



# LEVINE•FRICKE

ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

July 30, 1993

LF 2407.00-14

Mr. Paul Smith  
Hazardous Materials Division  
Department of Environmental Health  
Alameda County Health Care Services Agency  
80 Swan Way  
Oakland, California 94621

Subject: Quarterly Ground-Water Monitoring Report for the  
Period from April 1 through June 30, 1993, 5050  
Coliseum Way and 750-50th Avenue, Oakland, California

Dear Mr. Smith:

On behalf of Volvo GM, and in accordance with our work plan dated January 6, 1993 and submitted to the Alameda County Health Care Services Agency, we have prepared this quarterly monitoring report presenting results of recent ground-water sampling and analysis conducted at the properties located at 5050 Coliseum Way and 750-50th Avenue (collectively referenced as "the Site"; Figure 1).

Levine-Fricke collected water-level measurements in April, May, and June 1993, and collected ground-water samples from 11 on-site wells on May 24 and 25, 1993. Ground-water samples were submitted to a state-certified analytical laboratory for analysis of CAM Title 22 metals.

If you have any questions or comments concerning the results presented in this report, please do not hesitate to call me or Jenifer Beatty.

Sincerely,

Kathleen A. Isaacson, R.G.  
Senior Hydrogeologist

Enclosure

cc: Lester Feldman, Regional Water Quality Control Board  
Bob Whelen, Volvo GM Heavy Truck Corp.  
Martha Boyd, Volvo GM Heavy Truck Corp.  
Larry Bazel, Beveridge & Diamond

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Quarterly Ground-Water Monitoring Report for the Period  
from April 1 through June 30, 1993  
5050 Coliseum Way and 750-50th Avenue  
Oakland, California

July 30, 1993  
2407.00-14

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



**LEVINE·FRICKE**

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July 30, 1993

2407.00-14

**QUARTERLY GROUND-WATER MONITORING REPORT FOR  
THE PERIOD FROM APRIL 1 THROUGH JUNE 30, 1993  
5050 COLISEUM WAY AND 750-50TH AVENUE  
OAKLAND, CALIFORNIA**

**1.0 INTRODUCTION**

This report presents results of quarterly ground-water monitoring activities conducted during the period from April 1 through June 30, 1993, 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 ground-water elevation and ground-water quality data collected at the Site.

**2.0 MONTHLY WATER-LEVEL MEASUREMENTS AND GROUND-WATER FLOW DIRECTION**

The top of each well casing at the Site was surveyed relative to mean sea level by a state-licensed land surveyor in November 1991. On April 14, May 24, and June 14, 1993, water-level measurements were collected from all wells at the Site. A historical summary of depth-to-water measurements and ground-water elevations for the Site is presented in Table 1.

Depth-to-water measurements collected at the Site in April 1993 indicated a general increase in ground-water elevations in most wells relative to March 1993. Ground-water elevation increases were variable across the Site and ranged from 0.12 foot in well LF-7 to 1.06 feet in well MW-4. Depth-to-water measurements in May and June 1993 indicated a slight decrease in ground-water elevations relative to April 1993.

Ground-water elevation contours for May 24, 1993 are presented in Figure 2. Ground-water elevation contours for May 1993 were consistent with April and June 1993 data and indicated that the general ground-water flow direction was toward the west during all three months, under a lateral hydraulic gradient which ranged from approximately 0.003 foot per foot (ft/ft; as calculated between wells LF-2 and LF-3) to 0.016

ft/ft (as calculated between wells LF-1 and LF-5). As shown on Figure 2, and noted for April and June 1993 data, ground-water elevation contours indicate apparent "mounding" of ground water in the vicinity of well MW-1, with ground water generally flowing away from this well.

### **3.0 GROUND-WATER QUALITY**

Ground-water samples were collected from 11 monitoring wells on May 24 and 25, 1993.

#### **3.1 Sampling Procedures**

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

Ground-water samples were collected using the same Teflon bailer used to purge the well. Ground-water samples for metals analysis were filtered in the field and preserved with nitric acid. Samples were placed in an ice-chilled cooler immediately after collection for transportation to the analytical laboratory.

Samples were submitted to American Environmental Network, Inc. (formerly Quanteq Laboratories) of Pleasant Hill, California, a state-certified laboratory, for analysis of Title 22 metals. The pH values for ground-water samples collected from each monitoring well were measured and recorded in the field during sampling activities.

For quality assurance/quality control measures, a duplicate sample and a field blank were collected for well LF-1. The duplicate sample was submitted for Title 22 metals analysis and the field blank was submitted to the laboratory on a hold basis, pending analytical results.

#### **3.2 Ground-Water Quality Results**

Analytical results for metals analysis are presented in Figure 3 and Table 2. Laboratory certificates are presented

in Appendix B. Analytical results for ground-water samples collected during the recent round of sampling were generally consistent with results reported previously for the Site.

No chromium, mercury, or selenium was detected in samples collected from the Site. Concentrations of 0.5 parts per million (ppm) or less of antimony, barium, beryllium, lead, molybdenum, silver, thallium, and vanadium were detected in samples collected from various wells on the Site.

Zinc was detected in all of the 11 wells sampled at concentrations ranging from 0.007 ppm in the sample from well LF-7 to 19,000 ppm in the sample from well LF-1. Nickel was detected in samples from 9 of the 11 wells sampled at concentrations ranging from 0.01 ppm in LF-3 to 16 ppm in LF-1. The highest concentration of arsenic (3.4 ppm) was detected in a sample collected from well LF-3. Arsenic was also detected in samples from six other wells at concentrations ranging from 0.003 ppm for well LF-7 to 1.8 ppm for well MW-2. The highest concentrations of cadmium (40.0 ppm), cobalt (4.7 ppm), and copper (1.0 ppm) were detected in samples collected from well LF-1.

Measurements of ground-water pH were generally consistent with values previously reported for the Site. Recent monitoring indicates that pH values for shallow ground water beneath the Site are variable. Low values of pH (6.4 or less) were measured for ground-water samples collected from six wells. The pH values recorded for the remaining five wells ranged from 6.5 to 7.1 (Figure 3).

Analytical results for the sampling round conducted in March 1993 indicated that the concentration of zinc decreased from 6,000 ppm to 290 ppm in samples from well MW-2, and increased from 730 ppm to 3,000 ppm in samples from well MW-3; however, labeling errors in the field or laboratory were thought to be responsible for the anomalous data reported for wells MW-2 and MW-3 (Levine-Fricke 1993). Recent analytical results (May 1993) showed concentrations for MW-2 and MW-3 to be more consistent with historical concentrations. These analytical results lend support to the idea that inadvertent labeling errors had occurred in March 1993.

Analytical results for the duplicate sample (LF-101) generally showed lower concentrations of metals relative to the primary sample (LF-1). Because high concentrations of metals are present in ground water in the vicinity of well LF-1, it is possible that this discrepancy is a result of using the same

disposable filter for filtering both the primary and duplicate samples.

**4.0 PROJECT ACTIVITIES TO BE CONDUCTED DURING THE PERIOD FROM JULY 1 THROUGH SEPTEMBER 30, 1993**

The following activities will be conducted during the period from July 1 through September 30, 1993:

- Water-level measurements will be collected from all on-site monitoring wells on a monthly basis.
- Ground-water samples will be collected from all monitoring wells in August 1993 in accordance to our work plan dated January 6, 1993.
- Ground-water samples will be submitted to American Environmental Network, Inc., of Pleasant Hill, California, for analysis of Title 22 metals.



**5.0 REFERENCE**

Levine·Fricke, Inc. 1993. Quarterly Ground-Water Monitoring Report for the Period January 1 through March 31, 1993, 5050 Coliseum Way and 750-50th Avenue, Oakland, California. April 27.

