Results of Ground-Water Sampling and Analysis
5050 Coliseum Way and 750-50th Avenue
Oakland, California

November 12, 1992
2407.11

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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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

November 12, 1992 LF 2407.11

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

Subject: Results of Ground-Water Sampling and Analysis
5050 Coliseum Way and 750-50th Avenue
Oakland, California

Dear Mr. Chan:

On behalf of Volvo GM, and in accordance with our letter to you dated September 23, 1992, we have prepared this report presenting results of recent ground-water sampling and analysis conducted at the White GMC Trucks facility, located at 5050 Coliseum Way, and for the adjoining property, located at 750-50th Avenue (collectively referenced as "the Site"; Figure 1).

Water-level measurements and ground-water samples were collected from 11 on-site wells by Levine•Fricke on October 26 and 27, 1992. Ground-water samples were submitted to a State-certified analytical laboratory for analysis of CAM Title 22 metals. Ground-water samples collected from monitoring well LF-1 also were analyzed for semivolatile organic compounds (SVOCs), oil and grease (O&G), and hydrocarbons.

GROUND-WATER ELEVATIONS AND FLOW DIRECTION

The top of each well casing at the Site was surveyed relative to mean sea level (msl) by a State-licensed land surveyor in November 1991. Before sampling, water-level measurements were collected on October 26, 1992, from all wells at the Site. Depth to water was measured using an electric water-level sounding probe to the nearest 0.01 foot, relative to the top of the polyvinyl chloride (PVC) well casing. Ground-water elevation contours for shallow ground water at the Site are presented in Figure 2. A historical summary of ground-water elevations for the Site is presented in Table 1.

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Depth to ground water at the Site ranged from 4.69 feet msl to 9.04 feet msl. Ground-water elevation contours indicate apparent "mounding" of ground water in the vicinity of the facility building, with a general ground-water flow direction radially away from the building toward the north, east, and west.

GROUND-WATER QUALITY

Ground-water samples were collected from eleven monitoring wells on October 26 and 27, 1992.

Sampling Procedures

Before collecting ground-water samples, approximately three to five 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 Attachment 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 as was 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.

Ground-water samples were submitted to Quanteq Laboratories (formerly Med-Tox Associates) of Pleasant Hill, California, a state-certified laboratory, for analysis of Title 22 metals. Ground-water samples collected from monitoring well LF-1 also were analyzed for SVOCs using EPA Method 8270, and for O&G and hydrocarbons using Standard Methods 5520 C and F. 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 and field blank were submitted to the laboratory for analysis of SVOCs using EPA Method 8270, and O&G and hydrocarbons using EPA Methods 5520 C and F.

Ground-Water Quality Results

Analytical results for metals analysis are presented on Figure 3 and in Table 2. Laboratory certificates are contained in Attachment B. Analytical results for ground-water samples collected during the recent round of sampling generally were consistent with analytical results reported previously for the Site.

No chromium or lead was detected in ground-water samples collected from the Site. Barium was detected in samples collected from three wells at concentrations of 0.11 parts per million (ppm) or less. Copper was detected in five wells at concentrations of 1 ppm or less.

The highest concentrations of cobalt (4.1 ppm) and cadmium (57 ppm) were detected in ground-water samples collected from well LF-1. Arsenic was detected in 10 of the 11 wells sampled at concentrations ranging from 0.007 ppm in wells LF-1 and LF-2 to 3.6 ppm in well LF-3. Nickel and zinc were detected in all wells sampled at concentrations up to 19 ppm and 16,000 ppm, respectively, in well LF-1.

No SVOCs, O&G, or hydrocarbons were detected in the primary or duplicate ground-water sample collected from well LF-1.

Measurements of pH were consistent with values previously reported for the Site and indicate 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 seven wells. The pH values recorded for the remaining four wells ranged from 6.5 to 6.9 (Figure 3).

Waste-Oil Tank Pit

The waste-oil tank pit was backfilled on October 27, 1992, under the supervision of Mr. Bob Whelen of Volvo GM. Before backfilling, a 3-inch-diameter pipe in the excavation was plugged with concrete and approximately 2,000 gallons of water in the pit were pumped into a tank for temporary storage. This water will be disposed of appropriately with the purged ground water from the wells after receipt of analytical results.

The tank pit was backfilled with approximately 30 cubic yards of clean sand and approximately 5 cubic yards of aggregate base. Backfill material was compacted to approximately 90 percent relative compaction and the former excavation was capped with approximately 4 inches of asphaltic concrete.

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

Sincerely,

Kathleen A. Isaacson, R.G.
Senior Hydrogeologist

Attachments: Table 1 - Shallow Ground-Water Elevation Data
Table 2 - Concentrations of Metals in Ground-Water Samples
Figure 1 - Site Location Map
Figure 2 - Shallow Ground-Water Elevations, October 26, 1992
Figure 3 - Concentrations of Metals Detected in Shallow Ground-Water Samples and pH, October 26 and 27, 1992
Attachment A - Water-Quality Sampling Forms
Attachment B - Laboratory Certificates

cc: Lester Feldman, RWQCB
Bob Whelen, Volvo GM Heavy Truck Corp.
Martha Boyd, Volvo GM Heavy Truck Corp.

TABLE 1
SHALLOW GROUND-WATER ELEVATION DATA
WHITE GMC TRUCKS FACILITY
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
LF-2	9.84	07-Nov-91	7.26	2.58
		26-Oct-92	6.28	3.56
LF-3	10.98	07-Nov-91	7.55	3.43
		26-Oct-92	7.05	3.93
LF-4	10.36	07-Nov-91	11.63	-1.27
		26-Oct-92	7.31	3.05
LF-5	8.03	07-Nov-91	7.34	0.69
		26-Oct-92	7.05	0.98
LF-6	11.59	07-Nov-91	8.59	3.00
		26-Oct-92	8.82	2.77
LF-7	10.65	07-Nov-91	8.54	2.11
		26-Oct-92	7.98	2.67
MW-1	10.21	07-Nov-91	6.13	4.24
		26-Oct-92	7.58	2.63
MW-2	8.86	07-Nov-91	5.93	2.93
		26-Oct-92	5.41	3.45
MW-3	9.01	07-Nov-91	6.94	2.07
		26-Oct-92	7.29	1.72
MW-4	10.75	07-Nov-91	10.26	0.49
		26-Oct-92	9.04	1.71

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

WHITE GMC TRUCKS FACILITY

(All results in ppm)

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	[redacted]	<1	4.1	1	<4	<0.0003	<1	19	0.027	<0.5	<10	<0.5	[redacted]
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
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
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
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
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
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
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
MW-2	05-Nov-92	<0.2	2.1	0.013	0.002	[redacted]	<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		<0.1	1.5	0.2	<0.4	<0.0003	<0.1	4.9	0.014	<0.05	<1	<0.05	[redacted]
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

