

PROPERTY OF  
H. J. RAVIZZA  
BROADWAY BUILDING  
916-386-8886



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**PRELIMINARY ENVIRONMENTAL  
SITE ASSESSMENT  
2735 Broadway  
Oakland, California**

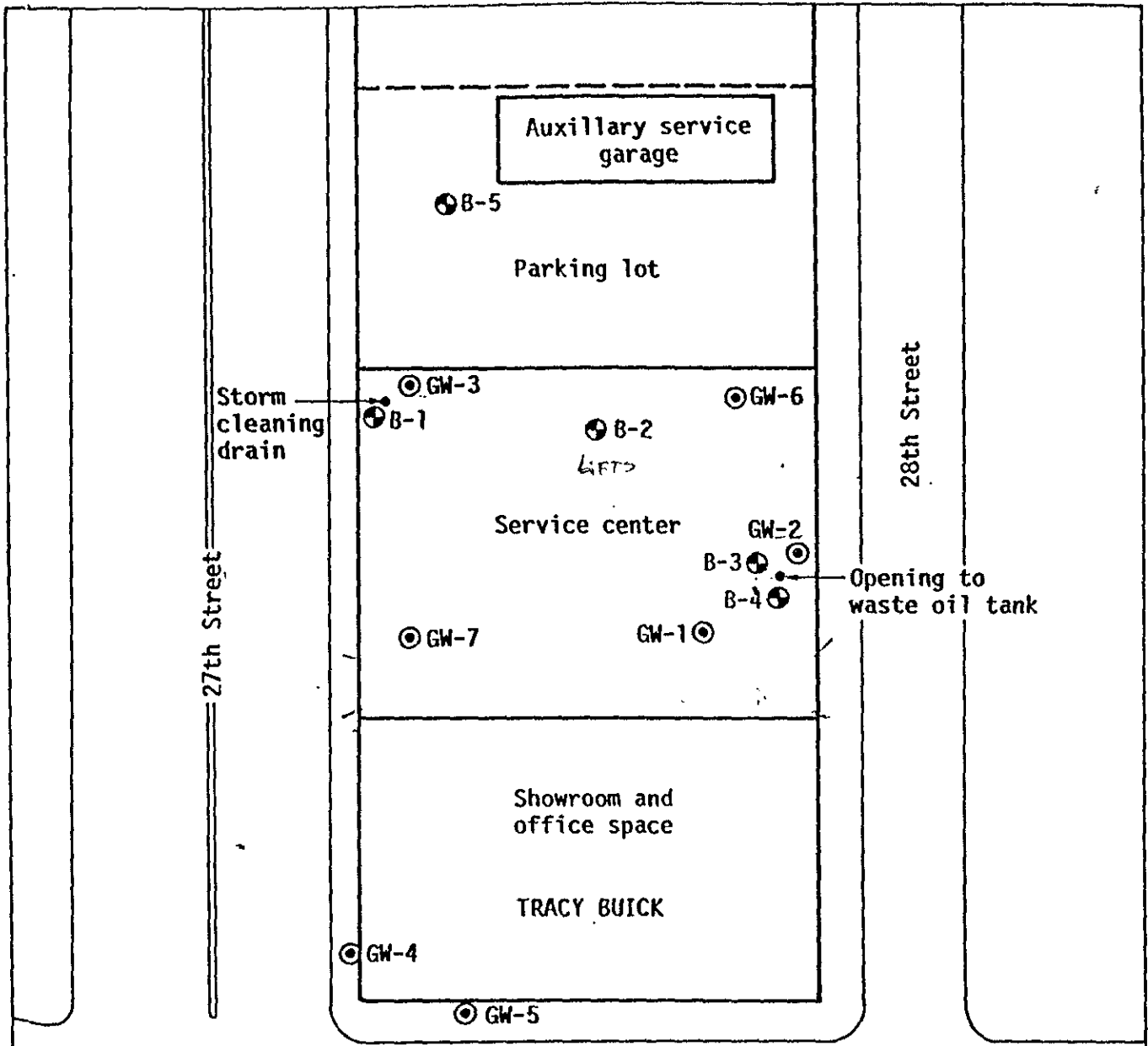
**Prepared for**

**Chrysler Realty Corporation  
289 Alameda De La Loma  
Novato, California**

**March 1989  
1411A**

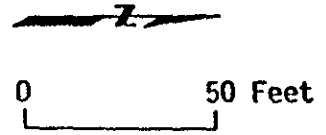
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**Geomatrix Consultants**