TABLE 1  
SHALLOW GROUND-WATER ELEVATION DATA  
5050 COLISEUM WAY AND 750-50TH AVENUE  
OAKLAND, CALIFORNIA

Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet msl)	Ground-Water Elevation (feet msl)
LF-1	7.56	07-Nov-91	6.79	0.77
		26-Oct-92	4.69	2.87
		04-Mar-93	3.94	3.62
		14-Apr-93	3.41	4.15
		24-May-93	3.07	4.49
		14-Jun-93	3.41	4.15
LF-2	9.84	07-Nov-91	7.26	2.58
		26-Oct-92	6.28	3.56
		04-Mar-93	5.14	4.70
		14-Apr-93	4.95	4.89
		24-May-93	5.09	4.75
		14-Jun-93	5.21	4.63
LF-3	10.98	07-Nov-91	7.55	3.43
		26-Oct-92	7.05	3.93
		04-Mar-93	5.83	5.15
		14-Apr-93	5.48	5.50
		24-May-93	5.61	5.37
		14-Jun-93	5.75	5.23
LF-4	10.36	07-Nov-91	11.63	-1.27
		26-Oct-92	7.31	3.05
		04-Mar-93	5.58	4.78
		14-Apr-93	5.21	5.15
		24-May-93	5.48	4.88
		14-Jun-93	5.63	4.73
LF-5	8.03	07-Nov-91	7.34	0.69
		26-Oct-92	7.05	0.98
		04-Mar-93	6.05	1.98
		14-Apr-93	6.25	1.78
		24-May-93	6.61	1.42
		14-Jun-93	6.97	1.06
LF-6	11.59	07-Nov-91	8.59	3.00
		26-Oct-92	8.82	2.77
		04-Mar-93	5.79	5.80
		14-Apr-93	5.41	6.18
		24-May-93	6.05	5.54
		14-Jun-93	6.29	5.30
LF-7	10.65	07-Nov-91	8.54	2.11
		26-Oct-92	7.98	2.67
		04-Mar-93	4.92	5.73
		14-Apr-93	4.80	5.85
		24-May-93	5.03	5.62
		14-Jun-93	5.18	5.47
MW-1	10.21	07-Nov-91	6.13	4.24
		26-Oct-92	7.58	2.63
		04-Mar-93	3.57	6.64
		14-Apr-93	3.57	6.64
		24-May-93	4.59	5.62
		14-Jun-93	4.86	5.35
MW-2	8.86	07-Nov-91	5.93	2.93
		26-Oct-92	5.41	3.45
		04-Mar-93	4.26	4.60
		14-Apr-93	3.83	5.03
		24-May-93	3.78	5.08
		14-Jun-93	3.89	4.97
MW-3	9.01	07-Nov-91	6.94	2.07
		26-Oct-92	7.29	1.72

TABLE 1  
 SHALLOW GROUND-WATER ELEVATION DATA  
 5050 COLISEUM WAY AND 750-50TH AVENUE  
 OAKLAND, CALIFORNIA

Well Number	Top of PVC Casing Elevation (feet msl)	Date Measured	Depth to Water (feet msl)	Ground-Water Elevation (feet msl)
		04-Mar-93	5.07	3.94
		14-Apr-93	5.21	3.8
		24-May-93	5.59	3.42
		14-Jun-93	5.66	3.35
MW-4	10.75	07-Nov-91	10.26	0.49
		26-Oct-92	9.04	1.71
		04-Mar-93	5.77	4.98
		14-Apr-93	4.71	6.04
		24-May-93	5.60	5.15
		14-Jun-93	5.94	4.81

Data entered by MEK 6/21/93 Data proofed by MEK 6/21/93  
 Data QA/QC by NTC 6/21/93

NOTES  
 All elevations are measured to the mean-sea-level (msl) datum.  
 The elevations shown here were measured from the north side of  
 each PVC casing.

TABLE 2  
 CONCENTRATIONS OF METALS IN GROUND-WATER SAMPLES  
 5050 COLISEUM WAY AND 750-50TH AVENUE  
 (All results in milligrams per liter (mg/l)\*)

Well ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
LF-1	04-Nov-91	<0.2	0.004	0.046	0.11	130	<0.01	5.7	1.9	0.5	<0.0003	0.11	20	<0.004	0.054	<1	<0.005	40000
	27-Oct-92	<2	0.007	<0.5	<0.2	57	<1	4.1	1	<4	<0.0003	<1	19	0.027	<0.5	<10	<0.5	16000
	05-Mar-93	<2	0.22	<0.05	<0.2	43	<1	3.6	0.47	<4	<0.0003	<1	11	<0.01	<0.5	<10	<0.5	14000
	Duplicate 05-Mar-93	<2	0.26	<0.05	<0.2	44	<1	3.9	0.50	<4	<0.0003	<1	11	<0.01	<0.5	<10	<0.5	14000
Duplicate	25-May-93	<2	0.12	<0.05	<0.2	40	<1	4.7	1	<0.4	<0.0003	<1	16	<0.004	<0.5	<10	<0.5	19000
	25-May-93	<0.1	0.36	<0.05	0.02	9.6	<0.05	0.81	0.15	0.3	<0.0003	<0.05	3	<0.004	<0.03	<0.5	<0.03	4700
LF-2	04-Nov-91	<0.02	0.028	0.026	<0.001	0.009	<0.01	0.18	0.008	<0.005	<0.0003	<0.01	0.52	<0.004	<0.002	<0.1	<0.005	4.2
	27-Oct-92	<0.02	0.007	<0.05	<0.002	0.006	<0.01	0.12	0.02	<0.04	<0.0003	<0.01	0.22	0.005	0.006	<0.1	<0.005	3.3
	04-Mar-93	<0.02	0.003	<0.05	<0.002	<0.005	<0.01	0.10	<0.01	<0.04	<0.0003	<0.01	0.12	<0.004	<0.005	<0.1	<0.005	1.9
	24-May-93	<0.02	0.005	<0.05	<0.002	<0.005	<0.01	0.061	<0.01	<0.04	<0.0003	<0.01	0.08	<0.004	<0.005	<0.1	<0.005	1.4
LF-3	04-Nov-91	<0.02	3.1	0.077	0.001	<0.005	<0.01	0.016	<0.004	<0.005	<0.0003	0.16	0.012	<0.004	<0.002	<0.1	0.006	3.1
	27-Oct-92	<0.02	3.6	0.11	0.004	0.013	<0.01	0.029	<0.01	<0.04	<0.0003	0.22	0.02	0.018	<0.005	<0.1	<0.005	12
	04-Mar-93	<0.02	4.9	0.07	0.003	0.012	<0.01	0.023	<0.01	<0.04	<0.0003	0.18	0.04	<0.02	<0.005	<0.1	<0.005	15
	25-May-93	<0.02	3.4	0.11	<0.002	0.04	<0.01	0.01	<0.01	<0.04	<0.0003	0.13	0.01	<0.004	<0.005	<0.1	<0.005	5.8
LF-4	04-Nov-91	0.03	0.026	0.082	<0.001	<0.005	<0.01	<0.005	<0.004	<0.005	<0.0003	<0.01	0.013	<0.004	<0.002	<0.1	0.01	0.034
	27-Oct-92	<0.02	0.034	<0.05	<0.002	<0.005	<0.01	<0.005	<0.01	<0.04	<0.0003	<0.01	0.03	<0.004	<0.005	<0.1	<0.005	0.012
	04-Mar-93	0.02	0.017	0.11	<0.002	<0.005	<0.01	<0.005	<0.01	<0.04	<0.0003	<0.01	0.05	<0.004	<0.005	<0.1	0.008	0.04
	24-May-93	<0.02	0.013	0.22	<0.002	<0.005	<0.01	<0.005	<0.01	<0.04	<0.0003	<0.01	0.03	<0.004	<0.005	<0.1	<0.005	0.035
LF-5	04-Nov-91	<0.02	<0.002	0.018	<0.001	0.049	<0.01	0.03	<0.005	<0.005	0.0004	<0.01	0.23	<0.004	0.004	<0.1	<0.005	11
	27-Oct-92	<0.02	0.005	<0.05	<0.002	0.24	<0.01	1.4	<0.01	<0.04	<0.0003	<0.01	5.4	0.017	0.022	<0.1	<0.005	35
	04-Mar-93	<0.02	<0.005	<0.05	<0.002	0.21	<0.01	1.1	<0.01	<0.04	<0.0003	<0.01	5.0	<0.010	0.021	<0.1	<0.005	36
	25-May-93	<0.02	<0.002	<0.05	<0.002	0.17	<0.01	0.84	<0.01	<0.04	<0.0003	<0.01	3.2	<0.004	0.01	0.2	<0.005	23
LF-6	05-Nov-91	<0.02	0.008	0.019	<0.001	0.079	<0.01	0.58	<0.005	0.009	0.0009	<0.01	2.1	<0.004	0.011	<0.1	<0.005	8.1
	27-Oct-92	<0.02	0.022	<0.05	<0.002	0.17	<0.01	1.6	<0.01	<0.04	<0.0003	<0.01	5.5	0.012	0.020	<0.1	<0.005	23
	04-Mar-93	<0.02	0.007	<0.05	0.003	0.13	<0.01	1.2	<0.01	<0.04	<0.0003	<0.01	4.2	<0.004	0.013	<0.1	<0.005	17
	24-May-93	<0.02	<0.002	<0.05	<0.002	0.13	<0.01	0.97	0.01	<0.04	<0.0003	<0.01	3.4	<0.004	0.008	0.1	<0.005	13
LF-7	05-Nov-91	<0.02	0.004	0.13	<0.001	<0.005	<0.01	<0.005	0.006	<0.005	0.0011	<0.01	0.01	<0.004	<0.002	<0.1	0.006	<0.005
	27-Oct-92	<0.02	0.03	0.11	<0.002	<0.005	<0.01	<0.005	<0.01	<0.04	<0.0003	0.01	0.01	<0.004	<0.005	<0.1	0.008	0.021
	04-Mar-93	<0.02	0.025	0.08	<0.002	<0.005	<0.01	<0.005	<0.01	<0.04	<0.0003	0.01	0.01	<0.010	<0.005	<0.1	0.009	0.01
	24-May-93	<0.02	0.003	0.08	<0.002	<0.005	<0.01	<0.005	<0.01	<0.04	<0.0003	<0.01	<0.01	<0.004	<0.005	<0.1	0.006	0.007
MW-1	05-Nov-91	<0.02	0.073	0.085	<0.001	<0.005	<0.01	0.008	<0.005	<0.005	<0.0003	0.02	0.032	<0.004	<0.002	<0.1	<0.005	2.7
	27-Oct-92	<0.02	0.084	0.09	<0.002	0.031	<0.01	0.052	<0.01	<0.04	<0.0003	<0.01	0.3	<0.004	<0.005	<0.1	0.007	42
	05-Mar-93	<0.02	0.024	0.05	<0.002	0.008	<0.01	0.015	<0.01	<0.04	<0.0003	<0.01	0.11	<0.004	<0.005	<0.1	0.006	16
	25-May-93	0.03	0.064	0.06	<0.002	<0.005	<0.01	0.008	<0.01	<0.04	<0.0003	0.02	0.02	<0.004	<0.005	<0.1	0.007	1.6
MW-2	05-Nov-92	<0.2	2.1	0.013	0.002	7	<0.01	0.42	0.093	<0.2	0.0055	0.01	1.2	<0.004	0.008	<0.1	<0.005	4200
	27-Oct-92	<0.2	1.5	<0.5	<0.02	10	<0.1	1.5	0.2	<0.4	<0.0003	<0.1	4.9	0.014	<0.05	<1	<0.05	6000
	(1) 05-Mar-93	<0.02	0.011	<0.05	<0.002	0.28	<0.01	0.24	0.14	<0.04	<0.0003	<0.1	1.0	<0.01	<0.005	<0.1	<0.005	290
	25-May-93	<0.2	1.8	<0.05	<0.02	5.2	<0.1	0.85	<0.1	<0.4	<0.0003	<0.1	2.4	<0.004	<0.05	<1	<0.05	3000
MW-3	05-Nov-92	<0.02	<0.002	0.017	0.001	0.57	<0.01	0.42	0.28	0.005	0.0028	<0.01	1.2	<0.004	0.005	<0.1	<0.005	600
	27-Oct-92	<0.02	0.004	<0.05	0.003	0.73	<0.01	0.74	0.3	<0.04	<0.0003	<0.01	2.6	0.011	0.009	<0.1	<0.005	730
	(1) 05-Mar-93	<0.2	1.6	<0.05	<0.02	5.8	<0.1	1.0	0.07	<0.4	<0.0003	<0.1	3.1	<0.02	<0.05	<1	<0.05	3000
	25-May-93	<0.02	<0.002	<0.05	<0.002	0.28	<0.01	0.24	0.07	<0.04	<0.0003	<0.01	0.83	<0.004	<0.005	<0.1	<0.005	260