TABLE 2

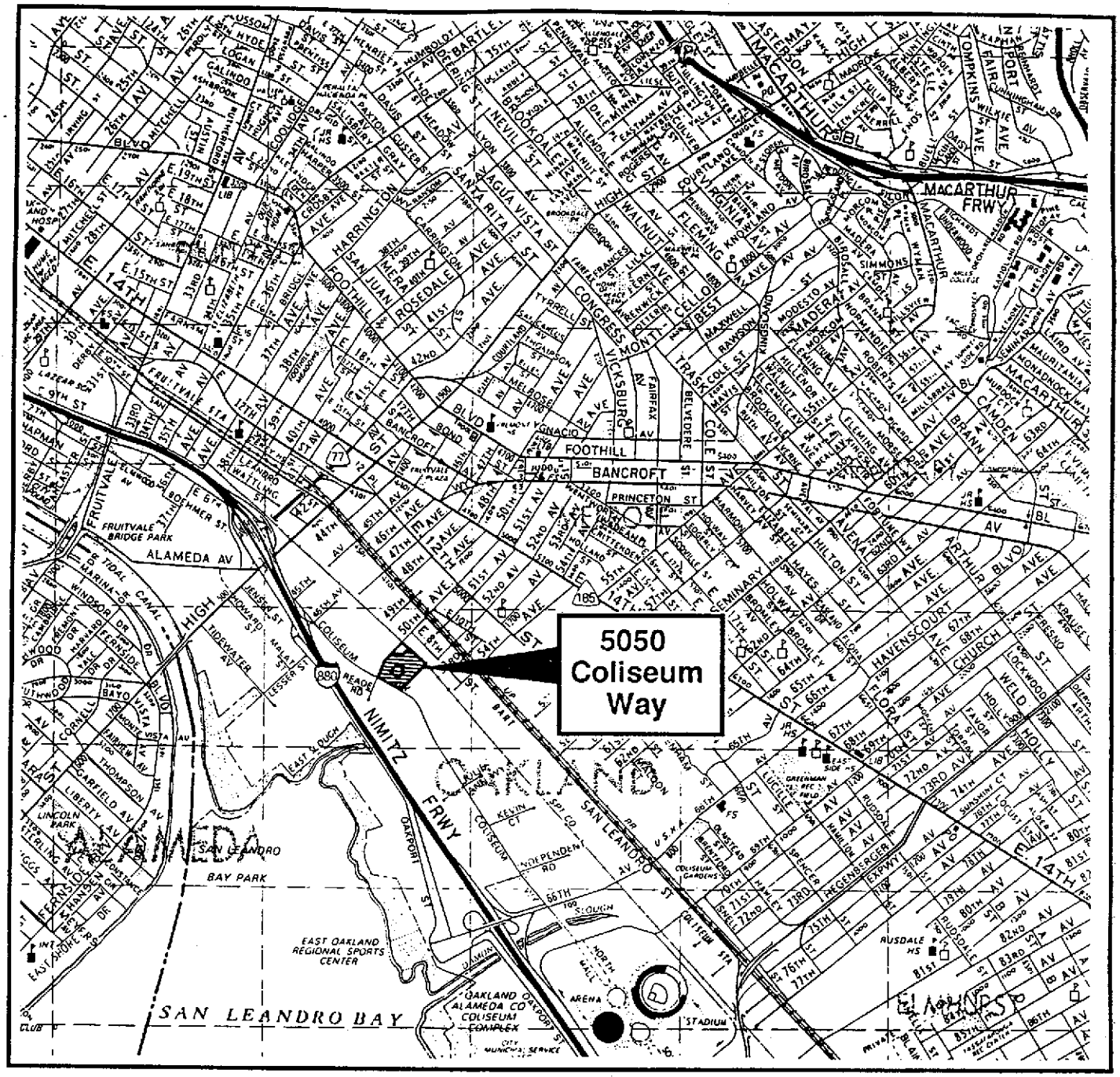
CONCENTRATIONS OF METALS IN GROUND-WATER SAMPLES

WHITE GMC TRUCKS FACILITY

(All results in ppm)

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

All metals analyzed using Method 6010 except: Arsenic analzed using Method 7060, Mercury analyzed using Method 7470, Selenium analyzed using Method 7740.



SOURCE: Thomas Bros. map
Alameda and Contra Costa
1990

Figure 1 : SITE LOCATION MAP

Project No. 2407.02

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KAI 09AUG91 | jm

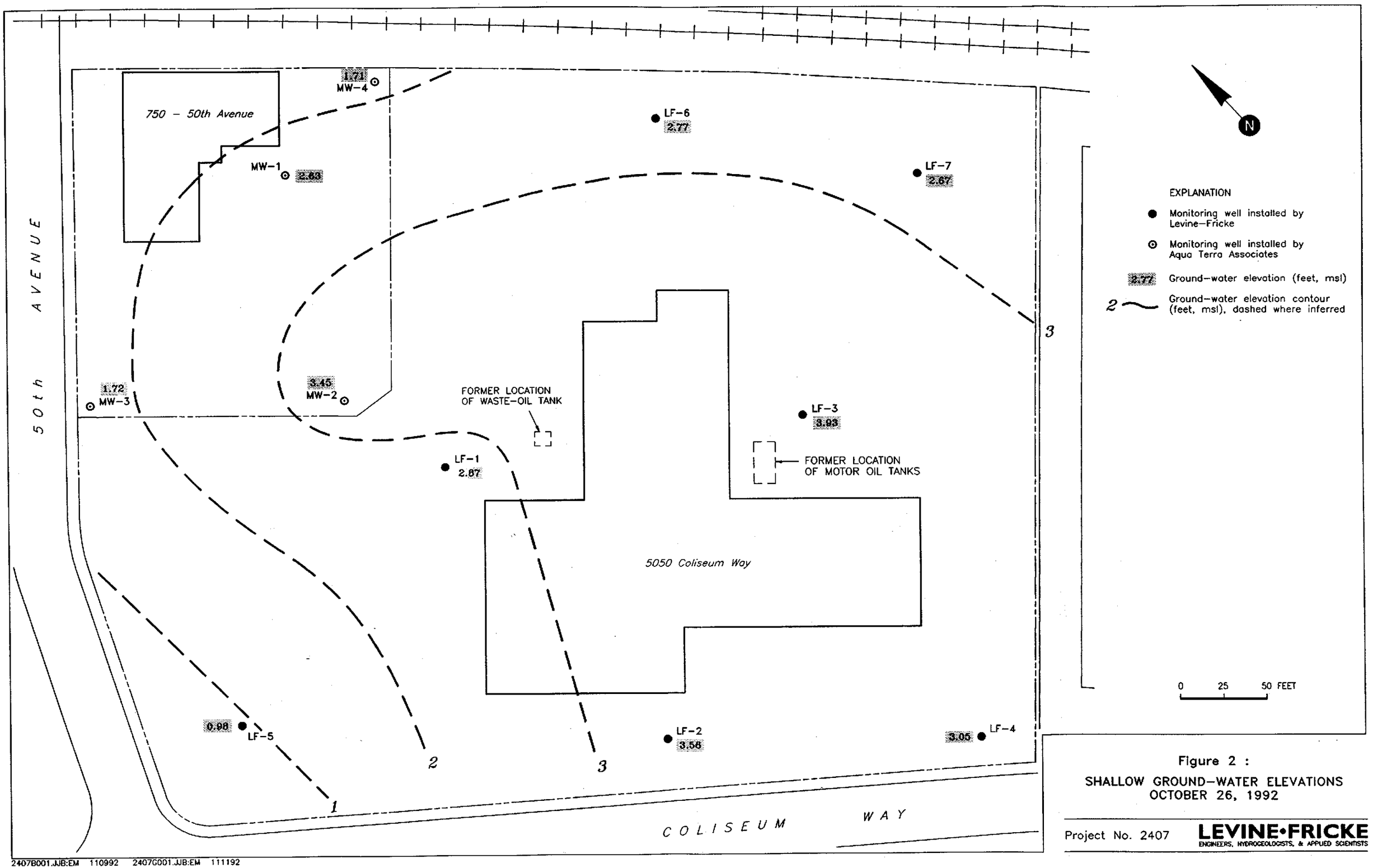

Figure 2 :

