Woodward-Clyde Consultants

PRELIMINARY SOIL AND GROUNDWATER CONTAMINATION ASSESSMENT HERTZ SERVICE CENTER #1 AIRPORT DRIVE OAKLAND, CALIFORNIA

2/97

Prepared for

The Hertz Corporation
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Prepared by

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1.0 INTRODUCTION

In accordance with Agreement between the Hertz Corporation and Woodward Clyde Consultants (WCC) dated October 27, 1989, we are pleased to submit this Preliminary Soil and Groundwater Contamination Assessment of the Hertz Oakland Airport Services Center at #1 Airport Drive, Oakland, California, as shown on Figure 1.

This report presents the following information:

- a description of the soil and groundwater conditions encountered adjacent to the former underground tank site;
- analytical results of potential contaminants in soil and groundwater;
- evaluation of on-site contamination; and
- recommendations.

1.1 BACKGROUND/PROJECT DESCRIPTION

The Hertz Service Center, Oakland Airport is located between Terminal 1 of the Oakland International Airport to the south, Alan Shepard Way to the northeast, and the Oakland Airport Fire Station to the northwest (Figure 1). As shown on Figure 2, the former tanks were located where the office building presently exists. The other structures adjacent to the office

trailer are a two-pump gasoline service island with a metal canopy to the west, and a masonry car wash/service bay building to the north. Most of the site is paved with asphaltic concrete.

It is our understanding that three underground storage tanks and associated piping were removed from the subject site in November, 1988 by Paradiso Construction Company: one 10,000-gallon and one 5,000-gallon tank containing gasoline, and one 500-gallon tank containing waste oil (Figure 2). On November 25, 1988 soil and groundwater samples were collected by Paradiso Construction Company (Figure 3). Soil samples A1, A2, A3, A4, A5 (at the vent inlet), and A6 (at the vent outlet), and groundwater sample A5 were collected from the tank excavation area. Soil samples B1 and B2 were collected from the associated piping excavation trenches. A composite soil sample (C1, C2 and C3) was comprised of soil removed from the former tank area and stockpiled on site.

The soil and groundwater samples were analyzed on 28 November 1988 by Trace Analysis Laboratory, Inc. of Hayward, California for total petroleum hydrocarbons, benzene, toluene, ethylbenzene, and xylenes (BTEX). In addition, soil sample A1 was analyzed for semi-volatile hydrocarbon compounds (EPA Method 8010).

Results of the analyses indicated that the soil sample from location B2 and the groundwater sample from location A5 contained the following compounds: 1,300 ppm (parts per million) and 7,400 ug/L or ppb (parts per billion) total petroleum hydrocarbons as gasoline; 55 ppm and 63 ppb benzene, 51 ppm and 570 ppb toluene; 19 ppm and 250 ppb ethylbenzene; and 200 ppm and 1,900 ppb xylenes. Total petroleum hydrocarbons including BTEX were not found above the detection limits in soil samples A1, A2, A3, A4, A5, A6, B1, and composite sample C1, C2 and C3. Furthermore, semi-volatile compounds were not found above detection limits in soil sample A1. This information was provided to WCC by the Hertz Corporation and is included in Appendix A.

At present, the area where the tanks were removed, and soil and groundwater samples were taken is no longer directly accessible. Following tank removal an office building was constructed over the former tank locations (Figure 2).

The purpose of this study is to evaluate potential for soil and groundwater contamination at the subject site.

1.2 SCOPE OF WORK

This preliminary assessment of the Hertz Service Center site at the Oakland International Airport includes:

- site reconnaissance;
- drilling of three borings and collection of soil samples;
- installation of three monitoring wells and collection of groundwater samples;
- laboratory analyses of soil and groundwater samples; and
- preparation of this report.

Soil and groundwater samples were collected from each boring and well and submitted to a commercial analytical laboratory for the following analysis:

- Total petroleum hydrocarbons (TPH) as gasoline and diesel;
- Chlorinated hydrocarbons (CLHC) and benzene, toluene, ethylbenzene, and xylenes (BTEX);

- Metals: cadmium (Cd), chromium (Cr), lead (Pb), and zinc (Zn)

- PCB, PCP, PNA, and creosote.

This report presents the results of the assessment.

2.0
FIELD EXPLORATION

2.1 SOIL BORINGS AND SAMPLING

Soil borings were drilled on December 20, 1989 by Datum Exploration in accordance with the Health and Safety Agreement dated November 14, 1989 (Appendix B) at three locations, to the west, east and south side of the Service Center office building, as shown in Figure 2. The borings extended to a maximum depth of 16.5 feet. Each boring was converted into a groundwater monitoring well. The monitoring well permits are included in Appendix C. A log of each boring was prepared by a WCC engineer and is included in Appendix D. The logs contain descriptions of the materials encountered in each boring, well construction details, field measurements and field observations of potential contaminants. To investigate the groundwater conditions, the monitoring wells were located at points that WCC anticipated would provide data representative of site conditions, and were as close to the previous tank locations as was physically possible.

All of the borings were drilled with 8-inch diameter continuous flight hollow stem augers, powered by a truck mounted drill rig. Soil samples were obtained at 5-ft intervals to 15 feet and at 2 ft below the ground surface. The soil samples were recovered with a 2-inch diameter modified California drive sampler, lined with four, 4-inch long, 2-inch diameter brass tubes. Sample ends were sealed with teflon sheets and plastic caps and transported to Anametrix, Inc. of San Jose, California, a State certified analytical laboratory, in a chilled ice chest on the day sampled. Selected soil samples were submitted to a the analytical laboratory for chemical testing. Samples not selected for chemical analyses were held by the laboratory pending analytical results and proper disposal.

To reduce the potential of cross-contamination between sampling intervals, the drive sampler was decontaminated in the following manner:

(1) Alconox wash,
(2) Tap water rinse,
(3) Triple rinse with deionized water, and
(4) Air-dried.

Brass liners and caps were decontaminated in the same manner, prior to use. To reduce the potential for contamination between drilling locations, the augers and the drive sampler were steam cleaned prior to commencing each monitoring well boring.

Soil cuttings of each boring were placed in 55-gallon drums and stored on site pending laboratory analytical results for proper disposal.

2.2 MONITORING WELL CONSTRUCTION, DEVELOPMENT AND SAMPLING

Each boring was converted into a 2-inch-diameter monitoring well. Monitoring wells MW-1, MW-2, and MW-3 are located on the west, east, and south side of the service center office building, respectively (Figure 2). All PVC casing, screen and well end caps were steam cleaned before construction of each monitoring well. Construction details are included in Appendix D.

The monitoring wells were developed at least 24 hours after the monitoring wells were installed. In developing the monitoring wells approximately 5 casing volumes of water were removed with a Teflon bailer. The wells were allowed to recharge for approximately 24 hours before sampling occurred. Prior to sampling, approximately 45 to 50 gallons of water were removed from the wells with a Honda suction pump. Measurements of the relative stability of pH, temperature, conductivity, and salinity were taken every 5 gallons (Appendix E). Groundwater samples

were taken with a Teflon bailer and retained in containers prepared by the analytical laboratory. The samples were transported to the State certified laboratory in a chilled ice chest. Chain-of-Custody forms are also included in Appendix E. Water removed from the monitoring wells was stored in 55-gallon drums pending analytical results for proper disposal.

The monitoring wells were surveyed on Thursday, January 18, 1990. Approximate water elevations were estimated from depth to water data taken on December 22, 1989, using Port of Oakland Datum, Hertz station of 10.42 feet above mean sea level. The data indicates that the water elevations are approximately 1-3/4, 3-1/4 and 2-1/4 feet above mean sea level in MW-1, MW-2 and MW-3, respectively. Therefore, the local groundwater gradient is approximated to be southwest (Figure 4), where MW-2 is upgradient and MW-1 is downgradient. MW-3 is approximately 8 feet south of the former tank location.

The local groundwater gradient corresponds to general topographic information. Topographic maps show a gentle southwesterly slope. (U.S. Geologic Survey, San Leandro Quadrangle and Oakland East Quadrangle, 7.5 minute series, Topographic.) Groundwater in these areas is expected to flow toward San Francisco Bay to the southwest.

3.0
CHEMICAL ANALYTICAL TESTING

The soil and groundwater samples were submitted to a State certified analytical laboratory, Anametrix Inc. in San Jose, California for chemical testing. All of the groundwater and soil samples were analyzed for one or more of the following:

- Total petroleum hydrocarbons (TPH) as gasoline and diesel (DHS Method);
- Chlorinated hydrocarbons (CLHC) (EPA Method 8010) and benzene, toluene, ethylbenzene, and xylenes (BTEX);
- Metals: cadmium (Cd), chromium (Cr), lead (Pb), and zinc (Zn) (EPA Method 7000/6010);
- PCB, PCP, PNA, and creosote (EPA Method 8270).

Groundwater and soil samples were analyzed for potential contaminants based on field observations, site history, and regulatory requirements. One water sample from each monitoring well was analyzed. One soil sample taken at 2 feet below the ground surface and one soil sample taken at 5 feet below the ground surface from each monitoring well boring were analyzed.

4.0
RESULTS

4.1 FIELD EXPLORATION

Similar types of fill material were encountered in each of the three monitoring well borings. The fill encountered consists of mostly sand ranging from fine to medium grained sand with trace silt to medium sand with trace clay and pockets of shell fragments. At approximately 13 feet below grade, clay is encountered in all monitoring well borings.

During drilling of monitoring well borings MW-1 and MW-2, groundwater was encountered at a depth of approximately 6 feet. In monitoring well boring MW-3, groundwater was encountered at a depth of approximately 10 feet below grade. After construction of the monitoring wells, the groundwater rose to approximately 4½ to 5 feet below grade.

4.2 SOIL ANALYSES

The results of the chemical analytical tests are summarized in Table 1 and the analytical laboratory reports are included in Appendix E.

Samples taken at 2 feet below grade were analyzed for the following metals: cadmium (Cd), chromium (Cr), lead (Pb), and zinc (Zn). Concentrations of metals were not detected in concentrations above the Total Threshold Limit Concentration (TTLC) or Soluble Threshold Limit Concentration (STLC). Samples taken at 5 feet below grade were analyzed for TPH as gasoline and diesel, chlorinated hydrocarbons including BTEX, and extractible organic compounds including PCBs, PCP, PNA, and creosote. None were detected.

4.3 GROUNDWATER ANALYSES

The results of the analytical tests of groundwater samples are summarized in Table 2A, 2B, 2C and the analytical laboratory reports are included in Appendix E.

Although neither TPH (as gasoline and diesel) nor target organic compounds (EPA 8270 and 8010) were detected, two tentatively identified compounds (TICs) were reported in the three groundwater samples. The TICs reported were (iodomethyl) benzene in monitoring well MW-1 and MW-3, and 4-4'butylidenebis[2-(1,1-dimethyl-ethyl)5-methyl]phenol in MW-2 and MW-3. However, analyses for TICs are not standardized or calibrated, and not considered interpretable. See Section 4.4 for further discussion.

4.4 DISCUSSION

Laboratory analyses of soil and groundwater samples indicates that neither the soil nor groundwater sampled is contaminated with either total petroleum hydrocarbons, chlorinated hydrocarbons, or the metals: cadmium, chromium, lead and zinc. The TICs reported, (iodomethyl)benzene and 4-4'butylidenebis[2-(1,1-dimethyl-ethyl)5-methyl]phenol are indicated by the presence of an unidentified peak on the GC/MS spectra generated in EPA Method 8270 with an open scan. This unidentified peak is then compared to the National Bureau of Standards mass spectra library. Five (5) "best fits" from the library spectra are compared to the unidentified peak. The criteria for the match are interpreted and applied by the analyst. This leaves a high degree of uncertainty in the interpretation of the "best fit", and is not considered an accurate assessment of the unknown organic compound detected in the sample.

As described in Section 1.1, the sampling which occurred at the time of tank removal indicated contamination in one soil sample at location B2 and in one groundwater sample at location A5. Monitoring well MW-2 is located

within approximately 20 feet of soil sample B2 and approximately 10 ft from groundwater sample A5. Petroleum hydrocarbons were not detected in soil or groundwater samples from monitoring well/boring MW-2.

5.0
RECOMMENDATIONS

The results of soil and groundwater analyses for the subject site indicates that neither petroleum hydrocarbons nor extractible organic compounds (EPA Method 8270) were detected in soil or groundwater samples. The metals: cadmium, chromium, lead and zinc were detected in total concentrations below the TTLC and STLC. We recommend that a work plan to close the monitoring wells MW-1, MW-2, and MW-3 be developed and implemented. The plan should be submitted to Alameda County Department of Environmental Health (ACDEH) for review, along with a copy of this report, and if directed, submitted to the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region.

6.0
LIMITATIONS

The scope of this investigation is limited by time constraints, expense, and practicality. A limited number of samples were taken at locations at the site and a limited number of laboratory chemical analyses were performed for those samples. Professional opinions concerning the presence of hazardous substances were developed based on the resulting data. It would be prohibitively expensive and time consuming to sample all locations at the site and analyze the samples for all substances which are now, or in the future, might be considered hazardous. Therefore, WCC cannot be held responsible should the investigation fail to detect the presence or quantity of all hazardous substances at all locations of the site.

Table 1. SOIL LABORATORY ANALYSES

PARAMETER (a)	TTLCs (e)	UNITS	MW1-5	MW2-5	MW3-5	MW1-2	MW2-2	MW3-2	Detection Limit
METALS (EPA Method 7000/6010)									
Cadmium (Cd)	100	mg/kg	*	*	*	- -	- -	- -	0.5
Total Chromium (Cr)	2500	mg/kg	*	*	*	19.7	18.1	19.8	0.5
Lead (Pb)	1000	mg/kg	*	*	*	2.5	1.5	1.5	1.0
Zinc (Zn)	5000	mg/kg	*	*	*	23.5	12.3	11.0	0.5
SEMI-VOLATILE ORGANICS (EPA Method 8270)									
None detected; see footnote (a).		mg/kg	- -	- -	- -	- -	- -	- -	(a)
PETROLEUM HYDROCARBONS (EPA Methods 8015/8020)									
TPH as gasoline (EPA Method 5030)		mg/kg	- -	- -	- -	- -	- -	- -	1
TPH as diesel (EPA Method 3510/3550)		mg/kg	- -	- -	- -	- -	- -	- -	10
Benzene		mg/kg	- -	- -	- -	- -	- -	- -	0.005
Toluene		mg/kg	- -	- -	- -	- -	- -	- -	0.005
Ethylbenzene		mg/kg	- -	- -	- -	- -	- -	- -	0.005
Xylenes		mg/kg	- -	- -	- -	- -	- -	- -	0.005

(a) Compounds listed are only those compounds detected in one or more of the monitoring well borings sampled. Data for other compounds [not detected] is available in Appendix E.

(b) * indicates not tested

(c) -- indicates parameter not present above the stated detection limit.

(d) An example of the soil sample descriptions, MW1-5: MW1 is monitoring well boring no. 1; -5 indicates the depth interval in feet.

(e) Total threshold limit concentration (TTLCs) standards are set by the State of California, California Adminstrative Code, Title 22, Div. 4, Sect. 66699. Concentrations above these limits define the substance as a hazardous waste.

Table 2A. MONITORING WELL NO. 1 GROUNDWATER LABORATORY ANALYSES

PARAMETER (a)	UNITS	SAMPLING EVENT		DRINKING WATER CRITERIA		MARINE CRITERIA		
		December, 1989	Detection Limit	PRIMARY MCLs (c),(d),(i)	ACTION LEVELS (e)	S.F. BAY BASIN PLAN	CALIFORNIA OCEAN PLAN (g)	EPA ACUTE TOXICITY (h)
VOLATILE HALOCARBONS (EPA Method 8010)								
None detected; see footnote (a).	ug/L	- -	(a)	(j)				
SEMI-VOLATILE ORGANICS (EPA Method 8270)								
None detected; see footnote (a).	ug/L	- -	2.0					
PETROLEUM HYDROCARBONS (BTEX by EPA Method 8020)								
TPH as gasoline (EPA Method 5030)	ug/L	- -	50.0					
TPH as diesel (EPA Method 3510/3550)	ug/L	- -	50.0					
Benzene	ug/L	- -	0.5	5	1			5100
Toluene	ug/L	- -	0.5	2000	100			6300
Ethylbenzene	ug/L	- -	0.5	680	680			430
Xylenes	ug/L	- -	1	1750	620			
EXTRA COMPOUNDS (EPA Method 8270)								
(iodomethyl)benzene		(k)						

(a) Compounds listed are only those compounds detected in one or more of the monitoring well borings sampled. Data for other compounds [not detected] is available in Appendix E.

(b) -- indicates parameter not present above the stated detection limit.

(c) Drinking Water Standards Under the Safe Drinking Water Act, U.S. EPA, Criteria and Standards Division, Washington, D.C., February, 1989.

(d) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for contaminants in Drinking Water. April, 1989.

(e) Drinking Water Action Levels Recommended by the State of California Department of Health Services. April 19, 1989.

(f) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December, 1986, Table IV-1 (Shallow Water).

(g) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(h) U.S. Environmental Protection Agency, Water Quality Advisories, March, 1986; U.S. Environmental Protection Agency, Quality Criteria for Water, May, 1986, and as amended.

(i) If state and federal guidelines both exist, the lower of the two concentration limits is given.

(j) Blank indicates no water quality criteria known.

(k) Tenatively identified compounds (TICs) are significant chromaticgraphic peaks other than priority pollutants. TIC spectra are compared with entries in the National Bureau of Standards mass spectral library. Identification is made using EPA guidelines and acceptance criteria.

Table 2B. MONITORING WELL NO. 2 GROUNDWATER LABORATORY ANALYSES

PARAMETER (a)	UNITS	SAMPLING EVENT		DRINKING WATER CRITERIA		MARINE CRITERIA		
		December, 1989	Detection Limit	PRIMARY MCLs (c),(d),(i)	ACTION LEVELS (e)	S.F. BAY BASIN PLAN	CALIFORNIA OCEAN PLAN (g)	EPA ACUTE TOXICITY (h)
VOLATILE HALOCARBONS (EPA Method 8010)								
None detected; see footnote (a).	ug/L	- -	(a)	(j)				
SEMI-VOLATILE ORGANICS (EPA Method 8270)								
None detected; see footnote (a).	ug/L	- -	2.0					
PETROLEUM HYDROCARBONS (BTEX by EPA Method 8020)								
TPH as gasoline (EPA Method 5030)	ug/L	- -	50.0					
TPH as diesel (EPA Method 3510/3550)	ug/L	- -	50.0					
Benzene	ug/L	- -	0.5	5	1			5100
Toluene	ug/L	- -	0.5	2000	100			6300
Ethylbenzene	ug/L	- -	0.5	680	680			430
Xylenes	ug/L	- -	1	1750	620			
EXTRA COMPOUNDS (EPA Method 8270)								
4,4'-butylidenebis [2-(1,1-dimethyl-ethyl)5-methyl]phenol		(k)						

(a) Compounds listed are only those compounds detected in one or more of the monitoring well borings sampled. Data for other compounds [not detected] is available in Appendix E.

(b) -- indicates parameter not present above the stated detection limit.

(c) Drinking Water Standards Under the Safe Drinking Water Act, U.S. EPA, Criteria and Standards Division, Washington, D.C., February, 1989.

(d) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for contaminants in Drinking Water. April, 1989.

(e) Drinking Water Action Levels Recommended by the State of California Department of Health Services. April 19, 1989.

(f) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December, 1986, Table IV-1 (Shallow Water).

(g) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(h) U.S. Environmental Protection Agency, Water Quality Advisories, March, 1986; U.S. Environmental Protection Agency, Quality Criteria for Water, May, 1986, and as amended.

(i) If state and federal guidelines both exist, the lower of the two concentration limits is given.

(j) Blank indicates no water quality criteria known.

(k) Tenatively identified compounds (TICs) are significant chromaticgraphic peaks other than priority pollutants. TIC spectra are compared with entries in the National Bureau of Standards mass spectral library. Identification is made using EPA guidelines and acceptance criteria.

Table 2C. MONITORING WELL NO. 3 GROUNDWATER LABORATORY ANALYSES

PARAMETER (a)	UNITS	SAMPLING EVENT		DRINKING WATER CRITERIA		MARINE CRITERIA		
		December, 1989	Detection Limit	PRIMARY MCLs (c),(d),(i)	ACTION LEVELS (e)	S.F. BAY BASIN PLAN	CALIFORNIA OCEAN PLAN (g)	EPA ACUTE TOXICITY (h)
VOLATILE HALOCARBONS (EPA Method 8010)								
None detected; see footnote (a).	ug/L	- -	(a)	(j)				
SEMI-VOLATILE ORGANICS (EPA Method 8270)								
None detected; see footnote (a).	ug/L	- -	2.0					
PETROLEUM HYDROCARBONS (BTEX by EPA Method 8020)								
TPH as gasoline (EPA Method 5030)	ug/L	- -	50.0					
TPH as diesel (EPA Method 3510/3550)	ug/L	- -	50.0					
Benzene	ug/L	- -	0.5	5	1.0			5100
Toluene	ug/L	- -	0.5	2000	100			6300
Ethylbenzene	ug/L	- -	0.5	680	680			430
Xylenes	ug/L	- -	1	1750	620			
EXTRA COMPOUNDS (EPA Method 8270)								
(iodomethyl) benzene		(k)						
4,4'- butylidenebis [2-(1,1-dimethyl-ethyl)5-methyl]phenol		(k)						

(a) Compounds listed are only those compounds detected in one or more of the monitoring well borings sampled. Data for other compounds [not detected] is available in Appendix E.

(b) -- indicates parameter not present above the stated detection limit.

(c) Drinking Water Standards Under the Safe Drinking Water Act, U.S. EPA, Criteria and Standards Division, Washington, D.C., February, 1989.

(d) State of California Department of Health Services, Recently Adopted Maximum Contaminant Levels for contaminants in Drinking Water. April, 1989.

(e) Drinking Water Action Levels Recommended by the State of California Department of Health Services. April 19, 1989.

(f) San Francisco Bay Basin Water Quality Control Plan, California RWQCB, San Francisco Bay Region. December, 1986, Table IV-1 (Shallow Water).