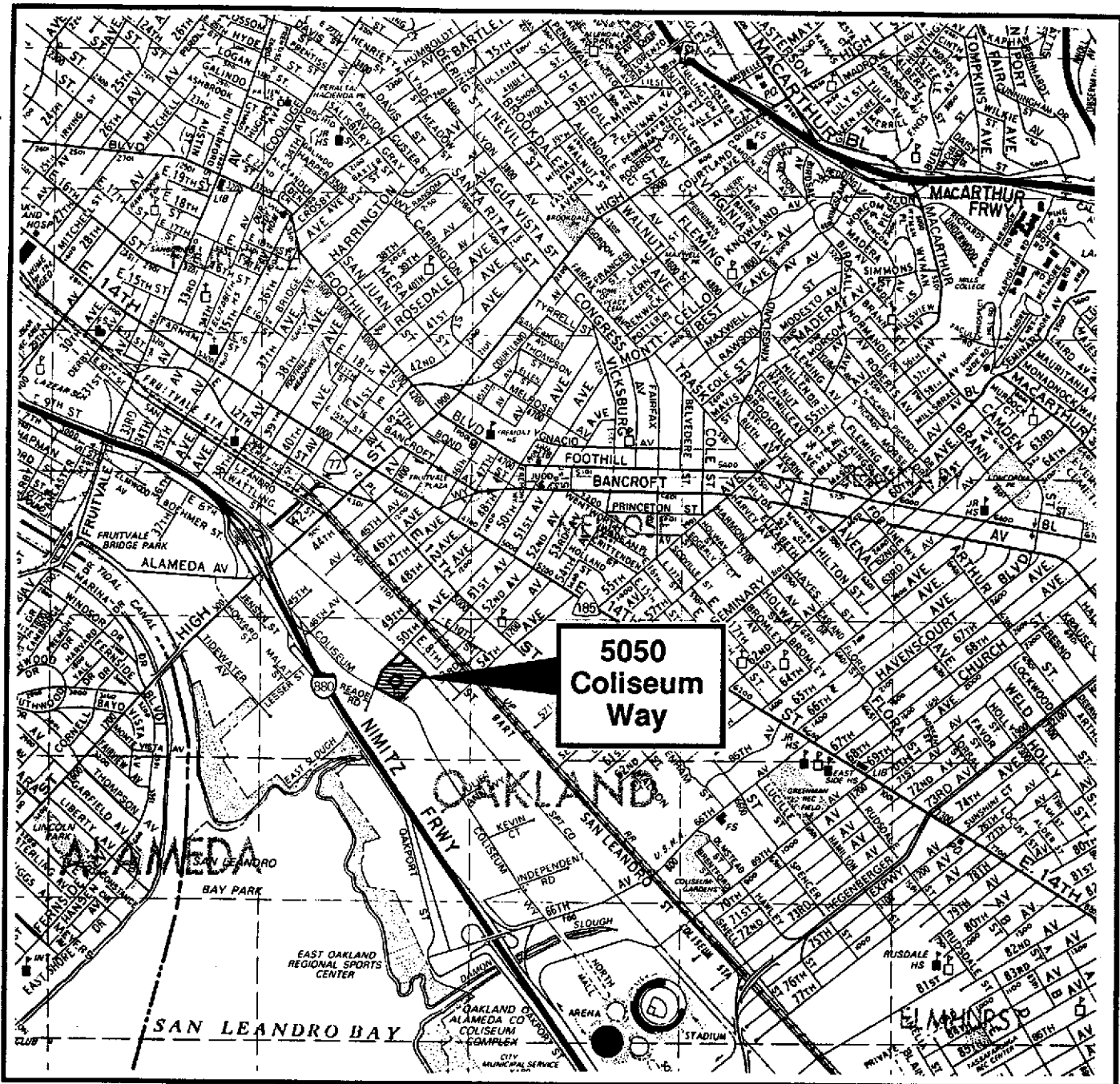
TABLE 2  
 CONCENTRATIONS OF METALS IN GROUND-WATER SAMPLES  
 5050 COLISEUM WAY AND 750-50TH AVENUE  
 (All results in milligrams per liter [mg/l]\*)

Well ID	Sample Date	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
MW-4	05-Nov-92	<0.02	0.007	0.017	<0.001	<0.005	<0.01	<0.005	<0.005	<0.005	0.0027	<0.01	0.012	<0.004	<0.002	<0.1	<0.005	<0.005
	27-Oct-92	<0.02	<0.002	<0.05	<0.002	0.006	<0.01	<0.005	0.02	<0.04	<0.0003	<0.01	0.02	0.004	<0.005	<0.1	0.011	0.047
	04-Mar-93	<0.02	<0.002	<0.05	<0.002	<0.005	<0.01	<0.005	<0.01	<0.04	<0.0003	<0.01	0.02	<0.004	<0.005	<0.1	0.010	0.03
	25-May-93	<0.02	<0.002	<0.05	<0.002	<0.005	<0.01	<0.005	<0.01	<0.04	<0.0003	<0.01	<0.01	<0.004	<0.005	<0.1	0.006	0.008

Data entered by MEK 6/21/93 Data proofed by MEK 6/21/93 QA/QC by NPDG 6/21/93

\* mg/l - milligrams per liter, equivalent to parts per million.