SHALLOW GROUND–WATER ELEVATIONS
OCTOBER 26, 1992

Project No. 2407

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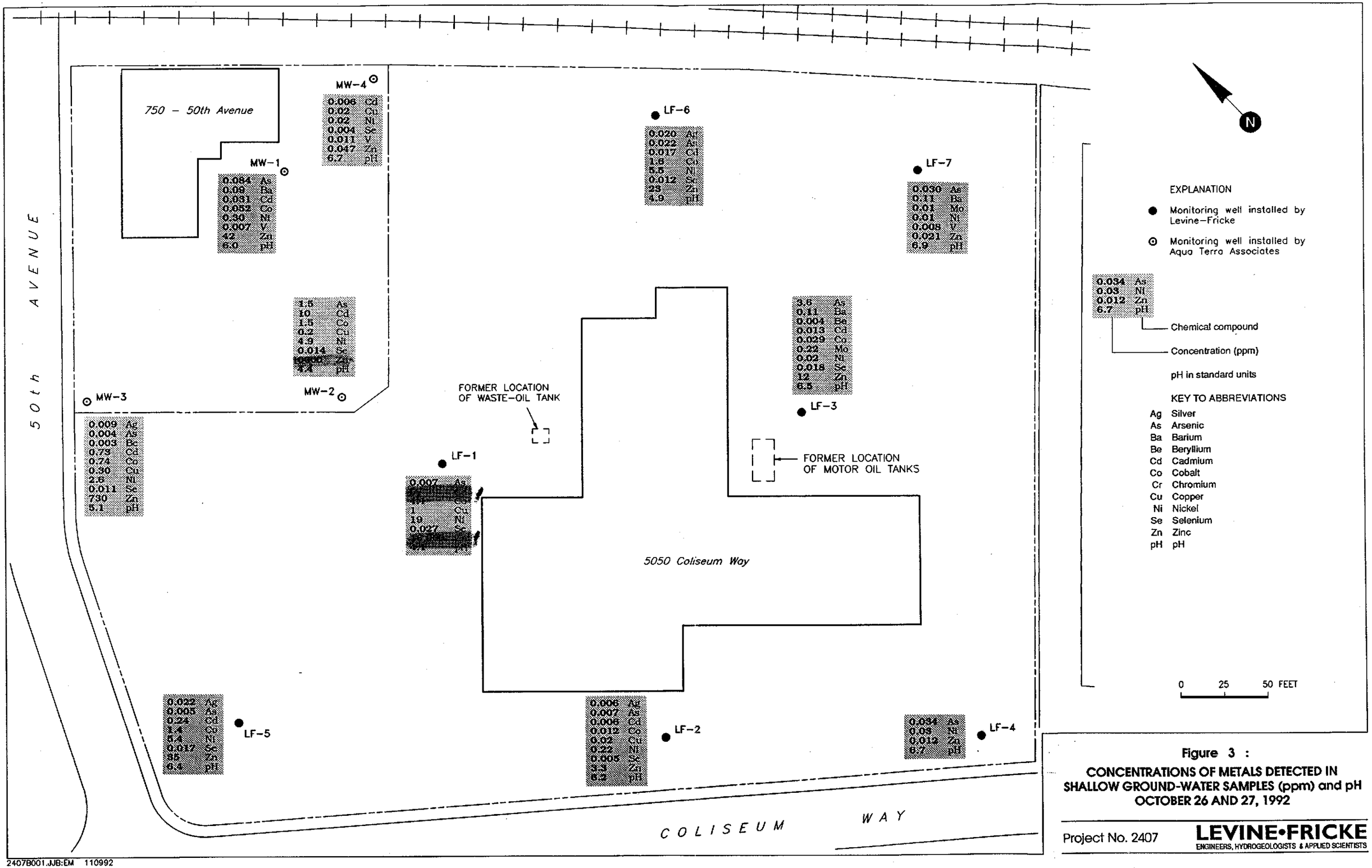
2407B001.JJB:EM 110992 2407G001.JJB:EM 111192



2407B001.JJB:EM 110992

Figure 3 :

CONCENTRATIONS OF METALS DETECTED IN SHALLOW GROUND-WATER SAMPLES (ppm) and pH OCTOBER 26 AND 27, 1992

Project No. 2407

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ATTACHMENT A

WATER-QUALITY SAMPLING FORMS

LEVINE-FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Volvo GM
Project No.: 2407.11
Date: 10-27-92
Sample No.: LF-1
LF-1-DUP *
Samplers Name: NPD
Sampling Location: Oakland; LF-1
Sampling Method: Hand bail w/ Teflon bailer
Analyses Requested: Title 22 Metals, EPA 8270, oil & grease
Number and Types of Sample Bottles used: 9 containers
Method of Shipment: Courier

GROUND WATER

Well No.: LF-1
Well Diameter (in.): 2"
Depth to Water, Static (ft): 4.68
Water in Well Box: NO
Well Depth (ft): 20.0
Height of Water Column in Well: 15.32
Water Volume in Well: 2.45 gal
x 2.5

SURFACE WATER

Stream Width:
Stream Depth:
Stream Velocity:
Rained recently ?:
Other:

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

20.00
4.68
15.32
.16
9192
15320
2.45 12

LOCATION MAP

1.96
20.00
12.26
7.74

80% x 7.74'

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1139								start bailing
1141		2.5	23.3	5.21	12500			sl. turbid - clear
1144		5.0	22.8	4.94	13600			sl. turbid orange col
1148		7.5	22.2	4.10	54800			turbid dewtring
1152		9.0	22.1	4.16	37100			dewatered
1208	13.97							
1210		10.0	22.2	4.44	21700			turbid / stop * DEWTRD
		* sample @ 80% or 2 hrs						
1241	11.03							
1312	7.77							
1315								sample LF-1
1320								sample LF-1-DUP

Suggested Method for Purging Well:

* DUP for 8270, & oil & grease only

LEVINE-FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM — Project No. 2407.11

Date 10-26-92 — Sample No. LF-2

Samplers Name NPD

Sampling Location Oakland; LF-2

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 3 2½ plastic

Method of Shipment Courier

GROUND WATER

Well No. LF-2

Well Diameter (in.) 2"

Depth to Water, Static (ft) 6.28

Water in Well Box NO

Well Depth (ft) 14.75

Height of Water Column in Well 8.47

Water Volume in Well 1.35 gal ≈ 1.5

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

14.75
6.28
8.47
.16
5082
8470
1.355 2
8.47
.8
6.776 #

3"
14.75
6.78
7.97

LOCATION MAP

80% = 7.97

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1317								start bailing
1319		1.5	24.5	6.13	4350			sl. turbid - reddish orange
1321		3.0	24.1	6.16	4360			" " " "
1324		4.5	23.5	5.80	4440			" " " "
1331		5.0	23.5	6.17	4360			" " DEWATERED
		Sample @ 80% or 2 hrs.						
1428	7.81							
1430								sample LF-2
1445	7.88							

Suggested Method for Purging Well

LEVINE-FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM — Project No. 2407.11

Date 10-26-92 — Sample No. LF-3

Samplers Name NPD

Sampling Location Oakland; LF-3

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 32 oz. plastic

Method of Shipment Courier

GROUND WATER

Well No. LF-3

Well Diameter (in.) 2"

Depth to Water, Static (ft) 7.05

Water in Well Box NO

Well Depth (ft) 14.93

Height of Water Column in Well 7.88

Water Volume in Well 1.26 gal
≈ 1.5

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

(2-inch casing = 0.16 gal/ft)

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

14.93
7.05
7.88
.16
4728
7880
12608

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1459								start bailing
1501		1.5	24.6	6.48	4610			turbid
1503		3.0	24.6	6.48	4340			turbid
1505		4.5	24.6	6.57	4360			turbid
1515	7.45							sample LF-3

Suggested Method for Purging Well

LEVINE • FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM — Project No. 2407.11

Date 10-26-92 — Sample No. LF-4

Samplers Name NPD

Sampling Location Oakland; LF-4

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 3 x 40 ml plastic

Method of Shipment Courier

GROUND WATER		SURFACE WATER	
Well No.	LF-4	Stream Width	
Well Diameter (in.)	2"	Stream Depth	
Depth to Water, Static (ft)	7.31	Stream Velocity	
Water in Well Box	NO	Rained recently ?	
Well Depth (ft)	18.25	Other	
Height of Water Column in Well	10.94		
Water Volume in Well	1.75 gal		

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

18.25
7.31
10.94
.16
6564
10940
17504

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1351								start bailing
1353		1.75	23.2	6.61	3070			clear
1355		3.5	22.7	6.62	3150			clear dewtering
1400		5.25	21.8	6.70	4220			clear
1402		7.0	21.7	6.73	3730 (3730)			clear dewtd (3730)
								stop
1415								Sample LF-4

Suggested Method for Purging Well

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Volvo GM — Project No.: 2407.11

