DRAFT
SUBJECT TO REVISION

III Analytical Results

The water level measurements found the water table at the site to be slightly over 2 feet below ground surface (bgs), approximately 3 inches deeper than when measured in early May. A summary of the water level measurements is shown in Table 3. The groundwater gradient derived from these measurements is 0.0064, with a flow direction of due east, which is consistent with the findings of the first sampling period. Figure 3 shows the groundwater table contour map for these results.

The laboratory analytical results for the groundwater samples were very propitious. Every sample from each well had non-detectable levels of TPH-d, TPH-g, and TRPH, as they also did in the first sampling period. The VOC analysis results for the monitoring well samples were again all non-detect (ND) for every analyte. Similar results were found for the SVOC analysis: ND for every analyte, including Bis(2-Ethylhexyl)Phthalate, which was detected at 4 ug/L in MW3 during the first sampling period.

Every metal concentration that was screened was below its Maximum Contaminant Level (MCL) or Federal Action Level (FAL). Pb, Cr, and Ni had been detected above their respective MCLs or FALs in all or some of the wells during the May sampling period, but their concentrations were below the MCLs/FALs in every monitoring well sample from the second sampling period. The results of the laboratory analyses are presented in Table 1. The laboratory data sheets, including the QA/QC data, are included in Appendix A.

IV Conclusions

Based on the groundwater depth measurements taken on June 29, 1995, the groundwater at the Sutta Recycling site flows directly to the east with a gradient of 0.0064. This result is similar to the gradient magnitude and direction calculated in early May, but contradicts the usual assumption that the groundwater in this area would be flowing in a westerly direction towards the Bay. The difference between the theoretical and experimentally determined directions could be due to local variations in soil composition; the close proximity of the wells to each other yielding a nonrepresentative groundwater flow direction for the area; or with the site less than half a mile from the Bay, there possibly being tidal influence on the water table under the site.

As was concluded in the first round of sampling in May and has been confirmed by the analysis of the second round of groundwater samples, over-excavation of diesel-contaminated soil at the time of the fuel tank removal appears to have removed all sources of contamination from the site subsurface. No detectable levels of TPH-d, TPH-g, or VOCs (including benzene, toluene, ethylbenzene, and xylenes) have been found in the monitoring well water samples or the soil samples collected during well installation. Therefore, it is our office's conclusion that site cleanup is complete. We recommend that no more quarterly sampling be required and that Alameda County Health Care Services Agency close their file on the Sutta Recycling site.

I Introduction

The property located at 3401 Wood Street in Oakland (see Figure 1 for site location map), formerly known as Sutta Recycling, was acquired by the State Department of Transportation (Caltrans) in 1994 to be utilized as right of way for the proposed reconstruction of the Cypress freeway segment of Interstate 880. Previously, in August 1991, a 1000-gallon diesel fuel tank was removed from the site by the then-owner. Soil and groundwater samples taken at the time of the tank removal indicated that diesel fuel had leaked from the tank into the site subsurface. As a result, the tank excavation pit was over-excavated until soil samples taken from the pit sidewalls had non-detectable levels of diesel fuel.