All metals analyzed using Method 6010, except arsenic (analyzed using Method 7060), mercury (analyzed using Method 7470), and selenium (analyzed using Method 7740)  
 (1) Labeling errors in the field or laboratory may account for the anomalous data reported for wells MW-2 and MW-3.



SOURCE: Thomas Bros. map  
Alameda and Contra Costa  
1990

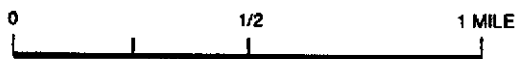


Figure 1 : SITE LOCATION MAP

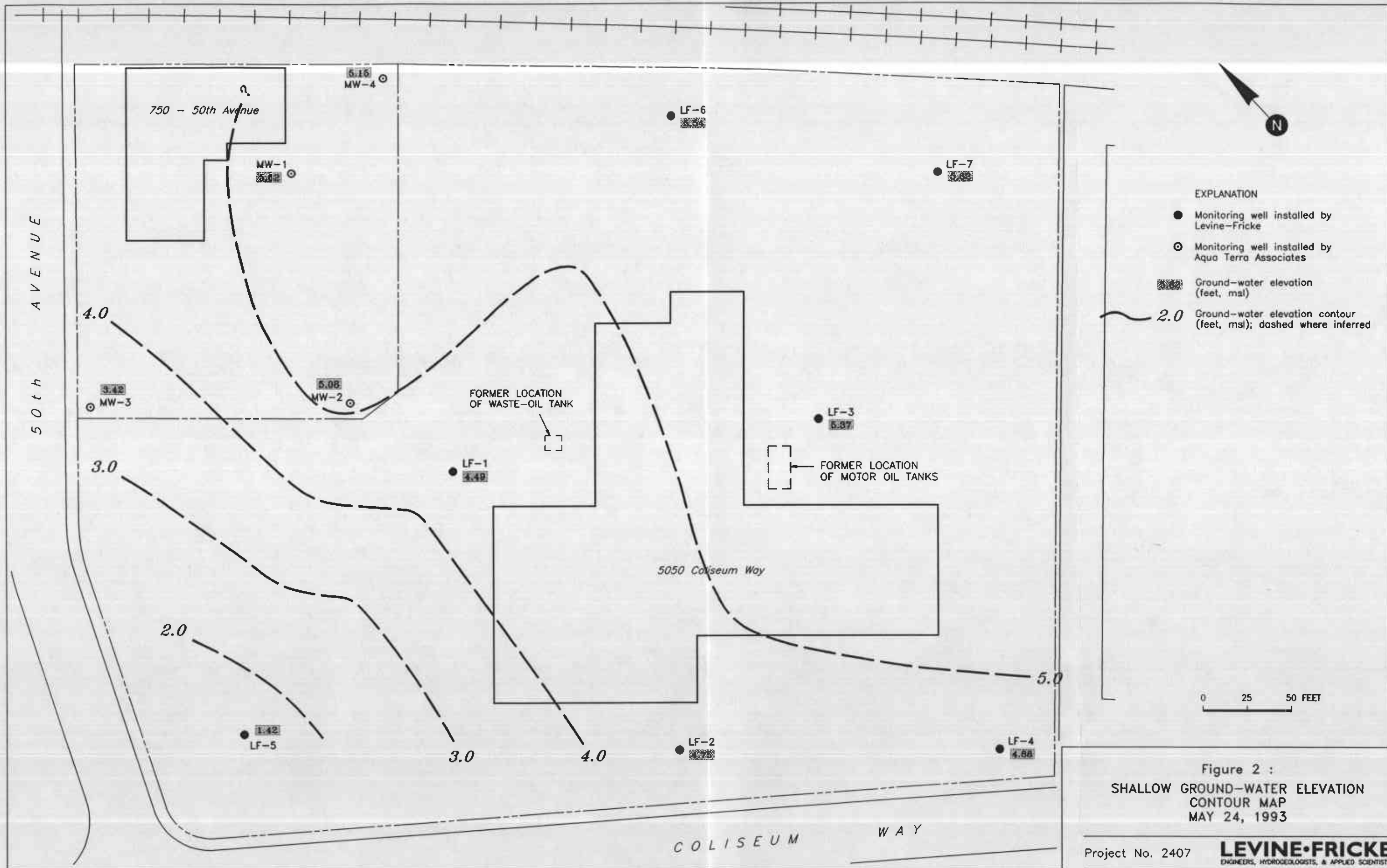
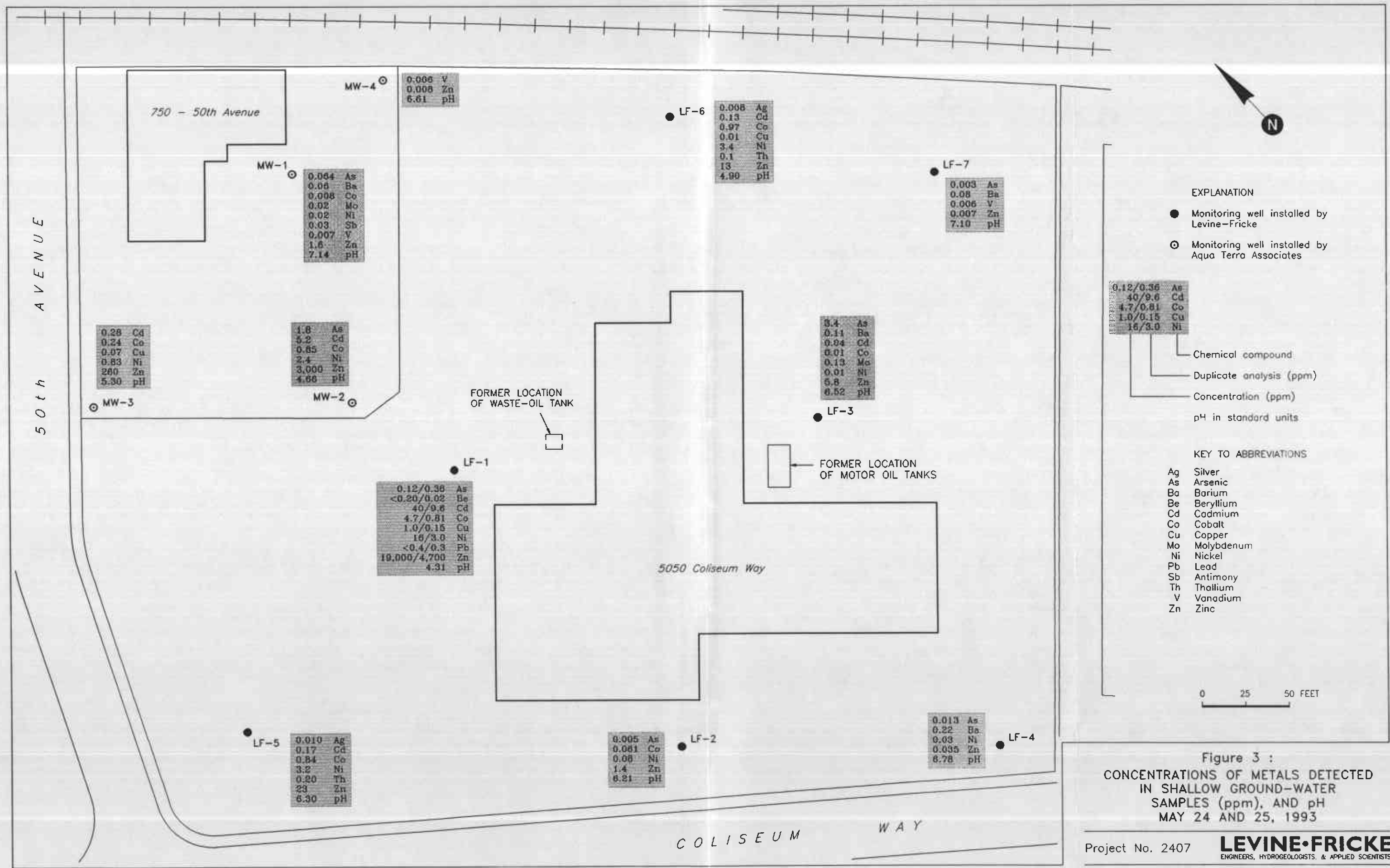


