EPA 200.7	0.048 *	0.002 mg/L		01/03/97
Be Beryllium	EPA 200.7	ND	0.0005 mg/L		01/03/97
Cd Cadmium	EPA 200.7	0.11 *	0.001 mg/L		01/03/97
Co Cobalt	EPA 200.7	0.58 *	0.001 mg/L		01/03/97
Cr Chromium	EPA 200.7	ND	0.002 mg/L		01/03/97
Cu Copper	EPA 200.7	0.003 *	0.002 mg/L		01/03/97
Hg Mercury	EPA 245.1	ND	0.0002 mg/L		12/26/96
Mo Molybdenum	EPA 200.7	0.002 *	0.002 mg/L		01/03/97
Ni Nickel	EPA 200.7	1.9 *	0.002 mg/L		01/03/97
Pb Lead	EPA 239.2	ND	0.005 mg/L		01/02/97
Sb Antimony	EPA 200.7	ND	0.004 mg/L		01/03/97
Se Selenium	EPA 270.2	ND	0.02 mg/L		12/31/96
Tl Thallium	EPA 200.7	ND	0.01 mg/L		01/03/97
V Vanadium	EPA 200.7	0.003 *	0.001 mg/L		01/03/97
Zn Zinc	EPA 200.7	26 *	0.005 mg/L		01/03/97

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



## LEVINE-FRICKE-RECON

SAMPLE ID: LF-1  
 AEN LAB NO: 9612348-12  
 AEN WORK ORDER: 9612348  
 CLIENT PROJ. ID: 3018.95.21

DATE SAMPLED: 12/19/96  
 DATE RECEIVED: 12/20/96  
 REPORT DATE: 01/09/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	12/27/96
Toluene	108-88-3	ND	0.5	ug/L	12/27/96
Ethylbenzene	100-41-4	ND	0.5	ug/L	12/27/96
Xylenes, Total	1330-20-7	ND	2	ug/L	12/27/96
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	12/27/96
#Digestion/G. Furnace	EPA 200.0	-		Prep Date	12/30/96
#Digestion/ICP	EPA 200.0	-		Prep Date	12/30/96
#Extraction for TPH	EPA 3510	-		Extrn Date	12/27/96
TPH as Diesel	GC-FID	0.61 *	0.05	mg/L	12/30/96
TPH as Oil	GC-FID	ND	0.2	mg/L	12/30/96
CCR 17 Metals (Low Level)					
Ag Silver	EPA 200.7	ND	0.05	mg/L	01/06/97
As Arsenic	EPA 206.2	0.92 *	0.002	mg/L	12/31/96
Ba Barium	EPA 200.7	ND	0.1	mg/L	01/06/97
Be Beryllium	EPA 200.7	ND	0.03	mg/L	01/06/97
Cd Cadmium	EPA 200.7	5.2 *	0.05	mg/L	01/06/97
Co Cobalt	EPA 200.7	0.62 *	0.05	mg/L	01/06/97
Cr Chromium	EPA 200.7	ND	0.1	mg/L	01/06/97
Cu Copper	EPA 200.7	0.1 *	0.1	mg/L	01/06/97
Hg Mercury	EPA 245.1	ND	0.0002	mg/L	12/26/96
Mo Molybdenum	EPA 200.7	0.1 *	0.1	mg/L	01/06/97
Ni Nickel	EPA 200.7	2.1 *	0.1	mg/L	01/06/97
Pb Lead	EPA 239.2	0.80 *	0.05	mg/L	12/31/96
Sb Antimony	EPA 200.7	ND	0.2	mg/L	01/06/97
Se Selenium	EPA 270.2	ND	0.04	mg/L	12/31/96
Tl Thallium	EPA 200.7	ND	0.5	mg/L	01/06/97
V Vanadium	EPA 200.7	ND	0.05	mg/L	01/06/97
Zn Zinc	EPA 200.7	4.000 *	0.1	mg/L	01/06/97

Reporting limit elevated for metals due to matrix interference.