Date: 10-27-92 — Sample No.: LF-5

Samplers Name: NPD

Sampling Location: Oakland; LF-5

Sampling Method: Hand bail w/ Teflon bailer

Analyses Requested: Title 22 Metals

Number and Types of Sample Bottles used: 32 oz. plastic

Method of Shipment: Courier

GROUND WATER

Well No.: LF-5

Well Diameter (in.): 2"

Depth to Water, Static (ft): 7.06

Water in Well Box: NO

Well Depth (ft): 21.10

Height of Water Column in Well: 14.04

Water Volume in Well: 2.25 gal

SURFACE WATER

Stream Width:

Stream Depth:

Stream Velocity:

Rained recently ?:

Other:

(2)-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

21.10
7.06
14.04
.16
8424
14040
2.2464

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
0834								start bailing
0842		2.25	22.2	6.31	23400			turbid
0844		4.5	22.3	6.41	22600			turbid
0847		6.75	22.0	6.36	22700			turbid / stop
0850	13.05							
0900								sample LF-5

Suggested Method for Purging Well:

LEVINE-FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM — Project No. 2407.11

Date 10-26-92 — Sample No. LF-6

Samplers Name NPD

Sampling Location Oakland; LF-6

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 32 oz. plastic

Method of Shipment Courier

GROUND WATER		SURFACE WATER	
Well No.	LF-6	Stream Width	
Well Diameter (in.)	2"	Stream Depth	
Depth to Water, Static (ft)	8.82	Stream Velocity	
Water in Well Box	YES	Rained recently ?	
Well Depth (ft)	20.00	Other	
Height of Water Column in Well	11.18	2-inch casing = 0.16 gal/ft	
Water Volume in Well	1.79 gal ≈ 2.0	4-inch casing = 0.65 gal/ft	
		5-inch casing = 1.02 gal/ft	
		6-inch casing = 1.47 gal/ft	

20.00
8.82
11.18
.16
6708
1118
1.7888

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1602								start bailing
1605		2.0	21.1	5.24	6890			turbid-sl. tan
1608		4.0	21.0	4.94	7180			" "
1611		6.0	20.9	4.89	7290			" "
1620	10.50							Sample LF-6

Suggested Method for Purging Well _____

LEVINE-FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM — Project No. 2407.11

Date 10-26-92 — Sample No. LF-7

Samplers Name NPD

Sampling Location Oakland; LF-7

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 32 oz. plastic

Method of Shipment Courier

GROUND WATER

Well No. LF-7

Well Diameter (in.) 2"

Depth to Water, Static (ft) 7.98

Water in Well Box NO

Well Depth (ft) 21.50

Height of Water Column in Well 13.52

Water Volume in Well 2.16 gal ≈ 2.5

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

21.50
7.98
13.52
.16
8 12
13520
2.163²

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1528								start bailing
1531		2.5	22.5	6.99	1790			turbid
1534		5.0	22.3	6.90	1739			turbid
1537		7.5	21.8	6.91	1748			turbid / stop
1541	15.58							
1545								sample LF-7

Suggested Method for Purging Well

LEVINE • FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name: Volvo GM
Project No.: 2407.11
Date: 10-27-92
Sample No.: MW-1
Samplers Name: NPD
Sampling Location: Oakland; MW-1
Sampling Method: Hand bail w/ Teflon bailer
Analyses Requested: Title 22 Metals
Number and Types of Sample Bottles used: 1x32 oz plastic
Method of Shipment: Courier

28.50
7.94
20.56
.16
12336
20560
3.2896

GROUND WATER

Well No.: MW-1
Well Diameter (in.): 2"
Depth to Water, Static (ft): 7.94
Water in Well Box: NO
Well Depth (ft): 28.5
Height of Water Column in Well: 20.56
Water Volume in Well: 3.28 gal ≈ 3.5

SURFACE WATER

Stream Width:
Stream Depth:
Stream Velocity:
Rained recently ?:
Other:

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

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
0943								start bailing
0946		3.5	21.8	5.90	1298			turbid
0950		7.0	21.1	6.00	1358			turbid
0954		10.5	20.4	6.04	1344			turbid
0957	23.13							
1005								Sample MW-1

Suggested Method for Purging Well:

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM — Project No. 2407.11

Date 10-27-92 — Sample No. MW-2

Samplers Name NPD

Sampling Location Oakland; MW-2

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

GROUND WATER		SURFACE WATER	
Well No.	MW-2	Stream Width	
Well Diameter (in.)	2"	Stream Depth	
Depth to Water, Static (ft)	5.37	Stream Velocity	
Water in Well Box	YES	Rained recently ?	
Well Depth (ft)	27.00	Other	
Height of Water Column in Well	21.63	2-inch casing = 0.16 gal/ft	
Water Volume in Well	3.46 gal ≈ 3.5	4-inch casing = 0.65 gal/ft	
		5-inch casing = 1.02 gal/ft	
		6-inch casing = 1.47 gal/ft	

27.00
5.37
21.63
.16
12978
21630
3.4608

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1059								start bailing
1102		3.5	24.5	4.56	9890			turbid
1106		7.0	24.1	4.54	9910			turbid
1110		10.5	23.1	4.44	10080			turbid/stop
1113	14.36							
1120								sample MW-2

Suggested Method for Purging Well

LEVINE-FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM — Project No. 2407.11

Date 10-23-92 — Sample No. MW-3

Samplers Name NPD

Sampling Location Oakland; MW-3

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1x32 oz plastic

Method of Shipment Courier

GROUND WATER		SURFACE WATER	
Well No.	MW-3	Stream Width	
Well Diameter (in.)	2"	Stream Depth	
Depth to Water, Static (ft)	7.07	Stream Velocity	
Water in Well Box	NO	Rained recently ?	
Well Depth (ft)	27.00	Other	
Height of Water Column in Well	19.93	2-inch casing = 0.16 gal/ft	
Water Volume in Well	3.12 gal. ≈ 3.25	4-inch casing = 0.65 gal/ft	
		5-inch casing = 1.02 gal/ft	
		6-inch casing = 1.47 gal/ft	

27.00
7.07
19.93
.16
11958
19930
31888

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
0913								start bailing
0916		3.25	22.1	4.82	8150			turbid
0919		6.5	21.7	4.98	8620			turbid
0923		9.75	20.6	5.08	8670			turbid / Stop
0926	18.08							
0930								Sample MW-3

Suggested Method for Purging Well

LEVINE•FRICKE

WATER-QUALITY SAMPLING INFORMATION

Project Name Volvo GM — Project No. 2407.11

Date 10-27-92 — Sample No. MW-4

Samplers Name NPD

Sampling Location Oakland; MW-4

Sampling Method Hand bail w/ Teflon bailer

Analyses Requested Title 22 Metals

Number and Types of Sample Bottles used 1 x 52 oz plastic

Method of Shipment Courier

GROUND WATER

Well No. MW-4

Well Diameter (in.) 2"

Depth to Water, Static (ft) 8.98

Water in Well Box NO

Well Depth (ft) 29.5

Height of Water Column in Well 20.52

Water Volume in Well 3.28 gal ≈ 3.25

SURFACE WATER

Stream Width

Stream Depth

Stream Velocity

Rained recently ?