**KEY**

- B-2 ⊕ Location of soil boring
- GW-4 ⊙ Location of shallow groundwater probe



**SITE PLAN, BORING AND PROBE LOCATIONS**  
 Tracy Buick  
 2735 Broadway  
 Oakland, California

Figure  
 2  
 Project No.  
 1411A

**BORING LOCATION:** Adjacent to sump at steam cleaner - SE corner of building

DATE STARTED: 2/14/89	DATE FINISHED: 2/14/89	NOTES: Logged By: L. RowlesHall, RG Drilling Equip.: Minuteman Drilling Contractor: Access Drilling Checked by: J.D. Gallinatti, CEG
DRILLING METHOD: 3 1/2" continuous flight auger		
HAMMER WEIGHT: 70 lbs	DROP: 30"	
SAMPLER: 2" split barrel sampler		

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	ANALYTICAL RESULTS
	Sample No.	Sample	Blows/ Foot		Surface Elevation:	
1				CONCRETE		See Tables 3 and 4
2				SILTY CLAY (CL) Brown (7.5 YR 4/4), moist, mostly silty clay, trace fine sand, low plasticity, hard, trace charcoal chips (1 -2 mm), trace subrounded fine gravel		
3	D1	37		Increasing sand content to few sand		
4						
5				CLAYEY SAND (SC) Pale brown (10 YR 6/5) to brown (10 YR 5/3), moist, mostly fine sand, some clay, trace coarse sand, trace charcoal		
6						
7				Increase in coarse sand to mostly coarse sand, some clay, few fine sand		
8	D2	50		Bottom of hole at 8.0 feet		
9						
10						
11						
12						
13						
14						
15						

**EXPLANATION**

- Drive sample
- Brass liner sample retained for chemical analysis

BL-1-88

PROJECT: CHRYSLER  
Oakland, California

# Log of Boring No. B-2

BORING LOCATION: Adjacent to old hydraulic lifts center of west wall of building

DATE STARTED: 2/14/89

DATE FINISHED: 2/14/89

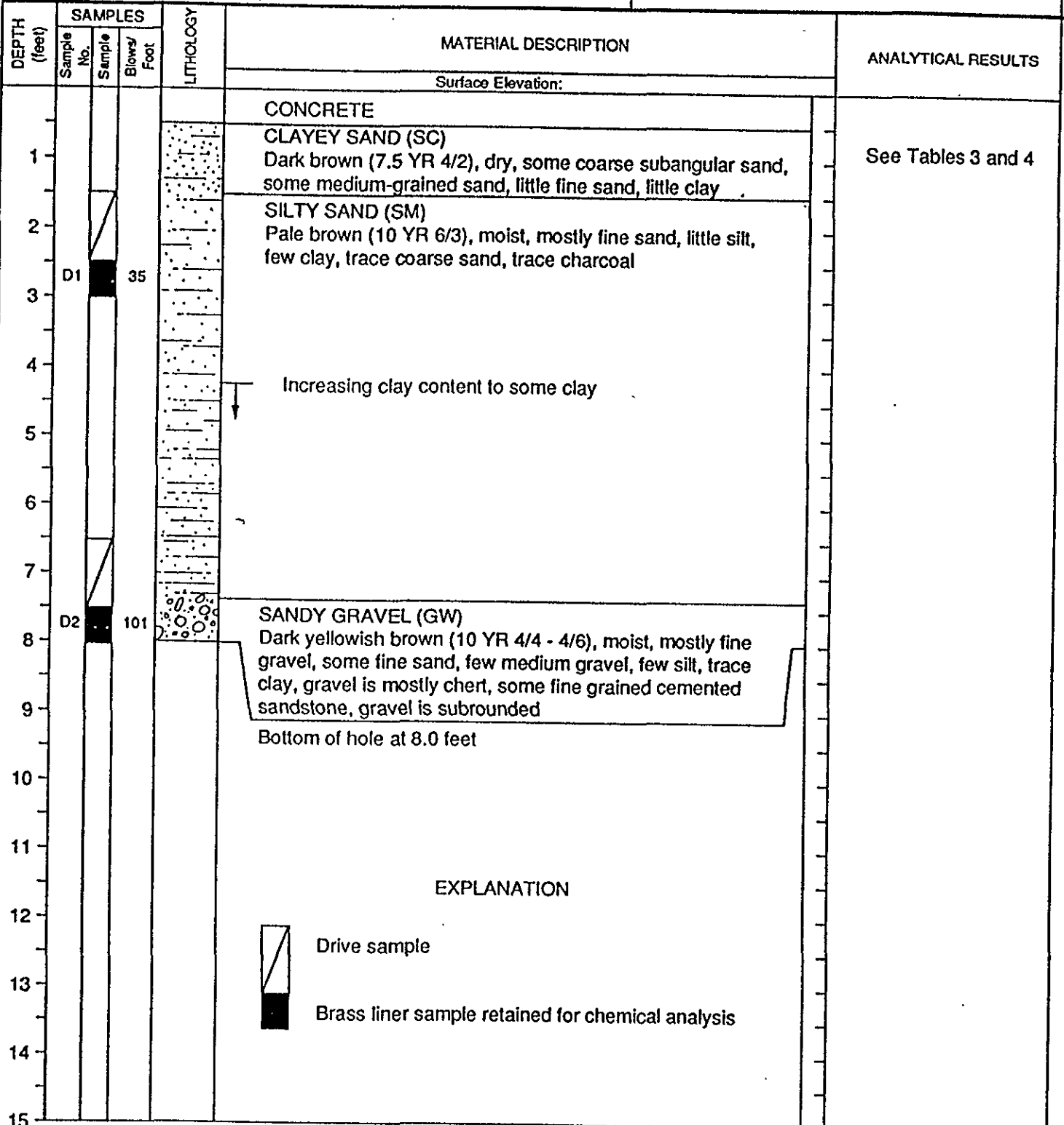
NOTES: Logged By: L. RowlesHall, RG  
Drilling Equip.: Minuteman  
Drilling Contractor: Access Drilling  
Checked by: J.D. Gallinatti, CEG

