safety-kleen

October 2, 1995

Via Certified Mail No. Z425868581

Ms. Jennifer Eberle
Alameda County
Department of Environmental Health
Hazardous Materials Division
1131 Harbor Bay Parkway, Second Floor
Alameda, California 94502-6577

ENVIRONMENTAL PROTECTION
95 OCT -4 PM 2:45

Re: **Safety-Kleen Corp. Service Center**
400 Market Street
Oakland, California

Dear Ms. Eberle:

Enclosed is the quarterly report which summarizes the groundwater monitoring and vapor extraction activities conducted at the above-referenced facility. This report covers the period from June through August 1995. As described in the letter submitted on July 13, 1994, and as modified and approved by Alameda County in a response letter dated July 27, 1994, Safety-Kleen is following the modified groundwater sampling schedule.

Also included is a description of the destruction of monitoring well MW-10 and the abandonment permit.

If you have any questions, please call me at (503) 655-2769.

Sincerely,

for Chip Prokop
Senior Project Manager - Remediation
Safety-Kleen Corp.

Enclosure

cc: Keith Marcott, Safety-Kleen Corp.
Scott Davies, Safety-Kleen Corp.
Branch Environmental File (7-178-01)
Robert Senga, State of California Department of Health Services - DTSC
Steven Ritchie, California Regional Water Quality Control Board
Scott Comiso, BAAQMD
Greg Hoehn, *SECOR*

OAKLAND7.L10
October 2, 1995
SECOR Job No. 70005-009-07

1000 NORTH RANDALL ROAD ELGIN, ILLINOIS 60123-7857 PHONE 708/697-8460 FAX 708/468-8500

safety-kleen

October 2, 1995

Via Certified Mail No. Z425868580

Mr. Steven Ritchie
Executive Officer
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

Re: **Safety-Kleen Corp. Service Center**
400 Market Street
Oakland, California

Dear Mr. Ritchie:

Enclosed is the quarterly report which summarizes the groundwater monitoring and vapor extraction activities conducted at the above-referenced facility. This report covers the period from June through August 1995. As described in the letter submitted on July 13, 1994, and as modified and approved by Alameda County in a response letter dated July 27, 1994, Safety-Kleen is following the modified groundwater sampling schedule.

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Greg Hoehn

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OAKLAND7.L09
October 2, 1995
SECOR Job No. 70005-009-07

1000 NORTH RANDALL ROAD ELGIN, ILLINOIS 60123-7857 PHONE 708/697-8460 FAX 708/468-8500

SECOR
International Incorporated

QUARTERLY GROUNDWATER MONITORING AND SOIL VAPOR EXTRACTION REPORT SAFETY-KLEEN SERVICE CENTER 400 MARKET STREET OAKLAND, CALIFORNIA

***SECOR* Job No. 70005-009-07**

Prepared For:
Safety-Kleen Corp.
16540 S.E. 130th Street
Clackamas, Oregon 97015

10-2-95

Submitted By:
SECOR International Incorporated
1390 Willow Pass Road
Suite 360
Concord, California 94520

October 2, 1995

REGISTERED GEOLOGIST
PAUL D. HORTON
Exp 9/97
No. 5435
STATE OF CALIFORNIA

Prepared By:

Robert Robitaille
Project Geologist

Reviewed By:

Paul D. Horton, R.G.
Principal Hydrogeologist

Greg D. Hoehn
Principal Geologist

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APPENDICES

1.0 INTRODUCTION

This report presents the results of groundwater monitoring and sampling activities conducted for the quarter of June through August 1995, at the Safety-Kleen Service Center located at 400 Market Street in Oakland, California (Figure 1 and Figure 2). Also included are the results of the soil vapor extraction (SVE) system operation.

2.0 PROJECT BACKGROUND INFORMATION

The Safety-Kleen Oakland Service Center is a local distribution center for Safety-Kleen products. Three single-walled underground storage tanks (USTs) were removed and replaced with two new 12,000 gallon double-walled tanks in June and July of 1990. Product and waste mineral spirits are currently stored in the two double-walled USTs at the site. One UST is used to consolidate waste mineral spirits prior to shipment to a Safety-Kleen Recycle Center and one UST is used for storage prior to distribution of product mineral spirits to Safety-Kleen customers.

During the single-walled tank removal, mineral spirits impacted soil was excavated from the tank pit as allowable by site conditions. Additionally, a product recovery well and a vapor extraction system withdrawal network were installed in the tank pit area. Tank removal and excavation activities are documented in the *Report of Underground Storage Tank Replacement Activities* dated September 1990. The product pumping system installed in recovery well (RW-1) to remove separate-phase product from the water table began operation on January 19, 1993. A system to extract and treat soil vapor began full-scale operation on June 1, 1993.

The SVE system consists of seven horizontal vapor extraction lines and a vapor treatment system consisting of granular activated carbon (GAC). The Padre™ regenerative adsorption system manufactured by Purus, Inc. is no longer utilized. Figure 3 depicts the layout of the vapor extraction lines and the vapor treatment system. A detailed description of the SVE system can be found in the report entitled *Quarterly Groundwater Monitoring and Soil Vapor Extraction Report* dated October 1, 1993.

3.0 SCOPE OF WORK

Work conducted during this quarter consisted of product recovery and the monitoring of twelve groundwater monitoring wells and the sampling of four groundwater monitoring wells. The following sections provide a description of the work steps conducted.

3.1 Soil Vapor Extraction System

The SVE system has not operated since November 24, 1994. At that time, the system was shut down by a system fault. Subsequently, the system piping was damaged during the installation of UST cathodic protection. The damage to SVE piping was repaired in December 1994; however, the system remains non-operational pending modification to a carbon adsorption treatment system. Operation of the SVE system will be resumed as soon as the system modification is complete. It is anticipated that the system will resume operation during the next quarter.

3.2 RW-1 Mineral Spirits Recovery

The mineral spirits recovery skimming pump began operation on January 19, 1993. Mineral spirits recovered from well RW-1 (Figure 2) is pumped directly to the waste mineral spirits tank operated at the site and is incorporated into the Safety-Kleen recycling process.

3.3 Groundwater Monitoring and Sampling

On July 11, 1995, on- and off-site monitoring wells were monitored for depth-to-water using a water level indicator calibrated to 0.01-foot. Monitoring well MW-10 was declared abandoned on July 12, 1995 after it was destroyed during Caltrans work in the area. The County was notified in the abandonment permit application that the well was destroyed by Caltrans during construction before it could be abandoned by Safety-Kleen. A copy of the well destruction permit is included in Appendix A. The depth-to-water measurements from the remaining wells were used with well survey data to construct a potentiometric surface map (Figure 4).

On July 11, 1995, subsequent to collecting depth-to-water measurements, monitoring wells MW-2, MW-3, MW-4 and MW-8 (in accordance with the quarterly sampling schedule) were purged by hand bailing until a minimum of three well volumes of groundwater had been removed, or until measurements of pH, temperature, and conductivity had stabilized. Following recovery of the groundwater levels in the wells to at least 80 percent of original volume, groundwater samples were collected using single use disposable samplers. The samples were placed into laboratory supplied sample containers, labelled with the date, time, and sample number, and placed on ice in an insulated cooler. Field data sheets which include depth-to-water measurements and well purge data are included in Appendix B.

The groundwater samples were delivered to a state-certified laboratory for analysis under chain-of-custody documentation. The groundwater samples were analyzed for the presence of benzene, toluene, ethylbenzene and xylenes (BTEX) by U.S. Environmental Protection Agency (EPA) Method 8020, for total petroleum hydrocarbons as mineral spirits (TPHms) by modified EPA Method 8015 and for halogenated volatile organic compounds (VOCs) by EPA Method 8010.

Prior to using any non-single use equipment in a groundwater monitoring well, the equipment was decontaminated by double-washing with a laboratory grade detergent in clean water, and triple-rinsed using deionized water. Purge water and decontamination water generated during well purging and sampling was placed in the waste mineral spirits tank or in labeled containers pending incorporation into the facilities' waste stream.