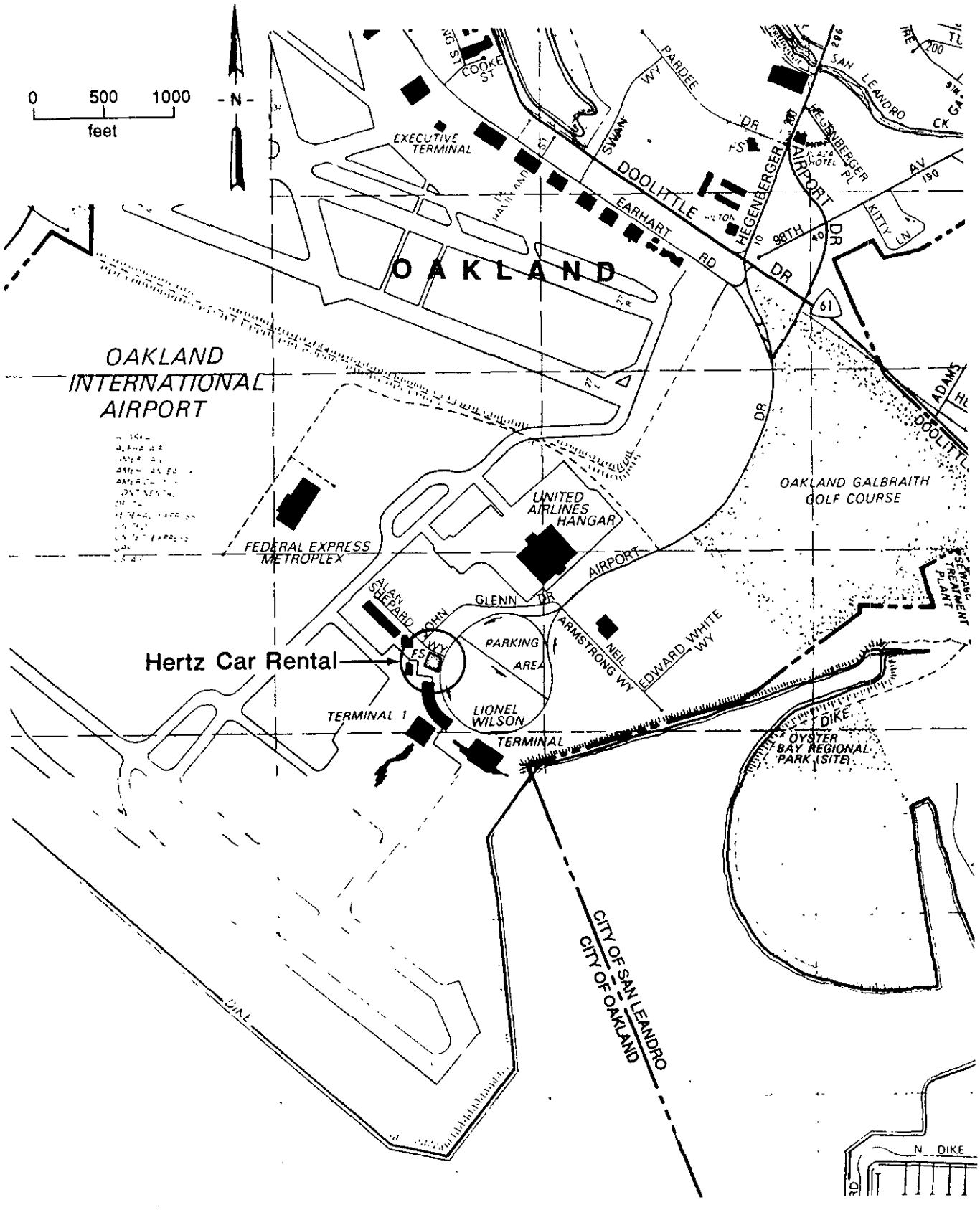
(g) California State Water Resources Control Board. 1983 Water Quality Control Plan; Ocean Waters of California.

(h) U.S. Environmental Protection Agency, Water Quality Advisories, March, 1986; U.S. Environmental Protection Agency, Quality Criteria for Water, May, 1986, and pertinent updates.

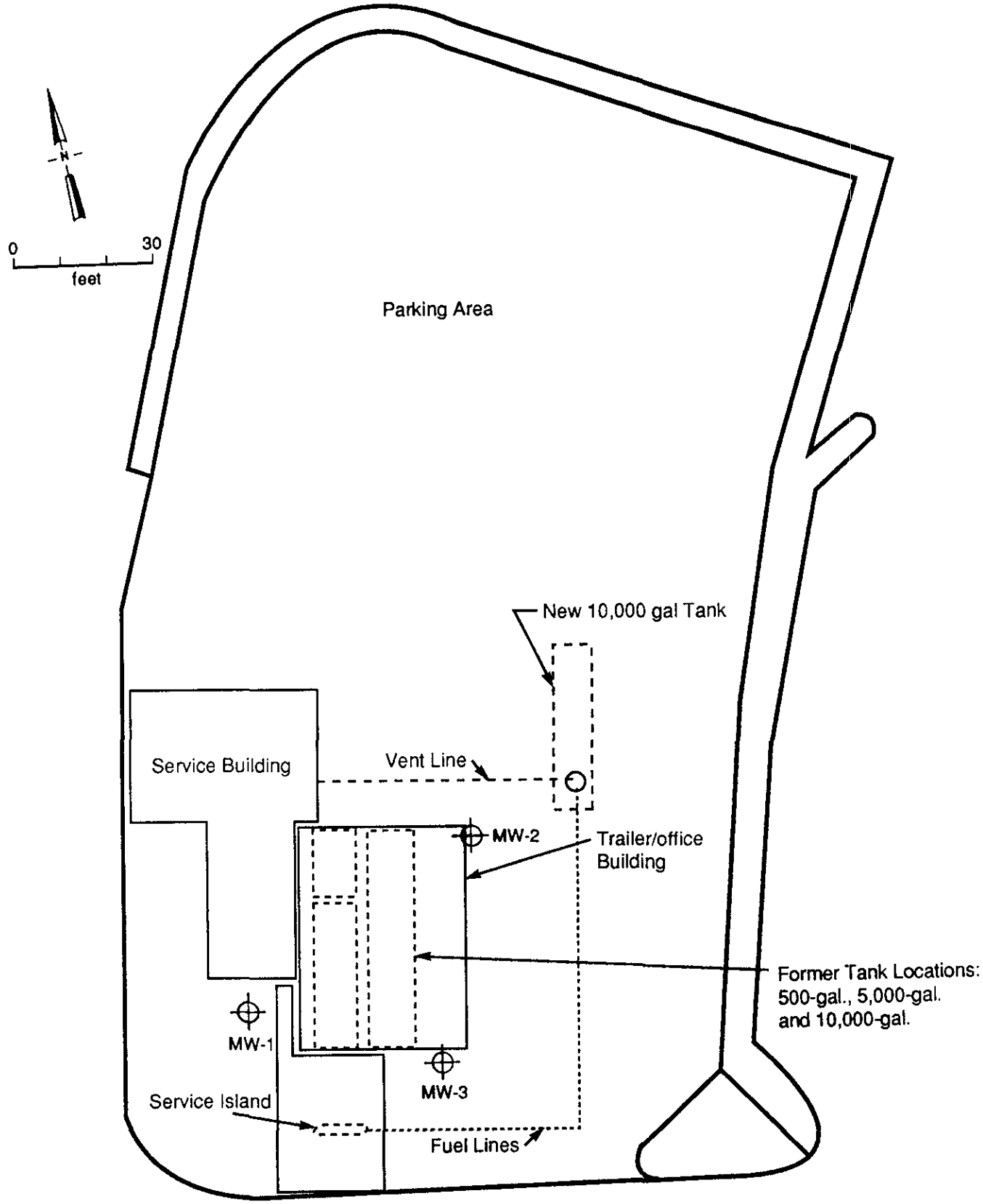
(i) If state and federal guidelines both exist, the lower of the two concentration limits is given.

(j) Blank indicates no water quality criteria known.

(k) Tenatively identified compounds (TICs) are significant chromaticgraphic peaks other than priority pollutants. TIC spectra are compared with entries in the National Bureau of Standards mass spectral library. Identification is made using EPA guidelines and acceptance criteria.

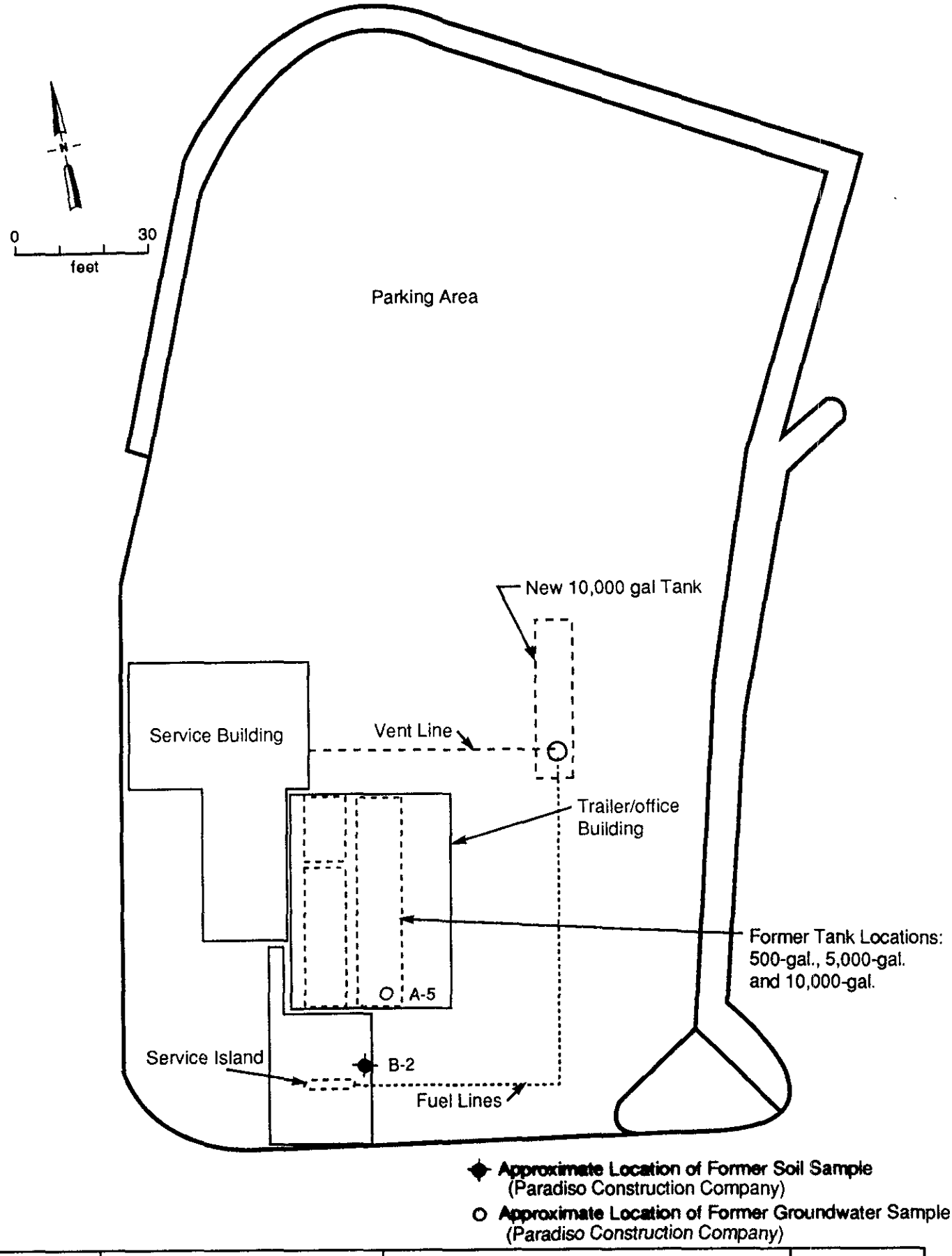


Project No. 8910336A	HERTZ OAKLAND AIRPORT	VICINITY MAP #1 Airport Drive Oakland, California	Figure 1
Woodward-Clyde Consultants			

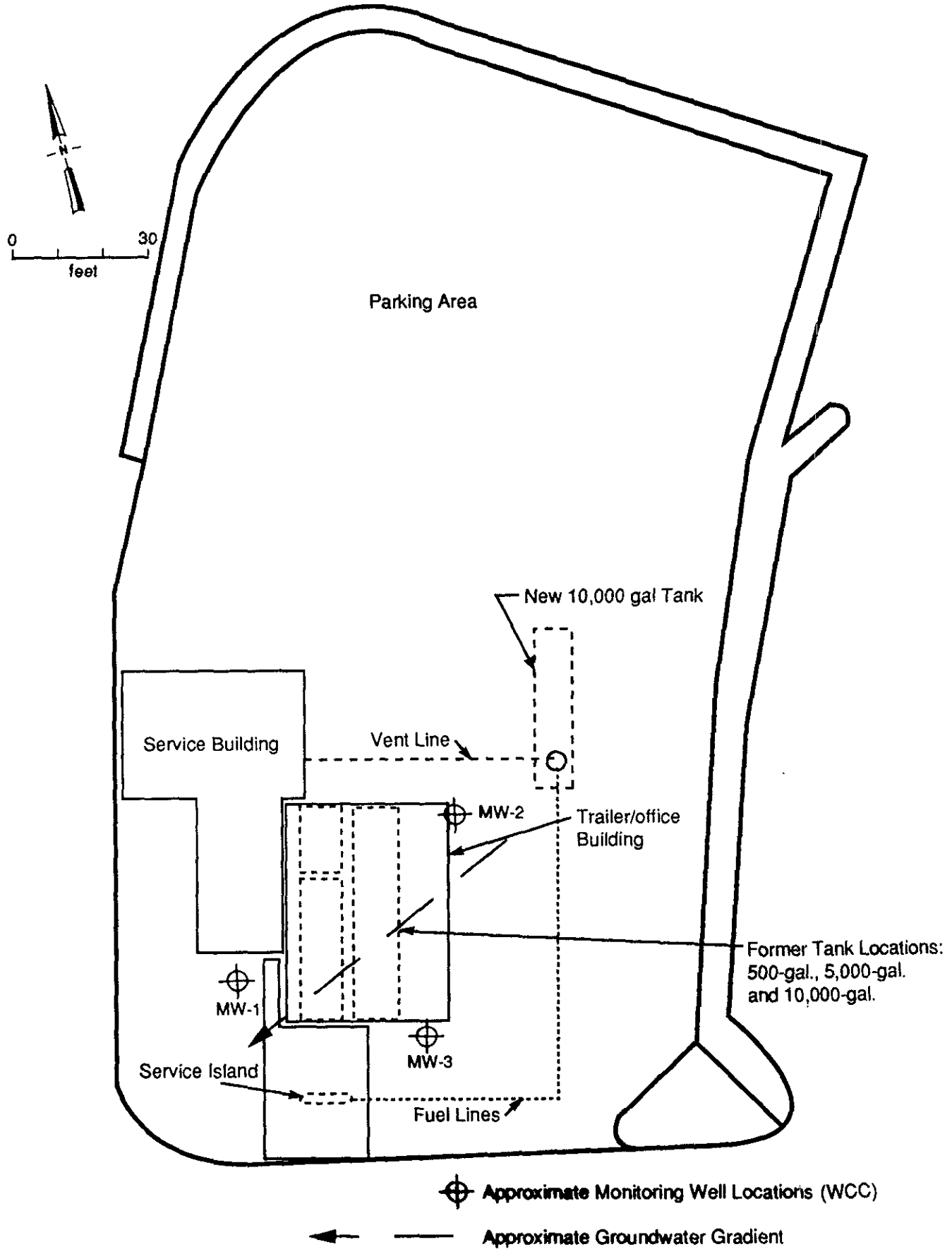


⊕ Approximate Monitoring Well Locations (WCC)

Project No. 8910336A	HERTZ OAKLAND AIRPORT	SITE AND MONITORING WELL LOCATION PLAN	January 1990
Woodward-Clyde Consultants			FIGURE 2



Project No. 8910336A	HERTZ OAKLAND AIRPORT	FORMER TANK AND TESTING LOCATION PLAN	January 1990
Woodward-Clyde Consultants			FIGURE 3



Project No. 8910336A	HERTZ OAKLAND AIRPORT	APPROXIMATE GROUNDWATER GRADIENT	January 1990
Woodward-Clyde Consultants			FIGURE 4

APPENDIX A

HISTORIC DATA - 1988 UNDERGROUND STORAGE TANK REMOVAL

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545 *(415) 783-6960*

(1)

TAL

DATE: 10/28/88

LOG NO.: 6564

DATE SAMPLED: 10/25/88

DATE RECEIVED: 10/25/88

CUSTOMER: Paradiso Construction Co.

REQUESTER: Eric Montesano

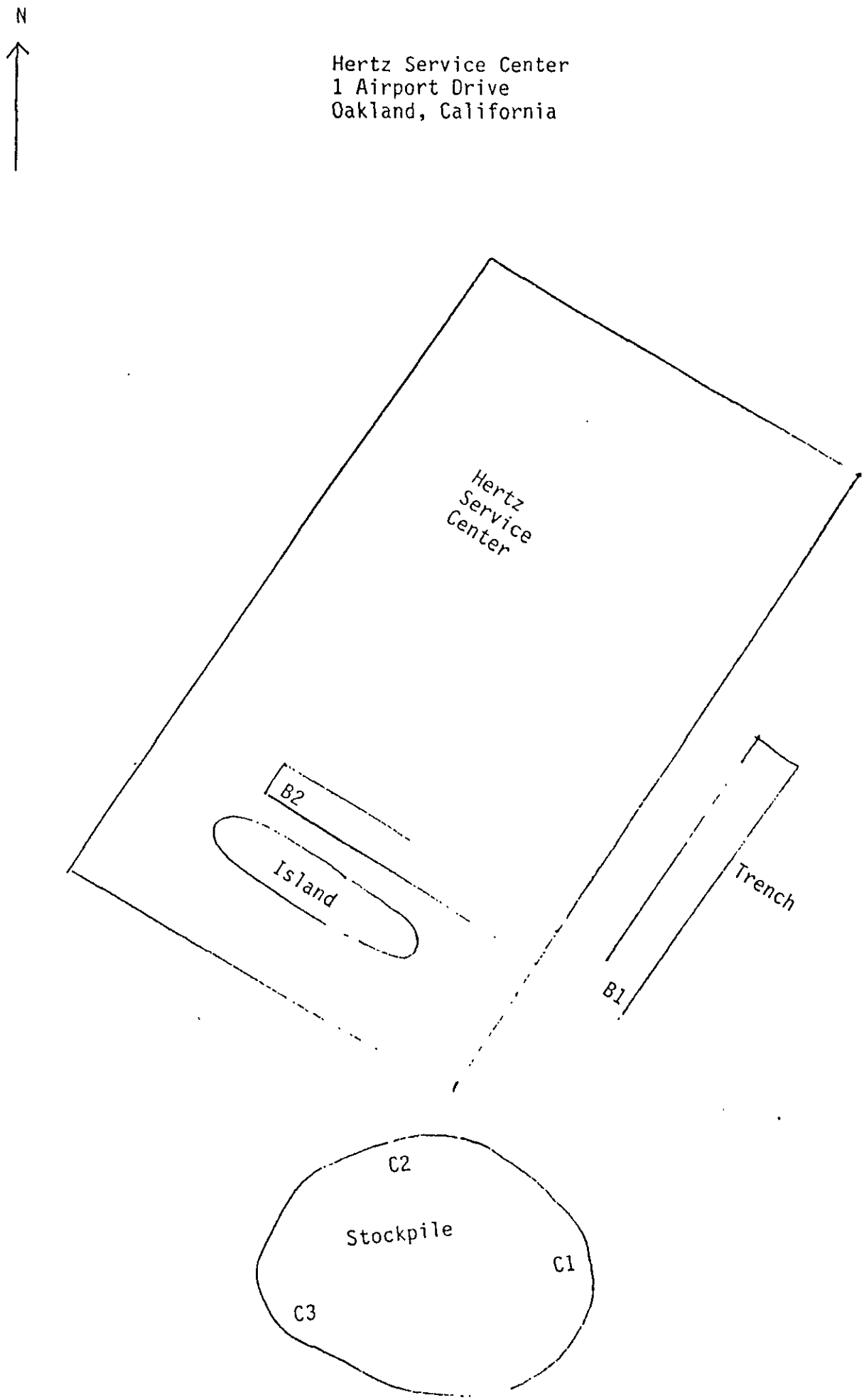
PROJECT: Hertz Service Center, Airport Drive, Oakland 404 E

		Sample Type: Soil					
		B-1		B-2		Composite of C-1, C-2, C-3	
Method and Constituent	Units	Concentration	Detection Limit	Concentration	Detection Limit	Concentration	Detection Limit
DHS Method:							
Total Petroleum Hydrocarbons as Gasoline	mg/kg	< 0.5	0.5	1,300	1	< 0.5	0.5
Modified EPA Method 8020:							
Benzene	mg/kg	< 0.03	0.03	55	3	< 0.03	0.03
Toluene	mg/kg	< 0.03	0.03	51	0.4	< 0.03	0.03
Xylenes	mg/kg	< 0.09	0.09	200	5	< 0.09	0.09
Ethyl Benzene	mg/kg	< 0.03	0.03	19	0.5	< 0.03	0.03

RECEIVED
OCT 31 1988
PARADISO CONSTRUCTION CO

Hugh R. McLean
Hugh R. McLean
Supervisory Chemist

HRM:mln


N
Hertz Service Center
1 Airport Drive
Oakland, California
Hertz Service Center
B2
Island
Trench
B1
C2
Stockpile
C1
C3

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545 (415) 783-6960

TAL

RECEIVED

OCT 25 1988

PARADISO
CONSTRUCTION CO.