DRILLING METHOD: 3 1/2" continuous flight auger

HAMMER WEIGHT: 140 lbs

DROP: 30"

SAMPLER: 2" split barrel sampler



BL-1-88

PROJECT: CHRYSLER  
Oakland, California

# Log of Boring No. B-3

BORING LOCATION: South side of waste oil underground tank

DATE STARTED: 2/14/89

DATE FINISHED: 2/14/89

NOTES: Logged By: L. RowlesHall, RG  
Drilling Equip.: Minuteman  
Drilling Contractor: Access Drilling  
Checked by: J.D. Gallinatti, CEG

DRILLING METHOD: 3 1/2" continuous flight auger

HAMMER WEIGHT: 140 lbs

DROP: 30"

SAMPLER: 2" split barrel sampler

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	ANALYTICAL RESULTS
	Sample No.	Sample	Blows/ Foot			
Surface Elevation:						
1				CONCRETE		See Tables 3 and 4
1				CLAYEY SAND (SC) Dark yellowish brown (10 YR 4/4 - 4/6), mottled, moist, some fine sand, some coarse sand, little clay, few fine gravel		
2						
3	D1		19			
4				Gradational decrease in grain size		
5				CLAYEY SAND (SC) Yellowish brown (10 YR 5/4), moist, mostly fine sand, some clay, few fine gravel, trace charcoal		
6						
7	D2		32	Increased clay content		
8	D3					
8				Bottom of hole at 8.0 feet		
9						
10						
11						
12						
13						
14						
15						

### EXPLANATION



Drive sample

Brass liner sample retained for chemical analysis

PROJECT: CHRYSLER  
Oakland, California

# Log of Boring No. B-4

BORING LOCATION: East of underground waste oil tank



DATE STARTED: 2/14/89      DATE FINISHED: 2/14/89

NOTES:  
 Logged By: L. RowlesHall, RG  
 Drilling Equip.: Minuteman  
 Drilling Contractor: Access Drilling  
 Checked by: J.D. Gallinatti, CEG

DRILLING METHOD: 3 1/2" continuous flight auger

HAMMER WEIGHT: 70 lbs      DROP: 30"