Other

2-inch casing = 0.16 gal/ft

4-inch casing = 0.65 gal/ft

5-inch casing = 1.02 gal/ft

6-inch casing = 1.47 gal/ft

29.50 (14)
8.98
20.52
.16
123 12
20520
3.2832

LOCATION MAP

TIME	DEPTH TO WATER (feet)	VOLUME WITHDRAWN (gallons)	TEMP (deg. C)	pH (S.U.)	COND (umhos/cm)	OTHER		REMARKS
1020								start bailing
1024		3.25	21.8	6.61	2500			sl. turbid
1028		6.5	21.8	6.59	2720			sl. turbid - tur.
1032		9.75	21.6	6.67	3350*			" " " /Bottom
1037		13.0	20.4	6.73	3500			" " " /Stop
1040	24.15							
1045								Sample MW-4

Suggested Method for Purging Well

ATTACHMENT B

LABORATORY CERTIFICATES

QuanteQ Laboratories

An Ecologics Company

FORMERLY MED-TOX

Certificate of Analysis

DOHS CERTIFICATION NO. 1772

AIHA ACCREDITATION NO. 332

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

ATTN: JENNIFER BEATTY

CLIENT PROJ. ID: 2407.11
C.O.C. SERIAL NO: 9664
CLIENT PROJ. NAME: VOLVO GM

REPORT DATE: 11/11/92

DATE SAMPLED: 10/26-27/92

DATE RECEIVED: 10/27/92

QUANTEQ JOB NO: 9210205

PROJECT SUMMARY:

On October 27, 1992, this laboratory received twelve (12) water samples. Samples were received at the proper temperature and in appropriate containers.

Per client request, samples were analyzed for organic and inorganic parameters.

Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

Analysis of samples MW-2 and LF-1 (9210205-10A,11A) for CCR 17 Metals have 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
Laboratory Manager

Results FAXed 11/03-05/92

Quanteq Laboratories
An Ecologex Company

LEVINE-FRICKE

DATE SAMPLED: 10/26-27/92
DATE RECEIVED: 10/27/92
CLIENT PROJ. ID: 2407.11

REPORT DATE: 11/11/92

QUANTEQ JOB NO: 9210205

Client Sample Id.	Quanteq Lab Id.	Oil & Grease (mg/L)	Hydrocarbons (mg/L)
LF-1	11D	ND	ND
LF-1-DUP	12C	ND	ND
Detection Limit		0.5	0.5
Method:		5520C	5520F

Instrument: IR

Date Extracted: 10/28/92
Date Analyzed: 10/29/92

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-1
CLIENT PROJ. ID: 2407.11
DATE SAMPLED: 10/27/92
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-11B
QUANTEQ JOB NO: 9210205
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92
INSTRUMENT: 11

EPA METHOD 8270 (WATER MATRIX)
GC/MS SEMI-VOLATILE ORGANIC COMPOUNDS
BASE/NEUTRAL EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Acenaphthene	83-32-9	ND	10
Acenaphthylene	208-96-8	ND	10
Anthracene	120-12-7	ND	10
Benzidine	92-87-5	ND	50
Benzoic Acid	65-85-0	ND	50
Benzo(a)anthracene	56-55-3	ND	10
Benzo(b)fluoranthene	205-99-2	ND	10
Benzo(k)fluoranthene	207-08-9	ND	10
Benzo(g,h,i)perylene	191-24-2	ND	10
Benzo(a)pyrene	50-32-8	ND	10
Benzyl Alcohol	100-51-6	ND	20
Bis(2-chloroethoxy) methane	111-91-1	ND	10
Bis(2-chloroethyl)ether	111-44-4	ND	10
Bis(2-chloroisopropyl) ether	108-60-1	ND	10
Bis(2-ethylhexyl) phthalate	117-81-7	ND	20
4-Bromophenyl phenyl ether	101-55-3	ND	10
Butylbenzyl phthalate	85-68-7	ND	10
4-Chloroaniline	106-47-8	ND	20
2-Chloronaphthalene	91-58-7	ND	10
4-Chlorophenyl phenyl ether	7005-72-3	ND	10
Chrysene	218-01-9	ND	10
Dibenzo(a,h)anthracene	53-70-3	ND	10
Dibenzofuran	132-64-9	ND	10
Di-n-butylphthalate	84-74-2	ND	10
1,2-Dichlorobenzene	95-50-1	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-1
CLIENT PROJ. ID: 2407.11
DATE SAMPLED: 10/27/92
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-11B
QUANTEQ JOB NO: 9210205
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92
INSTRUMENT: 11

EPA METHOD 8270

BASE/NEUTRAL EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
1,3-Dichlorobenzene	541-73-1	ND	10
1,4-Dichlorobenzene	106-46-7	ND	10
3,3'-Dichlorobenzidine	91-94-1	ND	20
Diethylphthalate	84-66-2	ND	10
Dimethylphthalate	131-11-3	ND	10
2,4-Dinitrotoluene	121-14-2	ND	10
2,6-Dinitrotoluene	606-20-2	ND	10
Di-n-octylphthalate	117-84-0	ND	10
1,2-Diphenylhydrazine	122-66-7	ND	10
Fluoranthene	206-44-0	ND	10
Fluorene	86-73-7	ND	10
Hexachlorobenzene	118-74-1	ND	10
Hexachlorobutadiene	87-68-3	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	10
Hexachloroethane	67-72-1	ND	10
Indeno(1,2,3-cd)pyrene	193-39-5	ND	10
Isophorone	78-59-1	ND	10
2-Methylnaphthalene	91-57-6	ND	10
Naphthalene	91-20-3	ND	10
2-Nitroaniline	88-74-4	ND	50
3-Nitroaniline	99-09-2	ND	50
4-Nitroaniline	100-01-6	ND	50
Nitrobenzene	98-95-3	ND	10
N-Nitrosodimethylamine	62-75-9	ND	10
N-Nitrosodiphenylamine	86-30-6	ND	10
N-Nitroso-di-n-propylamine	621-64-7	ND	10
Phenanthrene	85-01-8	ND	10
Pyrene	129-00-0	ND	10
1,2,4-Trichlorobenzene	120-82-1	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-1
CLIENT PROJ. ID: 2407.11
DATE SAMPLED: 10/27/92
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-11B
QUANTEQ JOB NO: 9210205
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92
INSTRUMENT: 11

EPA METHOD 8270

ACID EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
4-Chloro-3-methylphenol	59-50-7	ND	10
2-Chlorophenol	95-57-8	ND	10
2,4-Dichlorophenol	120-83-2	ND	10
2,4-Dimethylphenol	105-67-9	ND	10
4,6-Dinitro-2-methylphenol	534-52-1	ND	50
2,4-Dinitrophenol	51-28-5	ND	50
2-Methylphenol	95-48-7	ND	10
4-Methylphenol	106-44-5	ND	10
2-Nitrophenol	88-75-5	ND	10
4-Nitrophenol	100-02-7	ND	50
Pentachlorophenol	87-86-5	ND	50
Phenol	108-95-2	ND	10
2,4,5-Trichlorophenol	95-95-4	ND	10
2,4,6-Trichlorophenol	88-06-2	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-1-DUP
CLIENT PROJ. ID: 2407.11
DATE SAMPLED: 10/27/92
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-12A
QUANTEQ JOB NO: 9210205
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92
INSTRUMENT: 11

EPA METHOD 8270 (WATER MATRIX)
GC/MS SEMI-VOLATILE ORGANIC COMPOUNDS
BASE/NEUTRAL EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Acenaphthene	83-32-9	ND	10
Acenaphthylene	208-96-8	ND	10
Anthracene	120-12-7	ND	10
Benzidine	92-87-5	ND	50
Benzoic Acid	65-85-0	ND	50
Benzo(a)anthracene	56-55-3	ND	10
Benzo(b)fluoranthene	205-99-2	ND	10
Benzo(k)fluoranthene	207-08-9	ND	10
Benzo(g,h,i)perylene	191-24-2	ND	10
Benzo(a)pyrene	50-32-8	ND	10
Benzyl Alcohol	100-51-6	ND	20
Bis(2-chloroethoxy) methane	111-91-1	ND	10
Bis(2-chloroethyl)ether	111-44-4	ND	10
Bis(2-chloroisopropyl) ether	108-60-1	ND	10
Bis(2-ethylhexyl) phthalate	117-81-7	ND	20
4-Bromophenyl phenyl ether	101-55-3	ND	10
Butylbenzyl phthalate	85-68-7	ND	10
4-Chloroaniline	106-47-8	ND	20
2-Chloronaphthalene	91-58-7	ND	10
4-Chlorophenyl phenyl ether	7005-72-3	ND	10
Chrysene	218-01-9	ND	10
Dibenzo(a,h)anthracene	53-70-3	ND	10
Dibenzofuran	132-64-9	ND	10
Di-n-butylphthalate	84-74-2	ND	10
1,2-Dichlorobenzene	95-50-1	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-1-DUP
CLIENT PROJ. ID: 2407.11
DATE SAMPLED: 10/27/92
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-12A
QUANTEQ JOB NO: 9210205
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92
INSTRUMENT: 11