DATE: 10/21/88

LOG NO.: 6520

DATE SAMPLED: 10/13/88

DATE RECEIVED: 10/13/88

CUSTOMER: Paradiso Construction Company

REQUESTER: Eric V. Montesano

PROJECT: Hertz, 1 Airport Boulevard, Oakland

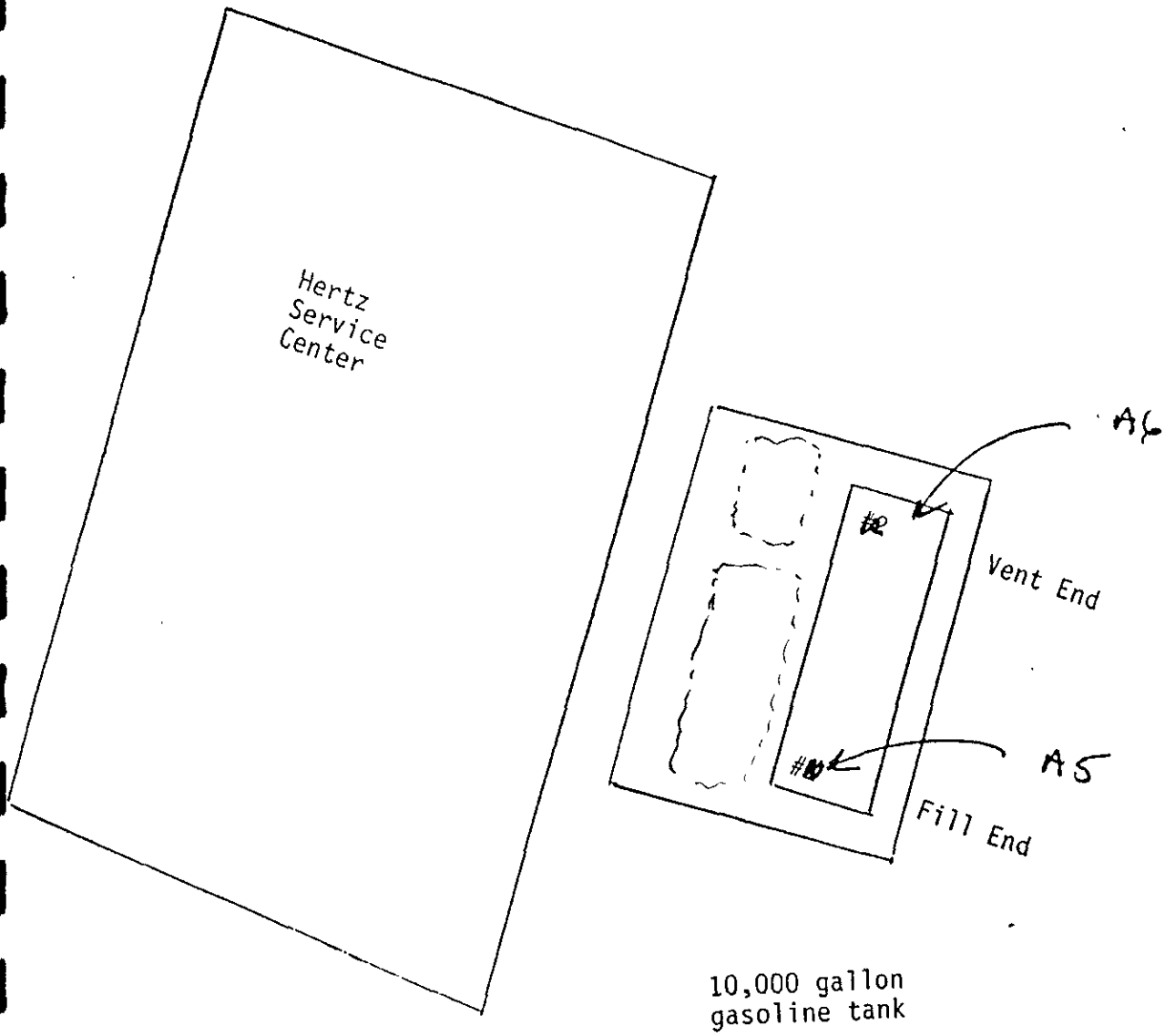
Sample Type: Soil

Method and Constituent	Units	No. 1 Concentration	No. 1 Detection Limit	No. 2 Concentration	No. 2 Detection Limit
DHS Method:					
Total Petroleum Hydrocarbons as Gasoline	ug/kg	< 900	900	< 900	900
Modified EPA Method 8020:					
Benzene	ug/kg	< 10	10	< 10	10
Toluene	ug/kg	< 10	10	< 10	10
Xylenes	ug/kg	< 50	50	< 50	50
Ethyl Benzene	ug/kg	< 20	20	< 20	20

Hugh R. McLean
Supervisory Chemist

HRM:mln

Hertz Service Center
1 Airport Drive
Oakland, California



10,000 gallon
gasoline tank

Trace Analysis Laboratory, Inc.
3423 Investment Boulevard, #8 • Hayward, California 94545 *(415) 783-6960*

TAL

DATE: 10/21/88

LOG NO.: 6522

DATE SAMPLED: 10/12/88

DATE RECEIVED: 10/13/88

CUSTOMER: Paradiso Construction Company

REQUESTER: Eric Montesano

PROJECT: No. 404, Hertz, Oakland Airport

		Sample Type: Soil			
		A-1		A-2	
Method and Constituent	Units	Concentration	Detection Limit	Concentration	Detection Limit
DHS Method:					
Total Petroleum Hydrocarbons as Diesel	ug/kg	< 2,000	2,000		
Total Petroleum Hydrocarbons as Gasoline	ug/kg	< 500	500	< 500	500
Modified EPA Method 8020:					
Benzene	ug/kg	< 20	20	< 20	20
Toluene	ug/kg	< 20	20	< 20	20
Xylenes	ug/kg	< 100	100	< 100	100
Ethyl Benzene	ug/kg	< 30	30	< 30	30
Standard Method 503E, Hydrocarbons:					
Oil and Grease	ug/kg	< 8,000	8,000		

RECEIVED

OCT 27 1988

PARADISO
CONSTRUCTION CO

DATE: 10/21/88
LOG NO.: 6522
DATE SAMPLED: 10/12/88
DATE RECEIVED: 10/13/88
PAGE: Two

Sample Type: Soil

Method and Constituent	Units	A-3 Concentration	A-3 Detection Limit	A-4 Concentration	A-4 Detection Limit
DHS Method:					
Total Petroleum Hydrocarbons as Gasoline	ug/kg	< 500	500	< 500	500
Modified EPA Method 8020:					
Benzene	ug/kg	< 20	20	< 20	20
Toluene	ug/kg	< 20	20	< 20	20
Xylenes	ug/kg	< 100	100	< 100	100
Ethyl Benzene	ug/kg	< 30	30	< 30	30

DATE: 10/21/88
LOG NO.: 6522
DATE SAMPLED: 10/12/88
DATE RECEIVED: 10/13/88
PAGE: Three

Sample Type: Soil

Method and Constituent	Units	A1 Concentration	A1 Detection Limit
EPA Method 8010:			
Benzyl chloride	ug/kg	< 30	30
Bis (2-chloroethoxy) methane	ug/kg	< 30	30
Bis (2-chloroisopropyl) ether	ug/kg	< 30	30
Bromobenzene	ug/kg	< 30	30
Bromodichloromethane	ug/kg	< 30	30
Bromoform	ug/kg	< 30	30
Bromomethane	ug/kg	< 30	30
Carbon tetrachloride	ug/kg	< 30	30
Chloracetaldehyde	ug/kg	< 30	30
Chloral	ug/kg	< 30	30
Chlorobenzene	ug/kg	< 30	30
Chloroethane	ug/kg	< 30	30
Chloroform	ug/kg	< 30	30
1-Chlorohexane	ug/kg	< 30	30
2-Chloroethyl vinyl ether	ug/kg	< 30	30
Chloromethane	ug/kg	< 30	30
Chloromethyl methyl ether	ug/kg	< 30	30
Chlorotoluene	ug/kg	< 30	30
Dibromochloromethane	ug/kg	< 30	30
Dibromomethane	ug/kg	< 30	30
1,2-Dichlorobenzene	ug/kg	< 30	30
1,3-Dichlorobenzene	ug/kg	< 30	30
1,4-Dichlorobenzene	ug/kg	< 30	30
Dichlorodifluoromethane	ug/kg	< 30	30
1,1-Dichloroethane	ug/kg	< 30	30
1,2-Dichloroethane	ug/kg	< 30	30

DATE: 10/21/88
LOG NO.: 6522
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PAGE: Four

Sample Type: Soil

Method and Constituent	Units	A1 Concentration	A1 Detection Limit
EPA Method 8010 (Continued):			
1,1-Dichloroethylene	ug/kg	< 30	30
trans-1,2-Dichloroethylene	ug/kg	< 30	30
Dichloromethane	ug/kg	< 30	30
1,2-Dichloropropane	ug/kg	< 30	30
1,3-Dichloropropylene	ug/kg	< 30	30
1,1,2,2-Tetrachloroethane	ug/kg	< 30	30
1,1,1,2-Tetrachloroethane	ug/kg	< 30	30
Tetrachloroethylene	ug/kg	< 30	30
1,1,1-Trichloroethane	ug/kg	< 30	30
1,1,2-Trichloroethane	ug/kg	< 30	30
Trichloroethylene	ug/kg	< 30	30
Trichlorofluoromethane	ug/kg	< 30	30
Trichloropropane	ug/kg	< 30	30
Vinyl chloride	ug/kg	< 30	30

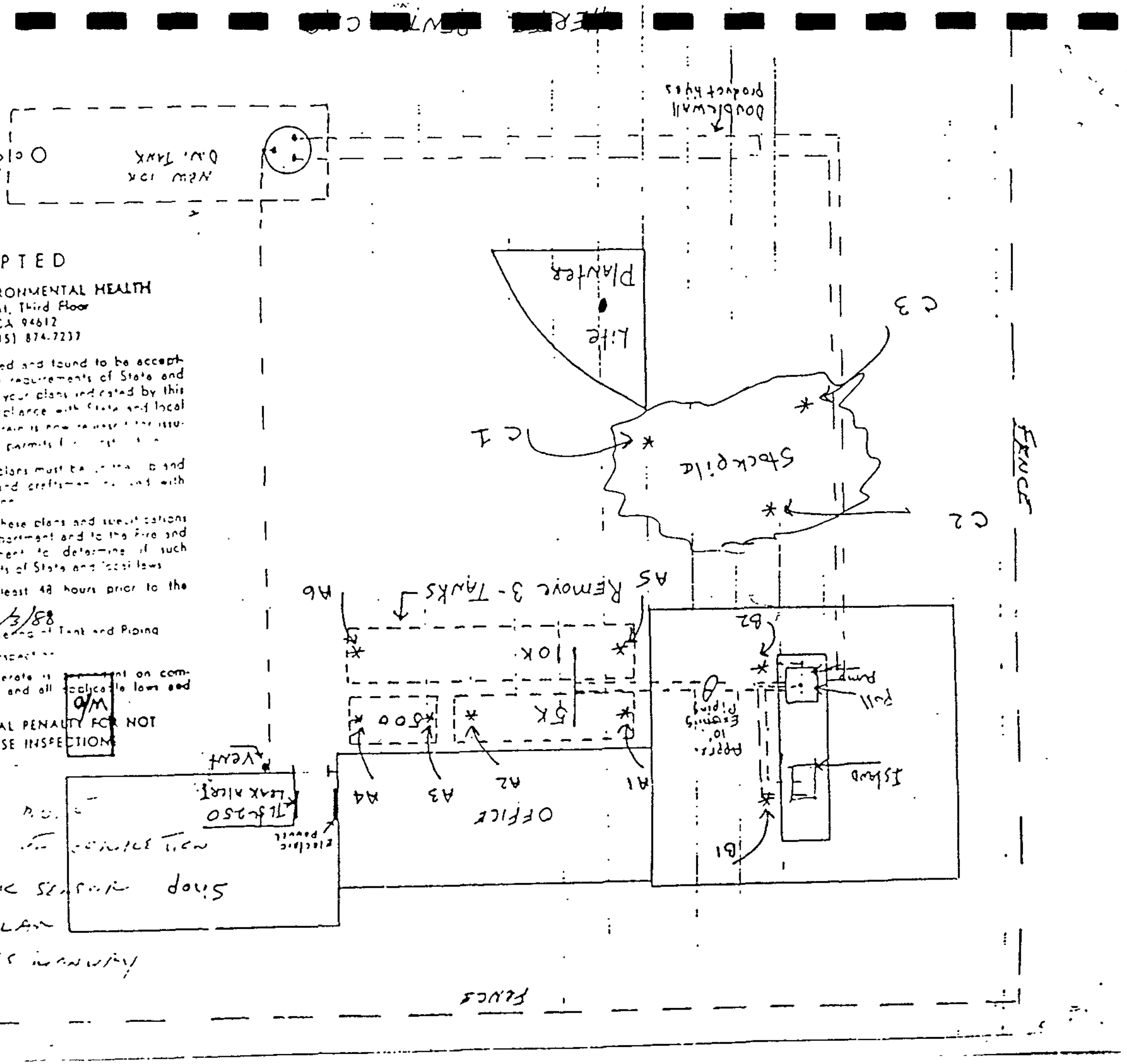
DATE: 10/21/88
LOG NO.: 6522
DATE SAMPLED: 10/12/88
DATE RECEIVED: 10/13/88
PAGE: Five

Sample Type: Water

Method and Constituent	Units	A-5 Concentration	A-5 Detection Limit
DHS Method:			
Total Petroleum Hydrocarbons as Gasoline	ug/l	7,400	500
Modified EPA Method 8020:			
Benzene	ug/l	63	20
Toluene	ug/l	570	10
Xylenes	ug/l	1,900	20
Ethyl Benzene	ug/l	250	20

Hugh R. McLean
Supervisory Chemist

HRM:mln



ACCEPTED

DEPARTMENT OF ENVIRONMENTAL HEALTH
470 - 27th Street, Third Floor
Oakland, CA 94612
Telephone: (415) 874-7237

These plans have been reviewed and found to be acceptable and essentially meet the requirements of State and [illegible] laws. Changes to your plans indicated by this [illegible] are to ensure compliance with State and local [illegible] project proposed herein is now released for issuance of required building permits [illegible]

[illegible] these accepted plans must be [illegible] and [illegible] to all contractors and craftsmen [illegible] with the construction and installation.

Any [illegible] alteration of these plans and specifications must be submitted to this Department and to the Fire and Building Inspection Department to determine if such changes meet the requirements of State and local laws.

Notify this Department at least 48 hours prior to the following required inspections:

[signature] 12/3/88 Pre Covering of Tank and Piping

__________ Final Inspection

Issuance of a permit to operate is [illegible] on compliance with accepted plans and all applicable laws and regulations.

W/O

THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS

[illegible] 90 days [illegible] completion
[illegible] Provide leak sensor doug
To tank annular
Space & access manway

APPENDIX B
HEALTH AND SAFETY PLAN

Hazardous Waste Management Practice
Health and Safety Manual

FORM HS-507
SITE SAFETY PLAN*
FIELD INVESTIGATION OF UNDERGROUND FUEL SPILLS

ADMINISTRATIVE INFORMATION

Project No. 891033GA-1000 Project Name Hertz Oakland Airport
Project Manager Pat Lucia Business Unit Ulrich Luscher
SSO John MacMillan HSO ERIC G MASAMORI
Date of Issue _____ Effective Dates 11/14/89
Proposed Starting Date 11/14/89

SITE INFORMATION

Location: #1 Airport Drive, OAKLAND, CA
Pertinent History: buried underground waste oil + gas tanks removed, building built on top.

Material(s) Spilled: _____

FIELD ACTIVITIES

3 soil borings - sampling @ 2', 5', 10', 15', 20'
3 monitoring wells installed in above borings

EMERGENCY TELEPHONE NUMBERS 911
Fire Dept. 444-3322 577-4080 Oak Airport Fire Stn Project Mgr. Pat Lucia wk 874-3054
Ambulance 357-6500 HSO ERIC G MASAMORI 874-3183
Hospital 357-6500

* Must be used with Operating procedure HS-507

Attachments: Operating Procedure HS-509, HS-502, Air Monitoring Data Sheet, Health and Safety Compliance Agreement and OSHA poster

FORM HS-507
SITE SAFETY PLAN*
FIELD INVESTIGATION OF UNDERGROUND FUEL SPILLS

HOSPITAL NAME, ADDRESS, & ROUTE

Name: Humana Hosp. Address: 13855 E. 14th St., San Leandro, CA

Route: E. Airport Drive to Doolittle S. to Davis E. to 14th S to 136th Ave.

AUTHORIZED FIELD PERSONNEL

Lois Gruenberg

NAME OF SUBCONTRACTORS (Field Work)

Name: Datum Exploration Telephone No. (415) 682-5560

Address: 4300 Erora Road, Pittsburg CA

Authorized Representative: Kelly Cowden

Name: _____ Telephone No. _____

Address: _____

Authorized Representative: _____

APPROVALS

Patrick C Lucia — Project Manager — 11-13-89 Date

Eric Massmore (EM) — HSO — 11-13-89 Date

_____ — CHSO* — Date

* Signature required only for modified plans.

OPERATING PROCEDURE NO. HS-507

507.0 Procedures for Field Investigations of Underground Spills of Gasoline and Other Petroleum Distillate Fuels

507.1 Purpose

The purpose of this procedure is to establish sound and uniform health and safety procedures and guidelines for field operations associated with investigations of leakage of petroleum hydrocarbon fuels from underground storage tanks and pipes.

507.2 Scope

This procedure identifies the kinds of fuels and field activities to which it applies, assesses the hazards of fuels, and describes risk control measures.

507.3 Applicability

This procedure applies to (1) collection of samples of surface and subsurface soil, (2) construction, completion, and testing of groundwater monitoring wells, (3) collection of water samples from new and existing wells, and observing removal of underground fuel pipes and storage tanks at facilities that currently dispense or store (1) leaded gasoline (2) unleaded gasoline, (3) gasahol, (4) Numbers 1, 1D, 2, 2D, 4, 5, or 6 fueled oils, (5) Numbers 3, 4, or 5 jet fuel, and/or (6) used crankcase oil.

This procedure shall not be used for confined space entry (including entering trenches) or for installing or operating pilot and full-scale fuel recovery systems. It is also not applicable to field work performed at refineries, sites where spills of chemicals other than the substances listed above have occurred, and any other site or activity identified by the business unit HSO.

507.4 Responsibility and Authority

The Project Manager (PM) has overall responsibility for safe conduct of all field work, including ensuring full implementation of this procedure by project staff and subcontractors assisting with field work. The PM shall assign a Site Safety Officer (SSO) to attend to day-to-day health and safety matters in the field or, if qualified, may elect to serve as SSO. The SSO must be on site whenever work by employees of WCC or its subcontractors is being performed at the site. Both the PM and SSO are authorized to suspend work when working conditions become too hazardous and to remove from the site any WCC and subcontractor employee whose conduct endangers the health and safety of the employee or of others.

507.5 Hazard Evaluation

Petroleum distillate fuels are mixtures of aliphatic and aromatic hydrocarbons. The predominant types of compounds in fuels are paraffins (e.g., pentane hexane), naphthenes (e.g., cyclohexane) and aromatics (e.g., benzene, toluene, polynuclear aromatics). Gasoline contains about 80 percent paraffins, 6 percent naphthenes, and 14 percent aromatics. JP-1 and 4 contain up to 48 percent paraffin, 38 percent naphthenes, and 20 percent aromatics. Fuel oils and certain jet fuels (JP-3 and 5) contain about 10 percent parafin, up to 23 percent naphthenes, and up to 78 percent non-volatile aromatic hydrocarbons. Gasahol is gasoline containing 10 to 40 percent ethyl alcohol. To improve their burning properties, compounds such as tetraethyl-lead and ethylene dibromide are often added to automotive and aviation fuels.

Petroleum distillate fuels exhibit relatively low acute inhalation and dermal toxicity. Concentrations of 160 to 270 ppm gasoline vapor have been reported to cause eye, nose, and throat irritation in people after several hours of exposure. Levels of 500 to 900 ppm have been reported to cause

irritation and dizziness in one hour and 2,000 ppm has been reported to cause mild anesthesia in 30 minutes. Gasoline, kerosene, and some jet fuels will cause severe eye irritation on contact with the eye and low to moderate skin irritation on contact with the skin.

Ingestion of 10 to 15 grams (2 to 3 teaspoons) of gasoline has caused death in children. In adults, ingestion of 20 to 50 grams may produce severe symptoms of poisoning. Secondary pneumonia may occur (if gasoline or other fuels are aspirated passed into the lungs) upon ingestion.

Some gasoline additives, such as ethylene dichloride, ethylene dibromide, and tetraethyl- and tetramethyl-lead are highly toxic materials; however, their concentrations in gasoline are so low that their contribution to the overall toxicity of gasoline is negligible in most instances.

Petroleum distillate fuels are flammable. Under certain conditions, this property presents a greater risk than toxicity. Five of the 13 substances covered by this procedure are classified by the Federal Department of Transportation as flammable liquids as all five have flash points of 100 degrees F or less. These fuels are gasoline, gasahol, JP-1, JP-4, and No. 1 fuel oil. Lower explosive limits of the 12 fuels range from 0.6 to 1.4 percent (6,000 to 14,000 ppm).

507.4 Health and Safety Requirements

507.6.1 Health and Safety Clearance

WCC employees as well as subcontractor employees assigned to perform field activities covered by this procedure must have active health and safety clearance statuses, which mean that during the past 12 months, they have been cleared by a physician to wear respirators and perform their field assignments and have satisfied health and safety training requirements specified in 29 CFR 1910.120(e).

507.6.2 Health and Safety Briefing

Before field work begins, all field personnel, including subcontractor employees, must be briefed on their work assignments and the provisions of this procedure, and each person briefed must be given a copy of this document and each must acknowledge receipt and willingness to comply by submitting a signed safety compliance agreement to the WCC Project Manager. Individuals refusing to sign the agreement will be prohibited from working at the site.

507.6.3 Personal Protective Equipment

Equipment listed below must be available on-site in appropriate sizes for use when needed.

- NIOSH-approved full- or half-face respirator with organic vapor cartridges (color coded black). Respirators must be worn when total airborne hydrocarbon action levels are reached or exceeded (see Section 507.6.5).

- Saranex or polyethylene coated Tyuek coveralls. Coat coveralls must be worn when product quantities of fuel are encountered and when fuel-saturated soil is handled.

- Safety goggles or glasses. Must be worn when working within 10 feet of operating heavy equipment (e.g., drill rig, backhoe). Must be splash-proof when handling concentrated fuel product.

- Nitrile or neoprene gloves. Must be worn when handling contaminated soil or water or drilling or digging into contaminated soil.

- Neoprene or butyl rubber safety boots, calf-length. Must be worn when walking on obviously contaminated soil and when working within 10 feet of operating heavy equipment.

- Hardhat. Must be worn when working within 10 feet of operating heavy equipment.

507.6.4 Explosion Hazard and Evacuation

When measurements with a combustible gas meter (CGM) indicate the presence of combustible gas levels equal o or exceeding the explosivity action level (see Section 507.6.5.2) in the work area, the following action must be taken.

- Extinguish all possible ignition sources in the work area (e.g., shut down electrically and fuel powered motors).

- Move personnel at least 100 feet away from work area

- Leave CGM in work area and return to work area only if CGM alarm goes off and remains off for at least 15 minutes

- Contact Health and Safety Officer (HSO).

- Prepare incident report and submit to HSO.