SAMPLER: 2" split barrel sampler

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	ANALYTICAL RESULTS
	Sample No.	Sample	Blows/ Foot			
Surface Elevation:						
1				CONCRETE		See Tables 3 and 4
1				SILTY CLAY (CL) Dark yellowish brown (10 YR 4/6), moist, mostly clay, some silt, trace fine gravel, firm		
2				CLAYEY SAND (SC) Dark yellowish brown (10 YR 4/4), moist, mottled, mostly fine sand, some clay, little fine gravel, little silt, trace medium gravel, colors mottled yellow, red, mostly dark yellowish brown, no odor, gravel, red chert, subangular - subrounded		
3	D1		58			
4						
5						
6						
7				CLAYEY SAND (SC) Mottled gray (5 Y 5/1) and brown (7.5 YR 4/4), mostly fine sand, some medium sand, little clay, trace medium subrounded gravel (chert), <u>strong odor</u>		
8	D2		28			
9						
10				CLAY (CL) Brown (10 YR 5/3) and light brownish gray (2.5 YR 6/2), mostly clay, trace silt, trace fine sand, moderate odor.		
11				Clay, pale brown (10 YR 6/3)		
12	D3		26			
12				Bottom of hole at 12.0 feet		
EXPLANATION						
13				 Drive sample		
14				 Brass liner sample retained for chemical analysis		
15						

PROJECT: CHRYSLER  
Oakland, California

# Log of Boring No. B-5

BORING LOCATION: Parking lot west of building

DATE STARTED: 2/14/89

DATE FINISHED: 2/14/89

NOTES:










Logged By: L. RowlesHall, RG  
Drilling Equip.: Minuteman  
Drilling Contractor: Access Drilling  
Checked by: J.D. Gallinatti, CEG

DRILLING METHOD: 3 1/2" continuous flight auger

HAMMER WEIGHT: 140 lbs

DROP: 30"

SAMPLER: 2" split barrel sampler

DEPTH (feet)	SAMPLES		LITHOLOGY	MATERIAL DESCRIPTION	ANALYTICAL RESULTS
	Sample No.	Blows/ Foot			
Surface Elevation:					
0				ASPHALT	
1				SANDY GRAVEL (GW) Brown (7.5 YR 4/4), moist, mostly medium subangular gravel, some medium sand, little fine sand, little clay	See Tables 3 and 4
2				SILTY CLAY (CL) Black (7.5 YR 2/0), moist, mostly clay, some silt, trace fine sand, trace roots. soft, no odor, medium plasticity	
3	D1	6			
4				Color and moisture content change to dark greenish gray (5 GY 4/1), wet	
5					
6					
7				SILTY CLAY (CL) Dark yellowish brown (10 YR 4/4), grading downward to yellowish brown (10 YR 5/4), dry, mostly clay, some silt, hard, medium plasticity, trace MnO <sub>2</sub>	
8	D2	76			
9				Bottom of hole at 8.0 feet	
10					
11					
12	D3	26			
13					
14					
15					

EXPLANATION



Drive sample

Brass liner sample retained for chemical analysis

BL-1-88

TABLE 2

ANALYTICAL RESULTS  
SOIL SAMPLES - ORGANIC COMPOUNDS<sup>1</sup>

concentrations in mg/kg (ppm).

Boring Number (Depth, feet)	Oil	Gasoline	Benzene	Toluene	Xylene	Ethyl- benzene	Ethylene Glycol	PCBs	Pesticides
1 (2.5)	ND <sup>2</sup>	ND	ND	ND	ND	ND	ND	ND	ND
(7.5)	ND	ND	ND	ND	ND	ND	ND	ND	ND
2 (2.5)	ND	ND	ND	ND	ND	ND	ND	ND	ND
(7.5)	ND	ND	ND	ND	ND	ND	ND	ND	ND
3 (2.5)	ND	ND	ND	ND	ND	ND	ND	ND	ND
(7.5)	140	ND	ND	ND	ND	ND	ND	ND	ND
4 (2.5)	ND	ND	ND	ND	ND	ND	ND	ND	ND
(7.5)	2900	ND	ND	ND	ND	ND	ND	ND	ND
5 (2.5)	ND	ND	ND	ND	ND	ND	ND	ND	ND
(7.5)	ND	ND	ND	ND	ND	ND	ND	ND	ND

<sup>1</sup> Detection limits vary according to analytical method and sample dilution factor.

<sup>2</sup> ND = not detected.