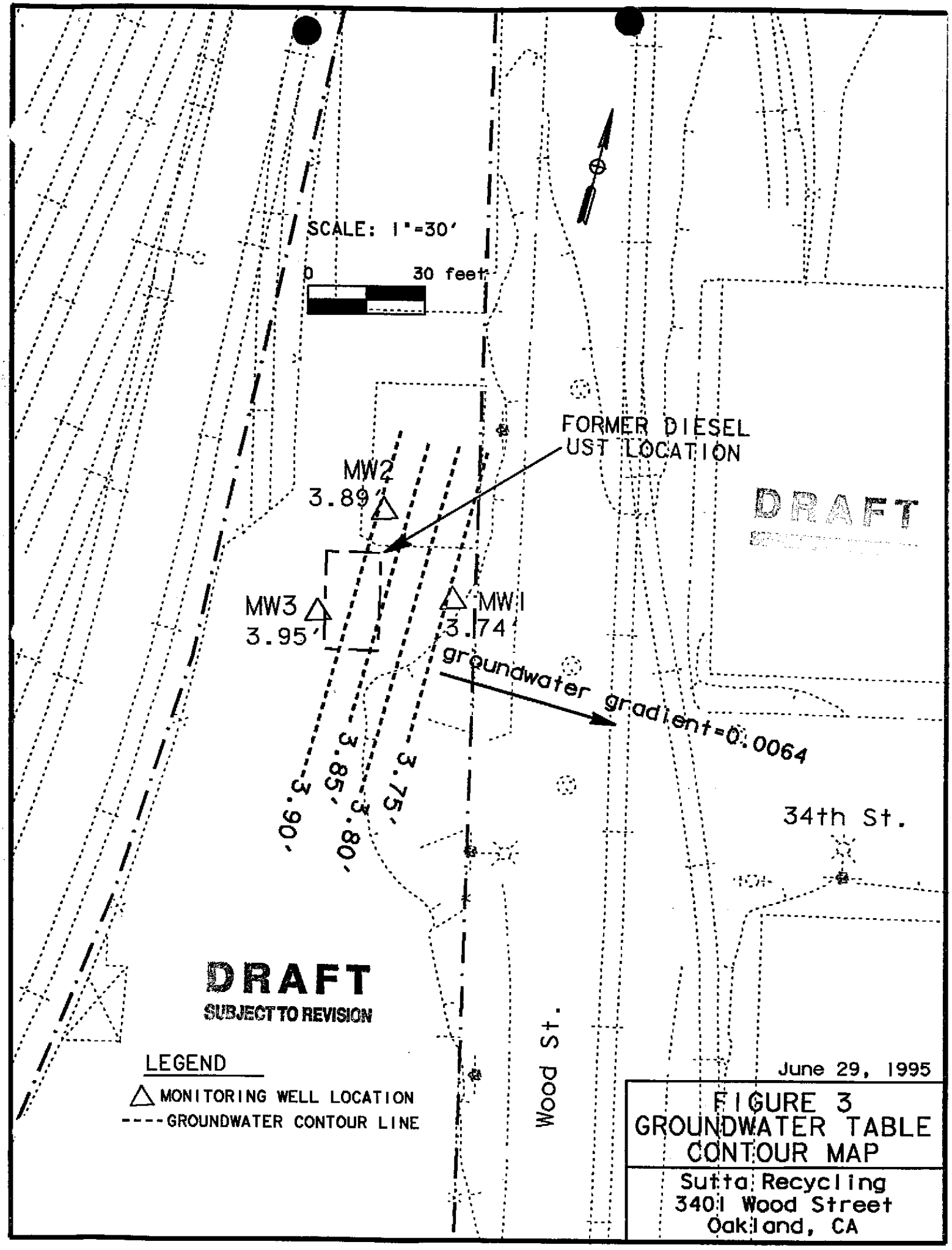
Following Caltrans' purchase of the site, the Alameda County Health Care Services Agency requested Caltrans to do a groundwater investigation in the vicinity of the former fuel tank location. In early May of this year, three monitoring wells were installed around the former tank location (see Figure 2 for detailed site map), and the first round of groundwater samples was collected. Laboratory analyses of the monitoring well samples found no detectable levels of diesel fuel or volatile hydrocarbons in the groundwater. A low concentration (4 ug/L) of the semi-volatile compound Bis(2-Ethylhexyl)Phthalate was the only hydrocarbon detected in the monitoring well samples. This report covers the results of the second round of monitoring well sampling.

II Monitoring Well Sampling Procedures

The second round of sampling took place on June 29, 1995. After the bolted-on well covers were removed and the expandable, locking well caps were unscrewed from each well, the depth to water in each well was measured with an electric water level meter. The wells were then purged of at least four wet well casing volumes before groundwater samples were collected. During purging, the water conductivity, temperature, and pH were measured and recorded (see Table 2). The purged groundwater was placed in labeled Department of Transportation 55-gallon drums and stored on-site pending disposal.