ND = Not detected at or above the reporting limit

\* = Value at or above reporting limit

AEN (CALIFORNIA)  
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9612348

CLIENT PROJECT ID: 3018.95.21

Quality Control Summary

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

Definitions

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

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

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

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

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

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

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

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9612348  
AEN LAB NO: 1227-BLANK  
DATE EXTRACTED: 12/27/96  
DATE ANALYZED: 12/27/96  
INSTRUMENT: C  
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 3510 GCFID

AEN JOB NO: 9612348  
 DATE EXTRACTED: 12/27/96  
 INSTRUMENT: C  
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			n-Pentacosane	
12/30/96	LF-8	04	91	
12/27/96	LF-3	05	83	
12/27/96	LF-103	06	90	
12/30/96	LF-14	07	88	
12/30/96	LF-16	10	91	
12/28/96	LF-5	11	75	
12/30/96	LF-1	12	91	
QC Limits:			65-125	

DATE EXTRACTED: 12/27/96  
 DATE ANALYZED: 12/27/96  
 SAMPLE SPIKED: 9612207-03  
 INSTRUMENT: C

Matrix Spike Recovery Summary

Analyte	Spike Added (mg/L)	Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Diesel	4.00	90	<1	60-110	15

QUALITY CONTROL DATA  
METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9612348  
AEN LAB NO: 1227-BLANK  
DATE ANALYZED: 12/27/96  
INSTRUMENT: F  
MATRIX: WATER

Method Blank

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

QUALITY CONTROL DATA

METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9612348  
 INSTRUMENT: F  
 MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery	
			Fluorobenzene	
12/27/96	LF-8	04	103	
12/27/96	LF-3	05	103	
12/27/96	LF-103	06	105	
12/27/96	LF-14	07	103	
12/27/96	LF-16	10	104	
12/27/96	LF-5	11	106	
12/27/96	LF-1	12	105	
QC Limits:			70-130	

DATE ANALYZED: 12/24/96  
 SAMPLE SPIKED: 9612338-07  
 INSTRUMENT: F

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Percent Recovery	RPD	QC Limits	
				Percent Recovery	RPD
Benzene	19.0	90	4	85-109	17
Toluene	64.5	90	4	87-111	16
Hydrocarbons as Gasoline	500	98	2	66-117	19

## QUALITY CONTROL DATA

AEN JOB NO: 9612348  
 SAMPLE SPIKED: DI WATER  
 DATE(S) ANALYZED: 12/26/96-01/03/97  
 MATRIX: WATER

## Method Blank and Spike Recovery Summary

Analyte	Inst./ Method	Blank Result (mg/L)	Spike Added (mg/L)	Percent Recovery	RPD	QC Limits	
						Percent Recovery	RPD
Ag. Silver	ICP/200.7	ND	0.0075	90	3	75-125	16
As. Arsenic	4000/206.2	ND	0.04	114	2	82-140	13
Ba. Barium	ICP/200.7	ND	0.3	109	1	75-125	16
Cd. Cadmium	ICP/200.7	ND	0.015	113	1	75-125	16
Cr. Chromium	ICP/200.7	ND	0.03	101	1	75-125	16
Cu. Copper	ICP/200.7	ND	0.0375	108	<1	75-125	16
Hg. Mercury	Hg/245.1	ND	2.00 ug/L	101	1	89-121	10
Ni. Nickel	ICP/200.7	ND	0.075	109	<1	75-125	16
Pb. Lead	4000/239.2	ND	0.02	110	5	70-122	14
Se. Selenium	4000/270.2	ND	0.08	99	2	79-115	13
Zn. Zinc	ICP/200.7	ND	0.075	110	<1	75-125	16

\*\*\* END OF REPORT \*\*\*

C-3, S-2 R-3, S-1 R-5, S-4

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9612348

Project No.: 3018.95.21 Project Location: OAKLAND, CA. Date: 12/19/96 Serial No.:  
 Project Name: VOLVO/GM Field Logbook No.: No 1027