Figure 2 :  
 SHALLOW GROUND-WATER ELEVATION  
 CONTOUR MAP  
 MAY 24, 1993

Project No. 2407

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



MW-4  
 0.008 V  
 0.008 Zn  
 6.61 pH

750 - 50th Avenue

MW-1  
 0.064 As  
 0.06 Ba  
 0.008 Co  
 0.02 Mo  
 0.02 Ni  
 0.03 Sb  
 0.007 V  
 1.6 Zn  
 7.14 pH

LF-6  
 0.006 Ag  
 0.13 Cd  
 0.97 Co  
 0.01 Cu  
 3.4 Ni  
 0.1 Th  
 13 Zn  
 4.90 pH

LF-7  
 0.003 As  
 0.08 Ba  
 0.006 V  
 0.007 Zn  
 7.10 pH

MW-3  
 0.28 Cd  
 0.24 Co  
 0.07 Cu  
 0.83 Ni  
 260 Zn  
 5.30 pH

MW-2  
 1.8 As  
 5.2 Cd  
 0.85 Co  
 2.4 Ni  
 3,000 Zn  
 4.66 pH

FORMER LOCATION OF WASTE-OIL TANK

LF-1

0.12/0.36 As  
 <0.20/0.02 Be  
 40/9.6 Cd  
 4.7/0.81 Co  
 1.0/0.15 Cu  
 16/3.0 Ni  
 <0.4/0.3 Pb  
 19,000/4,700 Zn  
 4.31 pH

LF-3  
 8.4 As  
 0.11 Ba  
 0.04 Cd  
 0.01 Co  
 0.13 Mo  
 0.01 Ni  
 5.8 Zn  
 6.52 pH

FORMER LOCATION OF MOTOR OIL TANKS

5050 Coliseum Way

LF-5  
 0.010 Ag  
 0.17 Cd  
 0.84 Co  
 3.2 Ni  
 0.20 Th  
 23 Zn  
 6.30 pH

LF-2  
 0.005 As  
 0.061 Co  
 0.08 Ni  
 1.4 Zn  
 6.21 pH

LF-4  
 0.013 As  
 0.22 Ba  
 0.03 Ni  
 0.035 Zn  
 6.78 pH



EXPLANATION

- Monitoring well installed by Levine-Fricke
- ⊙ Monitoring well installed by Aqua Terra Associates

0.12/0.36 As  
 40/9.6 Cd  
 4.7/0.81 Co  
 1.0/0.15 Cu  
 16/3.0 Ni

- Chemical compound
- Duplicate analysis (ppm)
- Concentration (ppm)
- pH in standard units

KEY TO ABBREVIATIONS

- Ag Silver
- As Arsenic
- Ba Barium
- Be Beryllium
- Cd Cadmium
- Co Cobalt
- Cu Copper
- Mo Molybdenum
- Ni Nickel
- Pb Lead
- Sb Antimony
- Th Thallium
- V Vanadium
- Zn Zinc

0 25 50 FEET

Figure 3 :  
 CONCENTRATIONS OF METALS DETECTED  
 IN SHALLOW GROUND-WATER  
 SAMPLES (ppm), AND pH  
 MAY 24 AND 25, 1993

Project No. 2407

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



**APPENDIX A**  
**WATER-QUALITY SAMPLING FORMS**

FILTERED IN FIELD

LEVINE-FRICKE

# WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM  
 Date 5/25/93  
 Samplers Name NPD  
 Sampling Location Oakland;  
 Sampling Method Hand bail w/ Teflon bailer  
 Analyses Requested Title 22 Metals  
 Number and Types of Sample Bottles used 1 X 32 oz. plastic  
 Method of Shipment Courier

Project No. 2407.14  
 Sample No. LF-1-FB  
LF-1

LF-101

20.00	
3.00	
17.00	
.16	
102	17.00
170	.8
2.72	13.6
	20.00
	13.60
	6.40

GROUND WATER	SURFACE WATER
Well No. <u>LF-1</u>	Stream Width _____
Well Diameter (in.) <u>2"</u>	Stream Depth _____
Depth to Water, Static (ft) <u>3.01</u>	Stream Velocity _____
Water in Well Box _____	Rained recently? _____
Well Depth (ft) <u>20.0</u>	Other _____
Height of Water Column in Well <u>17.00</u>	<u>2</u> -inch casing = 0.16 gal/ft
Water Volume in Well <u>2.75</u> <u>(2.72)</u>	4-inch casing = 0.65 gal/ft
	5-inch casing = 1.02 gal/ft
	6-inch casing = 1.47 gal/ft

LOCATION MAP

80% = 6.40'

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS	
1225								Sample LF-1-FB	
1233		<del>2.75</del>	20.8	4.82	16300			start bailing	
1235		2.75	20.1	5.21	9260			sl. turbid	
1238		5.5						" "	
1241		8.25	20.1	4.73	13840			turbid	
1245	DEWETED	11.0	20.1	4.31	33900			" / stop	
		* Sample @ 80% or 2 hrs							
1350	5.94							sample LF-1	
1355								sample LF-101	
1455									

Suggested Method for Purging Well \_\_\_\_\_

filtered in field

LEVINE • FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM Project No. 2407.14

Date 5-24-93 Sample No. LF-2

Samplers Name NPD

Sampling Location Oakland;

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1 X 32 oz. plastic

Method of Shipment Courier

14.75  
5.09  
-----  
9.66  
.16  
-----  
9.82  
9.66  
-----  
1.5456

**GROUND WATER**

**SURFACE WATER**

Well No. LF-2

Stream Width \_\_\_\_\_

Well Diameter (in.) 2"

Stream Depth \_\_\_\_\_

Depth to Water, Static (ft) 5.09

Stream Velocity \_\_\_\_\_

Rained recently? \_\_\_\_\_

Water in Well Box \_\_\_\_\_

Other \_\_\_\_\_

Well Depth (ft) 14.75

2-inch casing = 0.16 gal/ft

Height of Water Column in Well 9.66

4-inch casing = 0.65 gal/ft

Water Volume in Well 1.5 gal (1.54)

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1150								start tailing
1152		1.5	21.3	6.34	3820			orange color, sl. turb
1154		3.0	20.9	6.30	3800			less orange, turb
1157		4.5	20.5	6.21	3730			less orange, sl. turb.
1200	12.32							sample LF-2

Suggested Method for Purging Well H.B.

filtered in field

LEVINE • FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM Project No. 2407.14

Date 5/25/93 Sample No. LF-3

Samplers Name NPD

Sampling Location Oakland;

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1 X 32 oz. plastic

Method of Shipment Courier

14.93  
- 5.63  
-----  
9.30  
.16  
-----  
558  
930  
-----  
1.488

**GROUND WATER** **SURFACE WATER**

Well No. LF-3 Stream Width \_\_\_\_\_

Well Diameter (in.) 2" Stream Depth \_\_\_\_\_

Depth to Water, Static (ft) 5.63 Stream Velocity \_\_\_\_\_

Water In Well Box \_\_\_\_\_ Rained recently? \_\_\_\_\_

Well Depth (ft) 14.93 Other \_\_\_\_\_

Height of Water Column in Well 9.30 2-inch casing = 0.16 gal/ft

Water Volume in Well 1.5 gal 4-inch casing = 0.65 gal/ft

(1.48) 5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
839								start bail in
840		1.5	21.0	6.59	4330			turbid
842		3.0	21.2	6.57	4530			turbid
844		4.5	21.0	6.52	4610			turbid / stop
845	6.43							sample LF-3

Suggested Method for Purging Well \_\_\_\_\_

Filtered in field

LEVINE-FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM Project No. 2407.14

Date 5/24/93 Sample No. LF-4

Samplers Name NPD

Sampling Location Oakland;