EPA METHOD 8270

BASE/NEUTRAL EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
1,3-Dichlorobenzene	541-73-1	ND	10
1,4-Dichlorobenzene	106-46-7	ND	10
3,3'-Dichlorobenzidine	91-94-1	ND	20
Diethylphthalate	84-66-2	ND	10
Dimethylphthalate	131-11-3	ND	10
2,4-Dinitrotoluene	121-14-2	ND	10
2,6-Dinitrotoluene	606-20-2	ND	10
Di-n-octylphthalate	117-84-0	ND	10
1,2-Diphenylhydrazine	122-66-7	ND	10
Fluoranthene	206-44-0	ND	10
Fluorene	86-73-7	ND	10
Hexachlorobenzene	118-74-1	ND	10
Hexachlorobutadiene	87-68-3	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	10
Hexachloroethane	67-72-1	ND	10
Indeno(1,2,3-cd)pyrene	193-39-5	ND	10
Isophorone	78-59-1	ND	10
2-Methylnaphthalene	91-57-6	ND	10
Naphthalene	91-20-3	ND	10
2-Nitroaniline	88-74-4	ND	50
3-Nitroaniline	99-09-2	ND	50
4-Nitroaniline	100-01-6	ND	50
Nitrobenzene	98-95-3	ND	10
N-Nitrosodimethylamine	62-75-9	ND	10
N-Nitrosodiphenylamine	86-30-6	ND	10
N-Nitroso-di-n-propylamine	621-64-7	ND	10
Phenanthrene	85-01-8	ND	10
Pyrene	129-00-0	ND	10
1,2,4-Trichlorobenzene	120-82-1	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-1-DUP
CLIENT PROJ. ID: 2407.11
DATE SAMPLED: 10/27/92
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-12A
QUANTEQ JOB NO: 9210205
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92
INSTRUMENT: 11

EPA METHOD 8270

ACID EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
4-Chloro-3-methylphenol	59-50-7	ND	10
2-Chlorophenol	95-57-8	ND	10
2,4-Dichlorophenol	120-83-2	ND	10
2,4-Dimethylphenol	105-67-9	ND	10
4,6-Dinitro-2-methylphenol	534-52-1	ND	50
2,4-Dinitrophenol	51-28-5	ND	50
2-Methylphenol	95-48-7	ND	10
4-Methylphenol	106-44-5	ND	10
2-Nitrophenol	88-75-5	ND	10
4-Nitrophenol	100-02-7	ND	50
Pentachlorophenol	87-86-5	ND	50
Phenol	108-95-2	ND	10
2,4,5-Trichlorophenol	95-95-4	ND	10
2,4,6-Trichlorophenol	88-06-2	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-4
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-01A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

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	0.034	0.002	7060	V22
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	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	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	0.012	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-2
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-02A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

CCR 17 METALS
(WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	0.006	0.005	6010	ICP
As	Arsenic	0.007	0.002	7060	V22
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.006	0.005	6010	ICP
Co	Cobalt	0.12	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	0.02	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	0.22	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	0.005	0.004	7740	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	3.3	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-3
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-03A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

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	3.6	0.002	7060	V22
Ba	Barium	0.11	0.05	6010	ICP
Be	Beryllium	0.004	0.002	6010	ICP
Cd	Cadmium	0.013	0.005	6010	ICP
Co	Cobalt	0.029	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	0.22	0.01	6010	ICP
Ni	Nickel	0.02	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	0.018	0.004	7740	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	12	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Twologics Company

LEVINE-FRICKE

SAMPLE ID: LF-7
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-04A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

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	0.030	0.002	7060	V22
Ba	Barium	0.11	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	0.01	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	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	0.008	0.005	6010	ICP
Zn	Zinc	0.021	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-6
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-05A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

CCR 17 METALS
(WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	0.020	0.005	6010	ICP
As	Arsenic	0.022	0.002	7060	V22
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.17	0.005	6010	ICP
Co	Cobalt	1.6	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	5.5	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	0.012	0.004	7740	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	23	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: LF-5
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-06A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

CCR 17 METALS
(WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	0.022	0.005	6010	ICP
As	Arsenic	0.005	0.002	7060	V22
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.24	0.005	6010	ICP
Co	Cobalt	1.4	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	5.4	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	0.017	0.004	7740	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	35	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: MW-3
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-07A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

CCR 17 METALS
(WATER MATRIX)

CODE	METAL	CONCENTRATION (mg/L)	REPORTING LIMIT (mg/L)	METHOD REFERENCE	INST.
Ag	Silver	0.009	0.005	6010	ICP
As	Arsenic	0.004	0.002	7060	V22
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	0.003	0.002	6010	ICP
Cd	Cadmium	0.73	0.005	6010	ICP
Co	Cobalt	0.74	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	0.30	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	2.6	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	0.011	0.004	7740	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	ND	0.005	6010	ICP
Zn	Zinc	730	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Envirologics Company

LEVINE-FRICKE

SAMPLE ID: MW-1
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-08A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

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	0.084	0.002	7060	V22
Ba	Barium	0.09	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.031	0.005	6010	ICP
Co	Cobalt	0.052	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	0.30	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	ND	0.004	7740	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	0.007	0.005	6010	ICP
Zn	Zinc	42	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: MW-4
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-09A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

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	V22
Ba	Barium	ND	0.05	6010	ICP
Be	Beryllium	ND	0.002	6010	ICP
Cd	Cadmium	0.006	0.005	6010	ICP
Co	Cobalt	ND	0.005	6010	ICP
Cr	Chromium	ND	0.01	6010	ICP
Cu	Copper	0.02	0.01	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.01	6010	ICP
Ni	Nickel	0.02	0.01	6010	ICP
Pb	Lead	ND	0.04	6010	ICP
Sb	Antimony	ND	0.02	6010	ICP
Se	Selenium	0.004	0.004	7740	V22
Tl	Thallium	ND	0.1	6010	ICP
V	Vanadium	0.011	0.005	6010	ICP
Zn	Zinc	0.047	0.005	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Quanteq Laboratories
An Ecologics Company

LEVINE-FRICKE

SAMPLE ID: MW-2
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-10A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

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	1.5	0.10	7060	V22
Ba	Barium	ND	0.5	6010	ICP
Be	Beryllium	ND	0.02	6010	ICP
Cd	Cadmium	10	0.05	6010	ICP
Co	Cobalt	1.5	0.05	6010	ICP
Cr	Chromium	ND	0.1	6010	ICP
Cu	Copper	0.2	0.1	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	0.1	6010	ICP
Ni	Nickel	4.9	0.1	6010	ICP
Pb	Lead	ND	0.4	6010	ICP
Sb	Antimony	ND	0.2	6010	ICP
Se	Selenium	0.014	0.004	7740	V22
Tl	Thallium	ND	1	6010	ICP
V	Vanadium	ND	0.05	6010	ICP
Zn	Zinc	6,000	0.05	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Elevated reporting limit due to matrix interference.