Sampler (Signature): *JC RL* ANALYSES Samplers: JCK, DRJ

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES					HOLD	RUSH	REMARKS
						TITLE 22 METALS	TPH-D	TPH-MO	TPH-S	BTEX			
01A LF-12	12/18/96	15:20		1		X							STD TAT
02A MW-3		14:40		1		X							
03A LF-2		15:50		1		X							
04A-F LF-8		16:25		6		X	X	X	X	X			RESULTS TO
05A-E LF-3	12/19/96	13:35		6		X	X	X	X	X			JENIFER BEATTY
06A-E LF-103		14:35		5		X	X	X	X	X			TITLE 22 METALS TO
07A-F LF-14		13:45		6		X	X	X	X	X			BASIN PLAN DETECTION
08A LF-11		12:20		1		X							LIMITS
09A LF-111		13:20		1		X							METALS SAMPLE FILTERED
10A-F LF-16		12:15		6		X	X	X	X	X			+ PRESERVED IN FIELD
11A-F LF-5		11:00		6		X	X	X	X	X			
12A-F LF-1		11:40		6		X	X	X	X	X			

RELINQUISHED BY: <i>JC RL</i>	DATE: 12/20/96	TIME: 11:20	RECEIVED BY: <i>Michael Stuckler</i>	DATE: 12/20/96	TIME: 11:20
RELINQUISHED BY: <i>Michael Stuckler</i>	DATE: 12/20/96	TIME: 14:00	RECEIVED BY: <i>Jane Pollock</i>	DATE: 12/20/96	TIME: 15:00
RELINQUISHED BY: (Signature)	DATE:	TIME:	RECEIVED BY: (Signature)	DATE:	TIME:

METHOD OF SHIPMENT: DATE: TIME: LAB COMMENTS:

Sample Collector: LEVINE•FRICKE•RECON  
 1900 Powell Street, 12th Floor  
 Emeryville, California 94608-1827  
 (510) 652-4500

Analytical Laboratory: AEN  
 PLEASANT HILL, CA.



**Appendix B**

**Water-Quality Sampling Forms**

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 3018.95.21  
 Project Name: Volvo/GM  
 Sample Location: LF-1  
 Samplers Name: JCK DRJ  
 Sampling Plan Prepared By: JCK  
 Sampling Method: \_\_\_\_\_

Date: 12/19/96  
 Sample No.: LF-1  
 FB: \_\_\_\_\_  
 DUP: \_\_\_\_\_

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

Analyses Requested: TPH-d+o  
TITLE 22 METALS  
TPH-g

Number and Types of Bottle used: 2 L. GL.  
1 L. PLASTIC  
3 VOA

```

20.00
 3.52
-----
16.48
  .16
-----
 9.88
16.48
-----
26368

16.48      20.00
  .8        13.18
-----
13184      682

80% DTW 6.82
    
```

Method of Shipment: AEN  
 (Lab Name)

Courier \_\_\_\_\_  
 Hand Deliver: \_\_\_\_\_

Well Number: LF-1 Well Diameter: \_\_\_\_\_  
 Depth to Water: 3.52  
 1 Depth: 20.00  
 Height of Water Column: 16.48  
 Volume in Well: 2.64

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

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
10:26								START
10:29		3		21.0	4.91	7120		SLURRY
10:32		6		21.4	4.90	7300		LOW TURBID
10:34		9		21.4	4.27	12180		TURBID
10:37		11		21.5	3.78	14040		TURBID / DEWATER
11:40	6.75							SAMPLE

1 Depth: \_\_\_\_\_  
 Comments: METAL SAMPLE FILTERED IN FIELD  
 (Recommended Method For Purging Well)

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 3018.95.21  
 Project Name: Volvo/GM  
 Sample Location: LF-2  
 Samplers Name: JCK  
 Sampling Plan Prepared By: JCK  
 Sampling Method: \_\_\_\_\_

Date: 12/18/96  
 Sample No.: LF-2  
 FB: \_\_\_\_\_  
 DUP: \_\_\_\_\_

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

Analyses Requested

Number and Types of Bottle used

TITLE 22 METALS

1 PL. L.

Method of Shipment

AEN

(Lab Name)

Courier

Hand Deliver:

Well Number: MW-2  
 Depth to Water: 5.48  
 Total Depth: 14.75  
 Height of Water Column: 9.27  
 Volume in Well: 1.48

- Well Diameter: \_\_\_\_\_
- |                                                           |
|-----------------------------------------------------------|
| <input checked="" type="checkbox"/> 2" (0.16 Gallon/Feet) |
| <input type="checkbox"/> 4" (0.65 Gallon/Feet)            |
| <input type="checkbox"/> 5" (1.02 Gallon/Feet)            |
| <input type="checkbox"/> 6" (1.47 Gallon/Feet)            |

14.75	
5.48	
-----	
9.27	
.16	
-----	
55.62	
9.27	
-----	
148.32	
9.27	14.75
.8	7.42
-----	-----
74.16	7.33
80% DTW <u>7.33</u>	

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
1340								START
1343		1.5		21.5	6.28	4050		TURBID
1345		3.0		21.6	6.30	3950		TURBID
1348		4.5		21.9	6.31	3880		TURBID
B								

Final Depth: \_\_\_\_\_

Comments: \_\_\_\_\_  
 (Recommended Method For Purging Well)

SAMPLE FILTERED IN FIELD

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 3018.95.21  
 Project Name: Volvo/GM  
 Sample Location: LF-3  
 Samplers Name: JCK DRJ  
 Sampling Plan Prepared By: JCK

Date: 12/19/96  
 Sample No.: LF-3  
 FB: LF-3-FB-V92  
 DUP: LF-103

- Sampling Method:
- Centrifugal Pump
  - Submersible Pump
  - Hand Bail
  - Extraction Well Port
  - Disposable Bailer
  - Teflon Bailer
  - \_\_\_\_\_ (Other)

Analyses Requested  
TITLE 22 METALS

Number and Types of Bottle used  
1 L. PLASTIC

TPH's BTEX  
TPH-d+no

2 x 300A  
2 x 2L

Method of Shipment

AEN

(Lab Name)

Courier

Hand Deliver:

Well Number: LF-3  
 Depth to Water: 5.63  
 Well Depth: 14.93  
 Height of Water Column: 9.30  
 Volume in Well: 1.49

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

80% DTW \_\_\_\_\_

14.93  
5.63  


---

9.30  
.16  


---

5580  
930  


---

14880

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
13:18								START
13:21		1.5		21.9	6.38	3.81		turbid/mud
13:24		3.0		22.0	6.41	3.84		turbid/mud
13:27		4.5		22.0	6.41	3.81		turbid/mud slight <sup>drop</sup>
13:35	6.17							SAMPLE
14:35								DUPLICATE

Inlet Depth: \_\_\_\_\_

Comments: \_\_\_\_\_  
 (Recommended Method For Purging Well)

0 ~~100~~ SAMPLE FOR METALS FIELD FILTERED

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 3018.95.21  
 Project Name: Volvo/GM  
 Sample Location: LF-5  
 Samplers Name: JCK DRJ  
 Sampling Plan Prepared By: JCK  
 Sampling Method: \_\_\_\_\_

Date: 12/19/96  
 Sample No.: LF-5  
 FB: \_\_\_\_\_  
 DUP: \_\_\_\_\_

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

**Analyses Requested**

**Number and Types of Bottle used**

TPH-d+o  
TITLE 22 METALS  
TPH-S

2 L. GL.  
1 L. PL.  
3 VOA

**Method of Shipment**

AEN  Courier \_\_\_\_\_  
 (Lab Name)  Hand Deliver: \_\_\_\_\_

Well Number: LF-5  
 Depth to Water: 5.63  
 Depth: 21.10  
 Height of Water Column: 15.47  
 Volume in Well: 2.48

Well Diameter: \_\_\_\_\_  
 2" (0.16 Gallon/Feet)  
 4" (0.65 Gallon/Feet)  
 5" (1.02 Gallon/Feet)  
 6" (1.47 Gallon/Feet)