4.0 RESULTS

4.1 Soil Vapor Extraction System

No samples were collected or analyzed from the soil vapor extraction system during this reporting period because the system was non-operational.

4.2 RW-1 Mineral Spirits Recovery

The mineral spirits skimming pump recovery data indicated that 16.6 gallons of mineral spirits product were recovered during this reporting period. A total of 142.1 gallons of product have been removed since the pump was installed on January 19, 1993. Product recovery data are summarized on Table 1.

4.3 Groundwater Elevations

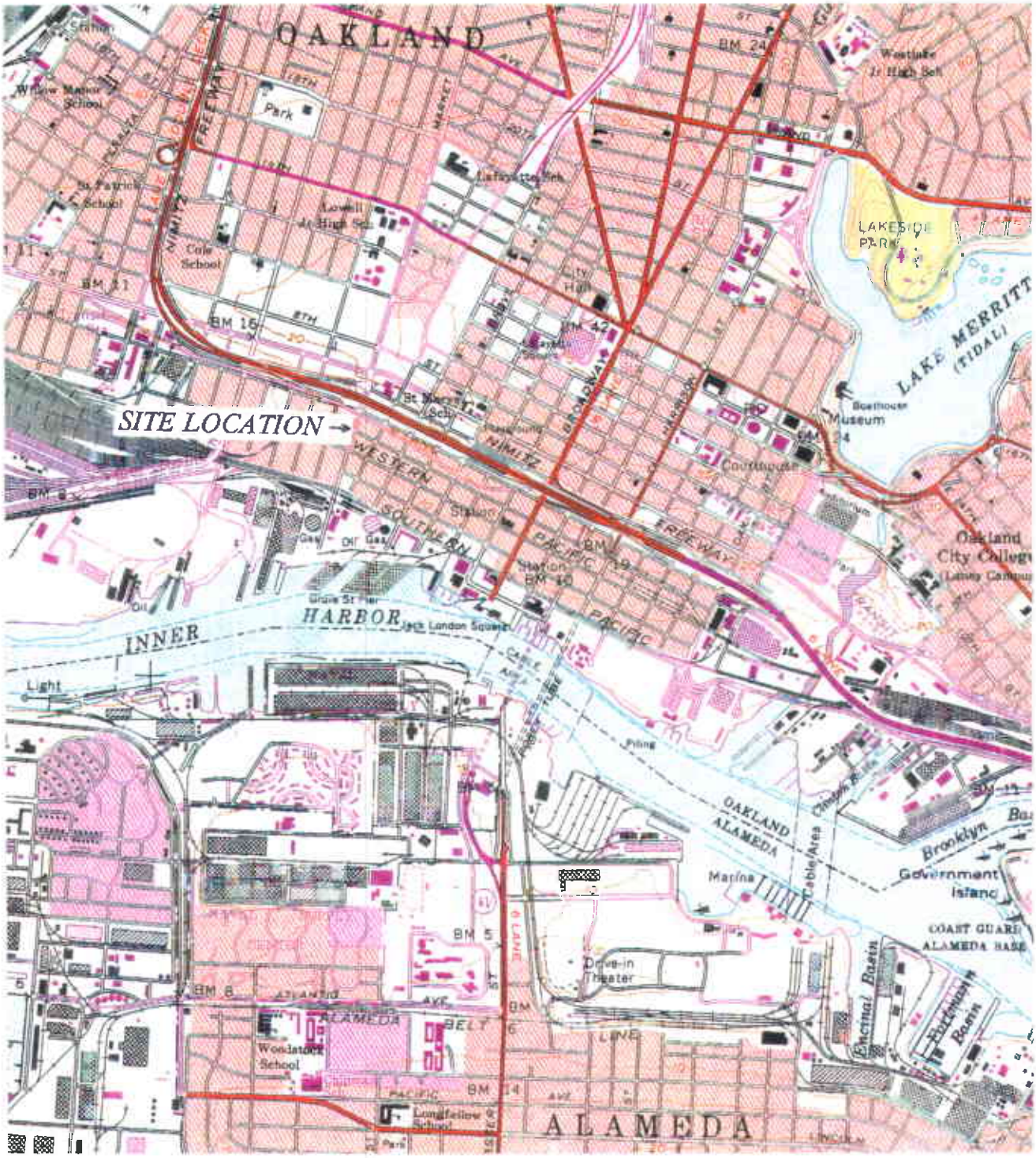
Groundwater elevations and depth-to-water measurements for this event are presented in Table 2. The average water table elevation on July 11, 1995 was 1.94 feet above mean sea level, a decrease of 1.06 feet since the April, 1995 event. A potentiometric surface map prepared with the July 11, 1995, data is presented as Figure 4.

As shown in Figure 4, the groundwater flow direction remains to the southwest, consistent with historic site data. The hydraulic gradient was 0.004 feet/foot (ft/ft) across the site as measured between wells MW-4 and MW-2. The gradient is 0.001 ft/ft lower than that measured during the last event and is consistent with previous data for the site.

4.4 Groundwater Conditions

No concentrations of BTEX were detected above the laboratory detection limits in any of the groundwater samples collected on July 11, 1995. Laboratory analysis of groundwater samples indicate that VOC's exist at concentrations exceeding the detection limits in wells MW-4 and MW-8. The groundwater sample from monitoring well MW-4 contained TCE at 247 $\mu g/\ell$, 1,1-DCE at 5.2 $\mu g/\ell$; cis-1,2-DCE at 11.8 $\mu g/\ell$, and trans-1,2-DCE at 3.2 $\mu g/\ell$. The groundwater sample from monitoring well MW-8 contained TCE at 163 $\mu g/\ell$; PCE at 3.2 $\mu g/\ell$; vinyl chloride at 2.6 $\mu g/\ell$; 1,2-DCB at 3.8 $\mu g/\ell$; 1,1-DCA at 6.2 $\mu g/\ell$; 1,2-DCA at 9.8 ; 1,1-DCE at 3.5 $\mu g/\ell$; cis-1,2-DCE at 25.57 $\mu g/\ell$; trans-1,2-DCE at 2.3 $\mu g/\ell$; and chlorobenzene at 6.9 $\mu g/\ell$. The groundwater samples collected from monitoring wells MW-2 and MW-3 did not contain detectable levels of any VOC's. Analytical test results showing compounds detected since the April 20, 1993 sampling event are presented in Table 3. Copies of the groundwater laboratory analytical reports are included in Appendix C.

OAKLAND WEST QUADRANGLE
California
7.5 Minute Series (Topographic)



SCALE 1:24 000

0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

DRAFTED BY:	CHECKED BY:	PROJECT NO. 70005-009	FIGURE 1	*SECOR*
TS	GDH			1390 Willow Pass Road
DWG. DATE: 04-05-94	REV. DATE: 06-15-95	Safety-Kleen Corp.	Site Location Map	Suite 360
FILE NAME: Oakland7.F01		400 Market Street Oakland, California		Concord, CA 94520