TABLE 3  
ANALYTICAL RESULTS  
SOIL SAMPLES - VOLATILE ORGANIC COMPOUNDS<sup>1</sup>

concentrations in mg/kg (ppm)

Compound	Detection Limit	Boring Number (Depth, feet)	
		3 (7.5)	4 (7.5)
1,1,1-Trichloroethane	0.1	ND <sup>2</sup>	ND
1,1,2,2-Tetrachloroethane	0.1	ND	ND
1,1,2-Dichloroethane	0.1	ND	ND
1,1-Dichloroethane	0.1	ND	ND
1,1-Dichloroethylene	0.1	ND	ND
1,2-Dichloroethane	0.1	ND	ND
1,2-Dichloropropane	0.1	ND	ND
2-Chloroethylvinylether	0.1	ND	ND
Acrolein	1.0	ND	ND
Acrylonitrile	1.0	ND	ND
Bromodichloroemthane	0.1	ND	ND
Bromomethane	0.1	ND	ND
Benzene	0.1	ND	ND
Chlorobenzene	0.1	ND	ND
Carbon Tetrachloride	0.1	ND	ND
Chloroethane	0.1	ND	ND
Bromoform	0.1	ND	ND
Chloroform	0.1	ND	ND
Chloromethane	0.1	ND	ND
Dibromochloromethane	0.1	ND	ND
Ethylbenzene	0.1	ND	ND
Methylene chloride	0.1	ND	ND
Tetrachloroethylene	0.1	ND	ND

<sup>1</sup> Analyzed by EPA Method 8240.

<sup>2</sup> ND = No detected

TABLE 4  
ANALYTICAL RESULTS  
SOIL SAMPLES - TOXIC METALS

concentrations in parts per million, ppm (mg/kg)

Metal	Background <sup>1</sup> (Bay Area)	TTL <sup>2</sup>	Soil Boring Number (Depth, feet)					Detection Limit
			1 (2.5)	2 (2.5)	3 (2.5)	4 (2.5)	5 (2.5)	
Antimony (Sb)	1-10	500	ND <sup>3</sup>	ND	ND	ND	ND	1.2
Arsenic (As)	10-65	500	ND	1.3	1.6	1.9	1.7	0.4
Barium (Ba)	500-3000	10,000	120	120	110	85	180	1.0
Beryllium (Br)	<1	75	ND	ND	ND	ND	ND	0.2
Cadmium (Cd)	NA <sup>4</sup>	100	3.4	4.7	3.3	5.7	3.6	0.8
Chromium (Cr)	100-1000	2,500	44	44	33	51	40	1.0
Cobalt (Co)	15-70	8,000	4.5	19	8.7	25	11	0.6
Copper (Cu)	50-500	2,500	8.2	15	22	21	12	1.6
Lead (Pb)	30-300	1,000	ND	ND	ND	ND	ND	6.0
Mercury (Hg)	.082-1.3	20	ND	0.02	0.02	0.03	ND	0.01
Molybdenum (Mo)	<3	3,500	ND	ND	ND	ND	ND	1.6
Nickel (Ni)	30-300	2,000	54	59	41	58	30	0.6
Selenium (Se)	<.1-0.5	100	ND	ND	0.2	ND	ND	0.2
Silver (Ag)	NA	500	0.4	ND	ND	ND	ND	0.4
Thallium (Th)	NA	700	5	ND	3	ND	ND	2
Vanadium (V)	150-500	2,400	21	39	28	44	41	0.6
Zinc (Zn)	120-400	5,000	17	50	68	35	21	0.2

<sup>1</sup> Shucklett and Boerngen, 1984, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States, U.S.G.S. Professional Paper 1220.

<sup>2</sup> TTL<sup>2</sup> = Total Threshold Limit Concentration according to Section 66899, Article 11, Title 22 of the California Administrative Code. Concentrations greater than TTL<sup>2</sup> are considered hazardous.

<sup>3</sup> ND = Not detected.

<sup>4</sup> NA = Not available.

TABLE 4 (continued)

ANALYTICAL RESULTS  
SOIL SAMPLES - TOXIC METALS

concentration in parts per million, ppm (mg/kg)