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1 X 32 oz. plastic

Method of Shipment Courier

18.25  
 5.48  
 12.77  
 .16  
 76.62  
 12.770  
 2.0432

<b>GROUND WATER</b>	<b>SURFACE WATER</b>
Well No. <u>LF-4</u>	Stream Width _____
Well Diameter (in.) <u>2"</u>	Stream Depth _____
Depth to Water, Static (ft) <u>5.48</u>	Stream Velocity _____
Water in Well Box _____	Rained recently? _____
Well Depth (ft) <u>18.25</u>	Other _____
Height of Water Column in Well <u>12.77</u>	<u>2</u> -inch casing = 0.16 gal/ft
Water Volume in Well <u>2.0 gal</u> <u>(2.04)</u>	4-inch casing = 0.65 gal/ft
	5-inch casing = 1.02 gal/ft
	6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1254								start bailing
1256		2.0	19.6	6.73	2470			clear
1258		4.0	19.5	6.76	2510			clear
1301		6.0	19.4	6.78	2690			clear/ stop
1305	15.12							Sample LF-4

Suggested Method for Purging Well H.B

filtered in field

LEVINE-FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM Project No. 2407.14

Date 5/25/93 Sample No. LF-5

Samplers Name NPD

Sampling Location Oakland;

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1 X 32 oz. plastic

Method of Shipment Courier

<sup>0.10</sup>  
 21.10  
 6.57  
 -----  
 14.53  
 1.16  
 -----  
 8718  
 14530  
 -----  
 23248

GROUND WATER	SURFACE WATER
Well No. <u>LF-5</u>	Stream Width _____
Well Diameter (in.) <u>2"</u>	Stream Depth _____
Depth to Water, Static (ft) <u>6.57</u>	Stream Velocity _____
Water in Well Box _____	Rained recently? _____
Well Depth (ft) <u>21.10</u>	Other _____
Height of Water Column in Well <u>14.53</u>	<u>2</u> -inch casing = 0.16 gal/ft
Water Volume in Well <u>2.5 gal</u> <u>(2.32)</u>	4-inch casing = 0.65 gal/ft
	5-inch casing = 1.02 gal/ft
	6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
0901								start bailing
0904		2.5	19.9	6.27	20600			turbid
0907		5.0	19.8	6.47	17800			"
0910		7.5	19.5	6.23	21500			"
0912		10.0	19.5	6.30	21600			" / stop
0915	14.26							sample LF-5

Suggested Method for Purging Well \_\_\_\_\_

filtered in field

LEVINE-FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM Project No. 2407.14

Date 5/24/93 Sample No. LF-6

Samplers Name NPD

Sampling Location Oakland;

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1 X 32 oz. plastic

Method of Shipment Courier

$$\begin{array}{r} 20.86 \\ 6.05 \\ \hline 13.95 \\ .16 \\ \hline 8370 \\ 13950 \\ \hline 22320 \end{array}$$

**GROUND WATER**

**SURFACE WATER**

Well No. LF-6 Stream Width \_\_\_\_\_

Well Diameter (in.) 2" Stream Depth \_\_\_\_\_

Depth to Water. 6.05 Stream Velocity \_\_\_\_\_

Static (ft) \_\_\_\_\_ Rained recently? \_\_\_\_\_

Water in Well Box \_\_\_\_\_ Other \_\_\_\_\_

Well Depth (ft) 20.00

Height of Water Column in Well 13.95

Water Volume in Well 2.5 gal (2.23)

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

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1345								Start bailing
1347		2.5	19.4	4.80	4920			turbid
1349		5.0	19.2	4.72	5030			turbid
1352		7.5	19.1	4.85	5160			turbid
1357		10.0	19.0	4.66	5140			turbid
1401		12.5	18.9	4.97	5970			turbid
1404		15.0	18.9	4.90	6120			turbid / stop
1410								sample LF-6

Suggested Method for Purging Well H.B.

filtered in field

LEVINE-FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM

Project No. 2407.14

Date 5.24.93

Sample No. LF-7

Samplers Name NPD

Sampling Location Oakland;

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1 X 32 oz. plastic

Method of Shipment Courier

21.50  
 5.03  
 16.47  
 .16  
 98.82  
 164.70  
 263.52

**GROUND WATER**

**SURFACE WATER**

Well No. LF-7 Stream Width \_\_\_\_\_

Well Diameter (in.) 2" Stream Depth \_\_\_\_\_

Depth to Water, Static (ft) 5.03 Stream Velocity \_\_\_\_\_

Water in Well Box \_\_\_\_\_ Rained recently? \_\_\_\_\_

Well Depth (ft) 21.5 Other \_\_\_\_\_

Height of Water Column in Well 16.47 2-inch casing = 0.16 gal/ft

Water Volume in Well 2.75 gal 4-inch casing = 0.65 gal/ft

(2.63) 5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1320								start bailing
1322		2.75	20.5	7.18	1643			turbid
1325		5.5	20.3	7.13	1640			turbid
1328		8.25	20.4	7.10	1641			turbid / stop
1330	14.27							sample LF-7

Suggested Method for Purging Well \_\_\_\_\_



filtered in field

LEVINE-FRICKE

## WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM Project No. 2407.14  
 Date 5/25/93 Sample No. MW-1  
 Samplers Name NPD  
 Sampling Location Oakland;  
 Sampling Method Hand bail w/ Teflon bailer  
 Analyses Requested Title 22 Metals  
 Number and Types of Sample Bottles used 1 X 32 oz. plastic (H<sub>2</sub>O<sub>3</sub>)  
 Method of Shipment Courier

7.14  
 28.56  
 4.59  


---

 23.91  
 .16  


---

 143.46  
 239.10  


---

 382.56

GROUND WATER	SURFACE WATER
Well No. <u>MW-1</u>	Stream Width _____
Well Diameter (in.) <u>2"</u>	Stream Depth _____
Depth to Water, Static (ft) <u>4.59</u>	Stream Velocity _____
Water in Well Box _____	Rained recently? _____
Well Depth (ft) <u>28.5</u>	Other _____
Height of Water Column in Well <u>23.91</u>	<u>2</u> -inch casing = 0.16 gal/ft
Water Volume in Well <u>4.0 gal</u> <u>(3.82)</u>	4-inch casing = 0.65 gal/ft
	5-inch casing = 1.02 gal/ft
	6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1026								start bailing
1029		4.0	19.6	7.03	964			turbid
1033		8.0	19.9	7.11	946			turbid
1038		12.0	20.2	7.14	963			turbid/stop
1040	23.48							sample MW-1

Suggested Method for Purging Well \_\_\_\_\_

filtered in field

10-20  
LEVINE • FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM  
 Date 5/25/93  
 Samplers Name NPD  
 Sampling Location Oakland;  
 Sampling Method Hand bail w/ Teflon bailer  
 Analyses Requested Title 22 Metals  
 Number and Types of Sample Bottles used 1 X 32 oz. plastic  
 Method of Shipment Courier

Project No. 2407.14  
 Sample No. MW-2

<sup>0.9</sup>  
 27.06  
3.75  
 23.25  
 .16  
13.950  
23.250  
37.200

LOCATION MAP

<b>GROUND WATER</b>	<b>SURFACE WATER</b>
Well No. <u>MW-2</u>	Stream Width _____
Well Diameter (in.) <u>2"</u>	Stream Depth _____
Depth to Water, Static (ft) <u>3.75</u>	Stream Velocity _____
Water in Well Box _____	Rained recently? _____
Well Depth (ft) <u>27.00</u>	Other _____
Height of Water Column in Well <u>23.25</u>	2-inch casing = 0.16 gal/ft
Water Volume in Well <u>3.75 gal</u> <u>(3.72)</u>	4-inch casing = 0.65 gal/ft
	5-inch casing = 1.02 gal/ft
	6-inch casing = 1.47 gal/ft

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1143								start bailing
1146		3.75	22.0	4.74	8470			turbid
1149		7.50	21.7	4.75	8290			turbid
1152		11.25	20.8	4.66	8350			turbid
1155	10.93							sample MW-2

Suggested Method for Purging Well \_\_\_\_\_

filtered in field

LEVINE-FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM Project No. 2407.14

Date 5/25/93 Sample No. MW-3

Samplers Name NPD

Sampling Location Oakland;

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1 X 32 oz. plastic

Method of Shipment Courier

27.00  
5.53  
 21.47  
.16  
 12882  
21470  
 3.4352

<b>GROUND WATER</b>	<b>SURFACE WATER</b>
Well No. <u>MW-3</u>	Stream Width _____
Well Diameter (in.) <u>2"</u>	Stream Depth _____
Depth to Water, Static (ft) <u>5.53</u>	Stream Velocity _____
Water in Well Box _____	Rained recently? _____
Well Depth (ft) <u>27.00</u>	Other _____
Height of Water Column in Well <u>21.47</u>	2-inch casing = 0.16 gal/ft
Water Volume in Well <u>3.5 gal (3.43)</u>	4-inch casing = 0.65 gal/ft
	5-inch casing = 1.02 gal/ft
	6-inch casing = 1.47 gal/ft

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
1058								start bailing
1101		3.5	19.5	4.80	4300			turbid
1104		7.0	19.0	4.96	5440			turbid
1108		10.5	18.6	5.33	5670			turbid
1113		14.0	19.0	5.47	5990			turbid
1116		17.5	19.1	5.33	6820			" / stop
1123		21.0	19.8	5.30	6580			turbid
1125	24.10							sample MW-3

Suggested Method for Purging Well H.B.