507.6.5 Vapor Monitoring

507.6.5.1 Monitoring Instruments

The preferred instrument is a combustible gas meter (CGM) with LEL and 0-500 ppm scales calibrated with hexane. If the CGM available for use does not have a ppm scale, a photoionization or flame-ionization meter shall be used in combination with the CGM.

507.6.5.2 Action Levels

The toxicity action levels given below are based on the ACGIH TLV for gasoline of 300 ppm adjusted to comply with the new OSHA benzene standard and are meter readings equivalent to 10 percent of the TLV. Respirators must be worn when meter readings averaged over 15 minutes equal or exceed the action level.

Instrument	Calibration Gas	Action Level (ppm)
Combustible gas meter	Hexane	30
Combustible gas meter	Methane	13
Photoionization meter with 10 to 10.2 eV lamp	Benzene*	6
Photoionization meter with 10 to 10.2 eV lamp	Isobutylene	10
Flame-ionization meter (OVA-128)	Methane	30

*NOTE: Although the calibration gas purchased from HNU is isobutylene, the concentration identified on the cylinder for calibration of HNUs with 10.2 eV lamps is a equivalence.

The explosivity action level is 20 percent of LEL for hexane calibrated CGMs and 47 percent of LEL for methane calibrated CGMs. The CGM alarm must be set to sound at the action level.

507.6.5.3 Monitoring Guidelines

Vapor monitoring should be performed as often as necessary and wherever necessary to protect field personnel from hazardous vapors. Monitoring must be performed by individuals trained in the use and care of the required instruments. Because toxicity action levels are considerably lower than explosivity action levels, monitoring efforts should focus initially on detection of toxic vapors. The presence of explosive levels of gases and vapors should be performed only when gas/vapor concentrations

exceed the ppm range of the monitoring instruments and when explosive levels are expected (e.g., inside tanks and other enclosed spaces).

During drilling operations, vapor emissions may be measured continuously or periodically. If vapors are measured continuously and the instrument must be unattended, the sample intake orifice or, in the case of instruments that operate by diffusion, the detector, must be positioned in a safe place downwind of the borehole and the instrument alarm set to sound at the action level.

If the alarm sounds while monitoring continuously for toxic concentrations, the sample intake orifice/detector should be moved so that vapor concentrations in the breathing zones of individuals closest to the boring are measured. Decisions regarding respirator use should be based on breathing zone vapor concentrations. If the alarm sounds while continuously monitoring fire explosive concentrations. If the alarm sounds while continuously monitoring fire explosive concentrations, initiate shut-down and evacuation procedures immediately. If vapor emissions are measured periodically, they should be measured whenever the boring is open. Measurements may be limited to breathing zone air.

Vapor emissions from trenches should be measured while the trench is being dug. The monitoring instrument should be placed near the backhoe operator and the instrument alarm set at the action level.

507.6.6 Area Control

Access to hazardous and potential hazardous areas of spill sites must be controlled to reduce the probability of occurrence of physical injury and chemical exposure of field personnel, visitors, and the public. A hazardous or potentially hazardous area includes any area where (1) field personnel are required to wear respirators, (2) borings are being drilled with powered augers, or (3) excavating operations with heavy equipment are being performed.

The boundaries of hazardous and potentially hazardous areas must be identified by cordons, barricades, or emergency traffic cones or posts, depending on conditions. If such areas are left unattended, signs warning of the danger and forbidding entry must be placed around the perimeter if the areas are accessible to the public. Trenches and other large holes must be guarded with wooded or metal barricades spaced no further than 20 feet apart and connected with yellow or yellow and black nylon tape not less than 3/4-inches wide. The barricades must be placed no less than two feet from the edge of the excavation or hole.

Entry to hazardous areas shall be limited to individuals who must work in those areas. Unofficial visitors must not be permitted to enter hazardous areas while work in those areas is in progress. Official visitors should be discouraged from entering hazardous areas, but may be allowed to enter only if they agree to abide by the provisions of this document, follow orders issued by the site safety officer, and are informed of the potential dangers that could be encountered in the areas.

507.6.7 Decontamination

Field decontamination of personnel and equipment is not required except when contamination is obvious (visually or by odor). Recommended decontamination procedures follow.

507.6.7.1 Personnel

Gasoline, kerosene, jet fuel, and gasahol should be removed from skin using a mild detergent and water. Hot water is more effective than cold. Liquid dishwashing detergent is more effective than hand soap.

507.6.7.2 Equipment

Gloves, respirators, hardhats, boots and goggles should be cleaned as described under personnel; however, if boots do not become clean after washing with detergent and water, wash then with a strong solution of trisodium phosphate and hot water.

Sampling equipment, augers, vehicle undercarriages, and tires should be steam cleaned. The steam cleaner is a convenient source of hot water for personnel and protective equipment cleaning.

507.6.8 Smoking

Smoking and open flames are strictly prohibited at sites under investigation.

507.6.9 Inerting of Tanks

Whenever WCC personnel must be present during removal or transport of fuel storage tanks, the SSO or designee must determine whether or not the procedures to be used by the firm responsible for tank removal/transport agree with procedures recommended by the American Petroleum Institute (attached). If the firm's procedures, especially those addressing removal/inactivation of flammable vapors, disagree substantially with API's procedures, the PM and HSO must be notified immediately (by telephone if possible). In turn, the PM shall inform the client that WCC personnel will not report to the site during tank removal/transport operations unless proper procedures are used. If the firm responsible for tank removal/transport is under subcontract to WCC, it must be required to follow API procedures.

507.8 Reporting

Form HS-502 must be completed and delivered to the HSO for each accident or incident involving WCC personnel. The form is available from the HSO.

The Site Safety Officer shall prepare a safety completion report after field work has been completed and deliver it to the HSO. The report shall contain an evaluation of the adequacy of the safety plan, summaries of each accident and safety incident, including safety infractions by site personnel (subcontractors included), air quality monitoring data (if collected) and description of decisions based on them, and recommendation for improving safety at similar sites.

OPERATING PROCEDURE NO. HS-509

509.0 Safety Guidelines for Drilling into Soil and Rocks

509.1 Purpose

The purpose of this operating procedure is to provide guidelines for safe conduct of drilling operations with truck-mounted and other engine-powered, drill rigs. The procedure addresses off-road movement of drill rigs, overhead and buried utilities, use of augers rotary and core drilling, and other drilling operations and activities.

509.2 Application

The guidelines shall be applied in all WCC projects in which truck-mounted or other engine-powered, drill rigs are used. The guidelines are applicable to WCC employees as well as employees of firms contracted by WCC to operate drill rigs.

509.3 Responsibility and Authority

Drill rig safety and maintenance is the responsibility of the drill rig operator.

509.4 Safety Guidelines

509.4.1 Off-Road Movement of Drill Rigs

Before moving a rig, the operator must do the following:

- To the extent practical walk the planned route of travel and inspect it for depressions, gulleys, ruts, and other obstacles.
- Check the brakes of the truck/carrier, especially if the terrain along the route of travel is rough or sloped.

- Discharge all passengers before moving on rough or steep terrain.
- Engage the front axle (on 4x4, 6x6, etc. vehicles) before traversing rough or steep terrain.

Driving drill rigs along the sides of hills should be avoided; however, if side-hill travel becomes necessary, the operator must conservatively evaluate the ability of the rig to remain upright while on the hill. The possibility that the presence of drilling tools on the rig may reduce the ability of the rig to remain upright by raising the center of mass of the rig must be considered.

Logs, ditches, road curbs, and other long and horizontal obstacles should be normally approached and driven over squarely, not at an angle.

When close lateral or overhead clearance is encountered, the driver of the rig should be guided by another person on the ground.

Loads on the drill rig and truck must be tied down while the truck is moving, and the mast must be in the fully lowered position.

After the rig has been positioned to begin drilling, all brakes and/or locks must be set before drilling begins. If the rig is positioned on a steep grade and leveling of the ground is impossible or impractical, the wheel of the transport vehicle should be blocked and other means of preventing the rig from moving or topping over employed.

509.5 Buried and Overhead Utilities

The location of overhead and buried utility lines must be determined before drilling begins, and their locations must be noted on all boring plans and assignment sheets.

When overhead power lines are close by, the drill rig mast should not be raised unless the distance between the rig and the nearest power line is at least 20 feet or whatever distance local ordinances require. The drill rig operator or assistant should walk completely around the rig to make sure that proper distance exists.

When the drill rig is positioned near an overhead line, the rig operator should be aware that hoist lines and power lines can be moved towards each other by wind.

509.6 Clearing the Work Area

Before a drill rig is positioned to drill, the area on which the rig is to be positioned should be cleared of removable obstacles and leveled if sloped. The cleared/leveled area should be large enough to accommodate the rig and supplies.

509.7 Safe Use of Augers

Never place hands or fingers under the bottom of an auger flight when hoisting the flight over the top of another flight in the ground or other hard surfaces, such as the drill rig platform.

Never allow feet to get under the auger flight while the flight is being hoisted.

When an auger is rotating, stay clear of the auger and other rotating components of the drill dig. Never reach behind or around a rotating auger for any reason.

Move auger cuttings away from the auger with a long-handled shovel or spade; never use hands or feet.

Never clean an auger attached to the drill rig unless the transmission is in neutral or the engine is off, and the auger has stopped rotating.

509.8 Safe Use of Hand Tools

Rules described in 29 CFR 1926.301 and 302 should be observed in addition to the guidelines provided below:

- Each tool should be used only to perform tasks for which it was originally designed.
- Damaged tools should be repaired before use or discarded.
- Safety goggles or glasses should be worn when using a hammer or chisel. Nearby co-workers and by-standers should be required to wear safety goggles or glasses also.
- Tools should be kept cleaned and stored in an orderly manner when not in use.

509.9 Safe Use of Wire Line Hoists, Wire Rope, and Hoisting Hardware

Safety rules described in 29 CFR 1926.552 and guidelines contained in the Wire RPE User's Manual published by the American Iron and Steel Institute shall be used whenever wire line hoists, wire rope, or hoisting hardware are used.

509.10 Protective Gear

509.10.1 Minimum Protective Gear

Items listed below should be worn by all members of the drilling team while engaged in drilling activities.

- Hard Hat
- Safety Shoes (shoes or boots with steel toes and shanks)
- Gloves.

29 CFR 1926.100, 101, and 102 should be consulted for additional information.

509.10.2 Other Gear

Items listed below should be worn when conditions warrant their use. Some of the conditions are listed after each item.

- Safety goggles or glasses. Use when: (1) driving pins in and out of drive chains, (2) replacing keys in tongs, (3) handling hazardous chemicals, (4) renewing or tightening gauge glasses, (5) breaking concrete, brick, or cast iron, (6) cleaning material with chemical solutions, (7) hammering or sledging on chisels, cold cuts, or bars, (8) cutting wire lines, (9) grinding on abrasive wheels, (10) handling materials in powered or semi-powered form, (11) scraping metal surfaces, (12) sledging rock bits or core heads to tighten or loosen them, (13) hammering fittings and connections, and (14) driving and holding rivets.

- Safety Belts and Lifelines. Safety belts and lifelines should be worn by all persons working on top of an elevated derrick beam. The lifeline should be secured at a position that will allow a person to fall no more than eight feet.

FORM HS-502
WCC HEALTH AND SAFETY INCIDENT REPORT

Project Name _____

Project Number _____

Date of Incident _____

Time of Incident _____

Location _____

TYPE OF INCIDENT (Check all applicable items)

☐ Illness ☐ Injury ☐ Fire, explosion, flash ☐ Vehicular accident

☐ Property Damage ☐ Unexpected exposure ☐ Health & safety infraction

☐ Other (describe) _____

PROJECT NAME _____ **LOCATION** _____

DESCRIPTION OF INCIDENT (Describe what happened and possible cause, identify individuals involved, witnesses, and their affiliations; and describe emergency or corrective action taken.)

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

Reporter: _____ _____ _____
Print Name Signature Date

Reporter must deliver this report to the Business Unit Health and Safety Officer within 24 hours of the reported incident for medical treatment cases and within five days for other incidents.

Reviewed by _____ _____
Business Unit Health & Safety Officer Date

Distribution:

___ Corporate Health and Safety Administrator
___ Corporate Health and Safety Officer
___ Project Manager
___ Personnel Office (medical treatment cases only)

Woodward-Clyde Consultants

AIR MONITORING DATA SHEET

Site or Project Name _____ Project No. _____ Date: _____

Person(s) Collecting Data _____

General Operation and Location at Site _____

Instrument Type, Make, Model _____

Instrument Serial or ID No. _____ Battery Check Results _____

Date of Last Calibration or Check _____ Date of Last Service _____

Contaminant(s) Suspected _____

	Specific Location	Specific Operation or Work Phase	Employee Name If Breathing Zone Monitored	Time	Reading	Comments (e.g., duration, causation of reading)
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

General Comments: _____

Signature of Person Responsible for Data: _____ Date Signed _____

HEALTH AND SAFETY COMPLIANCE AGREEMENT

I, the undersigned, have received a copy of the health and safety plan for the project identified below. I have read the plan, understand it, and agree to comply with all of the health and safety requirements therein. I understand that I may be prohibited from continuing work on the project for failing to comply.

I have __ have not __ (check one) been briefed by a project safety authority on the health and safety requirements of the project.

Project No. _____

Project Title _____

Date of Plan _____

James McDonald
Print Name

James McDonald
Signature

Eaton Exploration
Firm

2-20-89
Date

Jim Moore

SAFETY AND HEALTH PROTECTION ON THE JOB

State of California
Department of Industrial Relations

The California Occupational Safety and Health Act of 1973 provides job safety and health protection for workers. The Department of Industrial Relations has primary responsibility for administering the Cal/OSHA program. Job safety and health standards are promulgated by the Occupational Safety and Health Standards Board. Employers and employees are required to comply with these standards. Enforcement is carried out by the Division of Occupational Safety and Health within the Department of Industrial Relations.

EMPLOYERS AND EMPLOYEES

California law requires every employer to provide employment and a place of employment which are safe and healthful for the employees therein. Employers and employees are required to comply with the occupational safety and health standards contained in Title 8 of the California Code of Regulations and all rules, regulations and orders pursuant to Division 5 of the California Labor Code which are applicable to their employment and actions on the job.

COMPLIANCE WITH JOB SAFETY AND HEALTH REQUIREMENTS

To ensure compliance with State job safety and health requirements, the Division of Occupational Safety and Health conducts periodic jobsite inspections. The inspections are made by trained safety engineers and industrial hygienists.

The law provides that an authorized representative of the employer and a representative of the employees be given an opportunity to accompany the safety engineer/industrial hygienist for the purpose of aiding the inspection. Where there is no authorized employee representative, the safety engineer/industrial hygienist talks with a reasonable number of employees about the safety and health conditions in the workplace.

Every employee has the right to bring unsafe or unhealthful conditions to the attention of the safety engineer/industrial hygienist making the inspection. In addition, any employee who believes unsafe or unhealthful conditions exist at the worksite has the right to notify the Division of Occupational Safety and Health. The Division upon request will withhold the names of employees who submit or make statements during an inspection or investigation.

If the Division of Occupational Safety and Health believes that an employer has violated a safety and health standard or order, it issues a citation to the employer. Each citation specifies a date by which the alleged violation must be corrected. The law provides for mandatory penalties against employers of up to $2,000 for each serious violation and for optional penalties of up to $1,000 for each general violation. Penalties of up to $2,000 per day may be proposed for failure to correct serious violations and up to $1,000 per day may be proposed for failure to correct general violations by the abatement date. Also any employer who willfully or repeatedly violates any occupational safety and health standard or order may be assessed civil penalties of not more than $20,000 for serious violations and $10,000 for general violations.

A willful violation that causes death or permanent impairment of the body of any employee results, upon conviction, in a fine of not more than $10,000 or imprisonment of not more than six months, or both. A second conviction after a first conviction, doubles these maximum penalties.

While governmental entities may be cited on the same basis as other employers, and abatement dates set, civil penalties will not be assessed.

An employer who receives a citation, Order to Take Special Action or Special Order must post it prominently at or near the place of the violation for three working days, or until the unsafe condition is corrected, whichever is longer, to warn employees of danger that may exist there. Any employee may protest the time allowed for correction of the violation.

COMPLAINTS

Employees or their representatives who believe unsafe or unhealthful conditions exist in their workplace have the right to file a complaint with any office of the Division of Occupational Safety and Health and thereby to request an inspection. The Division keeps confidential the names of complainants unless they request otherwise.

An employee may not be fired or punished in any way for filing a complaint about unsafe or unhealthful working conditions or using any other right given to employees by the Cal/OSHA law. An employee of a private employer who believes that he/she has been fired or punished for exercising such rights may file a complaint about this discrimination with the nearest office of the Department of Industrial Relations - Division of Labor Standards Enforcement (State Labor Commissioner) or with the San Francisco office of the U.S. Department of Labor, Occupational Safety and Health Administration. Employees of state or local government agencies may file discrimination complaints only with the State Labor Commissioner. Consult your local telephone directory for the office nearest you.

OTHER EMPLOYEE RIGHTS

Any employee has the right to refuse to perform work which would violate the Cal/OSHA Act or any occupational safety or health standard or order where such violation would create a real and apparent hazard to the employee or other employees.

Employers who use any substance listed as a hazardous substance in Section 339 of Title 8 of the California Code of Regulations or subject to the Federal Hazard Communication Standard (29 CFRS 1910.1200) must provide employees with information on the contents of material safety data sheets (MSDS) or equivalent information about the substance which trains employees to use the substance safely.

Employers shall make available on a timely and reasonable basis a material safety data sheet on each hazardous substance in the workplace upon request of an employee, collective bargaining representative, or an employee's physician.

Employees have the right to see and copy their medical records and accurate records of employee exposure to potentially toxic materials or harmful physical agents.

Any employee has the right to observe monitoring or measuring of employee exposure to hazards conducted pursuant to Cal/OSHA standards. Employers must tell their employees when they are being, or have been, exposed to concentrations of harmful substances higher than the exposure limits allowed by Cal/OSHA standards and the corrective action being taken.

For information and assistance, contact the nearest office of the Division of Occupational Safety and Health. See addresses below.

The law requires each employer in California to post this poster conspicuously in each workplace.

CONSULTATION SERVICE

In order to encourage voluntary compliance, Cal/OSHA provides free, upon request, a full range of occupational safety and health consulting services. The Cal/OSHA Consultation Service is separate from Cal/OSHA enforcement activities.

OFFICES OF THE DIVISION OF OCCUPATIONAL SAFETY AND HEALTH

HEADQUARTERS: San Francisco 525 Golden Gate Ave. 94102 (415) 557-1946

Regional Offices

*Los Angeles	6150 Van Nuys Blvd., Ste. 310, Van Nuys 91401	(818) 901-5422
Sacramento	2422 Arden Way, Suite B-53 95825	(916) 920-6127
San Francisco	455 Golden Gate Ave., Room 1171, 94102	(415) 557-8640
Santa Ana	28 Civic Center Plaza, 92701	(714) 558-4476

District Offices

Bakersfield	4800 Stockdale Highway, Suite 212, 93309	(805) 395 2718
*Berkeley/Oakland	1111 Jackson Street Room 1005, Oakland, 94607	(415) 464 1177
*Concord	1961 No. Broadway #230, Walnut Creek, 94596	(415) 676-5333
*Covina	1317 W. Foothill Blvd., First Floor, Upland 91786	(714) 985 2250
Fresno	2550 Mariposa St., Room 4000, 93721	(209) 445-5302
Long Beach	245 West Broadway Suite 245 90802	(213) 590-5069
*Los Angeles	3550 West Sixth St., Room 431 90020	(213) 252-7829
*Modesto	31 E. Channel St., Room 418, Stockton, 95202	(209) 576-6260
*Redding	2135 Akard Ave., Room 10, 96001	(916) 225 2886
Sacramento	2422 Arden Way Suite B-55 95825	(916) 920-6123
San Bernardino	303 West Third St., Room 640 92401	(714) 383-4321
San Diego	7807 Convoy Court Suite 150 92111	(619) 237-7325
San Francisco	455 Golden Gate Ave., Room 1193, 94102	(415) 557-1677
*San Jose	828 South Bascom Ave., Suite 120, 95128	(408) 277-1260
*San Mateo	455 Golden Gate Ave., Rm. 300, San Fran. 94102	(415) 557-1677
Santa Ana	28 Civic Center Plaza Room 552, 92701	(714) 558-4141
*Santa Fe Spgs	8535 E. Florence Ave., Ste. 200, Downey 90240	(213) 869-8855
Santa Rosa	50 "D" St., Suite 430 95404	(707) 576-2388
Van Nuys	6150 Van Nuys Blvd., Suite 405, 91401	(818) 901-5403
Ventura	5720 Ralston St., Rm. 203, 93003	(818) 654-4581
*Vernon	8535 E. Florence Ave., Ste. 200, Downey, 90240	(213) 923 3006 (213) 862 3990

Field Offices

*Chico	2135 Akard Ave., Room 10, Redding, 96001	(916) 225-2886
Eureka	619 Second St., Room 109, 95501	(707) 445-6611
*Salinas	828 So. Bascom Ave., Ste. 120, San Jose, 95128	(408) 443-3050
Stockton	31 E. Channel St., Room 418, 95202	(209) 948-7762
*Ukiah	50 "D" Street, Ste. 430, Santa Rosa, 95404	(707) 576-2388

*** Denotes temporary location.**

CAL/OSHA CONSULTATION SERVICE

Headquarters 525 Golden Gate Ave., 2nd Fl., San Francisco, 94102 (415) 557-2870

Area Offices

Downey ..... 8535 E. Florence Ave., Suite 200, 90240	(213) 861-9993
Fresno ..... 1901 N. Gateway, Suite 102, 93727	(209) 445 5072
Sacramento ..... 2424 Arden Way Suite D-90, 95825	(916) 920-6131
San Diego ..... 7807 Convoy Court, Suite 140, 92111	(619) 279-3771
San Francisco ..350 McAllister St., Room 2003, 94102	(415) 557-1715

Persons wishing to register a complaint alleging inadequacy in the administration of the California Occupational Safety and Health Plan may do so by contacting the San Francisco Regional Office of the Occupational Safety and Health Administration (OSHA) U.S. Department of Labor (Tel. 415/995 5672). OSHA monitors the operation of State plans to assure that continued approval is merited.

TO ALL EMPLOYERS OF CALIFORNIA EMPLOYEES. Section 6408(a) of the California Labor Code requires that information shall be posted regarding protections and obligations of employees under the occupational safety and health laws. This poster meets that requirement and must be prominently posted in all places of employment in the state of California. Section 6431 of the California Labor Code provides that any employer who violates any of the posting requirements of Section 6408 of the California Labor Code shall be assessed a civil penalty of up to one thousand dollars ($1,000) for each violation.