C:\S-KLEEN\OAK\SITE
14FEB94 REV.A

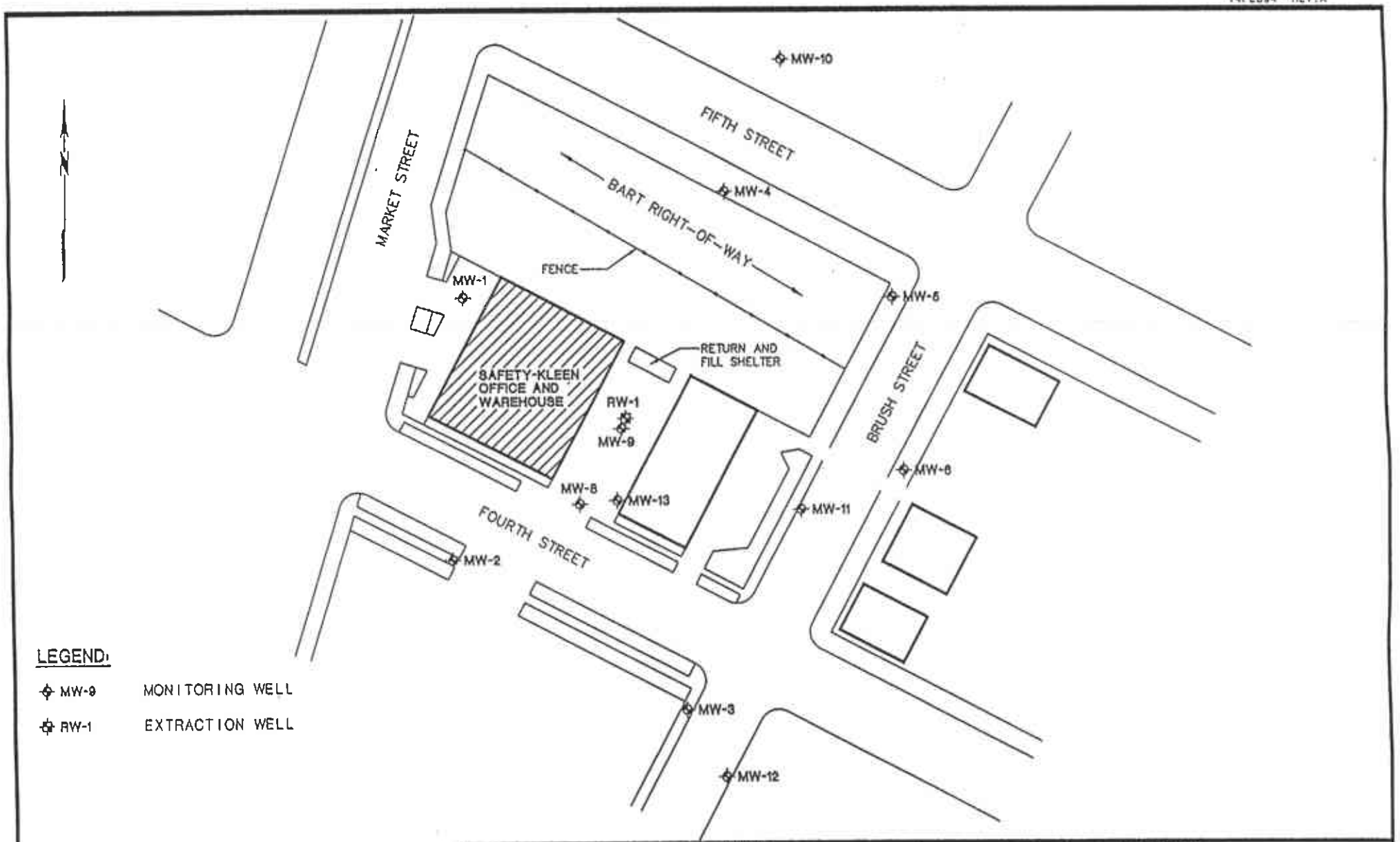


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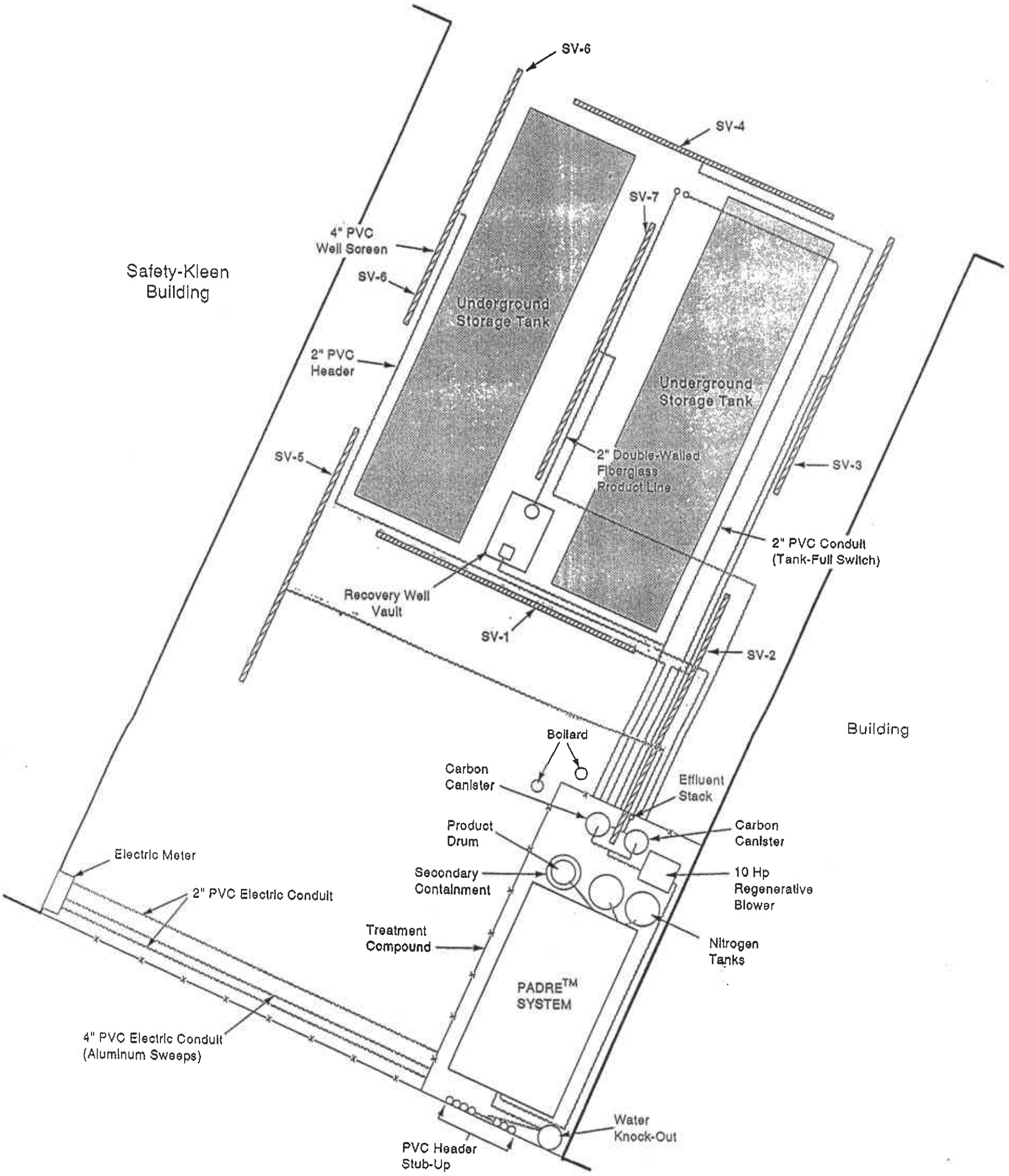
FIGURE 2
SAFETY-KLEEN
400 MARKET STREET
OAKLAND, CALIFORNIA
SITE PLAN