The groundwater samples were collected using dedicated, disposable bailers. The samples were released from the bailers into sterile, laboratory-supplied containers, and placed in a cooler with blue ice for delivery to Chromalab, Inc., where the following laboratory analyses would be performed:

EPA Method 8015-m, Total Petroleum Hydrocarbons as Diesel (TPH-d)
EPA Method 8015-m, Total Petroleum Hydrocarbons as Gasoline (TPH-g)
EPA Method 418.1, Total Recoverable Petroleum Hydrocarbons (TRPH)
EPA Method 6010, Title 22 Metals Scan
EPA Method 8240, Volatile Organic Compounds (VOCs)
EPA Method 8270, Semi-Volatile Organic Compounds (SVOCs)


SCALE: 1"=30'
0
30 feet
FORMER DIESEL
UST LOCATION
MW2
3.89'
MW3
3.95'
MW1
3.74'
groundwater gradient=0.0064
3.90'
3.85'
3.80'
3.75'
DRAFT
34th St.
Wood St.
DRAFT
SUBJECT TO REVISION
LEGEND
MONITORING WELL LOCATION
GROUNDWATER CONTOUR LINE
June 29, 1995
FIGURE 3
GROUNDWATER TABLE
CONTOUR MAP
Sutta Recycling
3401 Wood Street
Oakland, CA