JOB SAFETY & HEALTH PROTECTION

The Occupational Safety and Health Act of 1970 provides job safety and health protection for workers by promoting safe and healthful working conditions throughout the Nation. Requirements of the Act include the following:

Employers

All employers must furnish to employees employment and a place of employment free from recognized hazards that are causing or are likely to cause death or serious harm to employees. Employers must comply with occupational safety and health standards issued under the Act.

Employees

Employees must comply with all occupational safety and health standards, rules, regulations and orders issued under the Act that apply to their own actions and conduct on the job.

The Occupational Safety and Health Administration (OSHA) of the U.S. Department of Labor has the primary responsibility for administering the Act. OSHA issues occupational safety and health standards and its Compliance Safety and Health Officers conduct jobsite inspections to help ensure compliance with the Act.

Inspection

The Act requires that a representative of the employer and a representative authorized by the employees be given an opportunity to accompany the OSHA inspector for the purpose of aiding the inspection.

Where there is no authorized employee representative, the OSHA Compliance Officer must consult with a reasonable number of employees concerning safety and health conditions in the workplace.

Complaint

Employees or their representatives have the right to file a complaint with the nearest OSHA office requesting an inspection if they believe unsafe or unhealthful conditions exist in their workplace. OSHA will withhold, on request, names of employees complaining.

The Act provides that employees may not be discharged or discriminated against in any way for filing safety and health complaints or for otherwise exercising their rights under the Act.

Employees who believe they have been discriminated against may file a complaint with their nearest OSHA office within 30 days of the alleged discrimination.

Citation

If, upon inspection, OSHA believes an employer has violated the Act, a citation alleging such violations will be issued to the employer. Each citation will specify a time period within which the alleged violation must be corrected.

The OSHA citation must be prominently displayed at or near the place of alleged violation for three days, or until it is corrected, whichever is later, to warn employees of dangers that may exist there.

Proposed Penalty

The Act provides for mandatory penalties against employers of up to $1,000 for each serious violation and for optional penalties of up to $1,000 for each nonserious violation. Penalties of up to $1,000 per day may be proposed for failure to correct violations within the proposed time period. Also, any employer who willfully or repeatedly violates the Act may be assessed penalties of up to $10,000 for each such violation.

Criminal penalties are also provided for in the Act. Any willful violation resulting in death of an employee, upon conviction, is punishable by a fine of not more than $10,000, or by imprisonment for not more than six months, or by both. Conviction of an employer after a first conviction doubles these maximum penalties.

Voluntary Activity

While providing penalties for violations, the Act also encourages efforts by labor and management, before an OSHA inspection, to reduce workplace hazards voluntarily and to develop and improve safety and health programs in all workplaces and industries. OSHA's Voluntary Protection Programs recognize outstanding efforts of this nature.

Such voluntary action should initially focus on the identification and elimination of hazards that could cause death, injury or illness to employees and supervisors. There are many public and private organizations that can provide information and assistance in this effort, if requested. Also, your local OSHA office can provide considerable help and advice on solving safety and health problems or can refer you to other sources for help such as training.

Consultation

Free consultative assistance, without citation or penalty, is available to employers, on request, through OSHA supported programs in most State departments of labor or health.

More Information

Additional information and copies of the Act, specific OSHA safety and health standards and other applicable regulations may be obtained from your employer or from the nearest OSHA Regional Office in the following locations:

Atlanta, Georgia
Boston, Massachusetts
Chicago, Illinois
Dallas, Texas
Denver, Colorado
Kansas City, Missouri
New York, New York
Philadelphia, Pennsylvania
San Francisco, California
Seattle, Washington

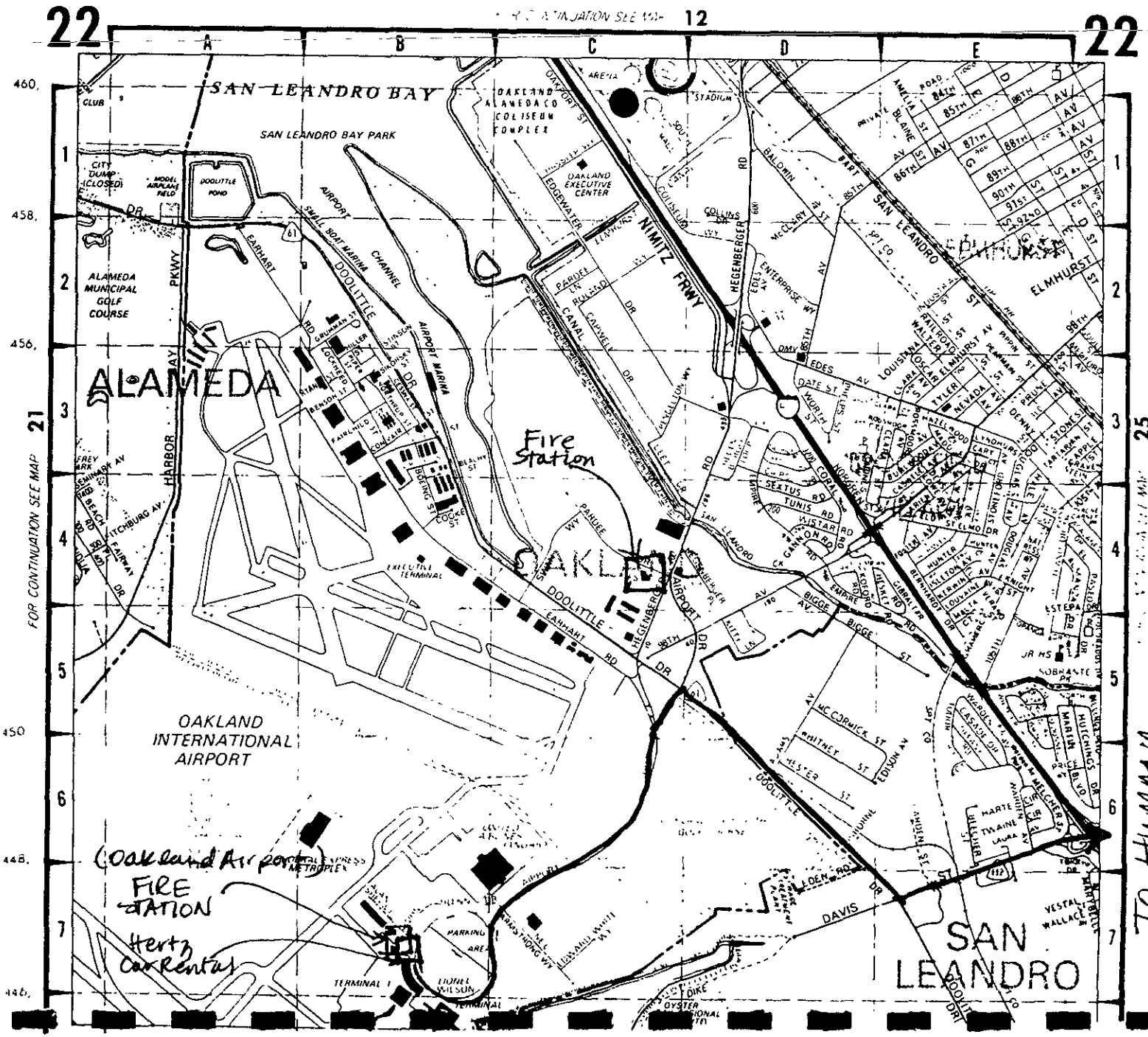
Telephone numbers for these offices, and additional area office locations, are listed in the telephone directory under the United States Department of Labor in the United States Government listing.

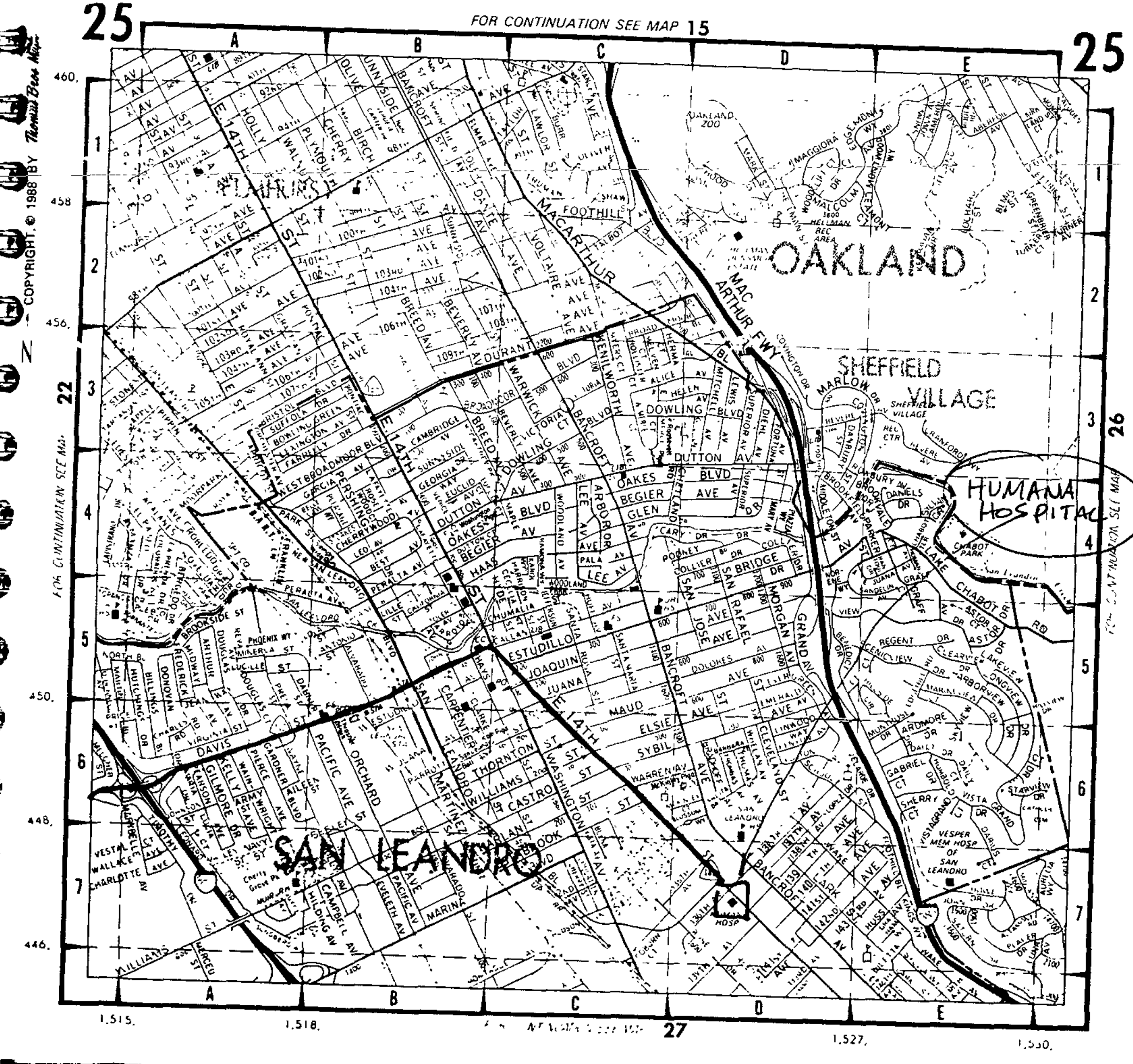
Washington, D.C.
1985
OSHA 2203

William E. Brock, Secretary of Labor

U.S. Department of Labor
Occupational Safety and Health Administration

Under provisions of Title 29, Code of Federal Regulations, Part 1903.3(e)(1) employers must post this notice (or a facsimile) in a conspicuous place where notices to employees are customarily posted.





25
FOR CONTINUATION SEE MAP 15
25
COPYRIGHT © 1988 BY Thomas Bros Maps
OAKLAND
OAKLAND ZOO
SHEFFIELD VILLAGE
SAN LEANDRO
HUMANA HOSPITAL
VESPER MEM HOSP OF SAN LEANDRO
MACARTHUR FWY
MACARTHUR BLVD
E 14TH ST
FOOTHILL
DURANT
BANCROFT AVE
ESTUDILLO
DAVIS
WILLIAMS
LAKE CHABOT RD
CHABOT PARK
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1,515
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1,527
1,530

HEALTH AND SAFETY COMPLIANCE AGREEMENT

I, the undersigned, have received a copy of the health and safety plan for the project identified below. I have read the plan, understand it, and agree to comply with all of the health and safety requirements therein. I understand that I may be prohibited from continuing work on the project for failing to comply.

I have __ have not __ (check one) been briefed by a project safety authority on the health and safety requirements of the project.

Project No. 891033XA-4000

Project Title ~~North Richmond Water Reclamation~~ Hertz, Oakland Airport

Date of Plan ~~Feb 7, 1989~~

Kelly J. Cowden
Print Name

Kelly J. Cowden
Signature

Datum Exploration
Firm

Nov, 15 1989
Date

APPENDIX C
MONITORING WELL PERMIT

ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT
5997 PARKSIDE DRIVE ♦ PLEASANTON, CALIFORNIA 94566 ♦ (415) 484-2600

GROUNDWATER PROTECTION ORDINANCE PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

1) LOCATION OF PROJECT Hertz Car Rental
#1 Airport Drive
Oakland, CA

2) CLIENT
Name Hertz Corporation
Address 225 Brae Blvd. Phone (201) 307-2526
City Parkridge, NJ Zip 07656-0713

3) APPLICANT
Name Woodward-Clyde Consultants
Lois Gruenberg
Address 500 - 12th St., #100 Phone 874-1765
City Oakland, CA Zip 94607-4014

4) DESCRIPTION OF PROJECT
Water Well Construction X Geotechnical Investigation
Cathodic Protection ___ General ___
Well Destruction ___ Contamination ___

5) PROPOSED WATER WELL USE
Domestic ___ Industrial ___ Irrigation ___
Municipal ___ Monitoring X Other ___

6) PROPOSED CONSTRUCTION
Drilling Method:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. 57-480802

WELL PROJECTS
Drill Hole Diameter 6 to 8 in. Maximum
Casing Diameter 2 in. Depth 20 ft.
Surface Seal Depth 5 ft. Number 3

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

7) ESTIMATED STARTING DATE 11/14/89
ESTIMATED COMPLETION DATE 11/14/89

8) I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Lois Gruenberg Date 11/9/89

FOR OFFICE USE

PERMIT NUMBER 89658
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as arrive at the Zone 7 office five days prior proposed starting date.
2. Submit to Zone 7 within 60 days after completi of permitted work the original Department Water Resources Water Well Drillers Report equivalent for well projects, or drilling lo and location sketch for geotechnical projects.
3. Permit is void if project not begun within days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal a industrial wells or 20 feet for domestic, irrig tion, and monitoring wells unless a lesser dep is specially approved.

C. GEOTECHNICAL. Backfill bore hole with compacted cut tings or heavy bentonite and upper two feet with com pacted material. In areas of known or suspecte contamination, tremied cement grout shall be used i place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concret placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Todd N. Wendler Date 9 Nov 89
Todd N. Wendler

21985

FROM FAX 11-9-89 10:10 AM 3 of 3

APPENDIX D

LOGS OF EXPLORATORY BORINGS AND CONSTRUCTION DETAILS, CHAIN OF CUSTODY RECORDS AND WATER QUALITY DATA

Woodward-Clyde Consultants

8910336A
HERTZ Oakland Airport

LOG OF MONITORING WELL **MW-1**

LOCATION #1 Airport Dr., Oakland, north side of the Service Center office			ELEVATION AND DATUM
AGENCY Datum Exploration	DRILLER Jim/Steve		DATE STARTED 12/21/89
EQUIPMENT B-61HD			DATE COMPLETED 12/21/89
METHOD 8"-diam Hollow Stem Auger	DRILL BIT		COMPLETION DEPTH 16.5'
CASING 2 in.-diameter Schedule 40 PVC			SAMPLERS Modified California 2-in.-diam.
PERFORATIONS 0.01 in. slot	FROM 5' TO 15'		NO. OF SAMPLES 4 DIST. UNDIST.
PACK #2/12 Monterey sand	FROM 4' TO 16-1/2'		WATER LEVEL ATD 4-1/2' COMPL 24 HR
TYPE OF SEALS: Activated bentonite pellets	FROM 3' TO 4'		LOGGED BY Lois Gruenberg
TYPE OF SEALS: Cement/concrete/bentonite	FROM 0' TO 3'		CHECKED BY Pat Lucia

DEPTH (FT)	DESCRIPTION	PIEZOMETER INSTALLTION	DEPTH (FT)	SAMPLES	REMARKS (Strength, moisture content, etc.)
0	Asphalt concrete				
	SAND (SW) - brown and tan - some silt - fine grained - dense - damp				90% recovery
5	Grades to saturated sand.		5	43 62	
10			10	42	
15	Cuttings -- CLAY, gray, at approximately 13' below the ground surface, not present in samples. Grades to gray, medium grained sand with shell fragments at approximately 15' below ground surface.		15	46	
20			20		Boring terminated at 16.5' below the ground surface.
25			25		

Woodward-Clyde Consultants

8910336A
HERTZ Oakland Airport

LOG OF MONITORING WELL **MW-3**

LOCATION #1Airport Dr., Oakland, west side of the Service Center office		ELEVATION AND DATUM	
AGENCY Datum Exploration	DRILLER Jim/Steve	DATE STARTED 12/21/89	
EQUIPMENT B-61HD		DATE COMPLETED 12/21/89	
METHOD 8"-diam Hollow Stem Auger	DRILL BIT	COMPLETION DEPTH 16.5'	
CASING 2 in.-diameter Schedule 40 PVC		SAMPLERS Modified California 2-in.-diam.	
PERFORATIONS 0.01 in. slot	FROM 4-2/3' TO 14-2/3'	NO. OF SAMPLES DIST. 4	UNDIST.
PACK #2/12 Monterey sand	FROM 4' TO 16-1/2'	WATER LEVEL ATD 5'	COMPL 24 HR
TYPE OF SEALS: Activated bentonite pellets	FROM 3' TO 4'	LOGGED BY Lois Gruenberg	CHECKED BY Pat Lucia
TYPE OF SEALS: Cement/concrete/bentonite	FROM 0' TO 3'		

DEPTH (FT)	DESCRIPTION	PIEZOMETER INSTALLTION	DEPTH (FT)	SAMPLES	REMARKS (Strength, moisture content, etc.)
	Asphalt concrete				
	Cuttings -- SILT, brown, damp, some sand.				
	SAND (SP) - brown and tan - fine grained - dense - wet			47 23	
5			5		
	Grades to saturated, fine to very fine, gray and brownsand with some silt.				
10			10	12	
	SAND AND CLAY (SP and CL) - gray, fine to medium grained - brown, fine grained - some shell fragements - loose - gray, soft clay - saturated			7	Boring terminated at 16.5' below the ground surface.
15			15		
20			20		
25			25		

Woodward-Clyde Consultants

8910336A
HERTZ Oakland Airport

LOG OF MONITORING WELL
MW-2

LOCATION #1Airport Drive, Oakland, south side of the Service Center office			ELEVATION AND DATUM
AGENCY Datum Exploration	DRILLER Jim/Steve		DATE STARTED 12/21/89
EQUIPMENT B-61HD			DATE COMPLETED 12/21/89
METHOD 8"-diam Hollow Stem Auger	DRILL BIT		COMPLETION DEPTH 16.5'
CASING 2 in.-diameter Schedule 40 PVC			SAMPLERS Modified California 2-in.-diam.
PERFORATIONS 0.01 in. slot	FROM 4-1/2' TO 14-1/2'		NO. OF SAMPLES DIST. 4 UNDIST.
PACK #2/12 Monterey sand	FROM 4' TO 16-1/2'		WATER LEVEL ATD 4-1/2' COMPL 24 HR
TYPE OF SEALS: Activated bentonite pellets	FROM 3' TO 4'		LOGGED BY Lois Gruenberg
TYPE OF SEALS: Cement/concrete/bentonite	FROM 0' TO 3'		CHECKED BY Pat Lucia

DEPTH (FT)	DESCRIPTION	PIEZOMETER INSTALLTION	DEPTH (FT)	SAMPLES	REMARKS (Strength, moisture content, etc.)
	Asphalt concrete				
	SAND (SW) - brown and tan - fine grained - medium dense and dense - wet				
5	Grades to gray saturated sand.		5	28 35	
10	Grades to brown, fine to medium, loose sand.		10	8	
15	Cuttings -- CLAY, gray, at approximately 13' below grade; and SAND, gray, coarse grained, with gray clay in the bottom 2" of the 15' sample.		15	10	
20			20		Boring terminated at 16.5' below the ground surface.
25			25		

APPENDIX E
FIELD DATA AND LABORATORY ANALYTICAL RESULTS

Woodward-Clyde Consultants

500 12th Street, Suite 100, Oakland, CA 94607-4041
(415) 893-3600

Chain of Custody Record

PROJECT NO. 9910336A

SAMPLERS: (Signature) Lois Gruenberg

DATE	TIME	SAMPLE NUMBER	Sample Matrix (Soil, (W)ater, (A)ir)	ANALYSES: EPA Method	EPA Method	EPA Method	EPA Method	TPH-g, BTEX	TPH-d	9010	Cd, Cr, Pb, Zn	8270 open			Number of Containers	REMARKS (Sample preservation, handling procedures, etc.)
12/20		MW1-2	S								X				1	Results to Lois Gruenberg (415) 874-1765
1989		MW1-2D		HOLD											1	
		MW1-5						X	X	X		X			1	
		MW1-10		HOLD											1	
		MW1-15		HOLD											1	
		MW1-15D		HOLD											1	
		MW2-2									X				1	
		MW2-5						X	X	X		X			1	
		MW2-5D		HOLD											1	
		MW2-10		HOLD											1	
		MW2-15		HOLD											1	
		MW3-2									X				1	
		MW3-5						X	X	X		X			1	
		MW3-10		HOLD											1	
		MW3-10D		HOLD											1	
		MW3-15		HOLD											1	

TOTAL NUMBER OF CONTAINERS: 16

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Lois Gruenberg	12/20/89 9:30	13:10			

METHOD OF SHIPMENT:	SHIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature)	DATE/TIME

Woodward-Clyde Consultants

500 12th Street, Suite 100, Oakland, CA 94607-4041
(415) 893-3600

Chain of Custody Record

PROJECT NO. 8910336A-1000

SAMPLERS: (Signature) Lois Gruenberg

DATE	TIME	SAMPLE NUMBER	Sample Matrix (Soil, (W)ater, (A)ir	ANALYSES: EPA Method 8010	EPA Method 8270 spec.	EPA Method	EPA Method	TPHg/BTEX	TPHd						Number of Containers	REMARKS (Sample preservation, handling procedures, etc.)
12/22		MW1	W	X	X			X	X						9	Results to Lois Gruenberg (415) 874-1765
1989		MW2		X	X			X	X						8	
		MW3		X	X			X	X						9	