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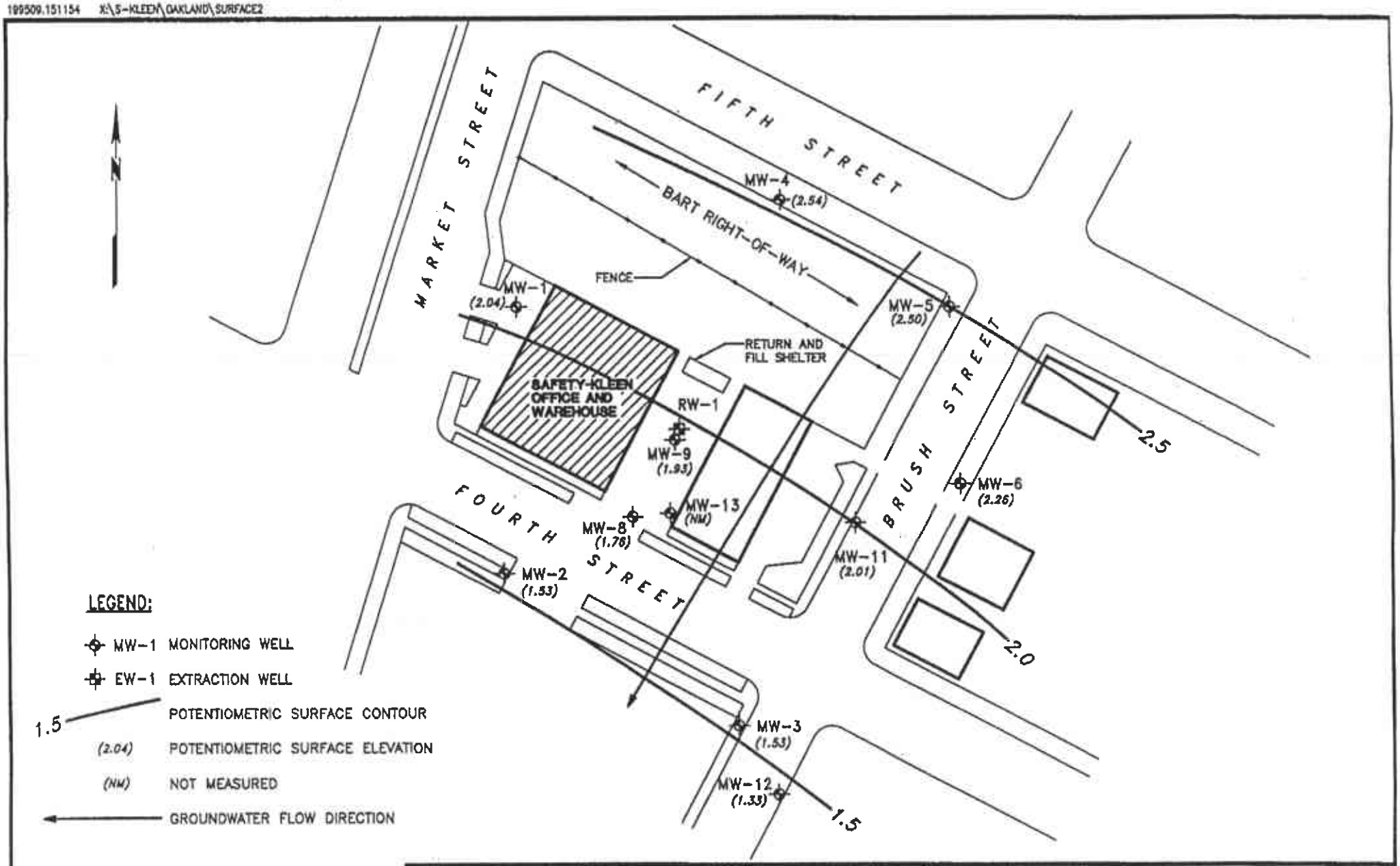
0 10 Feet

DRAFTED BY: DH	CHECKED BY:	PROJECT NO. 70005-009	FIGURE 3	SECOR INTERNATIONAL INCORPORATED
DRWG. DATE:	REV. DATE:	Safety-Kleen Service Center 400 Market Street Oakland, California	Soil Vapor Extraction System Layout	
FILE NAME:				

199509.151154 X:\S-KLEEN\OAKLAND\SURFACE2



SECOR INTERNATIONAL INCORPORATED

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JOB NO.	70005-009

FIGURE 4
SAFETY-KLEEN
400 MARKET STREET
OAKLAND, CALIFORNIA

POTENTIOMETRIC SURFACE MAP
JULY 11, 1995

TABLE 1
Product Recovery Data
from Well RW-1

Date	Product Recovered This Period (gallons)	Cumulative Product Recovered (gallons)
01-19-93	-	-
02-25-93	6.5	6.5
05-20-93	4.3	10.8
08-27-93	-	10.8
10-24-93	10.3	21.1
02-28-94	22.6	43.7
05-31-94	16.6	60.3
08-31-94	16.4	76.7
11-30-94	16.2	92.9
02-28-95	16.0	108.9
05-31-95	16.6	125.5
08-31-95	16.6	142.1

TABLE 2
Groundwater Monitoring Data
July 11, 1995

Well I.D.	TOC Elevation (ft msl)	DTW (ft)	DTP (ft)	PT (ft)	Adjusted Elevation (ft msl)
MW-1	7.99	5.95	-	-	2.04
MW-2	8.20	6.67	-	-	1.53
MW-3	6.66	5.13	-	-	1.53
MW-4	10.32	7.78	-	-	2.54
MW-5	10.28	7.78	-	-	2.50
MW-6	8.97	6.71	-	-	2.26
MW-8	7.80	6.04	-	-	1.76
MW-9	8.21	6.74	6.17	0.57	1.93
MW-10*	10.43	-	-	-	-
MW-11	7.91	5.90	-	-	2.01
MW-12	6.74	5.41	-	-	1.33
MW-13	8.08	6.55	-	-	1.53

TOC	=	Top of casing
DTW	=	Depth-to-water
DTP	=	Depth-to-product (separate-phase hydrocarbons)
PT	=	product thickness
Elevation	=	Adjusted groundwater elevation
ft msl	=	Measurement in feet (ft) relative to mean sea level (msl)
*	=	Well destroyed July 1995

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DETECTED COMPOUNDS

Safety-Kleen Service Center
400 Market Street
Oakland, California

Well No.		MW-1									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	-	-	NS	-	NS	-	NS
Benzene	1	-	-	-	-	-	NS	-	NS	-	NS
Toluene	150	-	-	-	-	-	NS	-	NS	-	NS
Ethyl-benzene	700	-	-	-	-	-	NS	-	NS	-	NS
Xylenes	1750	-	-	-	-	-	NS	-	NS	-	NS
1,1-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	-	NS	-	NS
1,2-Dichloroethane	0.5	-	-	-	-	-	NS	-	NS	-	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS
trans-1,2-Dichloroethene	10	-	-	-	-	-	NS	-	NS	-	NS
Chloroform	NE	-	-	-	-	-	NS	-	NS	-	NS
1,1,1-Trichloroethane	200	-	-	-	-	-	NS	-	NS	-	NS
Trichloroethene	5	-	-	-	-	-	NS	-	NS	-	NS
Tetrachloroethene	5	-	-	-	-	-	NS	-	NS	0.7	NS
Chlorobenzene	70	-	-	-	-	-	NS	-	NS	-	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	-	NS	-	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	-	NS	-	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	NS	-	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	NS	-	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	-	NS	-	NS

Well No.		MW-2									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	-	-	-	-	-	-	-
Benzene	1	-	-	-	-	-	-	-	-	-	-
Toluene	150	-	-	-	-	-	-	-	-	-	-
Ethyl-benzene	700	-	-	-	-	-	-	-	-	-	-
Xylenes	1750	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	6	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.5	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	6	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	10	-	-	-	-	-	-	-	-	-	-
Chloroform	NE	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	200	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	70	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	150	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	-	-	-	-	-

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DETECTED COMPOUNDS

Safety-Kleen Service Center
400 Market Street
Oakland, California

Well No.		MW-3									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	-	-	-	-	-	-	-
Benzene	1	-	-	-	-	-	-	-	-	-	-
Toluene	150	-	-	-	-	-	-	-	-	-	-
Ethyl-benzene	700	-	-	-	-	-	-	-	-	-	-
Xylenes	1750	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	6	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.5	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	6	-	-	-	-	-	-	-	-	-	-
trans-1,2-Dichloroethene	10	-	-	-	-	-	-	-	-	-	-
Chloroform	NE	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	200	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	70	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	150	-	-	-	-	1.8	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	-	-	-	-	-