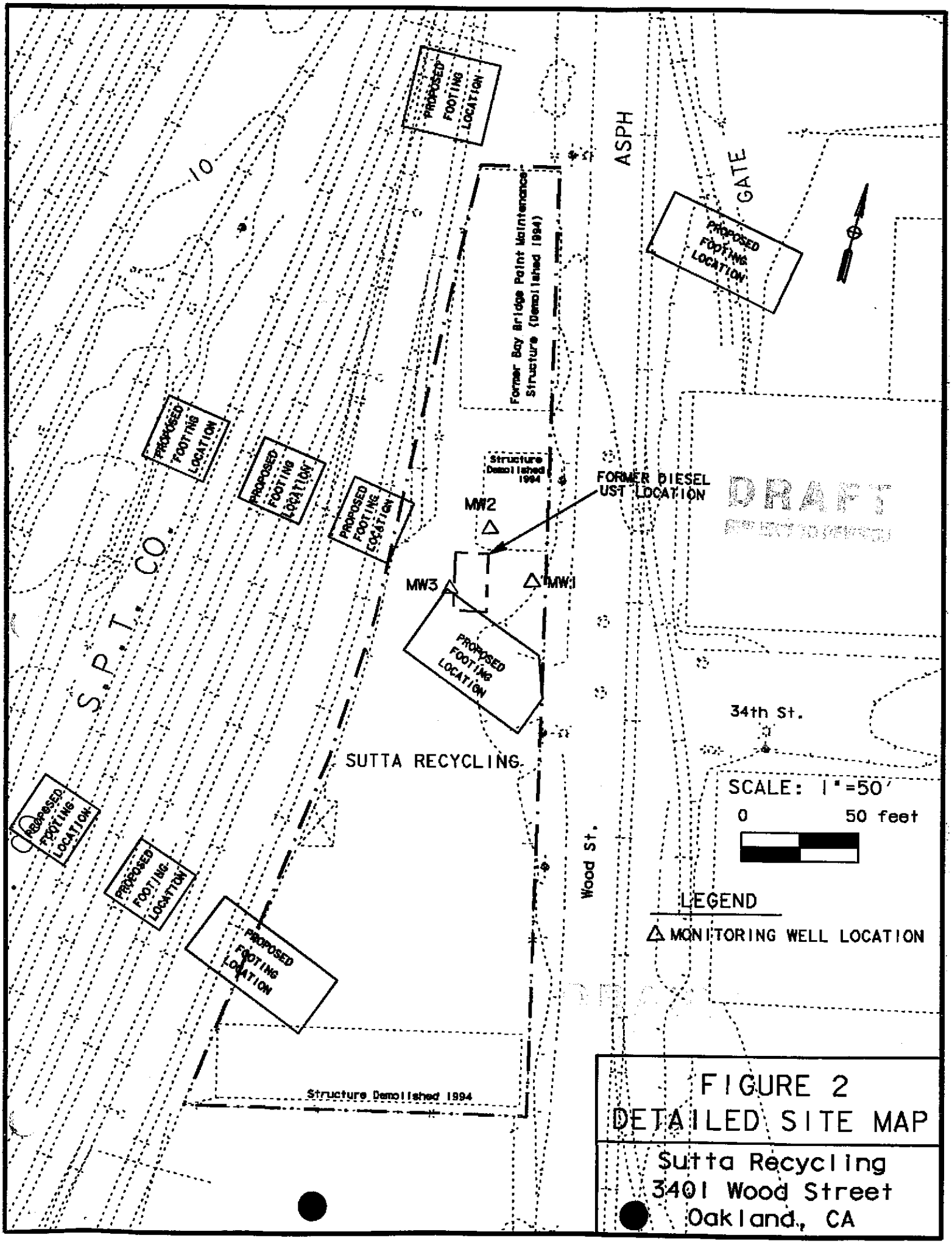


FIGURE 2
DETAILED SITE MAP

Sutta Recycling
3401 Wood Street
Oakland, CA

DRAFT

SUBJECT TO REVISION

DRAFT

Table 1: Sutta Recycling Groundwater Analytical Results

MWell #	Date of Sampling	8270 Semi VOCs (ug/L) cont.	2,4 Dichlorophenol	1,2,4-Trichlorobenzene	Naphthalene	4-Chloroanaline	Hexachlorobutadiene	4-Chloro-3-Methylphenol	2-Methylnaphthalene	Hexachlorocyclopentadiene	2,4,6-Trichlorophenol	2,4,5-Trichlorophenol	2-Chloronaphthalene	2-Nitroanaline	Dimethyl Phthalate	Acenaphthylene	3-Nitroanaline	Acenaphthene	2,4-Dinitrophenol	4-Nitrophenol	Dibenzofuran	2,4-Dinitrotoluene	2,6-Dinitrotoluene	Diethyl Phthalate	4-Chlorophenyl-Phenyl Ether	Fluorene	4-Nitroanaline	2-Methyl-4,6-Dinitrophenol	N-Nitrosodiphenylamine	4-Bromophenyl-Phenyl Ether
MW1	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW1	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW2	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW2	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND=Not Detected
--=Not Analyzed

DRAFT

DRAFT

SUBJECT TO [illegible]

Table 1: Sutta Recycling Groundwater Analytical Results

MWell #	Date of Sampling	8240 VOCs (ug/L) cont.	Toluene	1,1,1-Trichloroethane	1,1,2-Trichloroethane	Trichloroethene	Trichlorofluoromethane	Vinyl Acetate	Vinyl Chloride	Total Xylenes	8270 Semi VOCs (ug/L)	Phenol	Bis(2-Chloroethyl)Ether	2-Chlorophenol	1,3-Dichlorobenzene	1,4-Dichlorobenzene	Benzyl Alcohol	1,2-Dichlorobenzene	2-Methylphenol	Bis(2-Chloroisopropyl)Ether	4-Methylphenol	N-Nitrosodi-N-Propylamine	Hexachloroethane	Nitrobenzene	Isophorone	2-Nitrophenol	2,4-Dimethylphenol	Benzoic Acid	Bis(2-Chloroethoxy)Methane
MW1	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW1	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW2	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW2	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND=Not Detected
--=Not Analyzed

Table 1: Sutta Recycling Groundwater Analytical Results

MWell #	Date of Sampling	8240 VOCs (ug/L)	Acetone	Benzene	Bromodichloromethane	Bromoform	Bromomethane	Methyl Ethyl Ketone	Carbon Tetrachloride	Chlorobenzene	Chloroethane	2-Chloroethylvinyl Ether	Chloroform	Chloromethane	Dibromochloromethane	1,1-Dichloroethane	1,2-Dichloroethane	1,1-Dichloroethene	Cis-1,2-Dichloroethene	Trans-1,2-Dichloroethene	1,2-Dichloropropane	Cis-1,3-Dichloropropene	Trans-1,3-Dichloropropene	Ethylbenzene	2-Hexanone	Methylene Chloride	Methyl Isobutyl Ketone	Styrene	1,1,2,2-Tetrachloroethane	Tetrachloroethene
MW1	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW1	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW2	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW2	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND=Not Detected
--=Not Analyzed