$\begin{array}{r} 21.10 \\ 5.63 \\ \hline 15.47 \\ .16 \\ \hline 9.282 \\ 15.47 \\ \hline 2.4752 \end{array}$		$\begin{array}{r} 21.10 \\ 12.38 \\ \hline 8.72 \end{array}$
$\begin{array}{r} 15.47 \\ .8 \\ \hline 1.2376 \end{array}$		80% DTW <u>8.72</u>

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
10:44								START
10:47		2.5		20.4	5.83	12040		TURBID
10:49		5		21.0	5.96	15050		TURBID
10:51		7.5		21.5	6.02	15940		TURBID
11:00	8.65							SAMPLE

Depth: \_\_\_\_\_

Comments: SAMPLE FOR METALS FILTERED IN FIELD  
 (Recommended Method For Purging Well)

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 3018.95.21  
 Project Name: Volvo/GM  
 Sample Location: LF-8  
 Samplers Name: JCK  
 Sampling Plan Prepared By: JCK  
 Sampling Method: \_\_\_\_\_

Date: 12/18/96  
 Sample No.: LF-8  
 FB: \_\_\_\_\_  
 DUP: \_\_\_\_\_

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

Analyses Requested: TPH-0+0 Number and Types of Bottle used: 2 L. GL.  
TITLE 22 METALS 1 L. PL.  
TPH-9 BTEX 3 UOA

14.65  
 5.48  
 -----  
 9.17  
 .65  
 -----  
 4585  
 5502  
 -----  
 5.9605  
  
 9.17      14.65  
 .8          7.34  
 -----  
 7336      7.31  
  
 80% DTW 7.31

**Method of Shipment**

AEN  Courier \_\_\_\_\_  
 (Lab Name)  Hand Deliver: \_\_\_\_\_

Well Number: LF-8 Well Diameter: \_\_\_\_\_  
 Depth to Water: 5.48  2" (0.16 Gallon/Feet)  
 Depth: 14.65  4" (0.65 Gallon/Feet)  
 Height of Water Column: 9.17  5" (1.02 Gallon/Feet)  
 Volume in Well: 5.96  6" (1.47 Gallon/Feet)

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
16:08								START
16:10		6		18.6	6.96	2890		TURBID
16:12	NEWATER	12		18.9	7.07	2790		TURBID/OFF
16:15								ON
16:17		18		19.0	7.14	2680		SL. TURBID/OFF
16:25	598							SAMPLE

Depth: \_\_\_\_\_  
 Comments: METALS SAMPLE FIELD FILTERED  
 (Recommended Method For Purging Well)

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 2018.95.21

Date: 12/18/96

Project Name: VALUO/GM

Sample No.: LF-11

Sample Location: LF-11

FB: \_\_\_\_\_

Samplers Name: JCK DRJ

DUP: \_\_\_\_\_

Sampling Plan Prepared By: JCK

Sampling Method: \_\_\_\_\_

- Centrifugal Pump
- Submersible Pump
- Hand Bail
- Extraction Well Port

- Disposable Bailer
- Teflon Bailer
- \_\_\_\_\_  
(Other)

Analyses Requested

Number and Types of Bottle used

TITREZZ METALS

1 L. PLASTIC

Method of Shipment

AEN

(Lab Name)

Courier \_\_\_\_\_

Hand Deliver: \_\_\_\_\_

Well Number: LF-11

Well Diameter: \_\_\_\_\_

Depth to Water: 3.85

2" (0.16 Gallon/Feet)

1 Depth: 20.01

4" (0.65 Gallon/Feet)

Height of Water Column: 16.16

5" (1.02 Gallon/Feet)

Volume in Well: 10.50

6" (1.47 Gallon/Feet)

80% DTW

$$\begin{array}{r}
 20.01 \\
 3.85 \\
 \hline
 16.16 \\
 .65 \\
 \hline
 8080 \\
 9696 \\
 \hline
 105040
 \end{array}$$
  

$$\begin{array}{r}
 16.16 \quad 3.85 \\
 \quad \quad 3.23 \\
 \hline
 2 \quad \quad 7.08 \\
 \hline
 3232
 \end{array}$$