Filtered in field

LEVINE-FRICKE

**WATER-QUALITY SAMPLING INFORMATION**

Project Name Volvo GM  
 Date 5/25/93  
 Samplers Name NPD  
 Sampling Location Oakland;  
 Sampling Method Hand bail w/ Teflon bailer  
 Analyses Requested Title 22 Metals  
 Number and Types of Sample Bottles used 1 X 32 oz. plastic  
 Method of Shipment Courier

Project No. 2407.14  
 Sample No. MW-4

29.50	
5.70	
<u>23.80</u>	23.80
<u>.65</u>	<u>.16</u>
14.90	14.28
<u>14.280</u>	<u>2380</u>
<u>15470</u>	3808

LOCATION MAP

GROUND WATER	SURFACE WATER
Well No. <u>MW-4</u>	Stream Width _____
Well Diameter (in.) <u>2"</u>	Stream Depth _____
Depth to Water, Static (ft) <u>5.70</u>	Stream Velocity _____
Water in Well Box _____	Rained recently? _____
Well Depth (ft) <u>29.5</u>	Other _____
Height of Water Column in Well <u>23.80</u>	<u>2</u> -inch casing = 0.16 gal/ft
Water Volume in Well <u>4.0 gal</u> <u>(3.80)</u>	4-inch casing = 0.65 gal/ft
	5-inch casing = 1.02 gal/ft
	6-inch casing = 1.47 gal/ft

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (mhos/cm)	OTHER		REMARKS
<del>0947</del>								start bailing
0950		4.0	19.9	6.44	2310			turbid
0953		8.0	19.8	6.50	2600			turbid
0957		12.0	19.8	6.57	2930			turbid
1002		16.0	20.0	6.61	2980			turbid (stop)
1005	26.71							sample MW-4

Suggested Method for Purging Well \_\_\_\_\_

**APPENDIX B**  
**LABORATORY CERTIFICATES**

# American Environmental Network

## Certificate of Analysis

DOHS Certification: 1172

AHLA Accreditation 94523-001

PAGE 1 OF 15

LEVINE-FRICKE  
1900 POWELL STREET  
12TH FLOOR  
EMERYVILLE, CA 94608  
ATTN: JENIFER BEATTY

REPORT DATE: 06/04/93  
DATE SAMPLED: 05/24-25/93  
DATE RECEIVED: 05/25/93  
AEN JOB NO: 9305177

CLIENT PROJECT ID: 2407.14  
C.O.C. SERIAL NO: 11750  
PROJ. NAME: VOLVO GM

### PROJECT SUMMARY:

On May 25, 1993, this laboratory received thirteen (13) water samples.

Client requested samples be analyzed for CCR 17 Metals. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

Samples LF-1, LF-101 and MW-2 (9305177-02A,03A,11A) had elevated reporting limits due to matrix interference.

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

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

  
Larry Klein  
General Manager

Results FAXed 06/02/93

# COPY

## LEVINE-FRICKE

SAMPLE ID: LF-1-FB  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-01A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.005	6010	ICP
As	Arsenic	ND	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	ND	0.005	6010	ICP
Co	Cobalt	ND	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	ND	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	ND	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	0.007	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

LEVINE-FRICKE

SAMPLE ID: LF-1  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-02A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.5*	6010	ICP
As	Arsenic	0.12	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.2*	6010	ICP
Cd	Cadmium	40	0.005	6010	ICP
Co	Cobalt	4.7	0.5*	6010	ICP
Cr	Chromium	ND	1*	6010	ICP
Cu	Copper	1.0	0.5*	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	1*	6010	ICP
Ni	Nickel	16	1*	6010	ICP
Pb	Lead	ND	0.4*	6010	ICP
Sb	Antimony	ND	2*	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	10*	6010	ICP
V	Vanadium	ND	0.5*	6010	ICP
Zn	Zinc	19,000	0.005	6010	ICP

Digestion Date: 05/26/93,06/01/93

ND = Not Detected

INST. = Instrument Number

\* Reporting limit elevated due to matrix interference.



LEVINE-FRICKE

SAMPLE ID: LF-101  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-03A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.03*	6010	ICP
As	Arsenic	0.36	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	0.02	0.01*	6010	ICP
Cd	Cadmium	9.6	0.03*	6010	ICP
Co	Cobalt	0.81	0.03*	6010	ICP
Cr	Chromium	ND	0.05*	6010	ICP
Cu	Copper	0.15	0.05*	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.05*	6010	ICP
Ni	Nickel	3.0	0.05*	6010	ICP
Pb	Lead	0.3	0.2*	6010	ICP
Sb	Antimony	ND	0.1*	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.5*	6010	ICP
V	Vanadium	ND	0.03*	6010	ICP
Zn	Zinc	4,700	0.005	6010	ICP

Digestion Date: 05/26/93,06/01/93

ND = Not Detected

INST. = Instrument Number

\* Reporting limit elevated due to matrix interference.

LEVINE-FRICKE

SAMPLE ID: LF-2  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-04A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.005	6010	ICP
As	Arsenic	0.005	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	ND	0.005	6010	ICP
Co	Cobalt	0.061	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	ND	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	0.08	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	1.4	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

## LEVINE-FRICKE

SAMPLE ID: LF-3  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-05A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.005	6010	ICP
As	Arsenic	3.4	0.002	7060	4000
Ba	Barium	0.11	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.040	0.005	6010	ICP
Co	Cobalt	0.010	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	ND	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	0.13	0.01	6010	ICP
Ni	Nickel	0.01	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	5.8	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

## LEVINE-FRICKE

SAMPLE ID: LF-4  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-06A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.005	6010	ICP
As	Arsenic	0.013	0.002	7060	4000
Ba	Barium	0.22	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	ND	0.005	6010	ICP
Co	Cobalt	ND	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	ND	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	0.03	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	0.035	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

LEVINE-FRICKE

SAMPLE ID: LF-5  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-07A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	0.010	0.005	6010	ICP
As	Arsenic	ND	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.17	0.005	6010	ICP
Co	Cobalt	0.84	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	ND	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	3.2	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	0.2	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	23	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

## LEVINE-FRICKE

SAMPLE ID: LF-6  
CLIENT PROJ. ID: 2407.14  
DATE RECEIVED: 05/25/93  
REPORT DATE: 06/04/93

AEN LAB NO: 9305177-08A  
AEN JOB NO: 9305177  
DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
(WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	0.008	0.005	6010	ICP
As	Arsenic	ND	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.13	0.005	6010	ICP
Co	Cobalt	0.97	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	0.01	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	3.4	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	0.1	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	13	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

## LEVINE-FRICKE

SAMPLE ID: LF-7  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-09A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.005	6010	ICP
As	Arsenic	0.003	0.002	7060	4000
Ba	Barium	0.08	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	ND	0.005	6010	ICP
Co	Cobalt	ND	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	ND	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	ND	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	0.006	0.005	6010	ICP
Zn	Zinc	0.007	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

## LEVINE-FRICKE

SAMPLE ID: MW-1  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-10A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.005	6010	ICP
As	Arsenic	0.064	0.002	7060	4000
Ba	Barium	0.06	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	ND	0.005	6010	ICP
Co	Cobalt	0.008	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	ND	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	0.02	0.01	6010	ICP
Ni	Nickel	0.02	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	0.03	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	0.007	0.005	6010	ICP
Zn	Zinc	1.6	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number



LEVINE-FRICKE

SAMPLE ID: MW-2  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-11A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.05*	6010	ICP
As	Arsenic	1.8	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.02*	6010	ICP
Cd	Cadmium	5.2	0.05*	6010	ICP
Co	Cobalt	0.85	0.05*	6010	ICP
Cr	Chromium	ND	0.1*	6010	ICP
Cu	Copper	ND	0.1*	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.1*	6010	ICP
Ni	Nickel	2.4	0.1*	6010	ICP
Pb	Lead	ND	0.4*	6010	ICP
Sb	Antimony	ND	0.2*	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	1*	6010	ICP
V	Vanadium	ND	0.05*	6010	ICP
Zn	Zinc	3,000	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

\* Reporting limit elevated due to matrix interference.