Table 1: Sutta Recycling Groundwater Analytical Results

MWell #	Date of Sampling	Hydrocarbons (mg/L)	8015-m Diesel	8015-m Gasoline	418.1 TRPH	6010 Metals (mg/L)	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
MW1	5/12/95		ND	ND	ND		--	ND	0.12	--	ND	0.14	--	--	0.05	ND	--	0.12	ND	ND	--	--	--
MW1	6/29/95		ND	ND	ND		--	0.02	0.02	--	ND	ND	--	--	ND	ND	--	0.02	ND	ND	--	--	--
MW2	5/12/95		ND	ND	ND		--	ND	0.11	--	ND	0.09	--	--	0.07	ND	--	0.09	ND	ND	--	--	--
MW2	6/29/95		ND	ND	ND		--	ND	0.08	--	ND	ND	--	--	ND	ND	--	0.01	ND	ND	--	--	--
MW3	5/12/95		ND	ND	ND		--	ND	0.05	--	ND	0.04	--	--	0.02	ND	--	0.04	ND	ND	--	--	--
MW3	6/29/95		ND	ND	ND		--	0.02	0.02	--	ND	ND	--	--	ND	ND	--	0.02	0.01	ND	--	--	--

ND=Not Detected
--=Not Analyzed

Table 1: Sutta Recycling Groundwater Analytical Results

MWell #	Date of Sampling	8270 Semi VOCs (ug/L) cont.	Hexachlorobenzene	Pentachlorophenol	Phenanthrene	Anthracene	Di-N-Butyl Phthalate	Fluoranthene	Pyrene	Butyl Benzyl Phthalate	3,3-Dichlorobenzidine	Benzo(A)Anthracene	Bis(2-Ethylhexyl)Phthalate	Chrysene	Di-N-Octyl Phthalate	Benzo(B)Fluoranthene	Benzo(K)Fluoranthene	Benzo(A)Pyrene	Indeno(1,2,3-C,D)Pyrene	Dibenzo(A,H)Anthracene	Benzo(G,H,I)Perylene
MW1	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW1	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW2	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.0	ND	ND	ND	ND	ND	ND	ND	ND
MW2	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	5/12/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW3	6/29/95		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND=Not Detected
--=Not Analyzed

Table 2
Groundwater Conductivity, pH, and Temperature Measurements

Well Number	Measuring Date	Conductivity (umhos)	pH	Temperature (degrees fahrenheit)
MW1	05/12/95	1190	7.96	64.7
	06/29/95	2590	8.07	66.0
MW2	05/12/95	880	7.28	63.9
	06/29/95	860	8.05	68.6
MW3	05/12/95	1540	7.02	67.0
	06/29/95	3540	7.95	65.7

Table 3
Sutta Recycling Groundwater Investigation
Water Level Data

Well Number	Top of Casing Elevation*	Measuring Date	Depth To Water**	Water Level Elevation*
MW1	5.38	05/12/95	1.35	4.03
		06/29/95	1.64	3.74
MW2	6.16	05/12/95	2.04	4.12
		06/29/95	2.27	3.89
MW3	6.12	05/12/95	1.92	4.20
		06/29/95	2.17	3.95