Well No.		MW-4									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	* 400	* 270	* 760	* 200	* 330	** -	-	-
Benzene	1	-	-	-	-	-	-	-	-	-	-
Toluene	150	-	-	-	-	-	-	-	-	1.2	-
Ethyl-benzene	700	-	-	-	-	-	-	-	-	-	-
Xylenes	1750	-	-	-	-	-	-	-	-	-	-
1,1-Dichloroethene	6	-	-	-	-	-	-	-	-	0.8	5.2
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.5	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	6	-	-	-	-	-	-	-	-	-	11.8
trans-1,2-Dichloroethene	10	-	-	-	-	-	-	-	-	1.0	3.2
Chloroform	NE	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	200	-	-	-	-	-	-	-	-	-	-
Trichloroethene (TCE)	5	2400	1100	-	790	1600	410	650	780	440	247
Tetrachloroethene	5	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	70	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	150	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	-	-	-	-	-

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DETECTED COMPOUNDS

Safety-Kleen Service Center
400 Market Street
Oakland, California

Well No.		MW-5									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	-	-	NS	NS	NS	-	NS
Benzene	1	-	-	-	-	-	NS	NS	NS	-	NS
Toluene	150	-	-	-	-	-	NS	NS	NS	-	NS
Ethyl-benzene	700	-	-	-	-	-	NS	NS	NS	-	NS
Xylenes	1750	-	-	-	-	-	NS	NS	NS	-	NS
1,1-Dichloroethene	6	1.5	0.6	-	-	-	NS	NS	NS	-	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichloroethane	0.5	-	-	-	-	-	NS	NS	NS	-	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	NS
trans-1,2-Dichloroethene	10	-	-	-	4.3	3.5	NS	NS	NS	-	NS
Chloroform	NE	-	-	-	-	-	NS	NS	NS	-	NS
1,1,1-Trichloroethane	200	4.0	6.0	12	-	7.2	NS	NS	NS	9.1	NS
Trichloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS
Tetrachloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS
Chlorobenzene	70	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	NS	NS	-	NS
Trichlorofluoromethane	150	18	19	-	-	7.9	NS	NS	NS	-	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	NS	NS	-	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	NS	NS	16	NS

Well No.		MW-6									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	-	-	NS	NS	NS	-	NS
Benzene	1	-	-	-	-	-	NS	NS	NS	-	NS
Toluene	150	-	-	-	-	-	NS	NS	NS	-	NS
Ethyl-benzene	700	-	-	-	-	-	NS	NS	NS	-	NS
Xylenes	1750	-	-	-	-	-	NS	NS	NS	-	NS
1,1-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichloroethane	0.5	-	-	-	-	-	NS	NS	NS	-	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	NS
trans-1,2-Dichloroethene	10	-	-	-	-	-	NS	NS	NS	-	NS
Chloroform	NE	-	-	-	-	-	NS	NS	NS	-	NS
1,1,1-Trichloroethane	200	-	5.0	1.3	-	1.0	NS	NS	NS	0.4	NS
Trichloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS
Tetrachloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS
Chlorobenzene	70	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	NS	NS	-	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	NS	NS	-	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	NS	NS	-	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	NS	NS	-	NS

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DETECTED COMPOUNDS

Safety-Kleen Service Center
400 Market Street
Oakland, California

Well No.		MW-8									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	* 60	-	NS	-	-	-	-
Benzene	1	-	-	-	-	-	NS	-	-	-	-
Toluene	150	-	-	-	-	-	NS	-	-	-	-
Ethyl-benzene	700	-	-	-	-	-	NS	-	-	-	-
Xylenes	1750	-	-	-	-	-	NS	-	-	-	-
1,1-Dichloroethene	6	-	-	-	-	-	NS	-	-	-	3.5
1,1-Dichloroethane	5	3.4	-	-	8.6	3.7	NS	5.5	-	-	6.2
1,2-Dichloroethane	0.5	7.4	5.0	5.2	11	7.1	NS	-	-	-	9.8
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	-	-	25.57
trans-1,2-Dichloroethene	10	-	1.0	-	-	-	NS	-	-	-	2.3
Chloroform	NE	-	-	-	-	-	NS	-	-	-	-
1,1,1-Trichloroethane	200	-	-	-	2.5	1.5	NS	-	-	-	-
Trichloroethene TCE	5	14	31	15	22	18	NS	23	2.6	15	163
Tetrachloroethene	5	1.8	-	-	2.0	0.8	NS	-	-	0.4	3.2
Chlorobenzene	70	11	-	5.4	16	-	NS	2.4	1.2	-	6.9
1,2-Dichloropropane	5	0.6	-	-	-	0.8	NS	-	-	-	-
1,2-Dichlorobenzene	600	2.6	-	-	4.8	-	NS	-	-	-	3.8
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	NS	-	-	-	2.6

Well No.		MW-10 destroyed									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	-	NS	NS	NS	NS	NS	NS
Benzene	1	-	-	-	-	NS	NS	NS	NS	NS	NS
Toluene	150	-	-	-	-	NS	NS	NS	NS	NS	NS
Ethyl-benzene	700	-	-	-	-	NS	NS	NS	NS	NS	NS
Xylenes	1750	-	-	-	-	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	6	-	2.0	-	-	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	5	-	-	-	-	NS	NS	NS	NS	NS	NS
1,2-Dichloroethane	0.5	-	-	-	-	NS	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	6	-	-	-	-	NS	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	10	-	17	3.0	0.4	NS	NS	NS	NS	NS	NS
Chloroform	NE	1.2	0.5	-	-	NS	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	200	-	0.8	-	-	NS	NS	NS	NS	NS	NS
Trichloroethene	5	45	54	42	67	NS	NS	NS	NS	NS	NS
Tetrachloroethene	5	-	-	-	-	NS	NS	NS	NS	NS	NS
Chlorobenzene	70	-	-	-	-	NS	NS	NS	NS	NS	NS
1,2-Dichloropropane	5	-	-	-	-	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	600	-	-	-	-	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane	150	-	-	-	-	NS	NS	NS	NS	NS	NS
Dichlorodifluoromethane	NE	-	-	-	-	NS	NS	NS	NS	NS	NS
Vinyl chloride	0.5	-	-	-	-	NS	NS	NS	NS	NS	NS

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DETECTED COMPOUNDS

Safety-Kleen Service Center
400 Market Street
Oakland, California

Well No.		MW-11									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	-	-	NS	NS	NS	-	NS
Benzene	1	-	-	-	-	-	NS	NS	NS	-	NS
Toluene	150	-	-	-	-	-	NS	NS	NS	-	NS
Ethyl-benzene	700	-	-	-	-	-	NS	NS	NS	-	NS
Xylenes	1750	-	-	-	-	-	NS	NS	NS	-	NS
1,1-Dichloroethene	6	-	2.0	-	-	-	NS	NS	NS	-	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichloroethane	0.5	-	-	-	-	-	NS	NS	NS	-	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	NS
trans-1,2-Dichloroethene	10	-	3.0	-	-	-	NS	NS	NS	-	NS
Chloroform	NE	-	-	-	-	-	NS	NS	NS	-	NS
1,1,1-Trichloroethane	200	-	2.0	-	-	-	NS	NS	NS	-	NS
Trichloroethene	5	9.1	36	11	2.6	3.1	NS	NS	NS	3.4	NS
Tetrachloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS
Chlorobenzene	70	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	NS	NS	-	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	NS	NS	-	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	NS	NS	-	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	NS	NS	-	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	NS	NS	1.4	NS