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
10:04								START
10:05		11		21.5	4.38	14100		SC. TURBID
10:15								ON
10:17		22		23.0	3.58	19850		CLEAR
10:17		23						OFF
11:35	16.47							
12:20	15.96							SAMPLE
13:20								DUPLICATE

1 Depth: \_\_\_\_\_

Comments:

(Recommended Method For Purging Well)

SAMPLE FILTERED IN FIELD

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 3018.95.21  
 Project Name: VOLVO/GM  
 Sample Location: LF-12  
 Samplers Name: JCK  
 Sampling Plan Prepared By: JCK  
 Sampling Method: \_\_\_\_\_

Date: 12/18/96

Sample No.: LF-12

FB: \_\_\_\_\_

DUP: \_\_\_\_\_

- Centrifugal Pump
- Submersible Pump
- Hand Bail
- Extraction Well Port
- Disposable Bailer
- Teflon Bailer
- \_\_\_\_\_ (Other)

Analyses Requested

Number and Types of Bottle used

TITLE 22 METALS

1 L. PLASTIC

$$\begin{array}{r}
 14.70 \\
 6.07 \\
 \hline
 8.63 \\
 .65 \\
 \hline
 4315 \\
 5178 \\
 \hline
 5.6095
 \end{array}$$

$$\begin{array}{r}
 8.63 \quad 14.70 \\
 .8 \quad 6.90 \\
 \hline
 6904 \quad 780
 \end{array}$$

80% DTW 7.80

Method of Shipment

AEN

(Lab Name)

Courier

Hand Deliver:

Well Number: LF-12

Well Diameter: \_\_\_\_\_

Depth to Water: 6.07

2" (0.16 Gallon/Feet)

Depth: 14.70

4" (0.65 Gallon/Feet)

Height of Water Column: 8.63

5" (1.02 Gallon/Feet)

Volume in Well: 5.61

6" (1.47 Gallon/Feet)

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
14:00								START
14:02		6		20.0	4.33	7440		SL. TURBID
14:03		9						OFF/DEWATER
14:13	~11.30							ON
14:15	DEWATER	10		21.4	4.31	8930		MOD TURBID/OFF
15:20	7.80							SAMPLE

Depth: \_\_\_\_\_

Comments:

(Recommended Method For Purging Well)

SAMPLE FIELD FILTERED



# WATER-QUALITY SAMPLING INFORMATION

Project No.: 03018.95.21  
 Project Name: Volvo/GM  
 Sample Location: LF-14  
 Samplers Name: JCK DRT  
 Sampling Plan Prepared By: JCK  
 Sampling Method: \_\_\_\_\_

Date: 12/19/96  
 Sample No.: LF-14  
 FB: \_\_\_\_\_  
 DUP: \_\_\_\_\_

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

**Analyses Requested**

**Number and Types of Bottle used**

TPH-0+0

2 L.G.L.

TITLE 22 METALS

1 L. PLASTIC

TPH-9 BTEX

3 UOA

**Method of Shipment**

AEN

(Lab Name)

Courier

Hand Deliver:

Well Number: \_\_\_\_\_  
 Depth to Water: 0.92  
 Depth: 25.00  
 Height of Water Column: 18.08  
 Volume in Well: 2.89

- Well Diameter: \_\_\_\_\_
- 2" (0.16 Gallon/Feet)
  - 4" (0.65 Gallon/Feet)
  - 5" (1.02 Gallon/Feet)
  - 6" (1.47 Gallon/Feet)

25.00	
<u>6.92</u>	18.08
18.08	2
<u>.16</u>	3.616
10848	
<u>1808</u>	
28928	
18.08	25.00
<u>.8</u>	14.46
14464	1054
<del>6.92</del>	
<del>3.62</del>	
80% DTW	<u>10.54</u>

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
13:04								START
13:07		3		18.9	4.55	6170		TURBID
13:11		6		18.9	4.83	6710		TURBID
13:16		9		19.2	4.85	5890		TURBID/DEWATER
13:45	8.10							SAMPLE

Depth: \_\_\_\_\_

Comments: \_\_\_\_\_  
 (Recommended Method For Purging Well)