*=Measurement in feet above USGS Mean Sea Level

**=Measurement in feet from top of casing

95-903/REV.2/95

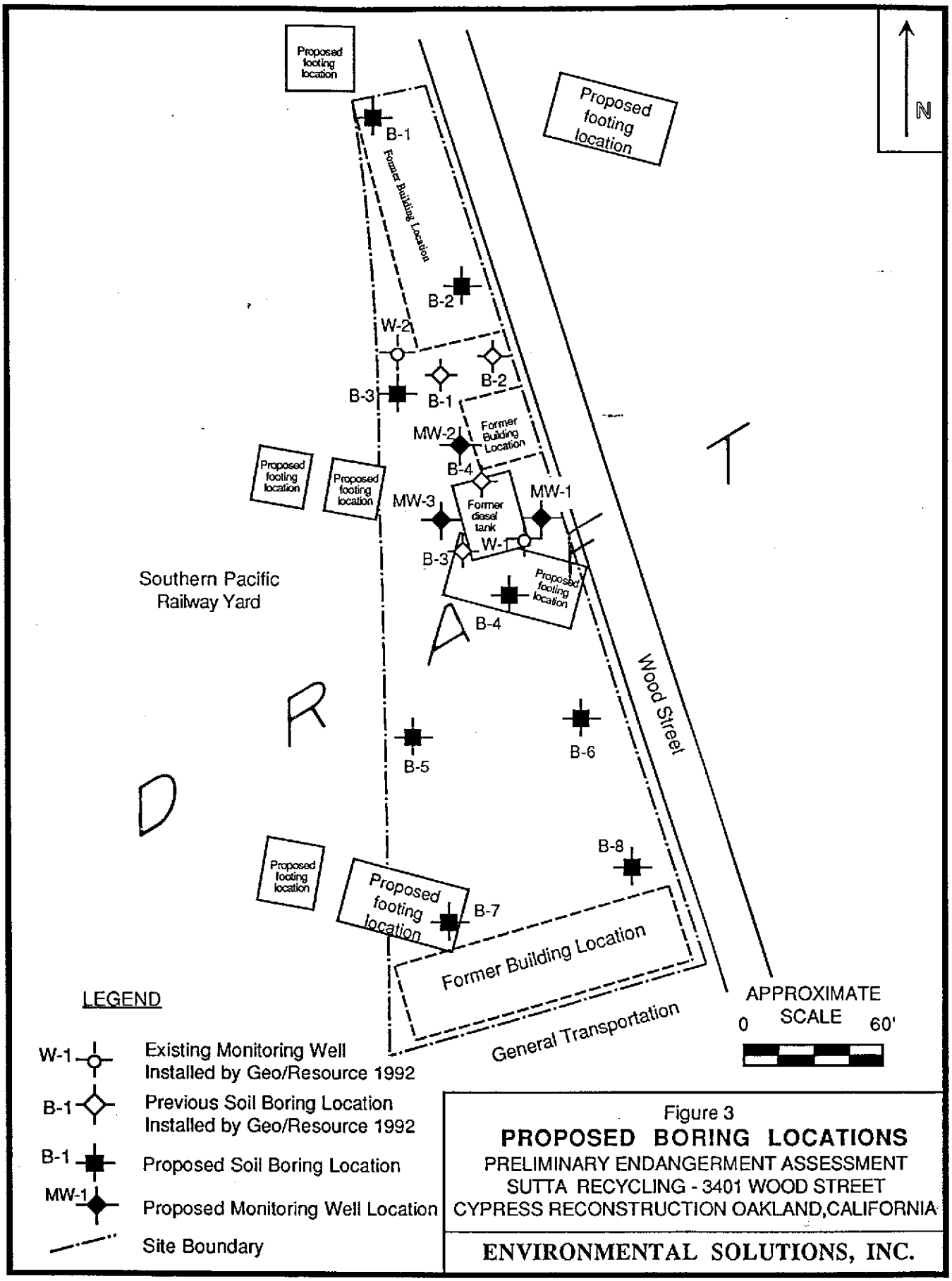


Figure 3

PROPOSED BORING LOCATIONS

PRELIMINARY ENDANGERMENT ASSESSMENT
SUTTA RECYCLING - 3401 WOOD STREET
CYPRESS RECONSTRUCTION OAKLAND,CALIFORNIA

ENVIRONMENTAL SOLUTIONS, INC.

TABLE 3 - SOIL AND GROUND WATER ANALYTICAL PROGRAM - SUTTA RECYCLING

BORING NUMBER	TRPH 418.1	CAM 17 6010	ANALYSIS AND EPA TEST METHOD CAM 7 6010	CHROM VI 7196	VOCS 8240	SEMI-VOCS 8270	TPH-D 8015m	TPH-G 8015m
B-1	1', 4', 8'	1', 4', 8'			1', 4', 8'		1', 4', 8'	
B-2	1', 4'	1', 4'		1', 4'		1', 4'		1', 4'
B-3	1', 4'		1', 4'	1', 4'		1', 4'		1', 4'
B-4	1', 4', 8'		1', 4', 8'		1', 4', 8'		1', 4', 8'	
B-5	1', 4'		1', 4'			1', 4'		1', 4'
B-6	1', 4'	1', 4'		1', 4'	1', 4'		1', 4'	
B-7	1', 4', 8'	1', 4', 8'		1', 4', 8'		1', 4', 8'		1', 4', 8'
B-8	1', 4'		1', 4'	1', 4'	1', 4'		1', 4'	
MW-1	1', 4', 8'		1', 4', 8'			1', 4', 8'	1', 4', 8'	
MW-2	1', 4', 8'	1', 4', 8'		1', 4', 8'	1', 4', 8'	1', 4', 8'	1', 4', 8'	
MW-3	1', 4', 8'		1', 4', 8'		1', 4', 8'	1', 4', 8'		
Ground water	B1 - B8		B1 - B8		B1 - B8	B1 - B8		
MW - ground water*	MW-1 - MW-3		MW-1 - MW-3		MW-1 - MW-3	MW-1 - MW-3	MW-1 - MW-3	MW-1 - MW-3