Well No.		MW-12									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	-	-	-	-	NS	-	NS	-	NS
Benzene	1	-	-	-	-	-	NS	-	NS	-	NS
Toluene	150	-	-	-	-	-	NS	-	NS	-	NS
Ethyl-benzene	700	-	-	-	-	-	NS	-	NS	-	NS
Xylenes	1750	-	-	-	-	-	NS	-	NS	-	NS
1,1-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS
1,1-Dichloroethane	5	2.6	2.0	-	2.3	1.7	NS	1.6	NS	3.8	NS
1,2-Dichloroethane	0.5	-	2.0	-	1.2	1.9	NS	-	NS	-	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS
trans-1,2-Dichloroethene	10	-	3.0	-	-	-	NS	-	NS	-	NS
Chloroform	NE	-	-	-	-	-	NS	-	NS	-	NS
1,1,1-Trichloroethane	200	-	-	-	-	-	NS	-	NS	-	NS
Trichloroethene	5	17	30	34	11	44	NS	24	NS	59	NS
Tetrachloroethene	5	-	-	-	-	-	NS	-	NS	-	NS
Chlorobenzene	70	-	-	-	-	-	NS	-	NS	-	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	-	NS	-	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	-	NS	-	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	NS	-	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	NS	-	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	-	NS	-	NS

TABLE 3
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DETECTED COMPOUNDS

Safety-Kleen Service Center
400 Market Street
Oakland, California

deep well screened ~65' bgs

Well No.		MW-13									
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(ug/l)
TPH-mineral spirits	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS
Benzene	1	-	NS	NS	NS	-	NS	NS	NS	-	NS
Toluene	150	-	NS	NS	NS	-	NS	NS	NS	-	NS
Ethyl-benzene	700	-	NS	NS	NS	-	NS	NS	NS	-	NS
Xylenes	1750	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,1-Dichloroethene	6	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,1-Dichloroethane	5	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,2-Dichloroethane	0.5	-	NS	NS	NS	-	NS	NS	NS	-	NS
cis-1,2-Dichloroethene	6	-	NS	NS	NS	-	NS	NS	NS	-	NS
trans-1,2-Dichloroethene	10	-	NS	NS	NS	-	NS	NS	NS	-	NS
Chloroform	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,1,1-Trichloroethane	200	-	NS	NS	NS	-	NS	NS	NS	-	NS
Trichloroethene	5	-	NS	NS	NS	-	NS	NS	NS	-	NS
Tetrachloroethene	5	-	NS	NS	NS	-	NS	NS	NS	-	NS
Chlorobenzene	70	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,2-Dichloropropane	5	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,2-Dichlorobenzene	600	-	NS	NS	NS	-	NS	NS	NS	-	NS
Trichlorofluoromethane	150	-	NS	NS	NS	-	NS	NS	NS	-	NS
Dichlorodifluoromethane	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS
Vinyl chloride	0.5	-	NS	NS	NS	-	NS	NS	NS	-	NS

LEGEND

MCL = Maximum contaminant level for primary drinking water constituents
NE = Not Established
NS = Not Sampled
- = Not Detected
* The TPH as mineral spirits result is the result of an unknown hydrocarbon consisting of a single peak.

NOTE:

Only compounds detected in one or more samples are included.
See the laboratory reports for a complete list of analytes.

APPENDIX A

Well Destruction Permit for Monitoring Well MW-10

SECOR
International Incorporated

July 12, 1995

Mr. Wyman Hong
Alameda County Food Control and Water Conservation District
5997 Parkside Drive
Pleasanton, California 94588-5127

RE: **Well Destruction - MW-10**
Safety-Kleen Service Center
400 Market Street
Oakland, California

Dear Mr. Hong:

As I discussed with you in a telephone conversation on Friday, July 6, 1995, monitor well MW-10 appears to have been destroyed by Cal Trans work being conducted in the area. I met Norman Freitag of Cal Trans on site to try and locate the well on July 6, 1995. His phone number is (510) 614-5951. There appeared to be a 5 foot deep excavation in the area of MW-10, and sections of broken PVC where observed in the area. I dug around the area with a shovel, but was unable to locate the well. The well was located on the north side of 5th street between Brush Street and Market Street.

Mr. Freitag said he considered the well abandoned, therefore, I have attached a Well Destruction Permit Application with this letter. Please let me know if you have any questions or comments regarding this matter.

Sincerely,

SECOR International Incorporated

Steven M. McCabe
Project Hydrogeologist

Attachment

Permit # 95459

1390 Willow Pass Road, Suite 360, Concord, CA 94520-5250 (510) 686-9780 (510) 686-3099 FAX

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

MW-10

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 400 Market Street
Oakland, CA

CLIENT
Name Safety-Kleen Corp.
Address 16540 SE 130th St Voice
City Clackamas, OR Zip 97015

APPLICANT
Name Steve McCabe
SECOR Fax (510) 686-3099
Address 1390 Willow Pass #360 Voice (510) 686-9750
City Concord, CA Zip 94520

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
Monitoring	___	Well Destruction	X

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger ___
Cable ___ Other N/A

DRILLER'S LICENSE NO. N/A

WELL PROJECTS
Drill Hole Diameter ___ in. Maximum
Casing Diameter ___ in. Depth ___ ft.
Surface Seal Depth ___ ft. Number ___

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

ESTIMATED STARTING DATE N/A
ESTIMATED COMPLETION DATE N/A

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

APPLICANT'S SIGNATURE Steve McCabe Date 7/12/95

FOR OFFICE USE

PERMIT NUMBER ___
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

A. GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

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

E. WELL DESTRUCTION. See attached.

Approved ___ Date ___

91992

APPENDIX B

Field Data Sheets

SECOR

HYDROLOGIC DATA SHEET

PROJECT: SAFETY-KLEEN OAKLAND		PROJECT NO.: 70005-009-07 TASK: 001
DATE: July 11, 1995	TIME START: 0700	TIME END: 1000
EVENT: QUARTERLY MONITORING AND SAMPLING		PERSONNEL: R. Ravelo

WELL ID	TOC	DTW	DTP	PT	TD	ELEV.	COMMENTS
MW-1	7.99	5.95			21.49	2.04	
MW-2	8.20	6.67			29.21	1.53	
MW-3	6.66	5.13			26.20	1.53	
MW-4	10.32	7.78			25.40	2.54	
MW-5	10.28	7.78			28.98	2.50	
MW-6	8.97	6.71			28.97	2.26	
MW-8	7.80	6.04			28.93	1.76	
MW-9	8.21	6.74	6.17	0.57	-	1.93	
MW-10	10.43						Destroyed
MW-11	7.91	5.90			27.50	2.01	
MW-12	6.74	5.41			25.38	1.33	
MW-13	8.08	6.55			69.00	1.53	
RW-1	-	5.52	5.31	0.21	-		

NOTES:

TOC = TOP OF CASING (FEET RELATIVE TO MEAN SEA LEVEL)
DTW = DEPTH TO WATER (FEET)
DTP = DEPTH TO PRODUCT (FEET)
PT = PRODUCT THICKNESS (FEET)
TD = TOTAL DEPTH (FEET)
ELEV. = GROUNDWATER ELEVATION (FEET RELATIVE TO MEAN SEA LEVEL)

SKOAKGW.TBL
11-21-94

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70005-009 | PURGED BY: RR | WELL I.D.: MW-4

CLIENT NAME: SL | SAMPLED BY: RR | SAMPLE I.D.: MW-4

LOCATION: OAKLAND | QA SAMPLES: _____

DATE PURGED 7/11/95 | START (2400hr) 11:48 | END (2400hr) 12:05

DATE SAMPLED 7/11/95 | SAMPLE TIME (2400hr) 12:10

SAMPLE TYPE: Groundwater ✓ | Surface Water ___ | Treatment Effluent ___ | Other ___

CASING DIAMETER:	2"	3"	4"	5"	6"	8"	Other
Casing Volume: (gallons per foot)	✓ (0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 25.40 | CASING VOLUME (gal) = 3.00

DEPTH TO WATER (feet) = 7.78 | CALCULATED PURGE (gal) = 9.00

WATER COLUMN HEIGHT (feet) = 17.62 | ACTUAL PURGE (gal) = 9

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
7/11	11:53	3.5	66.1	816	9.3	TAN	SLIGHT
"	11:58	6	65.6	884	9.0	"	4
"	12:04	9	65.6	836	9.0	"	4