Quanteq Laboratories
An Enologics Company

LEVINE-FRICKE

SAMPLE ID: LF-1
CLIENT PROJ. ID: 2407.11
DATE RECEIVED: 10/27/92
REPORT DATE: 11/11/92

QUANTEQ LAB NO: 9210205-11A
QUANTEQ JOB NO: 9210205
DATE ANALYZED: 10/27-11/04/92

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	0.077	0.002	7060	V22
Ba	Barium	ND	0.5	6010	ICP
Be	Beryllium	ND	0.2	6010	ICP
Cd	Cadmium	57	0.5	6010	ICP
Co	Cobalt	4.1	0.5	6010	ICP
Cr	Chromium	ND	1	6010	ICP
Cu	Copper	1.0	0.1	6010	ICP
Hg	Mercury	ND	0.0003	7470	Hg
Mo	Molybdenum	ND	1	6010	ICP
Ni	Nickel	19	0.1	6010	ICP
Pb	Lead	ND	4	6010	ICP
Sb	Antimony	ND	2	6010	ICP
Se	Selenium	0.027	0.004	7740	V22
Tl	Thallium	ND	10	6010	ICP
V	Vanadium	ND	0.5	6010	ICP
Zn	Zinc	16,000	5	6010	ICP

Digestion Date: 10/28-11/03/92

ND = Not Detected

INST. = Instrument Number

Elevated reporting limit due to matrix interference.

Quanteq Laboratories
An Ecologies Company

QUALITY CONTROL DATA

DATE EXTRACTED: 10/27/92
DATE ANALYZED: 10/29/92
CLIENT PROJ. ID: 2407.11

QUANTEQ JOB NO: 9210205
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: IR

IR DETERMINATION FOR OIL & GREASE/HYDROCARBONS
METHOD SPIKE RECOVERY SUMMARY
(WATER MATRIX)

ANALYTE	Spike Conc. (mg/L)	Sample Result (mg/L)	MS Result (mg/L)	MSD Result (mg/L)	Average Percent Recovery	RPD
Oil	6.35	ND	6.57	6.57	103.5	0.0

CURRENT QC LIMITS (Revised 06/22/92)

Analyte	Percent Recovery	RPD
Oil	(88-110)	5.8

METHOD BLANK RESULT

Lab Id.	Hydrocarbons (mg/L)
921028-BLANK	ND

Reporting Limit 0.5
Method: 5520C,F
Instrument: IR
Date Extracted: 10/28/92
Date Analyzed: 10/29/92

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

Quanteq Laboratories
An Ecologics Company

QUALITY CONTROL DATA

INSTRUMENT: 11

CLIENT PROJ. ID: 2407.11

QUANTEQ LAB NO: DAILY BLANK
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92

EPA METHOD 8270 (METHOD BLANK)
GC/MS SEMI-VOLATILE ORGANIC COMPOUNDS
BASE/NEUTRAL EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
Acenaphthene	83-32-9	ND	10
Acenaphthylene	208-96-8	ND	10
Anthracene	120-12-7	ND	10
Benzidine	92-87-5	ND	50
Benzoic Acid	65-85-0	ND	50
Benzo(a)anthracene	56-55-3	ND	10
Benzo(b)fluoranthene	205-99-2	ND	10
Benzo(k)fluoranthene	207-08-9	ND	10
Benzo(g,h,i)perylene	191-24-2	ND	10
Benzo(a)pyrene	50-32-8	ND	10
Benzyl Alcohol	100-51-6	ND	20
Bis(2-chloroethoxy) methane	111-91-1	ND	10
Bis(2-chloroethyl)ether	111-44-4	ND	10
Bis(2-chloroisopropyl) ether	39638-32-9	ND	10
Bis(2-ethylhexyl) phthalate	117-81-7	78	10
4-Bromophenyl phenyl ether	101-55-3	ND	10
Butylbenzyl phthalate	85-68-7	ND	10
4-Chloroaniline	106-47-8	ND	20
2-Chloronaphthalene	91-58-7	ND	10
4-Chlorophenyl phenyl ether	7005-72-3	ND	10
Chrysene	218-01-9	ND	10
Dibenzo(a,h)anthracene	53-70-3	ND	10
Dibenzofuran	132-64-9	ND	10
Di-n-butylphthalate	84-74-2	ND	10
1,2-Dichlorobenzene	95-50-1	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

QUALITY CONTROL DATA

INSTRUMENT: 11

CLIENT PROJ. ID: 2407.11

QUANTEQ LAB NO: DAILY BLANK
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92

EPA METHOD 8270 (METHOD BLANK)
BASE/NEUTRAL EXTRACTABLES (cont.)

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
1,3-Dichlorobenzene	541-73-1	ND	10
1,4-Dichlorobenzene	106-46-7	ND	10
3,3'-Dichlorobenzidine	91-94-1	ND	20
Diethylphthalate	84-66-2	ND	10
Dimethylphthalate	131-11-3	ND	10
2,4-Dinitrotoluene	121-14-2	ND	10
2,6-Dinitrotoluene	606-20-2	ND	10
Di-n-octylphthalate	117-84-0	ND	10
1,2-Diphenylhydrazine	122-66-7	ND	10
Fluoranthene	206-44-0	ND	10
Fluorene	86-73-7	ND	10
Hexachlorobenzene	118-74-1	ND	10
Hexachlorobutadiene	87-68-3	ND	10
Hexachlorocyclopentadiene	77-47-4	ND	10
Hexachloroethane	67-72-1	ND	10
Indeno(1,2,3-cd)pyrene	193-39-5	ND	10
Isophorone	78-59-1	ND	10
2-Methylnaphthalene	91-57-6	ND	10
Naphthalene	91-20-3	ND	10
2-Nitroaniline	88-74-4	ND	50
3-Nitroaniline	99-09-2	ND	50
4-Nitroaniline	100-01-6	ND	50
Nitrobenzene	98-95-3	ND	10
N-Nitrosodimethylamine	62-75-9	ND	10
N-Nitrosodiphenylamine	86-30-6	ND	10
N-Nitroso-di-n-propylamine	621-64-7	ND	10
Phenanthrene	85-01-8	ND	10
Pyrene	129-00-0	ND	10
1,2,4-Trichlorobenzene	120-82-1	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

QUALITY CONTROL DATA

INSTRUMENT: 11

CLIENT PROJ. ID: 2407.11

QUANTEQ LAB NO: DAILY BLANK
DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92

EPA METHOD 8270 (METHOD BLANK)
ACID EXTRACTABLES

COMPOUND	CAS #	CONCENTRATION (ug/L)	REPORTING LIMIT (ug/L)
4-Chloro-3-methylphenol	59-50-7	ND	10
2-Chlorophenol	95-57-8	ND	10
2,4-Dichlorophenol	120-83-2	ND	10
2,4-Dimethylphenol	105-67-9	ND	10
4,6-Dinitro-2-methylphenol	534-52-1	ND	50
2,4-Dinitrophenol	51-28-5	ND	50
2-Methylphenol	95-48-7	ND	10
4-Methylphenol	106-44-5	ND	10
2-Nitrophenol	88-75-5	ND	10
4-Nitrophenol	100-02-7	ND	50
Pentachlorophenol	87-86-5	ND	50
Phenol	108-95-2	ND	10
2,4,5-Trichlorophenol	95-95-4	ND	10
2,4,6-Trichlorophenol	88-06-2	ND	10

ND = Not Detected

Quanteq Laboratories
An Ecologics Company

QUALITY CONTROL DATA

DATE ANALYZED: 10/29/92

QUANTEQ JOB NO: 9210205

CLIENT PROJ. ID: 2407.11

INSTRUMENT: 11

SURROGATE STANDARD RECOVERY SUMMARY

METHOD 8270
(WATER MATRIX)

SAMPLE IDENTIFICATION			SURROGATE RECOVERY (PERCENT)					
Date Extracted	Client Id.	Lab Id.	Nitrobenzene-d_5	2-Fluorobiphenyl	Terphenyl-d_{14}	Phenol-d_5	2-Fluorophenol	2,4,6-Tribromophenol
10/28/92	LF-1	118	90.0	92.1	91.4	103.3	85.1	122.0
10/28/92	LF-1-DUP	128	94.0	93.6	95.1	103.6	86.6	121.2

CURRENT QC LIMITS (REVISED 01/08/92)

ANALYTE	PERCENT RECOVERY
Nitrobenzene-d_5	(47-104)
2-Fluorobiphenyl	(49-106)
Terphenyl-d_{14}	(36-138)
Phenol-d_5	(46-105)
2-Fluorophenol	(40- 97)
2,4,6-Tribromophenol	(37-145)