TRPH = Total Recoverable Petroleum Hydrocarbons
CAM 17 = Sb, As, Ba, Be, Cd, Cr (total), Co, Cu, Pb, Hg, Mo, Ni, Se, Ag, Tl, V, Zn
CAM 7 = As, Ba, Cd, Ni, Pb, Se
Chrom VI = Hexavalent chromium
VOCS = Volatile Organic Compounds
SEMI-VOCS = Semi-Volatile Organic Compounds
TPH-D = Total Petroleum Hydrocarbons as Diesel
TPH-G = Total Petroleum Hydrocarbons as Gasoline
1', 4', 8' = Sample depths in ft bgs
* Monitoring Wells will be sampled for two quarters after initial installation and sampling

TABLE 2. ANALYTICAL PROCEDURES

PARAMETER[1]	EPA TEST METHOD[2]	CONTAINER[3]	PRESERVATIVE	MAXIMUM HOLDING TIME	
				H_20	Soil
TRPH (5/0.5 ppm)	418.1	G-1000 ml	Cool; Acidify ph <2	28 days	28 days
Total Metals (1-10/0.1-1 ppm)	6010	G, P -500 ml	Filter(laboratory); $HN0_3$ pH<2, Cool 4°C	6 months	6 months
TPH-D (2.5/0.5 ppm)	Modified 8015	G-1000 ml	Cool 4°C	14 days	14 days
TPH-G (1/0.2 ppm)	Modified 8015	VOA-40 ml (x3)	Cool 4°C	14 days	14 days
Semi-Volatile VOCs (.34-1.7/.01-.05 ppm)	8250/ 8270	G-1000 ml (x2)	Cool 4°C	7 days	14 days
VOCs (5-25/1-10 ppb)	8240	VOA-40 ml (x3)	Cool 4°C pH<2	14 days	14 days
pH	150.2/9045	G,P-50 ml	NA	ASAP	ASAP

(1) The number in parentheses is the proposed quantitation limit for the analysis, constituents are listed by soil/water. If a metal concentration is above the TTLC value, it is classified as a hazardous waste and further testing of the samples may not be performed. If a metal concentration is less than the TTLC value but is at or above ten times the Soluble Threshold Limit Concentration (STLC) value, a Waste Extraction Test (WET) may be performed. A Toxicity Characteristic Leaching Procedure (TCLP) test may be performed on samples in which total metal concentrations are at or above 20 times the TCLP value.

(2) Procedures according to methods for chemical analysis of water and wastes, EPA-600/4-79-020.

(3) Containers for ground water collection: G = Glass; P = Polyethylene; ml = Milliliter; NA = Not Applicable; soil samples will be collected in stainless steel tubes.

TABLE 1

BORING LOCATION DESCRIPTIONS

BORING IDENTIFICATION	LOCATION	DESCRIPTION
B-1	Warehouse	Former Warehouse Foundation
B-2	Warehouse	Former Warehouse Foundation
B-3	Warehouse	Verify previous boring results
B-4	Footing	Freeway footing area
B-5	Parking lot	Truck parking area
B-6	Parking lot	Truck parking area
B-7	Footing	Freeway footing area
B-8	Parking lot	Truck parking area
MW-1	Former UST	Former 1000-gallon diesel UST
MW-2	Former UST	Former 1000-gallon diesel UST
MW-3	Former UST	Former 1000-gallon diesel UST