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: _____ | SAMPLE TURBIDITY: _____

80% RECHARGE: ___YES ___NO | ANALYSES: _____

ODOR: _____ | SAMPLE VESSEL / PRESERVATIVE: _____

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
✓ Bailer (PVC)
___ Bailer (Stainless Steel)
___ Dedicated _____

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
✓ Bailer (___PVC or ✓disposable)
___ Bailer (Stainless Steel)
___ Dedicated _____

Other: _____

WELL INTEGRITY: OK | LOCK#: 3260

REMARKS: _____

SIGNATURE: RR

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70005-004 | PURGED BY: RR | WELL I.D.: MW-3

CLIENT NAME: SIC | SAMPLED BY: RR | SAMPLE I.D.: MW-3

LOCATION: OAKLAND | QA SAMPLES: _____

DATE PURGED 7/11/95 | START (2400hr) 10:52 | END (2400hr) 11:27

DATE SAMPLED 7/11/95 | SAMPLE TIME (2400hr) 11:35

SAMPLE TYPE: Groundwater ✓ | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: Casing Volume: (gallons per foot)

2"	3"	4"	5"	6"	8"	Other
✓	____	____	____	____	____	____
(0.17)	(0.38)	(0.67)	(1.02)	(1.50)	(2.60)	( )

DEPTH TO BOTTOM (feet) = 26.20 | CASING VOLUME (gal) = 3.58

DEPTH TO WATER (feet) = 5.43 | CALCULATED PURGE (gal) = 10.75

WATER COLUMN HEIGHT (feet) = 21.07 | ACTUAL PURGE (gal) = 11.5

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
7/11	11:12	4	68.3	242	10.2	Brown	Moderate
"	11:20	8	68.1	235	9.4	"	"
"	11:26	11.5	67.5	227	9.4	"	"

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: _____ | SAMPLE TURBIDITY: _____

80% RECHARGE: ___YES ___NO | ANALYSES: _____

ODOR: _____ | SAMPLE VESSEL / PRESERVATIVE: _____

PURGING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristaltic Pump
____ Bailer (Teflon)
✓ Bailer (PVC)
____ Bailer (Stainless Steel)
____ Dedicated _____

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristaltic Pump
____ Bailer (Teflon)
✓ Bailer (___PVC or ✓ disposable)
____ Bailer (Stainless Steel)
____ Dedicated _____

Other: _____

WELL INTEGRITY: OK | LOCK#: 3210

REMARKS: _____

SIGNATURE: [signature] |

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70005-009 | PURGED BY: RR | WELL I.D.: MW-2

CLIENT NAME: SK, OAK | SAMPLED BY: RR | SAMPLE I.D.: MW-2

LOCATION: OAKLAND | QA SAMPLES: _____

DATE PURGED 7/11/95 | START (2400hr) 10:13 | END (2400hr) 10:37

DATE SAMPLED 7/11/95 | SAMPLE TIME (2400hr) 10:45

SAMPLE TYPE: Groundwater ✓ | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: 2" ✓ (0.17) | 3" ____ (0.38) | 4" ____ (0.67) | 5" ____ (1.02) | 6" ____ (1.50) | 8" ____ (2.60) | Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 29.21 | CASING VOLUME (gal) = 3.83

DEPTH TO WATER (feet) = 6.67 | CALCULATED PURGE (gal) = 11.50

WATER COLUMN HEIGHT (feet) = 22.54 | ACTUAL PURGE (gal) = 12

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
7/11	10:20	4	64.7	414	10.2	GW	SIGHT
"	10:28	8	70.0	416	9.9	"	"
"	10:36	12	70.2	450	9.4	"	"

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: _____ | SAMPLE TURBIDITY: _____

80% RECHARGE: ___YES ___NO | ANALYSES: _____

ODOR: _____ | SAMPLE VESSEL / PRESERVATIVE: _____

PURGING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristaltic Pump
____ Bailer (Teflon)
✓ Bailer (PVC)
____ Bailer (Stainless Steel)
____ Dedicated _____

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristaltic Pump
____ Bailer (Teflon)
✓ Bailer (___PVC or ✓ disposable)
____ Bailer (Stainless Steel)
____ Dedicated _____

Other: _____

WELL INTEGRITY: OK - NO LOCK | LOCK#: NONE

REMARKS: _____

SIGNATURE: RR

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70905-004 | PURGED BY: AA | WELL I.D.: MW-8

CLIENT NAME: SIC | SAMPLED BY: AA | SAMPLE I.D.: MW-8

LOCATION: OAKLAND | QA SAMPLES: _____

DATE PURGED 7/11/95 | START (2400hr) 9:35 | END (2400hr) 9:58

DATE SAMPLED 7/11/95 | SAMPLE TIME (2400hr) 10:10

SAMPLE TYPE: Groundwater ✓ | Surface Water ____ | Treatment Effluent ____ | Other ____

CASING DIAMETER: 2" ✓ (0.17) | 3" ____ (0.38) | 4" ____ (0.67) | 5" ____ (1.02) | 6" ____ (1.50) | 8" ____ (2.60) | Other ____ ( )

Casing Volume: (gallons per foot)

DEPTH TO BOTTOM (feet) = 28.93 | CASING VOLUME (gal) = 3.89

DEPTH TO WATER (feet) = 6.04 | CALCULATED PURGE (gal) = 11.67

WATER COLUMN HEIGHT (feet) = 22.89 | ACTUAL PURGE (gal) = 12

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (NTU)
7/11	9:42	4	63.7	630	9.2	TAN	SIGHT.
"	9:51	8	62.8	583	9.1	"	"
"	9:57	12	61.9	575	9.1	"	"

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: _____ | SAMPLE TURBIDITY: _____

80% RECHARGE: ___YES ___NO | ANALYSES: _____

ODOR: _____ | SAMPLE VESSEL / PRESERVATIVE: _____

PURGING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristaltic Pump
____ Bailer (Teflon)
✓ Bailer (PVC)
____ Bailer (Stainless Steel)
____ Dedicated _____

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

____ Bladder Pump
____ Centrifugal Pump
____ Submersible Pump
____ Peristaltic Pump
____ Bailer (Teflon)
✓ Bailer (___PVC or ✓disposable)
____ Bailer (Stainless Steel)
____ Dedicated _____

Other: _____

WELL INTEGRITY: OK | LOCK#: _____

REMARKS: _____

SIGNATURE: AA

APPENDIX C

Laboratory Reports - Groundwater

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 95-102
Date Reported: 8/14/95

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Mineral Spirits in Water

Modified EPA Method 8015

Extraction By EPA Method 5030

Work Order #	Collector's Sample #	Date Sampled	Date Extracted	Date Analyzed	Concentration µg/L
01	MW-4	7/11/95	7/20/95	7/20/95	<50
02	MW-3	7/11/95	7/20/95	7/20/95	<50
03	MW-8	7/11/95	7/20/95	7/20/95	<50
04	MW-2	7/11/95	7/20/95	7/20/95	<50

Analytical Review / Date: 8/14/95

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 95-102
Date Reported: 8/14/95

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8021

	Work Order #	01	02	03	04
	Collector's Sample #	MW-4	MW-3	MW-8	MW-2
	Date Sampled	7/11/95	7/11/95	7/11/95	7/11/95
	Date Analyzed	7/24/95	7/24/95	7/24/95	7/24/95
	Dilution Factor	1	1	1	1
Analyte	Report Limit mg/L	Concentration mg/L			
Benzene	0.005	<0.005	<0.005	<0.005	<0.005
Ethylbenzene	0.005	<0.005	<0.005	<0.005	<0.005
Toluene	0.005	<0.005	<0.005	<0.005	<0.005
Xylene (Total)	0.005	<0.005	<0.005	<0.005	<0.005