TOTAL NUMBER OF CONTAINERS: 26

RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)	RELINQUISHED BY: (Signature)	DATE/TIME	RECEIVED BY: (Signature)
Lois Gruenberg	12/22 1989				

METHOD OF SHIPMENT:	SHIPPED BY: (Signature)	COURIER: (Signature)	RECEIVED FOR LAB BY: (Signature)	DATE/TIME

WATER SAMPLE LOG

Sample No. MW12

Project No.: 8910336A Date: 12/22/89

Project Name: HERTZ OAKLAND AIRPORT

Sample Location: #1 AIRPORT Drive

Well Description: North side of Service office

Weather Conditions: Sunny cool

Observations / Comments:

Quality Assurance

Sampling Method: Teflon bailer

Method to Measure Water Level:

Pump Lines: (New) / Cleaned Bailer Lines: (New) / Cleaned

Method of cleaning Pump / Bailer: Alconox, Tap DI

pH Meter No.: 0231616 Calibrated 7.00 10.01 @ 25°C

Specific Conductance Meter No.: 13750 Calibrated Ind lined

Comments:

Sampling Measurements

Water Level (below MP) at Start: End:

Measuring Point (MP):

Time	Discharge (gallons)	pH	Temp. (°C)	Specific Conductance (µmhos / cm)	Turbidity	Color	Odor	Comments
1125	init	7.84	18.7	4000	v. high	Dk grey		Sal ‰ 3.0
1130	~7	7.72	19.2	4000	"	"		4.2
1139	~15	7.83	19.5	6000	"	"		5.9
1142	~20	7.76	19.9	5000	"	"		4.8
1144	~25	7.80	18.9	5500	"	"		4.5
1147	~30	7.79	19.0	6000	"	"		4.5
1157	~40	7.82	18.0	5500	"	"		4.5
1207	~45	7.89	18.2	5000	"	"		4.1
Sample		7.93	18.5	4000	Mod high	Yellow		2.5

Total Discharge: Casing Volumes Removed:

Method of disposal of discharged water:

Number and size of sample containers filled:

Collected by:

Woodward-Clyde Consultants
500 12th Street, Suite 100, Oakland, CA 94607-4014
(415) 893-3600

WATER SAMPLE LOG

Sample No. MW2

Project No. : 8910336A Date: 12/22/89

Project Name: HERTZ OAKLAND Airport

Sample Location: #1 Airport Drive

Well Description: South side of Service office

Weather Conditions: Sunny, cool, breezy

Observations / Comments:

Quality Assurance

Sampling Method: Teflon bailer

Method to Measure Water Level : Solinst

Pump Lines: (New) / Cleaned Bailer Lines: (New) / Cleaned

Method of cleaning Pump / (Bailer) Alconox, Tap, DI H2O @ 25C

pH Meter No.: 0231616 Calibrated 4.01

Specific Conductance Meter No.: 13750 Calibrated Med lined

Comments:

Sampling Measurements

Water Level (below MP) at Start: _____ End: _____

Measuring Point (MP):

Time	Discharge (gallons)	pH 7.96	Temp. (°C)	Specific Conductance (µmhos / cm)	Turbidity	Color	Odor	Comments Sal %
0955	~10	8.79	18.7	6000	high	grey		4.9
1003	20	7.94	18.7	6000	high	yell grey		5.0
1012	30	7.66	17.5	6000	mod-high	yell tan		4.2
1018	35	7.67	17.5	6000	"	"		"
1029	40	7.73	17.5	5500	"	"		4.0
1039	45	7.77	16.9	4200	low	yell clear		3.5
1066	50	7.83	20.0	6000	mod	yell tan		4.2
1900	55	7.64	20.0	5500	"	"		4.5
Sample		9.05	17.0	3000	clear			2.0

Total Discharge: _____ Casing Volumes Removed: _____

Method of disposal of discharged water:

Number and size of sample containers filled:

Collected by:

Woodward-Clyde Consultants
500 12th Street, Suite 100, Oakland, CA 94607-4014
(415) 893-3600

WATER SAMPLE LOG

Sample No. MW3

Project No.: 8910336A Date: 12/22/89

Project Name: HERTZ Oakland Airport

Sample Location: #1 Airport Drive

Well Description: west side of Service office/back door

Weather Conditions: sunny

Observations / Comments: _____

Quality Assurance

Sampling Method: Teflon bailer

Method to Measure Water Level: _____

Pump Lines: (New) / Cleaned Bailer Lines: (New) / Cleaned

Method of cleaning Pump / Bailer: Alconox, Tap, DI

pH Meter No.: 023161b Calibrated 7.00 @25C 10.01 red line

Specific Conductance Meter No.: 13750 Calibrated _____

Comments: _____

Sampling Measurements

Water Level (below MP) at Start: _____ End: _____

Measuring Point (MP): _____

Time	Discharge (gallons)	pH	Temp (°C)	Specific Conductance (µmhos / cm)	Turbidity	Color	Odor	Comments
1310	5	7.52	20.5	8000	mod high	tan gray		Sal ‰ 5.5
1437	12	7.59	20.0	8000	"	"		5.1
1345	20	7.57	22.0	11000	mod	"		8.7
1400	25	7.60	20.8	9200	"	"		6.0
1410	30	7.53	21.0	9400	"	"		6.1
Sample		7.69	19.0	7000		clear		4.5

Total Discharge: _____ Casing Volumes Removed: _____

Method of disposal of discharged water: _____

Number and size of sample containers filled: _____

Collected by: _____

Woodward-Clyde Consultants
500 12th Street, Suite 100, Oakland, CA 94607-4014
(415) 893-3600

ANAMETRIX INC

REPORT

Lois Gruenberg
Woodward-Clyde Consultants
500 12th Street
Suite 100
Oakland, CA 94607-4041

January 04, 1990
Anametrix W.O.#: 8912265
Date Received : 12/22/89
Project Number : 891033 6A-1000

Dear Ms. Gruenberg:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS, EXTRA COMPOUNDS and QUALITY ASSURANCE.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

B. Burt Sutherland

Burt Sutherland
Laboratory Director

BWS/dag

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : Woodward-Clyde Consultants
Address : 500 12th Street
Suite 100
City : Oakland, CA 94607-4041
Attn. : Lois Gruenberg

Anametrix W.O.#: 8912265
Date Received : 12/22/89
Purchase Order#: N/A
Project No. : 8910336A-1000
Date Released : 01/04/90

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
8912265-01	MW1	WATER	12/22/89	8010		12/29/89	HP15
8912265-02	MW2	WATER	12/22/89	8010		12/29/89	HP15
8912165-03	MW3	WATER	12/22/89	8010		12/29/89	HP15
8912265-01	MW1	WATER	12/22/89	8270	12/27/89	01/03/90	F2
8912265-02	MW2	WATER	12/22/89	8270	12/27/89	01/03/90	F2
8912265-03	MW3	WATER	12/22/89	8270	12/27/89	01/03/90	F2
8912265-01	MW1	WATER	12/22/89	TPH	01/02/90	01/03/90	N/A
8912265-02	MW2	WATER	12/22/89	TPH	01/02/90	01/03/90	N/A
8912265-03	MW3	WATER	12/22/89	TPH	01/02/90	01/03/90	N/A
TENTATIVELY INDENTIFIED COMPOUNDS (Extra)							
8912265-01	MW1	WATER	12/22/89	XTRAS	12/27/89	01/03/90	F2
8912265-02	MW2	WATER	12/22/89	XTRAS	12/27/89	01/03/90	F2
8912265-03	MW3	WATER	12/22/89	XTRAS	12/27/89	01/03/90	F2
QUALITY ASSURANCE (QA)							
15B1229H00	METHOD BLANK	WATER	N/A	8010		12/29/89	HP15
2CB1227C01	METHOD BLANK	WATER	N/A	8270	12/27/89	01/03/90	F2

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A-1000 MW1	Anametrix I.D.	: 8912265-01
Matrix	: WATER	Analyst	: LY
Date sampled	: 12/22/89	Supervisor	: [illegible]
Date analyzed	: 12/29/89	Date released	: 01/04/90
Dilution	: NONE	Instrument ID	: HP15

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
75-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	51-136%	95%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW2
Matrix : WATER
Date sampled : 12/22/89
Date analyzed: 12/29/89
Dilution : NONE

Anametrix I.D. : 8912265-02
Analyst : [illegible]
Supervisor : [illegible]
Date released : 01/04/90
Instrument ID : HP15

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
75-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	51-136%	95%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW3
Matrix : WATER
Date sampled : 12/22/89
Date analyzed: 12/29/89
Dilution : NONE

Anametrix I.D. : 8912165-03
Analyst : LT
Supervisor : SMS
Date released : 01/04/90
Instrument ID : HP15

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
75-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	51-136%	91%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A-1000 MW1	Anametrix I.D.	: 8912265-01
Matrix	: WATER	Analyst	:
Date sampled	: 12/22/89	Supervisor	: PG
Date ext.	: 12/27/89	Date released	: 01/04/90
Date analyzed	: 01/03/90	Volume ext.	: 1 LITER
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
62-75-9	* N-Nitrosodimethylamine	10	ND
108-95-2	* Phenol	10	ND
62-53-3	**Aniline	10	ND
111-44-4	* bis(-2-Chloroethyl)Ether	10	ND
95-57-8	* 2-Chlorophenol	10	ND
541-73-1	* 1,3-Dichlorobenzene	10	ND
106-46-7	* 1,4-Dichlorobenzene	10	ND
100-51-6	**Benzyl Alcohol	10	ND
95-50-1	* 1,2-Dichlorobenzene	10	ND
95-48-7	**2-Methylphenol	10	ND
108-60-1	**bis(2-chloroisopropyl)Ether	10	ND
106-44-5	**4-Methylphenol	10	ND
621-64-7	* N-Nitroso-Di-n-Propylamine	10	ND
67-72-1	* Hexachloroethane	10	ND
98-95-3	* Nitrobenzene	10	ND
78-59-1	* Isophorone	10	ND
88-75-5	* 2-Nitrophenol	10	ND
105-67-9	* 2,4-Dimethylphenol	10	ND
65-85-0	**Benzoic Acid	50	ND
111-91-1	* bis(-2-Chloroethoxy)Methane	10	ND
120-83-2	* 2,4-Dichlorophenol	10	ND
120-82-1	* 1,2,4-Trichlorobenzene	10	ND
91-20-3	* Naphthalene	10	ND
106-47-8	**4-Chloroaniline	10	ND
87-68-3	* Hexachlorobutadiene	10	ND
59-50-7	* 4-Chloro-3-Methylphenol	10	ND
91-57-6	**2-Methylnaphthalene	10	ND
77-47-4	* Hexachlorocyclopentadiene	10	ND
88-06-2	* 2,4,6-Trichlorophenol	10	ND
95-95-4	**2,4,5-Trichlorophenol	50	ND
91-58-7	* 2-Chloronaphthalene	10	ND
88-74-4	**2-Nitroaniline	50	ND
131-11-3	* Dimethyl Phthalate	10	ND
208-96-8	* Acenaphthylene	10	ND
99-09-2	**3-Nitroaniline	50	ND
83-32-9	* Acenaphthene	10	ND
51-28-5	* 2,4-Dinitrophenol	50	ND
100-02-7	* 4-Nitrophenol	50	ND
132-64-9	**Dibenzofuran	10	ND

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW1
Matrix : WATER
Date sampled : 12/22/89
Date ext. : 12/27/89
Date analyzed: 01/03/90
Dilut. factor: NONE

Anametrix I.D. : 8912265-01
Analyst : JH
Supervisor : PG
Date released : 01/04/90
Volume ext. : 1 LITER
Instrument ID : F2

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
121-14-2	* 2,4-Dinitrotoluene	10	ND
606-20-2	* 2,6-Dinitrotoluene	10	ND
84-66-2	* Diethylphthalate	10	ND
7005-72-3	* 4-Chlorophenyl-phenylether	10	ND
86-73-7	* Fluorene	10	ND
100-01-6	**4-Nitroaniline	50	ND
534-52-1	**4,6-Dinitro-2-Methylphenol	50	ND
86-30-6	* N-Nitrosodiphenylamine	10	ND
122-66-7	**Azobenzene	10	ND
101-55-3	* 4-Bromophenyl-phenylether	10	ND
118-74-1	* Hexachlorobenzene	10	ND
87-86-5	* Pentachlorophenol	50	ND
85-01-8	* Phenanthrene	10	ND
120-12-7	* Anthracene	10	ND
84-74-2	* Di-n-Butylphthalate	10	ND
206-44-0	* Fluoranthene	10	ND
92-87-5	* Benzidine	50	ND
129-00-0	* Pyrene	10	ND
85-68-7	* Butylbenzylphthalate	10	ND
91-94-1	* 3,3'-Dichlorobenzidine	20	ND
56-55-3	* Benzo(a)Anthracene	10	ND
117-81-7	* bis(2-Ethylhexyl)Phthalate	10	ND
218-01-9	* Chrysene	10	ND
117-84-0	* Di-n-Octyl Phthalate	10	ND
205-99-2	* Benzo(b)Fluoranthene	10	ND
207-08-9	* Benzo(k)Fluoranthene	10	ND
50-32-8	* Benzo(a)Pyrene	10	ND
193-39-5	* Indeno(1,2,3-cd)Pyrene	10	ND
53-70-3	* Dibenz(a,h)Anthracene	10	ND
191-24-2	* Benzo(g,h,i)Perylene	10	ND

CAS #	Surrogate Compounds	Limits	%Recovery
367-12-4	2-Fluorophenol	11-70%	46%
4165-62-2	Phenol-d6	10-62%	34%
4165-60-0	Nitrobenzene-d5	20-105%	68%
321-60-8	2-Fluorobiphenyl	26-110%	77%
118-79-6	2,4,6-Tribromophenol	26-154%	91%
1718-51-0	Terphenyl-d14	16-131%	103%

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A-1000 MW2	Anametrix I.D.	: 8912265-02
Matrix	: WATER	Analyst	:
Date sampled	: 12/22/89	Supervisor	:
Date ext.	: 12/27/89	Date released	: 01/04/90
Date analyzed	: 01/03/90	Volume ext.	: 1 LITER
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
62-75-9	* N-Nitrosodimethylamine	10	ND
108-95-2	* Phenol	10	ND
62-53-3	**Aniline	10	ND
111-44-4	* bis(-2-Chloroethyl)Ether	10	ND
95-57-8	* 2-Chlorophenol	10	ND
541-73-1	* 1,3-Dichlorobenzene	10	ND
106-46-7	* 1,4-Dichlorobenzene	10	ND
100-51-6	**Benzyl Alcohol	10	ND
95-50-1	* 1,2-Dichlorobenzene	10	ND
95-48-7	**2-Methylphenol	10	ND
108-60-1	**bis(2-chloroisopropyl)Ether	10	ND
106-44-5	**4-Methylphenol	10	ND
621-64-7	* N-Nitroso-Di-n-Propylamine	10	ND
67-72-1	* Hexachloroethane	10	ND
98-95-3	* Nitrobenzene	10	ND
78-59-1	* Isophorone	10	ND
88-75-5	* 2-Nitrophenol	10	ND
105-67-9	* 2,4-Dimethylphenol	10	ND
65-85-0	**Benzoic Acid	50	ND
111-91-1	* bis(-2-Chloroethoxy)Methane	10	ND
120-83-2	* 2,4-Dichlorophenol	10	ND
120-82-1	* 1,2,4-Trichlorobenzene	10	ND
91-20-3	* Naphthalene	10	ND
106-47-8	**4-Chloroaniline	10	ND
87-68-3	* Hexachlorobutadiene	10	ND
59-50-7	* 4-Chloro-3-Methylphenol	10	ND
91-57-6	**2-Methylnaphthalene	10	ND
77-47-4	* Hexachlorocyclopentadiene	10	ND
88-06-2	* 2,4,6-Trichlorophenol	10	ND
95-95-4	**2,4,5-Trichlorophenol	50	ND
91-58-7	* 2-Chloronaphthalene	10	ND
88-74-4	**2-Nitroaniline	50	ND
131-11-3	* Dimethyl Phthalate	10	ND
208-96-8	* Acenaphthylene	10	ND
99-09-2	**3-Nitroaniline	50	ND
83-32-9	* Acenaphthene	10	ND
51-28-5	* 2,4-Dinitrophenol	50	ND
100-02-7	* 4-Nitrophenol	50	ND
132-64-9	**Dibenzofuran	10	ND

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A-1000 MW2	Anametrix I.D.	: 8912265-02
Matrix	: WATER	Analyst	: M
Date sampled	: 12/22/89	Supervisor	: PG
Date ext.	: 12/27/89	Date released	: 01/04/90
Date analyzed	: 01/03/90	Volume ext.	: 1 LITER
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
121-14-2	* 2,4-Dinitrotoluene	10	ND
606-20-2	* 2,6-Dinitrotoluene	10	ND
84-66-2	* Diethylphthalate	10	ND
7005-72-3	* 4-Chlorophenyl-phenylether	10	ND
86-73-7	* Fluorene	10	ND
100-01-6	**4-Nitroaniline	50	ND
534-52-1	**4,6-Dinitro-2-Methylphenol	50	ND
86-30-6	* N-Nitrosodiphenylamine	10	ND
122-66-7	**Azobenzene	10	ND
101-55-3	* 4-Bromophenyl-phenylether	10	ND
118-74-1	* Hexachlorobenzene	10	ND
87-86-5	* Pentachlorophenol	50	ND
85-01-8	* Phenanthrene	10	ND
120-12-7	* Anthracene	10	ND
84-74-2	* Di-n-Butylphthalate	10	ND
206-44-0	* Fluoranthene	10	ND
92-87-5	* Benzidine	50	ND
129-00-0	* Pyrene	10	ND
85-68-7	* Butylbenzylphthalate	10	ND
91-94-1	* 3,3'-Dichlorobenzidine	20	ND
56-55-3	* Benzo(a)Anthracene	10	ND
117-81-7	* bis(2-Ethylhexyl)Phthalate	10	ND
218-01-9	* Chrysene	10	ND
117-84-0	* Di-n-Octyl Phthalate	10	ND
205-99-2	* Benzo(b)Fluoranthene	10	ND
207-08-9	* Benzo(k)Fluoranthene	10	ND
50-32-8	* Benzo(a)Pyrene	10	ND
193-39-5	* Indeno(1,2,3-cd)Pyrene	10	ND
53-70-3	* Dibenz(a,h)Anthracene	10	ND
191-24-2	* Benzo(g,h,i)Perylene	10	ND

CAS #	Surrogate Compounds	Limits	%Recovery
367-12-4	2-Fluorophenol	11-70%	37%
4165-62-2	Phenol-d6	10-62%	29%
4165-60-0	Nitrobenzene-d5	20-105%	60%
321-60-8	2-Fluorobiphenyl	26-110%	71%
118-79-6	2,4,6-Tribromophenol	26-154%	90%
1718-51-0	Terphenyl-d14	16-131%	109%

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW3
Matrix : WATER
Date sampled : 12/22/89
Date ext. : 12/27/89
Date analyzed: 01/03/90
Dilut. factor: NONE

Anametrix I.D. : 8912265-03
Analyst : UM
Supervisor : PG
Date released : 01/04/90
Volume ext. : 1 LITER
Instrument ID : F2

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
62-75-9	* N-Nitrosodimethylamine	10	ND
108-95-2	* Phenol	10	ND
62-53-3	**Aniline	10	ND
111-44-4	* bis(-2-Chloroethyl)Ether	10	ND
95-57-8	* 2-Chlorophenol	10	ND
541-73-1	* 1,3-Dichlorobenzene	10	ND
106-46-7	* 1,4-Dichlorobenzene	10	ND
100-51-6	**Benzyl Alcohol	10	ND
95-50-1	* 1,2-Dichlorobenzene	10	ND
95-48-7	**2-Methylphenol	10	ND
108-60-1	**bis(2-chloroisopropyl)Ether	10	ND
106-44-5	**4-Methylphenol	10	ND
621-64-7	* N-Nitroso-Di-n-Propylamine	10	ND
67-72-1	* Hexachloroethane	10	ND
98-95-3	* Nitrobenzene	10	ND
78-59-1	* Isophorone	10	ND
88-75-5	* 2-Nitrophenol	10	ND
105-67-9	* 2,4-Dimethylphenol	10	ND
65-85-0	**Benzoic Acid	50	ND
111-91-1	* bis(-2-Chloroethoxy)Methane	10	ND
120-83-2	* 2,4-Dichlorophenol	10	ND
120-82-1	* 1,2,4-Trichlorobenzene	10	ND
91-20-3	* Naphthalene	10	ND
106-47-8	**4-Chloroaniline	10	ND
87-68-3	* Hexachlorobutadiene	10	ND
59-50-7	* 4-Chloro-3-Methylphenol	10	ND
91-57-6	**2-Methylnaphthalene	10	ND
77-47-4	* Hexachlorocyclopentadiene	10	ND
88-06-2	* 2,4,6-Trichlorophenol	10	ND
95-95-4	**2,4,5-Trichlorophenol	50	ND
91-58-7	* 2-Chloronaphthalene	10	ND
88-74-4	**2-Nitroaniline	50	ND
131-11-3	* Dimethyl Phthalate	10	ND
208-96-8	* Acenaphthylene	10	ND
99-09-2	**3-Nitroaniline	50	ND
83-32-9	* Acenaphthene	10	ND
51-28-5	* 2,4-Dinitrophenol	50	ND
100-02-7	* 4-Nitrophenol	50	ND
132-64-9	**Dibenzofuran	10	ND