Metal	Background (Bay Area) <sup>1</sup>	TTLC <sup>2</sup>	Soil Boring Number (Depth, feet)					Detection Limit
			1 (7.5)	2 (7.5)	3 (7.5)	4 (7.5)	5 (7.5)	
Antimony (Sb)	1-10	500	ND <sup>3</sup>	ND	ND	ND	ND	1.2
Arsenic (As)	10-65	500	1.4	2.4	2.4	3.1	1.7	0.4
Barium (Ba)	500-3000	10,000	88	180	150	140	150	1.0
Beryllium (Br)	<1	75	ND	ND	ND	ND	ND	0.2
Cadmium (Cd)	NA <sup>4</sup>	100	3.8	5.3	6.7	5.2	4.1	0.8
Chromium (Cr)	100-1000	2,500	36	45	70	47	52	1.0
Cobalt (Co)	15-70	8,000	6.8	16	21	18	13	0.6
Copper (Cu)	50-500	2,500	12	87	60	22	13	1.6
Lead (Pb)	30-300	1,000	ND	ND	ND	ND	ND	6.0
Mercury (Hg)	.082-1.3	20	ND	ND	0.06	0.03	0.07	0.01
Molybdenum (Mo)	<3	3,500	ND	ND	ND	ND	ND	1.6
Nickel (Ni)	30-300	2,000	36	61	70	55	120	0.6
Selenium (Se)	<.1-0.5	100	ND	ND	ND	ND	ND	0.2
Silver (Ag)	NA <sup>5</sup>	500	ND	ND	ND	ND	ND	0.4
Thallium (Th)	NA	700	5	3	ND	ND	ND	2
Vanadium (V)	150-500	2,400	30	43	56	43	36	0.6
Zinc (Zn)	120-400	5,000	21	91	95	29	49	0.2

<sup>1</sup> Shacklette and Boerngen, 1984, Element Concentrations in Soils and Other Surficial Materials of the Conterminous United States, USGS Professional Paper 1270.

<sup>2</sup> TTLC = Total Threshold Limit Concentration according to Section 66899, Article 11, Title 22 of the California Administrative Code. Concentrations greater than TTLC are considered hazardous.

<sup>3</sup> ND = Not detected.

<sup>4</sup> NA = Not available.

TABLE 5

 ANALYTICAL RESULTS  
 GROUNDWATER - ORGANIC COMPOUNDS

concentrations in µg/l (ppb)

<u>Parameter</u>	<u>Limit</u>	<u>GW-1</u>	<u>GW-2</u>	<u>GW-3</u>
Gasoline	50	510	ND <sup>1</sup>	70
Motor Oil	100	860	1200	350
Ethyl Glycol	1000	ND	ND	ND
Benzene <sup>2</sup>	0.5/4.4	58/ND	8/ND	27/ND
Bromodichloromethane	2.2	ND	ND	ND
Bromoform	4.7	ND	ND	ND
Bromomethane	5.0	ND	ND	ND
Carbon Tetrachloride	2.0	ND	ND	ND
Chlorobenzene	6.0	ND	ND	ND
Chloroethane	5.0	ND	ND	ND
2-Chloroethylvinylether	7.0	ND	ND	ND
Chloroform	1.6	ND	ND	ND
Chloromethane	5.0	ND	ND	ND
Dibromochloromethane	3.1	ND	ND	ND
1,2-Dichlorobenzene	6.0	ND	ND	ND
1,3-Dichlorobenzene	6.0	ND	ND	ND
1,4-Dichlorobenzene	6.0	ND	ND	ND
1,1-Dichloroethane	4.7	ND	ND	ND
1,2-Dichloroethane	2.8	ND	ND	ND
1,1-Dichloroethene	2.8	ND	ND	ND
trans-1,2-Dichloroethene	1.6	ND	ND	ND
1,2-Dichloropropene	6.0	ND	ND	ND
cis-1,3-Dichloropropene	5.0	ND	ND	ND
trans-1,3-Dichloropropene	5.0	ND	ND	ND
Ethylbenzene <sup>2</sup>	0.6/7.2	ND/ND	ND/ND	ND/ND
Methylene chloride	10	14	ND	ND
1,1,2,2-Tetrachloroethane	6.9	ND	ND	ND
Tetrachloroethene	4.1	ND	ND	ND
Toluene <sup>2</sup>	0.5/6.0	ND/ND	3/ND	ND/ND
1,1,1-Trichloroethane	3.8	ND	ND	ND
1,1,2-Trichloroethane	5.0	ND	ND	ND
Trichloroethene	1.9	ND	ND	ND
Trichlorofluoromethane	5.0	ND	ND	ND
Vinyl chloride	5.0	ND	ND	ND
Xylene <sup>2</sup>	1.5/15	9/ND	ND/ND	ND/ND

<sup>1</sup> ND = Not detected.

<sup>2</sup> Analyzed initially on-site in the mobile laboratory by EPA Method 5020 and 8020. Confirmation analysis performed in main laboratory in Santa Rosa by EPA Method 624 (initial/confirmation).

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