## LEVINE-FRICKE

SAMPLE ID: MW-3  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-12A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.005	6010	ICP
As	Arsenic	ND	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.28	0.005	6010	ICP
Co	Cobalt	0.24	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	0.07	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	0.83	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	260	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

LEVINE-FRICKE

SAMPLE ID: MW-4  
 CLIENT PROJ. ID: 2407.14  
 DATE RECEIVED: 05/25/93  
 REPORT DATE: 06/04/93

AEN LAB NO: 9305177-13A  
 AEN JOB NO: 9305177  
 DATE ANALYZED: 05/27-06/02/93

CCR 17 METALS  
 (WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	ND	0.005	6010	ICP
As	Arsenic	ND	0.002	7060	4000
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	ND	0.005	6010	ICP
Co	Cobalt	ND	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	ND	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	ND	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	4000
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	0.006	0.005	6010	ICP
Zn	Zinc	0.008	0.005	6010	ICP

Digestion Date: 05/26/93

ND = Not Detected

INST. = Instrument Number

QUALITY CONTROL DATA

MATRIX: WATER

AEN JOB NO: 9305177

CLIENT PROJ. ID: 2407.14

DIGESTION DATE: 05/27/93

MATRIX SPIKE RECOVERY SUMMARY

COMPOUND	INST./METHOD	SAMPLE SPIKED	SAMPLE RESULT	SPIKE ADDED	OBSERVED RECOVERIES (mg/L)		% REC.	RPD	QC CONTROL LIMITS	
					MS	MSD			% REC. LIMIT	RPD LIMIT
Ag, Silver	ICP/6010	9305177-10A	ND	0.10	0.093	0.093	93	<1	75-125	20
As, Arsenic	4000/7060	9305177-10A	0.064	0.04	0.101	0.102	94	1	56-147	13
Ba, Barium	ICP/6010	9305177-10A	0.057	2.00	1.93	1.95	94	<1	82-111	5
Be, Beryllium	ICP/6010	9305177-10A	ND	0.05	0.040	0.041	81	2	75-125	20
Cd, Cadmium	ICP/6010	9305177-10A	ND	0.06	0.0657	0.0646	109	1	71-122	8
Co, Cobalt	ICP/6010	9305177-10A	0.0075	0.50	0.468	0.472	93	1	75-125	20
Cr, Chromium	ICP/6010	9305177-10A	ND	0.20	0.184	0.186	92	<1	77-115	5
Cu, Copper	ICP/6010	9305177-10A	ND	0.25	0.237	0.238	95	<1	85-113	5
Hg, Mercury	Hg/7470	9305177-09A	ND	2.0 ug/L	1.99	1.99	100	<1	80-120	15
Mo, Molybdenum	ICP/6010	9305177-10A	0.02	0.25	0.247	0.250	91	1	75-125	20
Ni, Nickel	ICP/6010	9305177-10A	0.017	0.50	0.459	0.462	89	<1	82-112	5
Pb, Lead	ICP/6010	9305177-10A	ND	0.50	0.475	0.480	95	<1	76-111	5
Se, Selenium	4000/7740	9305177-10A	ND	0.08	0.0736	0.0703	90	5	24-141	21
Sb, Antimony	ICP/6010	9305177-10A	0.03	0.50	0.484	0.491	92	1	75-125	20
Tl, Thallium	ICP/6010	9305177-10A	ND	2.0	1.794	1.784	89	1	75-125	20
V, Vanadium	ICP/6010	9305177-10A	0.007	0.50	0.470	0.471	93	<1	75-125	20
Zn, Zinc	ICP/6010	9305177-10A	1.630	0.50	2.035	2.035	81	<1	77-116	5

MS = Matrix Spike  
 MSD = Matrix Spike Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected  
 < = Less Than

QUALITY CONTROL DATA

MATRIX: WATER

AEN JOB NO: 9305177

CLIENT PROJ. ID: 2407.14

DIGESTION DATE: 05/26/93

METHOD BLANK AND STANDARD RECOVERY SUMMARY

COMPOUND	INST./METHOD	BLANK RESULT	TRUE VALUE	OBSERVED RECOVERIES			RPD	QC CONTROL LIMITS	
				MS (ng/L)	MSD	% REC.		% REC. LIMIT	RPD LIMIT
Ag, Silver	ICP/6010	ND	0.10	0.0988	0.0976	98	1	75-125	20
As, Arsenic	4000/7060	ND	0.04	0.0415	0.0409	103	1	79-126	12
Ba, Barium	ICP/6010	ND	2.00	2.00	1.98	100	1	81-113	5
Be, Beryllium	ICP/6010	ND	0.05	0.0439	0.0424	86	3	75-125	20
Cd, Cadmium	ICP/6010	ND	0.06	0.0686	0.0684	114	<1	73-125	8
Co, Cobalt	ICP/6010	ND	0.50	0.502	0.495	100	1	75-125	20
Cr, Chromium	ICP/6010	ND	0.20	0.194	0.189	96	2	87-114	5
Cu, Copper	ICP/6010	ND	0.25	0.248	0.246	99	<1	86-112	5
Hg, Mercury	Hg/7470	ND	5.0 ug/L	5.00	5.00	100	<1	80-120	15
Mo, Molybdenum	ICP/6010	ND	0.25	0.250	0.243	99	3	75-125	20
Ni, Nickel	ICP/6010	ND	0.50	0.487	0.480	97	1	85-109	5
Pb, Lead	ICP/6010	ND	0.50	0.507	0.500	101	1	88-112	6
Se, Selenium	4000/7740	ND	0.08	0.0790	0.0857	103	8	76-131	14
Sb, Antimony	ICP/6010	ND	0.50	0.490	0.494	98	1	75-125	20
Tl, Thallium	ICP/6010	ND	2.00	2.02	2.00	101	1	75-125	20
V, Vanadium	ICP/6010	ND	0.50	0.501	0.494	100	1	75-125	20
Zn, Zinc	ICP/6010	ND	0.50	0.494	0.482	98	2	85-117	5

MS = Method Spike  
 MSD = Method Standard Duplicate  
 RPD = Relative Percent Difference  
 ND = Not Detected  
 < = Less Than

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

C-1, S-2 9305177

Project No.: 2407.14 Field Logbook No.: Date: 5/25/93 Serial No.: 11750  
 Project Name: Volvo GM Project Location: Oakland

Sampler (Signature): [Signature] ANALYSES  
 Hold Rush: [ ] [ ]  
 Samplers: NPD

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CON-TAINERS	SAMPLE TYPE	ANALYSES		HOLD	RUSH	REMARKS
						EPA 601	EPA 624			
LF-1-FB	5/25	1225	01A	1	H <sub>2</sub> O		X	X		Normal Turnaround
LF-1		1355	02A							Results to: Jennifer Beatty Samples have been Filtered (in field)
LF-101		1455	03A							
LF-2	5/24	1200	04A							
LF-3	5/25	0845	05A							
LF-4	5/24	1305	06A							
LF-5	5/25	0915	07A							
LF-6	5/24	1410	08A							
LF-7	5/24	1330	09A							
MW-1	5/25	1040	10A							
MW-2		1155	11A							
MW-3		1125	12A							
MW-4		1005	13A							

RELINQUISHED BY: [Signature]	DATE: 5-25-93	TIME: 15:10	RECEIVED BY: [Signature]	DATE: 5-25-93	TIME: 15:10
RELINQUISHED BY: [Signature]	DATE: 5-25-93	TIME: 16:00	RECEIVED BY: [Signature]	DATE: 5-25-93	TIME: 16:00
RELINQUISHED BY: [Signature]	DATE:	TIME:	RECEIVED BY: [Signature]	DATE:	TIME:
METHOD OF SHIPMENT:	DATE:	TIME:	LAB COMMENTS:		

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

Analytical Laboratory: AEN