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A-1000 MW3	Anametrix I.D.	: 8912265-03
Matrix	: WATER	Analyst	: UM
Date sampled	: 12/22/89	Supervisor	: PG
Date ext.	: 12/27/89	Date released	: 01/04/90
Date analyzed	: 01/03/90	Volume ext.	: 1 LITER
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
121-14-2	* 2,4-Dinitrotoluene	10	ND
606-20-2	* 2,6-Dinitrotoluene	10	ND
84-66-2	* Diethylphthalate	10	ND
7005-72-3	* 4-Chlorophenyl-phenylether	10	ND
86-73-7	* Fluorene	10	ND
100-01-6	**4-Nitroaniline	50	ND
534-52-1	**4,6-Dinitro-2-Methylphenol	50	ND
86-30-6	* N-Nitrosodiphenylamine	10	ND
122-66-7	**Azobenzene	10	ND
101-55-3	* 4-Bromophenyl-phenylether	10	ND
118-74-1	* Hexachlorobenzene	10	ND
87-86-5	* Pentachlorophenol	50	ND
85-01-8	* Phenanthrene	10	ND
120-12-7	* Anthracene	10	ND
84-74-2	* Di-n-Butylphthalate	10	ND
206-44-0	* Fluoranthene	10	ND
92-87-5	* Benzidine	50	ND
129-00-0	* Pyrene	10	ND
85-68-7	* Butylbenzylphthalate	10	ND
91-94-1	* 3,3'-Dichlorobenzidine	20	ND
56-55-3	* Benzo(a)Anthracene	10	ND
117-81-7	* bis(2-Ethylhexyl)Phthalate	10	ND
218-01-9	* Chrysene	10	ND
117-84-0	* Di-n-Octyl Phthalate	10	ND
205-99-2	* Benzo(b)Fluoranthene	10	ND
207-08-9	* Benzo(k)Fluoranthene	10	ND
50-32-8	* Benzo(a)Pyrene	10	ND
193-39-5	* Indeno(1,2,3-cd)Pyrene	10	ND
53-70-3	* Dibenz(a,h)Anthracene	10	ND
191-24-2	* Benzo(g,h,i)Perylene	10	ND

CAS #	Surrogate Compounds	Limits	%Recovery
367-12-4	2-Fluorophenol	11-70%	44%
4165-62-2	Phenol-d6	10-62%	33%
4165-60-0	Nitrobenzene-d5	20-105%	67%
321-60-8	2-Fluorobiphenyl	26-110%	72%
118-79-6	2,4,6-Tribromophenol	26-154%	89%
1718-51-0	Terphenyl-d14	16-131%	98%

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A-1000 MW1	Anametrix I.D.	: 8912265-01
Matrix	: WATER	Analyst	: CB
Date sampled	: 12/22/89	Supervisor	: TC
Date anl.TPHg	: 12/26/89	Date released	: 01/04/90
Date ext.TPHd	: 01/02/90	Date ext. TOG	: N/A
Date anl.TPHd	: 01/03/90	Date anl. TOG	: N/A

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
71-43-2	Benzene	0.5	ND
108-88-3	Toluene	0.5	ND
100-41-4	Ethylbenzene	0.5	ND
1330-20-7	Total Xylenes	1	ND
	TPH as Gasoline	50	ND
	TPH as Diesel	50	ND

ND - Below reporting limit.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW2
Matrix : WATER
Date sampled : 12/22/89
Date anl.TPHg: 12/26/89
Date ext.TPHd: 01/02/90
Date anl.TPHd: 01/03/90

Anametrix I.D. : 8912265-02
Analyst : CB
Supervisor : JC
Date released : 01/04/90
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
71-43-2	Benzene	0.5	ND
108-88-3	Toluene	0.5	ND
100-41-4	Ethylbenzene	0.5	ND
1330-20-7	Total Xylenes	1	ND
	TPH as Gasoline	50	ND
	TPH as Diesel	50	ND

ND - Below reporting limit.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW3
Matrix : WATER
Date sampled : 12/22/89
Date anl.TPHg: 12/26/89
Date ext.TPHd: 01/02/90
Date anl.TPHd: 01/03/90

Anametrix I.D. : 8912265-03
Analyst : CB
Supervisor : TC
Date released : 01/04/90
Date ext. TOG : N/A
Date anl. TOG : N/A

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
71-43-2	Benzene	0.5	ND
108-88-3	Toluene	0.5	ND
100-41-4	Ethylbenzene	0.5	ND
1330-20-7	Total Xylenes	1	ND
	TPH as Gasoline	50	ND
	TPH as Diesel	50	ND

ND - Below reporting limit.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ORGANICS ANALYSIS DATA SHEET - 625/8270 TENTATIVELY IDENTIFIED COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW1
Matrix : WATER
Date Sampled : 12/22/89
Analyzed SV : 01/03/90
Dilution SV : NONE

Anametrix I.D. : 8912265-01
Analyst : LM
Supervisor : PG
Date Released : 01/04/90

	CAS #	Scan#	Semivolatile Fraction Compound Name	Det. Limit ppb	Amt. Found ppb
1	620-05-3	1688	(iodomethyl)benzene	10	30
2				10	
3				10	
4				10	
5				10	
6				10	
7				10	
8				10	
9				10	
10				10	

Tentatively identified compounds are significant chromatographic peaks (TICs) other than priority pollutants. TIC spectra are compared with entries in the National Bureau of Standards mass spectral library. Identification is made by following US EPA guidelines and acceptance criteria. TICs are quantitated by using the area of the nearest internal standard and assuming a response factor of one (1). Values calculated are ESTIMATES ONLY.

ORGANICS ANALYSIS DATA SHEET - 625/8270 TENTATIVELY IDENTIFIED COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW2
Matrix : WATER
Date Sampled : 12/22/89
Analyzed SV : 01/03/90
Dilution SV : NONE

Anametrix I.D. : 8912265-02
Analyst : JP
Supervisor : PG
Date Released : 01/04/90

	CAS #	Scan#	Semivolatile Fraction Compound Name	Det. Limit ppb	Amt. Found ppb
1	85-60-9	1753	4-4'butylidenebis[2-(1,1-dimethyl-	10	20
2			ethyl)5-methyl]phenol	10	
3				10	
4				10	
5				10	
6				10	
7				10	
8				10	
9				10	
10				10	

Tentatively identified compounds are significant chromatographic peaks (TICs) other than priority pollutants. TIC spectra are compared with entries in the National Bureau of Standards mass spectral library. Identification is made by following US EPA guidelines and acceptance criteria. TICs are quantitated by using the area of the nearest internal standard and assuming a response factor of one (1). Values calculated are ESTIMATES ONLY.

ORGANICS ANALYSIS DATA SHEET - 625/8270 TENTATIVELY IDENTIFIED COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A-1000 MW3
Matrix : WATER
Date Sampled : 12/22/89
Analyzed SV : 01/03/90
Dilution SV : NONE

Anametrix I.D. : 8912265-03
Analyst : UM
Supervisor : PG
Date Released : 01/04/90

	CAS #	Scan#	Semivolatile Fraction Compound Name	Det. Limit ppb	Amt. Found ppb
1	620-05-3	1689	(iodomethyl)benzene	10	40
2	85-60-9	1753	4,4'-butylidenebis[2-(1,1-dimethyl	10	20
3			ethyl)-5-methyl]phenol	10	
4				10	
5				10	
6				10	
7				10	
8				10	
9				10	
10				10	

Tentatively identified compounds are significant chromatographic peaks (TICs) other than priority pollutants. TIC spectra are compared with entries in the National Bureau of Standards mass spectral library. Identification is made by following US EPA guidelines and acceptance criteria. TICs are quantitated by using the area of the nearest internal standard and assuming a response factor of one (1). Values calculated are ESTIMATES ONLY.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: 15B1229HOO
Matrix	: WATER	Analyst	:
Date sampled	: N/A	Supervisor	:
Date analyzed	: 12/29/89	Date released	: 01/04/90
Dilution	: NONE	Instrument ID	: HP15

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
75-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	51-136%	97%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: 2CB1227C01
Matrix	: WATER	Analyst	: UM
Date sampled	: N/A	Supervisor	: PG
Date ext.	: 12/27/89	Date released	: 01/04/90
Date analyzed	: 01/03/90	Volume ext.	: 1 LITER
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
62-75-9	* N-Nitrosodimethylamine	10	ND
108-95-2	* Phenol	10	ND
62-53-3	**Aniline	10	ND
111-44-4	* bis(-2-Chloroethyl)Ether	10	ND
95-57-8	* 2-Chlorophenol	10	ND
541-73-1	* 1,3-Dichlorobenzene	10	ND
106-46-7	* 1,4-Dichlorobenzene	10	ND
100-51-6	**Benzyl Alcohol	10	ND
95-50-1	* 1,2-Dichlorobenzene	10	ND
95-48-7	**2-Methylphenol	10	ND
108-60-1	**bis(2-chloroisopropyl)Ether	10	ND
106-44-5	**4-Methylphenol	10	ND
621-64-7	* N-Nitroso-Di-n-Propylamine	10	ND
67-72-1	* Hexachloroethane	10	ND
98-95-3	* Nitrobenzene	10	ND
78-59-1	* Isophorone	10	ND
88-75-5	* 2-Nitrophenol	10	ND
105-67-9	* 2,4-Dimethylphenol	10	ND
65-85-0	**Benzoic Acid	50	ND
111-91-1	* bis(-2-Chloroethoxy)Methane	10	ND
120-83-2	* 2,4-Dichlorophenol	10	ND
120-82-1	* 1,2,4-Trichlorobenzene	10	ND
91-20-3	* Naphthalene	10	ND
106-47-8	**4-Chloroaniline	10	ND
87-68-3	* Hexachlorobutadiene	10	ND
59-50-7	* 4-Chloro-3-Methylphenol	10	ND
91-57-6	**2-Methylnaphthalene	10	ND
77-47-4	* Hexachlorocyclopentadiene	10	ND
88-06-2	* 2,4,6-Trichlorophenol	10	ND
95-95-4	**2,4,5-Trichlorophenol	50	ND
91-58-7	* 2-Chloronaphthalene	10	ND
88-74-4	**2-Nitroaniline	50	ND
131-11-3	* Dimethyl Phthalate	10	ND
208-96-8	* Acenaphthylene	10	ND
99-09-2	**3-Nitroaniline	50	ND
83-32-9	* Acenaphthene	10	ND
51-28-5	* 2,4-Dinitrophenol	50	ND
100-02-7	* 4-Nitrophenol	50	ND
132-64-9	**Dibenzofuran	10	ND

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: 2CB1227C01
Matrix	: WATER	Analyst	: UH
Date sampled	: N/A	Supervisor	: PG
Date ext.	: 12/27/89	Date released	: 01/04/90
Date analyzed	: 01/03/90	Volume ext.	: 1 LITER
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/l)	Amount Found (ug/l)
121-14-2	* 2,4-Dinitrotoluene	10	ND
606-20-2	* 2,6-Dinitrotoluene	10	ND
84-66-2	* Diethylphthalate	10	ND
7005-72-3	* 4-Chlorophenyl-phenylether	10	ND
86-73-7	* Fluorene	10	ND
100-01-6	**4-Nitroaniline	50	ND
534-52-1	**4,6-Dinitro-2-Methylphenol	50	ND
86-30-6	* N-Nitrosodiphenylamine	10	ND
122-66-7	**Azobenzene	10	ND
101-55-3	* 4-Bromophenyl-phenylether	10	ND
118-74-1	* Hexachlorobenzene	10	ND
87-86-5	* Pentachlorophenol	50	ND
85-01-8	* Phenanthrene	10	ND
120-12-7	* Anthracene	10	ND
84-74-2	* Di-n-Butylphthalate	10	ND
206-44-0	* Fluoranthene	10	ND
92-87-5	* Benzidine	50	ND
129-00-0	* Pyrene	10	ND
85-68-7	* Butylbenzylphthalate	10	ND
91-94-1	* 3,3'-Dichlorobenzidine	20	ND
56-55-3	* Benzo(a)Anthracene	10	ND
117-81-7	* bis(2-Ethylhexyl)Phthalate	10	19
218-01-9	* Chrysene	10	ND
117-84-0	* Di-n-Octyl Phthalate	10	ND
205-99-2	* Benzo(b)Fluoranthene	10	ND
207-08-9	* Benzo(k)Fluoranthene	10	ND
50-32-8	* Benzo(a)Pyrene	10	ND
193-39-5	* Indeno(1,2,3-cd)Pyrene	10	ND
53-70-3	* Dibenz(a,h)Anthracene	10	ND
191-24-2	* Benzo(g,h,i)Perylene	10	ND

CAS #	Surrogate Compounds	Limits	%Recovery
367-12-4	2-Fluorophenol	11-70%	33%
4165-62-2	Phenol-d6	10-62%	25%
4165-60-0	Nitrobenzene-d5	20-105%	49%
321-60-8	2-Fluorobiphenyl	26-110%	52%
118-79-6	2,4,6-Tribromophenol	26-154%	82%
1718-51-0	Terphenyl-d14	16-131%	117%

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ANAMETRIX INC

REPORT

Lois Gruenberg
Woodward-Clyde Consultants
500 12th Street Ste. 100
Oakland, CA 94607-4041

January 05, 1990
Anametrix W.O.#: 8912251
Date Received : 12/21/89
Project Number : 8910336A

Dear Ms. Gruenberg:

Your samples have been received for analysis. The REPORT SUMMARY lists your sample identifications and the analytical methods you requested. The following sections are included in this report: RESULTS and QUALITY ASSURANCE.

NOTE: Amounts reported are net values, i.e. corrected for method blank contamination.

If there is any more that we can do, please give us a call. Thank you for using ANAMETRIX, INC.

Sincerely,

ANAMETRIX, INC.

Burt Sutherland

Burt Sutherland
Laboratory Director

BWS/dmt

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : Woodward-Clyde Consultants
Address : 500 12th Street Ste. 100
City : Oakland, CA 94607-4041
Attn. : Lois Gruenberg

Anametrix W.O.#: 8912251
Date Received : 12/21/89
Purchase Order#: N/A
Project No. : 8910336A
Date Released : 01/05/90

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
8912251-03	MW1-5	SOIL	12/20/89	8270	01/03/90	01/04/90	F2
8912251-08	MW2-5	SOIL	12/20/89	8270	01/03/90	01/04/90	F2
8912251-13	MW3-5	SOIL	12/20/89	8270	01/03/90	01/04/90	F2
QUALITY ASSURANCE (QA)							
2CB0103C02	METHOD BLANK	SOIL	N/A	8270	01/03/90	01/04/90	F2
8912251-03	MW1-5	SOIL	12/20/89	SPIKE	01/03/90	01/04/90	F2

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A MW1-5	Anametrix I.D.	: 8912251-03
Matrix	: SOIL	Analyst	: UH
Date sampled	: 12/20/89	Supervisor	: PG
Date ext.	: 01/03/90	Date released	: 01/05/90
Date analyzed	: 01/04/90	Weight ext.	: 30g
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
62-75-9	* N-Nitrosodimethylamine	330	ND
108-95-2	* Phenol	330	ND
62-53-3	**Aniline	330	ND
111-44-4	* bis(-2-Chloroethyl)Ether	330	ND
95-57-8	* 2-Chlorophenol	330	ND
541-73-1	* 1,3-Dichlorobenzene	330	ND
106-46-7	* 1,4-Dichlorobenzene	330	ND
100-51-6	**Benzyl Alcohol	330	ND
95-50-1	* 1,2-Dichlorobenzene	330	ND
95-48-7	**2-Methylphenol	330	ND
108-60-1	**bis(2-chloroisopropyl)Ether	330	ND
106-44-5	**4-Methylphenol	330	ND
621-64-7	* N-Nitroso-Di-n-Propylamine	330	ND
67-72-1	* Hexachloroethane	330	ND
98-95-3	* Nitrobenzene	330	ND
78-59-1	* Isophorone	330	ND
88-75-5	* 2-Nitrophenol	330	ND
105-67-9	* 2,4-Dimethylphenol	330	ND
65-85-0	**Benzoic Acid	1600	ND
111-91-1	* bis(-2-Chloroethoxy)Methane	330	ND
120-83-2	* 2,4-Dichlorophenol	330	ND
120-82-1	* 1,2,4-Trichlorobenzene	330	ND
91-20-3	* Naphthalene	330	ND
106-47-8	**4-Chloroaniline	330	ND
87-68-3	* Hexachlorobutadiene	330	ND
59-50-7	* 4-Chloro-3-Methylphenol	330	ND
91-57-6	**2-Methylnaphthalene	330	ND
77-47-4	* Hexachlorocyclopentadiene	330	ND
88-06-2	* 2,4,6-Trichlorophenol	330	ND
95-95-4	**2,4,5-Trichlorophenol	1600	ND
91-58-7	* 2-Chloronaphthalene	330	ND
88-74-4	**2-Nitroaniline	1600	ND
131-11-3	* Dimethyl Phthalate	330	ND
208-96-8	* Acenaphthylene	330	ND
99-09-2	**3-Nitroaniline	1600	ND
83-32-9	* Acenaphthene	330	ND
51-28-5	* 2,4-Dinitrophenol	1600	ND
100-02-7	* 4-Nitrophenol	1600	ND
132-64-9	**Dibenzofuran	330	ND

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A MW1-5	Anametrix I.D.	: 8912251-03
Matrix	: SOIL	Analyst	: UH
Date sampled	: 12/20/89	Supervisor	: PG
Date ext.	: 01/03/90	Date released	: 01/05/90
Date analyzed	: 01/04/90	Weight ext.	: 30g
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
121-14-2	* 2,4-Dinitrotoluene	330	ND
606-20-2	* 2,6-Dinitrotoluene	330	ND
84-66-2	* Diethylphthalate	330	ND
7005-72-3	* 4-Chlorophenyl-phenylether	330	ND
86-73-7	* Fluorene	330	ND
100-01-6	**4-Nitroaniline	1600	ND
534-52-1	**4,6-Dinitro-2-Methylphenol	1600	ND
86-30-6	* N-Nitrosodiphenylamine	330	ND
122-66-7	**Azobenzene	330	ND
101-55-3	* 4-Bromophenyl-phenylether	330	ND
118-74-1	* Hexachlorobenzene	330	ND
87-86-5	* Pentachlorophenol	1600	ND
85-01-8	* Phenanthrene	330	ND
120-12-7	* Anthracene	330	ND
84-74-2	* Di-n-Butylphthalate	330	ND
206-44-0	* Fluoranthene	330	ND
92-87-5	* Benzidine	1600	ND
129-00-0	* Pyrene	330	ND
85-68-7	* Butylbenzylphthalate	330	ND
91-94-1	* 3,3'-Dichlorobenzidine	660	ND
56-55-3	* Benzo(a)Anthracene	330	ND
117-81-7	* bis(2-Ethylhexyl)Phthalate	330	ND
218-01-9	* Chrysene	330	ND
117-84-0	* Di-n-Octyl Phthalate	330	ND
205-99-2	* Benzo(b)Fluoranthene	330	ND
207-08-9	* Benzo(k)Fluoranthene	330	ND
50-32-8	* Benzo(a)Pyrene	330	ND
193-39-5	* Indeno(1,2,3-cd)Pyrene	330	ND
53-70-3	* Dibenz(a,h)Anthracene	330	ND
191-24-2	* Benzo(g,h,i)Perylene	330	ND

CAS #	Surrogate Compounds	Limits	%Recovery
367-12-4	2-Fluorophenol	15-83%	66%
4165-62-2	Phenol-d6	18-92%	69%
4165-60-0	Nitrobenzene-d5	12-80%	59%
321-60-8	2-Fluorobiphenyl	16-100%	68%
118-79-6	2,4,6-Tribromophenol	15-135%	68%
1718-51-0	Terphenyl-d14	15-117%	86%

ND : Not detected at or above practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A MW2-5
Matrix : SOIL
Date sampled : 12/20/89
Date ext. : 01/03/90
Date analyzed: 01/04/90
Dilut. factor: NONE

Anametrix I.D. : 8912251-08
Analyst : UM
Supervisor : PG
Date released : 01/05/90
Weight ext. : 30g
Instrument ID : F2

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
62-75-9	* N-Nitrosodimethylamine	330	ND
108-95-2	* Phenol	330	ND
62-53-3	**Aniline	330	ND
111-44-4	* bis(-2-Chloroethyl)Ether	330	ND
95-57-8	* 2-Chlorophenol	330	ND
541-73-1	* 1,3-Dichlorobenzene	330	ND
106-46-7	* 1,4-Dichlorobenzene	330	ND
100-51-6	**Benzyl Alcohol	330	ND
95-50-1	* 1,2-Dichlorobenzene	330	ND
95-48-7	**2-Methylphenol	330	ND
108-60-1	**bis(2-chloroisopropyl)Ether	330	ND
106-44-5	**4-Methylphenol	330	ND
621-64-7	* N-Nitroso-Di-n-Propylamine	330	ND
67-72-1	* Hexachloroethane	330	ND
98-95-3	* Nitrobenzene	330	ND
78-59-1	* Isophorone	330	ND
88-75-5	* 2-Nitrophenol	330	ND
105-67-9	* 2,4-Dimethylphenol	330	ND
65-85-0	**Benzoic Acid	1600	ND
111-91-1	* bis(-2-Chloroethoxy)Methane	330	ND
120-83-2	* 2,4-Dichlorophenol	330	ND
120-82-1	* 1,2,4-Trichlorobenzene	330	ND
91-20-3	* Naphthalene	330	ND
106-47-8	**4-Chloroaniline	330	ND
87-68-3	* Hexachlorobutadiene	330	ND
59-50-7	* 4-Chloro-3-Methylphenol	330	ND
91-57-6	**2-Methylnaphthalene	330	ND
77-47-4	* Hexachlorocyclopentadiene	330	ND
88-06-2	* 2,4,6-Trichlorophenol	330	ND
95-95-4	**2,4,5-Trichlorophenol	1600	ND
91-58-7	* 2-Chloronaphthalene	330	ND
88-74-4	**2-Nitroaniline	1600	ND
131-11-3	* Dimethyl Phthalate	330	ND
208-96-8	* Acenaphthylene	330	ND
99-09-2	**3-Nitroaniline	1600	ND
83-32-9	* Acenaphthene	330	ND
51-28-5	* 2,4-Dinitrophenol	1600	ND
100-02-7	* 4-Nitrophenol	1600	ND
132-64-9	**Dibenzofuran	330	ND