**SAMPLE FOR METALS FIELD FILTERED**

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 30189521  
 Project Name: VOLVO/GM  
 Sample Location: LF-16  
 Samplers Name: JCK DRJ  
 Sampling Plan Prepared By: JCK  
 Sampling Method: \_\_\_\_\_

Date: 12/18/96  
 Sample No.: LF-16  
 FB: \_\_\_\_\_  
 DUP: \_\_\_\_\_

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

Analyses Requested <u>TPH-D + O</u>	Number and Types of Bottle used <u>2 L GL.</u>
<u>TITRIZ W METALS</u>	<u>1 L. <del>GL.</del> PL.</u>
<u>TPH-9 BTEX</u>	<u>3 VOA</u>

24.50  
 7.08  


---

 17.42  
 .16  


---

 10.452  
 17.42  


---

 2.7872

17.42      24.50  
 .8            13.94  


---

 139.36      1056

80% DTW 10.56

Method of Shipment  
AEN  
 (Lab Name)  Courier \_\_\_\_\_  
 Hand Deliver: \_\_\_\_\_

Well Number: LF-16 Well Diameter: \_\_\_\_\_  
 Depth to Water: 7.08  
 Depth: 24.50  
 Height of Water Column: 17.42  
 Volume in Well: 2.79

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

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
11:21								START
11:24		3		19.9	4.36	10340		TURBID
11:27		6		19.7	4.27	12460		TURBID; SPLOTCHES OF SHEEN
11:30	DEWATER	9		19.7	4.24	12590		TURBID; SPLOTCHES OF SHEEN
2:15	10.50							SAMPLE

Final Depth: \_\_\_\_\_  
 Comments: METAL SAMPLE FILTERED IN FIELD  
 (Recommended Method For Purging Well)

# WATER-QUALITY SAMPLING INFORMATION

Project No.: 3018.95.21  
 Project Name: Volvo/GM  
 Sample Location: MW-3  
 Samplers Name: JCK  
 Sampling Plan Prepared By: JCK  
 Sampling Method: \_\_\_\_\_

Date: 12/18/96

Sample No.: MW-3

FB: \_\_\_\_\_  
 DUP: \_\_\_\_\_

- Centrifugal Pump       Disposable Bailer  
 Submersible Pump       Teflon Bailer  
 Hand Bail                       \_\_\_\_\_  
 Extraction Well Port                      (Other)

Analyses Requested: \_\_\_\_\_ Number and Types of Bottle used: \_\_\_\_\_

~~TYPE~~ TITLE 22 METALS      1 L. PL.

Method of Shipment

AEN (Lab Name)       Courier \_\_\_\_\_  
 Hand Deliver: \_\_\_\_\_

Well Number: MW-3  
 Depth to Water: 5.31  
 Depth: 27.00  
 Height of Water Column: 21.69  
 Volume in Well: 3.47

- Well Diameter: \_\_\_\_\_
- 2" (0.16 Gallon/Feet)
  - 4" (0.65 Gallon/Feet)
  - 5" (1.02 Gallon/Feet)
  - 6" (1.47 Gallon/Feet)

$$\begin{array}{r} 27.00 \\ 5.31 \\ \hline 21.69 \\ .16 \\ \hline 13014 \\ 2169 \\ \hline 34704 \end{array}$$
  

$$\begin{array}{r} 21.69 \\ .8 \\ \hline 17352 \end{array}$$
  

$$\begin{array}{r} 27.00 \\ 17.35 \\ \hline 965 \end{array}$$
  
 80% DTW 9.65

TIME	Depth to Water	Volume Purged (Gallons)	Totalizer Reading	Temperature °C	pH (SU)	Cond (mohs)	Turbidity (NTU)	Remarks
14:25								START
14:28		4		20.4	4.52	6860		TURBID
14:30		8		19.9	4.54	4390		TURBID
14:33		12		20.0	4.58	5750		TURBID
14:40	9.60							SAMPLE

Depth: \_\_\_\_\_

Comments: SAMPLE FILTERED IN FIELD

(Recommended Method For Purging Well)