Quanteq Laboratories
An Ecologics Company

QUALITY CONTROL DATA

DATE EXTRACTED: 10/28/92
DATE ANALYZED: 10/29/92
CLIENT PROJ. ID: 2407.11

QUANTEQ JOB NO: 9210205
SAMPLE SPIKED: D.I. WATER
INSTRUMENT: 11

MATRIX SPIKE RECOVERY SUMMARY
METHOD 8270
(WATER MATRIX)

ANALYTE	Spike Conc. (ug/L)	Sample Result (ug/L)	MS Result (ug/L)	MSD Result (ug/L)	Average Percent Recovery	RPD
Phenol	234	ND	149	158	65.6	5.9
2-Chlorophenol	203	ND	138	148	70.4	7.0
1,4-Dichlorobenzene	201	ND	107	116	55.5	8.1
N-Nitroso-di-n-propylamine	201	ND	209	205	103.0	1.9
1,2,4-Trichlorobenzene	209	ND	120	124	58.4	3.3
4-Chloro-3-methylphenol	204	ND	199	188	94.9	5.7
Acenaphthene	205	ND	163	156	77.8	4.4
4-Nitrophenol	201	ND	186	181	91.3	2.7
2,4-Dinitrotoluene	203	ND	207	194	98.8	6.5
Pentachlorophenol	206	ND	208	203	99.8	2.4
Pyrene	202	ND	184	175	88.9	5.0

CURRENT QC LIMITS (Revised 01/08/92)

Analyte	Percent Recovery	RPD
Phenol	(52- 88)	19
2-Chlorophenol	(55- 84)	24
1,4-Dichlorobenzene	(36- 82)	26
N-Nitroso-di-n-propylamine	(42-103)	16
1,2,4-Trichlorobenzene	(39- 85)	22
4-Chloro-3-methylphenol	(65- 95)	15
Acenaphthene	(49-113)	14
4-Nitrophenol	(41-101)	18
2,4-Dinitrotoluene	(53- 99)	15
Pentachlorophenol	(33-129)	21
Pyrene	(47-129)	12

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

Quanteq Laboratories
An Ecologics Company

QUALITY CONTROL DATA

MATRIX: WATER

QUANTEQ JOB NO: 9210205

CLIENT PROJ. ID: 2407.11

DATE DIGESTED: 10/28-11/03/92

MATRIX SPIKE RECOVERY SUMMARY

COMPOUND	INST./ METHOD	SAMPLE SPIKED	SAMPLE RESULT	SPIKE ADDED	OBSERVED RECOVERIES (mg/L) MS	MSD	% REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	RPD LIMIT
Ag, Silver	ICP/6010	9210205-01A	ND	0.10	0.0955	0.0962	95.9	0.7	75-125	15
As, Arsenic	V22/7060	9210205-04A	0.0303	0.04	0.0817	0.0723	116.8	12.0	62-140	13.0
Ba, Barium	ICP/6010	9210205-01A	ND	2.0	1.849	1.859	92.7	0.5	64.1-107.6	5.2
Cd, Cadmium	ICP/6010	9210205-01A	ND	0.1	0.0823	0.0888	84.8	7.7	68.2-116.9	11.2
Cr, Chromium	ICP/6010	9210205-01A	ND	0.5	0.474	0.475	94.8	2.1	70.4-118.8	7.0
Cu, Copper	ICP/6010	9210205-01A	ND	0.5	0.469	0.471	94.0	0.5	65.6-125.4	6.1
Hg, Mercury	Hg/7470	9210205-02A	ND	2.0 ug/L	1.99	1.99	99.3	0.0	94.3-104.9	5.0
Ni, Nickel	ICP/6010	9210205-01A	0.0255	0.5	0.478	0.476	95.4	0.5	64.4-116.3	6.0
Pb, Lead	ICP/6010	9210205-01A	ND	0.5	0.440	0.444	88.5	0.9	74.6-118.9	7.0
Se, Selenium	V22/7740	9210205-04A	ND	0.08	0.0359	0.0299	41.1	18.4	25-138	21.0
Zn, Zinc	ICP/6010	9210205-01A	0.0116	0.5	0.499	0.500	99.8	0.1	71.7-119.2	6.6

ND = Not Detected

Quanteq Laboratories
An Ecologies Company

QUALITY CONTROL DATA

MATRIX: WATER

QUANTEQ JOB NO: 9210205

CLIENT PROJ. ID: 2407.11

DATE DIGESTED: 10/28-11/03/92

METHOD STANDARD RECOVERY SUMMARY

COMPOUND	INST./ METHOD	BLANK RESULT	TRUE VALUE	OBSERVED RECOVERIES (mg/L) MS	MSD	% REC.	RPD	QC CONTROL LIMITS % REC. LIMIT	RPD LIMIT
Ag, Silver	ICP/6010	ND	0.10	0.1013	0.0979	99.6	3.4	75-125	15
As, Arsenic	V22/7060	ND	0.040	0.0406	0.0404	101.3	0.5	80-123	11
Ba, Barium	ICP/6010	ND	2.0	1.942	1.894	95.9	2.5	72.9-107.8	5.0
Cd, Cadmium	ICP/6010	ND	0.1	0.090	0.090	90.0	0.0	71.1-119.6	12.8
Cr, Chromium	ICP/6010	ND	0.5	0.495	0.488	98.3	1.4	85.1-114.3	5.7
Cu, Copper	ICP/6010	ND	0.5	0.479	0.468	94.7	2.3	85.6-114.0	5.0
Hg, Mercury	Hg/7470	ND	0.5 ug/L	0.499	0.499	99.8	0.0	97.2-102.7	5.0
Ni, Nickel	ICP/6010	ND	0.5	0.471	0.466	93.7	1.1	83.2-107.0	5.0
Pb, Lead	ICP/6010	ND	0.5	0.472	0.471	94.3	0.2	88.9-113.2	6.9
Se, Selenium	V22/7740	ND	0.08	0.0901	0.0923	114.0	2.5	80-129	16
Zn, Zinc	ICP/6010	ND	0.5	0.509	0.492	100.1	3.4	81.7-117.1	5.0

ND = Not Detected

R-1S-B

CHAIN OF CUSTODY / ANALYSES REQUEST FORM

9210205

Project No.: 2407.11	Field Logbook No.:	Date: 10-27-92	Serial No.: 9664
Project Name: Volvo GM	Project Location: Oakland		
Sampler (Signature): [signature]			

SAMPLE NO.	DATE	TIME	LAB SAMPLE NO.	NO. OF CONTAINERS	SAMPLE TYPE	EPA 601	EPA 624	Title 22 Metals	EPA 8270	Standard Method 5520 C&F (Petroleum)	HOLD	RUSH	REMARKS
LF-4	10·26	1415	01A	1	H_2O			X					- normal turnaround
LF-2	↓	1430	02A	↓	↓			↓					
LF-3		1515	03A										⊛ Standard Method 5520 C&F (petroleum component only)
LF-7		1545	04A										
LF-6	↓	1620	05A	↓									
LF-5	10·27	0900	06A										
MW-3		0930	07A										- Results to: Jennifer Beatty
MW-1		1005	08A										
MW-4		1045	09A										
MW-2		1120	10A	↓									
LF-1		1315	11A-E	5				↓	X	X			⊛ pls. fax results to Jennifer Beatty ASAA (as soon as available)
LF-1-DUP	↓	1320	⊛ 12A-D	4	↓				X	X			

ANALYSES

Samplers: NPD

RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
[signature]	10/27/92	15:10	[signature]	10/27/92	15:10
RELINQUISHED BY: (Signature) [signature]	10/27/92	15:55	RECEIVED BY: (Signature) Gina Gillespie	10-27-92	1555
RELINQUISHED BY: (Signature)	DATE	TIME	RECEIVED BY: (Signature)	DATE	TIME
METHOD OF SHIPMENT: Courier	DATE	TIME	LAB COMMENTS:		

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

Analytical Laboratory:
QUANTEQ

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