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A MW2-5	Anametrix I.D.	: 8912251-08
Matrix	: SOIL	Analyst	: UH
Date sampled	: 12/20/89	Supervisor	: PG
Date ext.	: 01/03/90	Date released	: 01/05/90
Date analyzed	: 01/04/90	Weight ext.	: 30g
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
121-14-2	* 2,4-Dinitrotoluene	330	ND
606-20-2	* 2,6-Dinitrotoluene	330	ND
84-66-2	* Diethylphthalate	330	ND
7005-72-3	* 4-Chlorophenyl-phenylether	330	ND
86-73-7	* Fluorene	330	ND
100-01-6	**4-Nitroaniline	1600	ND
534-52-1	**4,6-Dinitro-2-Methylphenol	1600	ND
86-30-6	* N-Nitrosodiphenylamine	330	ND
122-66-7	**Azobenzene	330	ND
101-55-3	* 4-Bromophenyl-phenylether	330	ND
118-74-1	* Hexachlorobenzene	330	ND
87-86-5	* Pentachlorophenol	1600	ND
85-01-8	* Phenanthrene	330	ND
120-12-7	* Anthracene	330	ND
84-74-2	* Di-n-Butylphthalate	330	ND
206-44-0	* Fluoranthene	330	ND
92-87-5	* Benzidine	1600	ND
129-00-0	* Pyrene	330	ND
85-68-7	* Butylbenzylphthalate	330	ND
91-94-1	* 3,3'-Dichlorobenzidine	660	ND
56-55-3	* Benzo(a)Anthracene	330	ND
117-81-7	* bis(2-Ethylhexyl)Phthalate	330	ND
218-01-9	* Chrysene	330	ND
117-84-0	* Di-n-Octyl Phthalate	330	ND
205-99-2	* Benzo(b)Fluoranthene	330	ND
207-08-9	* Benzo(k)Fluoranthene	330	ND
50-32-8	* Benzo(a)Pyrene	330	ND
193-39-5	* Indeno(1,2,3-cd)Pyrene	330	ND
53-70-3	* Dibenz(a,h)Anthracene	330	ND
191-24-2	* Benzo(g,h,i)Perylene	330	ND

CAS #	Surrogate Compounds	Limits	%Recovery
367-12-4	2-Fluorophenol	15-83%	46%
4165-62-2	Phenol-d6	18-92%	54%
4165-60-0	Nitrobenzene-d5	12-80%	41%
321-60-8	2-Fluorobiphenyl	16-100%	52%
118-79-6	2,4,6-Tribromophenol	15-135%	61%
1718-51-0	Terphenyl-d14	15-117%	81%

ND : Not detected at or above practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A MW3-5
Matrix : SOIL
Date sampled : 12/20/89
Date ext. : 01/03/90
Date analyzed: 01/04/90
Dilut. factor: NONE

Anametrix I.D. : 8912251-13
Analyst : UH
Supervisor : PG
Date released : 01/05/90
Weight ext. : 30g
Instrument ID : F2

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
62-75-9	* N-Nitrosodimethylamine	330	ND
108-95-2	* Phenol	330	ND
62-53-3	**Aniline	330	ND
111-44-4	* bis(-2-Chloroethyl)Ether	330	ND
95-57-8	* 2-Chlorophenol	330	ND
541-73-1	* 1,3-Dichlorobenzene	330	ND
106-46-7	* 1,4-Dichlorobenzene	330	ND
100-51-6	**Benzyl Alcohol	330	ND
95-50-1	* 1,2-Dichlorobenzene	330	ND
95-48-7	**2-Methylphenol	330	ND
108-60-1	**bis(2-chloroisopropyl)Ether	330	ND
106-44-5	**4-Methylphenol	330	ND
621-64-7	* N-Nitroso-Di-n-Propylamine	330	ND
67-72-1	* Hexachloroethane	330	ND
98-95-3	* Nitrobenzene	330	ND
78-59-1	* Isophorone	330	ND
88-75-5	* 2-Nitrophenol	330	ND
105-67-9	* 2,4-Dimethylphenol	330	ND
65-85-0	**Benzoic Acid	1600	ND
111-91-1	* bis(-2-Chloroethoxy)Methane	330	ND
120-83-2	* 2,4-Dichlorophenol	330	ND
120-82-1	* 1,2,4-Trichlorobenzene	330	ND
91-20-3	* Naphthalene	330	ND
106-47-8	**4-Chloroaniline	330	ND
87-68-3	* Hexachlorobutadiene	330	ND
59-50-7	* 4-Chloro-3-Methylphenol	330	ND
91-57-6	**2-Methylnaphthalene	330	ND
77-47-4	* Hexachlorocyclopentadiene	330	ND
88-06-2	* 2,4,6-Trichlorophenol	330	ND
95-95-4	**2,4,5-Trichlorophenol	1600	ND
91-58-7	* 2-Chloronaphthalene	330	ND
88-74-4	**2-Nitroaniline	1600	ND
131-11-3	* Dimethyl Phthalate	330	ND
208-96-8	* Acenaphthylene	330	ND
99-09-2	**3-Nitroaniline	1600	ND
83-32-9	* Acenaphthene	330	ND
51-28-5	* 2,4-Dinitrophenol	1600	ND
100-02-7	* 4-Nitrophenol	1600	ND
132-64-9	**Dibenzofuran	330	ND

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A MW3-5	Anametrix I.D.	: 8912251-13
Matrix	: SOIL	Analyst	: UH
Date sampled	: 12/20/89	Supervisor	: PG
Date ext.	: 01/03/90	Date released	: 01/05/90
Date analyzed	: 01/04/90	Weight ext.	: 30g
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
121-14-2	* 2,4-Dinitrotoluene	330	ND
606-20-2	* 2,6-Dinitrotoluene	330	ND
84-66-2	* Diethylphthalate	330	ND
7005-72-3	* 4-Chlorophenyl-phenylether	330	ND
86-73-7	* Fluorene	330	ND
100-01-6	**4-Nitroaniline	1600	ND
534-52-1	**4,6-Dinitro-2-Methylphenol	1600	ND
86-30-6	* N-Nitrosodiphenylamine	330	ND
122-66-7	**Azobenzene	330	ND
101-55-3	* 4-Bromophenyl-phenylether	330	ND
118-74-1	* Hexachlorobenzene	330	ND
87-86-5	* Pentachlorophenol	1600	ND
85-01-8	* Phenanthrene	330	ND
120-12-7	* Anthracene	330	ND
84-74-2	* Di-n-Butylphthalate	330	ND
206-44-0	* Fluoranthene	330	ND
92-87-5	* Benzidine	1600	ND
129-00-0	* Pyrene	330	ND
85-68-7	* Butylbenzylphthalate	330	ND
91-94-1	* 3,3'-Dichlorobenzidine	660	ND
56-55-3	* Benzo(a)Anthracene	330	ND
117-81-7	* bis(2-Ethylhexyl)Phthalate	330	ND
218-01-9	* Chrysene	330	ND
117-84-0	* Di-n-Octyl Phthalate	330	ND
205-99-2	* Benzo(b)Fluoranthene	330	ND
207-08-9	* Benzo(k)Fluoranthene	330	ND
50-32-8	* Benzo(a)Pyrene	330	ND
193-39-5	* Indeno(1,2,3-cd)Pyrene	330	ND
53-70-3	* Dibenz(a,h)Anthracene	330	ND
191-24-2	* Benzo(g,h,i)Perylene	330	ND

CAS #	Surrogate Compounds	Limits	%Recovery
367-12-4	2-Fluorophenol	15-83%	66%
4165-62-2	Phenol-d6	18-92%	74%
4165-60-0	Nitrobenzene-d5	12-80%	63%
321-60-8	2-Fluorobiphenyl	16-100%	71%
118-79-6	2,4,6-Tribromophenol	15-135%	63%
1718-51-0	Terphenyl-d14	15-117%	96%

ND : Not detected at or above practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: 2CB0103C02
Matrix	: SOIL	Analyst	: UM
Date sampled	: N/A	Supervisor	: PG
Date ext.	: 01/03/90	Date released	: 01/05/90
Date analyzed	: 01/04/90	Weight ext.	: 30g
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
62-75-9	* N-Nitrosodimethylamine	330	ND
108-95-2	* Phenol	330	ND
62-53-3	**Aniline	330	ND
111-44-4	* bis(-2-Chloroethyl)Ether	330	ND
95-57-8	* 2-Chlorophenol	330	ND
541-73-1	* 1,3-Dichlorobenzene	330	ND
106-46-7	* 1,4-Dichlorobenzene	330	ND
100-51-6	**Benzyl Alcohol	330	ND
95-50-1	* 1,2-Dichlorobenzene	330	ND
95-48-7	**2-Methylphenol	330	ND
108-60-1	**bis(2-chloroisopropyl)Ether	330	ND
106-44-5	**4-Methylphenol	330	ND
621-64-7	* N-Nitroso-Di-n-Propylamine	330	ND
67-72-1	* Hexachloroethane	330	ND
98-95-3	* Nitrobenzene	330	ND
78-59-1	* Isophorone	330	ND
88-75-5	* 2-Nitrophenol	330	ND
105-67-9	* 2,4-Dimethylphenol	330	ND
65-85-0	**Benzoic Acid	1600	ND
111-91-1	* bis(-2-Chloroethoxy)Methane	330	ND
120-83-2	* 2,4-Dichlorophenol	330	ND
120-82-1	* 1,2,4-Trichlorobenzene	330	ND
91-20-3	* Naphthalene	330	ND
106-47-8	**4-Chloroaniline	330	ND
87-68-3	* Hexachlorobutadiene	330	ND
59-50-7	* 4-Chloro-3-Methylphenol	330	ND
91-57-6	**2-Methylnaphthalene	330	ND
77-47-4	* Hexachlorocyclopentadiene	330	ND
88-06-2	* 2,4,6-Trichlorophenol	330	ND
95-95-4	**2,4,5-Trichlorophenol	1600	ND
91-58-7	* 2-Chloronaphthalene	330	ND
88-74-4	**2-Nitroaniline	1600	ND
131-11-3	* Dimethyl Phthalate	330	ND
208-96-8	* Acenaphthylene	330	ND
99-09-2	**3-Nitroaniline	1600	ND
83-32-9	* Acenaphthene	330	ND
51-28-5	* 2,4-Dinitrophenol	1600	ND
100-02-7	* 4-Nitrophenol	1600	ND
132-64-9	**Dibenzofuran	330	ND

ND : Not detected at or above the practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

ORGANIC ANALYSIS DATA SHEET -- EPA METHOD 625/8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: 2CB0103C02
Matrix	: SOIL	Analyst	: LH
Date sampled	: N/A	Supervisor	: PG
Date ext.	: 01/03/90	Date released	: 01/05/90
Date analyzed	: 01/04/90	Weight ext.	: 30g
Dilut. factor	: NONE	Instrument ID	: F2

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
121-14-2	* 2,4-Dinitrotoluene	330	ND
606-20-2	* 2,6-Dinitrotoluene	330	ND
84-66-2	* Diethylphthalate	330	ND
7005-72-3	* 4-Chlorophenyl-phenylether	330	ND
86-73-7	* Fluorene	330	ND
100-01-6	**4-Nitroaniline	1600	ND
534-52-1	**4,6-Dinitro-2-Methylphenol	1600	ND
86-30-6	* N-Nitrosodiphenylamine	330	ND
122-66-7	**Azobenzene	330	ND
101-55-3	* 4-Bromophenyl-phenylether	330	ND
118-74-1	* Hexachlorobenzene	330	ND
87-86-5	* Pentachlorophenol	1600	ND
85-01-8	* Phenanthrene	330	ND
120-12-7	* Anthracene	330	ND
84-74-2	* Di-n-Butylphthalate	330	ND
206-44-0	* Fluoranthene	330	ND
92-87-5	* Benzidine	1600	ND
129-00-0	* Pyrene	330	ND
85-68-7	* Butylbenzylphthalate	330	ND
91-94-1	* 3,3'-Dichlorobenzidine	660	ND
56-55-3	* Benzo(a)Anthracene	330	ND
117-81-7	* bis(2-Ethylhexyl)Phthalate	330	ND
218-01-9	* Chrysene	330	ND
117-84-0	* Di-n-Octyl Phthalate	330	ND
205-99-2	* Benzo(b)Fluoranthene	330	ND
207-08-9	* Benzo(k)Fluoranthene	330	ND
50-32-8	* Benzo(a)Pyrene	330	ND
193-39-5	* Indeno(1,2,3-cd)Pyrene	330	ND
53-70-3	* Dibenz(a,h)Anthracene	330	ND
191-24-2	* Benzo(g,h,i)Perylene	330	ND

CAS #	Surrogate Compounds	Limits	%Recovery
367-12-4	2-Fluorophenol	15-83%	76%
4165-62-2	Phenol-d6	18-92%	78%
4165-60-0	Nitrobenzene-d5	12-80%	66%
321-60-8	2-Fluorobiphenyl	16-100%	72%
118-79-6	2,4,6-Tribromophenol	15-135%	84%
1718-51-0	Terphenyl-d14	15-117%	105%

ND : Not detected at or above practical quantitation limit for the method.
* A 625 approved compound (Federal Register, 10/26/84).
** A compound on the U.S. EPA CLP Hazardous Substance List (HSL).

CLP SEMI-VOLATILE MATRIX SPIKE REPORT -- EPA METHOD 8270
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A MW1-5	Anametrix I.D.	: 8912251-03
Matrix	: SOIL	Analyst	: UM
Date sampled	: 12/20/89	Supervisor	: PG
Date ext.	: 01/03/90	Date released	: 01/05/90
Date analyzed	: 01/04/90	Instrument I.D.	: F2

COMPOUND	SPIKE AMT. (UG/KG)	8912251 MS (UG/KG)	%REC. MS	8912251 MSD (UG/KG)	%REC. MSD	RPD	%REC LIMITS*
PHENOL	3300	1900	58%	1700	52%	-11%	18-85%
2-CHLOROPHENOL	3300	1700	52%	1500	45%	-13%	15-79%
1,4-DICHLOROBENZENE	1700	750	44%	630	37%	-17%	10-76%
NITROSODIPROPYLAMINE	1700	750	44%	690	41%	-8%	16-83%
1,2,4-TRICHLOROBENZENE	1700	810	48%	690	41%	-16%	12-78%
4-CHLORO-3-METHYLPHENOL	3300	1900	58%	1700	52%	-11%	39-96%
ACENAPHTHENE	1700	850	50%	760	45%	-11%	10-116%
4-NITROPHENOL	3300	1900	58%	1800	55%	-5%	29-116%
2,4-DINITROTOLUENE	1700	920	54%	850	50%	-8%	27-104%
PENTACHLOROPHENOL	3300	2000	61%	2200	67%	10%	18-125%
PYRENE	1700	1100	65%	1100	65%	0%	33-129%

Limits established by Anametrix, Inc.

REPORT SUMMARY
ANAMETRIX, INC. (408) 432-8192

Client : Woodward-Clyde Consultants
Address : 500 12th Street Suite 100
City : Oakland, CA 94607-4041
Attn. : Lois Gruenberg

Anametrix W.O.#: 0112251
Date Received : 12/21/89
Purchase Order#: N/A
Project No. : 8910336A
Date Released : 01/05/90

Anametrix I.D.	Sample I.D.	Matrix	Date Sampled	Method	Date Extract	Date Analyzed	Inst I.D.
RESULTS							
8912251-03	MW1-5	SOIL	12/20/89	8010		01/02/90	HP10
8912251-08	MW2-5	SOIL	12/20/89	8010		01/02/90	HP10
8912251-13	MW3-5	SOIL	12/20/89	8010		01/02/90	HP10
8912251-03	MW1-5	SOIL	12/20/89	TPH	01/02/90	01/03/90	N/A
8912251-08	MW2-5	SOIL	12/20/89	TPH	01/02/90	01/03/90	N/A
8912251-13	MW3-5	SOIL	12/20/89	TPH	01/02/90	01/03/90	N/A
8912251-01	MW1-2	SOIL	12/20/89	6010		01/04/90	ICP1
8912251-07	MW2-2	SOIL	12/20/89	6010		01/04/90	ICP1
8912251-12	MW3-2	SOIL	12/20/89	6010		01/04/90	ICP1
QUALITY ASSURANCE (QA)							
10B0102H02	METHOD BLANK	SOIL	N/A	8010		01/02/90	HP10
MB010490S	METHOD BLANK	SOIL	N/A	6010		01/04/90	ICP1

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A MW1-5
Matrix : SOIL
Date sampled : 12/20/89
Date analyzed: 01/02/90
Dilution : NONE

Anametrix I.D. : 8912251-03
Analyst :
Supervisor :
Date released : 01/05/90
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
79-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	33-134%	47%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A MW2-5
Matrix : SOIL
Date sampled : 12/20/89
Date analyzed: 01/02/90
Dilution : NONE

Anametrix I.D. : 8912251-08
Analyst : CVP
Supervisor : DHS
Date released : 01/05/90
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
79-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	33-134%	93%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D. : 8910336A MW3-5
Matrix : SOIL
Date sampled : 12/20/89
Date analyzed: 01/02/90
Dilution : NONE

Anametrix I.D. : 8912251-13
Analyst : CP
Supervisor : DW
Date released : 01/05/90
Instrument ID : HP10

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
79-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	33-134%	94%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
# A compound added by Anametrix, Inc.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A MW1-5	Anametrix I.D.	: 8912251-03
Matrix	: SOIL	Analyst	: mh
Date sampled	: 12/20/89	Supervisor	: TC
Date anl.TPHg	: 12/26/89	Date released	: 01/05/90
Date ext.TPHd	: 01/02/90	Date ext. TOG	: N/A
Date anl.TPHd	: 01/03/90	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Gasoline	1000	ND
	TPH as Diesel	10000	ND

ND - Not detected at or above the practical quantitation limit for the method.

TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.

TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.

BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A MW2-5	Anametrix I.D.	: 8912251-08
Matrix	: SOIL	Analyst	: mh
Date sampled	: 12/20/89	Supervisor	: TC
Date anl.TPHg	: 12/26/89	Date released	: 01/05/90
Date ext.TPHd	: 01/02/90	Date ext. TOG	: N/A
Date anl.TPHd	: 01/03/90	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Gasoline	1000	ND
	TPH as Diesel	10000	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - PETROLEUM HYDROCARBON COMPOUNDS
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: 8910336A MW3-5	Anametrix I.D.	: 8912251-13
Matrix	: SOIL	Analyst	: mh
Date sampled	: 12/20/89	Supervisor	:
Date anl.TPHg	: 12/26/89	Date released	: 01/05/90
Date ext.TPHd	: 01/02/90	Date ext. TOG	: N/A
Date anl.TPHd	: 01/03/90	Date anl. TOG	: N/A

CAS #	Compound Name	Detection Limit (ug/kg)	Amount Found (ug/kg)
71-43-2	Benzene	5	ND
108-88-3	Toluene	5	ND
100-41-4	Ethylbenzene	5	ND
1330-20-7	Total Xylenes	5	ND
	TPH as Gasoline	1000	ND
	TPH as Diesel	10000	ND

ND - Not detected at or above the practical quantitation limit for the method.
TPHg - Total Petroleum Hydrocarbons as gasoline is determined by GCFID using EPA Method 5030.
TPHd - Total Petroleum Hydrocarbons as diesel is determined by GCFID following either EPA Method 3510 or 3550.
BTEX - Benzene, Toluene, Ethylbenzene, and Total Xylenes are determined by modified EPA 8020.

All testing procedures follow California Department of Health Services (Cal-DHS) approved methods.

ANALYSIS DATA SHEET - INDIVIDUAL METALS
ANAMETRIX, INC. - (408) 432-8192

Anametrix I.D.: 8912251
Matrix : SOIL
Date Sampled : 12/20/89
Project Number: 8910336A

Date Prepared : 01/04/90
Date Analyzed : 01/04/90
Date Released : 01/05/90
Instrument I.D.: ICP1

METALS	EPA Method#	Reporting Limit	Sample I.D.# MW1-2	Sample I.D.# MW2-2	Sample I.D.# MW3-2	Sample I.D.# MB0104S	Sample I.D.#
COMPOUNDS		(mg/Kg)	-01	-07	-12		
Cadmium (Cd)	6010	0.5	ND	ND	ND	ND	
Total Cr	6010	0.5	19.7	18.1	19.8	ND	
Lead (Pb)	6010	1.0	2.5	1.5	1.5	ND	
Zinc (Zn)	6010	0.5	23.5	12.3	11.0	ND	

ND : Not detected at or above the practical quantitation limit for the method.

All Metals by EPA Method 6010/7000, Test Methods for Evaluating Solid Waste, SW-846 3rd Edition November 1986.

MK 1/05/90
Analyst Date

MN 1/05/90
Supervisor Date

ORGANIC ANALYSIS DATA SHEET - EPA METHOD 601/8010
ANAMETRIX, INC. (408) 432-8192

Sample I.D.	: METHOD BLANK	Anametrix I.D.	: 10B0102H02
Matrix	: SOIL	Analyst	: CP
Date sampled	: N/A	Supervisor	: JMS
Date analyzed	: 01/02/90	Date released	: 01/05/90
Dilution	: NONE	Instrument ID	: HP10

CAS #	Compound Name	Reporting Limit (ug/Kg)	Amount Found (ug/Kg)
74-87-3	* Chloromethane	1	ND
74-83-9	* Bromomethane	0.5	ND
75-71-8	* Dichlorodifluoromethane	1	ND
75-01-4	* Vinyl Chloride	0.5	ND
75-00-3	* Chloroethane	0.5	ND
75-09-2	* Methylene Chloride	0.5	ND
79-69-4	* Trichlorofluoromethane	0.5	ND
75-35-4	* 1,1-Dichloroethene	0.5	ND
75-34-3	* 1,1-Dichloroethane	0.5	ND
156-59-2	# Cis-1,2-Dichloroethene	0.5	ND
156-60-5	* Trans-1,2-Dichloroethene	0.5	ND
67-66-3	* Chloroform	0.5	ND
76-13-1	# Trichlorotrifluoroethane	0.5	ND
107-06-2	* 1,2-Dichloroethane	0.5	ND
71-55-6	* 1,1,1-Trichloroethane	0.5	ND
56-23-5	* Carbon Tetrachloride	0.5	ND
75-27-4	* Bromodichloromethane	0.5	ND
78-87-5	* 1,2-Dichloropropane	0.5	ND
10061-02-6	* Trans-1,3-Dichloropropene	0.5	ND
79-01-6	* Trichloroethene	0.5	ND
124-48-1	* Dibromochloromethane	0.5	ND
79-00-5	* 1,1,2-Trichloroethane	0.5	ND
10061-01-5	* cis-1,3-Dichloropropene	0.5	ND
110-75-8	* 2-Chloroethylvinylether	1	ND
75-25-2	* Bromoform	0.5	ND
127-18-4	* Tetrachloroethene	0.5	ND
79-34-5	* 1,1,2,2-Tetrachloroethane	0.5	ND
108-90-7	* Chlorobenzene	0.5	ND
541-73-1	* 1,3-Dichlorobenzene	1	ND
95-50-1	* 1,2-Dichlorobenzene	1	ND
106-46-7	* 1,4-Dichlorobenzene	1	ND
	% Surrogate Recovery	33-134%	100%

ND : Not detected at or above the practical quantitation limit for the method.
* A 601/8010 approved compound (Federal Register, 10/26/84).
\# A compound added by Anametrix, Inc.