Analytical Review / Date: 8/14/95

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 95-102
Date Reported: 8/14/95

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8021

Work Order #	01	02	03	04
Collector's Sample #	MW-4	MW-3	MW-8	MW-2
Date Sampled	7/11/95	7/11/95	7/11/95	7/11/95
Date Analyzed	7/17/95	7/17/95	7/17/95	7/17/95
Dilution Factor	1	1	1	1
Analyte	Report Limit µg/L	Concentration µg/L			
[redacted]enzene	1.0	<1.0	<1.0	<1.0	<1.0
Bromobenzene	1.0	<1.0	<1.0	<1.0	<1.0
[redacted]romochloromethane	1.0	<1.0	<1.0	<1.0	<1.0
Bromodichloromethane	1.0	<1.0	<1.0	<1.0	<1.0
[redacted]romoform	1.0	<1.0	<1.0	<1.0	<1.0
Bromomethane	1.0	<1.0	<1.0	<1.0	<1.0
[redacted]-Butylbenzene	1.0	<1.0	<1.0	<1.0	<1.0
sec-Butylbenzene	1.0	<1.0	<1.0	<1.0	<1.0
[redacted]ert-Butylbenzene	1.0	<1.0	<1.0	<1.0	<1.0
Carbon Tetrachloride	1.0	<1.0	<1.0	<1.0	<1.0
[redacted]hlorobenzene	1.0	<1.0	<1.0	6.9	<1.0
Chlorodibromomethane	1.0	<1.0	<1.0	<1.0	<1.0
[redacted]hloroethane	1.0	<1.0	<1.0	<1.0	<1.0
Chloroform	1.0	<1.0	<1.0	<1.0	<1.0
[redacted]hloromethane	1.0	<1.0	<1.0	<1.0	<1.0
2-Chlorotoluene	1.0	<1.0	<1.0	<1.0	<1.0
[redacted]-Chlorotoluene	1.0	<1.0	<1.0	<1.0	<1.0
1,2-Dibromo-3-chloropropane	1.0	<1.0	<1.0	<1.0	<1.0
[redacted],2-Dibromoethane	1.0	<1.0	<1.0	<1.0	<1.0
Dibromomethane	1.0	<1.0	<1.0	<1.0	<1.0

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 95-102
Date Reported: 8/14/95

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8021

Work Order #		01	02	03	04
Collector's Sample #		MW-4	MW-3	MW-8	MW-2
Date Sampled		7/11/95	7/11/95	7/11/95	7/11/95
Date Analyzed		7/17/95	7/17/95	7/17/95	7/17/95
Dilution Factor		1	1	1	1
Analyte	Report Limit µg/L	Concentration µg/L			
,2-Dichlorobenzene	1.0	<1.0	<1.0	3.8	<1.0
1,3-Dichlorobenzene	1.0	<1.0	<1.0	<1.0	<1.0
,4-Dichlorobenzene	1.0	<1.0	<1.0	<1.0	<1.0
Dichlorodifluoromethane	1.0	<1.0	<1.0	<1.0	<1.0
,1-Dichloroethane	1.0	<1.0	<1.0	6.2	<1.0
1,2-Dichloroethane	1.0	<1.0	<1.0	9.8	<1.0
,1-Dichloroethene	1.0	5.2	<1.0	3.5	<1.0
cis-1,2-Dichloroethene	1.0	11.8	<1.0	25.57	<1.0
rans-1,2-Dichloroethene	1.0	3.2	<1.0	2.3	<1.0
1,2-Dichloropropane	1.0	<1.0	<1.0	<1.0	<1.0
,3-Dichloropropane	1.0	<1.0	<1.0	<1.0	<1.0
2,2-Dichloropropane	1.0	<1.0	<1.0	<1.0	<1.0
,1-Dichloropropene	1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	1.0	<1.0	<1.0	<1.0	<1.0
rans-1,3-dichloropropene	1.0	<1.0	<1.0	<1.0	<1.0
Ethylbenzene	1.0	<1.0	<1.0	<1.0	<1.0
Hexachlorobutadiene	1.0	<1.0	<1.0	<1.0	<1.0
Isopropylbenzene	1.0	<1.0	<1.0	<1.0	<1.0
p-Isopropyltoluene	1.0	<1.0	<1.0	<1.0	<1.0
Methylene Chloride	1.0	<1.0	<1.0	<1.0	<1.0
Naphthalene	1.0	<1.0	<1.0	<1.0	<1.0

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 95-102
Date Reported: 8/14/95

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8021

	Work Order #	01	02	03	04
	Collector's Sample #	MW-4	MW-3	MW-8	MW-2
	Date Sampled	7/11/95	7/11/95	7/11/95	7/11/95
	Date Analyzed	7/17/95	7/17/95	7/17/95	7/17/95
	Dilution Factor	1	1	1	1
Analyte	Report Limit µg/L	Concentration µg/L			
-Propylbenzene	1.0	<1.0	<1.0	<1.0	<1.0
Styrene	1.0	<1.0	<1.0	<1.0	<1.0
,1,1,2-Tetrachloroethane	1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-Tetrachloroethane	1.0	<1.0	<1.0	<1.0	<1.0
etrachloroethene	1.0	<1.0	<1.0	3.2	<1.0
Toluene	1.0	<1.0	<1.0	<1.0	<1.0
,2,3-Trichlorobenzene	1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trichlorobenzene	1.0	<1.0	<1.0	<1.0	<1.0
,1,1-Trichloroethane	1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-Trichloroethane	1.0	<1.0	<1.0	<1.0	<1.0
richloroethene	1.0	247	<1.0	163	<1.0
Trichlorofluoromethane	1.0	<1.0	<1.0	<1.0	<1.0
,2,3-Trichloropropane	1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-Trimethylbenzene	1.0	<1.0	<1.0	<1.0	<1.0
,3,5-Trimethylbenzene	1.0	<1.0	<1.0	<1.0	<1.0
Vinyl Chloride	1.0	<1.0	<1.0	2.6	<1.0
ylenes (Total)	1.0	<1.0	<1.0	<1.0	<1.0

Analytical Review / Date: 8/14/95

ENVIRONMENTAL CHAIN OF CUSTODY

DATE: July 11 1995 95-1042

SAFETY-KLEEN	GREG HOEHN		PROJECT # 700095-009
400 MARKET ST.	1390 WILLOW PASS	(510)686-9780	AUTHORIZATION #
OAKLAND, CA.	CONCORD, CA.	(510)686-3099(FAX)	
GENERATOR SITE & ADDRESS	PROJECT MANAGER(S)	PHONE & FAX	

SAMPLER'S NAME: R. RAVELO

ANALYSIS REQUESTED

FIELD SAMPLE ID #	SAMPLE MATRIX	DATE/TIME SAMPLED	# OF CONTAINERS	PRESERVATION METHOD	TPH (8015) Mineral Spirits Screen X	TOTAL Cyanide 335.2 Sulfide	TOTAL Volatiles(8240) (624); (601)	SEMI-VOA(8270) (525) (602)	TCLP Metals VOA BNA	IGNITABILITY (D001)	CORROSIVITY (D002)	REACTIVITY (D003)	SPECIFIC GRAVITY	C.O.D.(410.4) B.O.D.(405.1)	TOTAL Metals	PHENOLS (420.1)	PCB's (8080)	BTEX (8240)	PAH (8210)	TOTAL SUSPENDED SOLID (160.2)	OIL & GREASE (413.2) (9909)	EPA METHOD 8010 602	HOLD	
MW-4	WATER	7/11 12:10	6	COLD, HCL	X													X				X		95-3460
MW-3	"	" 11:35	6	" "	X													X				X		95-3463
MW-8	"	" 10:10	6	" "	X													X				X		95-3465
MW-2	"	" 10:45	6	" "	X													X				X		95-3466
Trip Blank																							X	95-3467

COMMENTS/REMARKS: * TPH as mineral spirits by purge & trap

REQUESTED TAT

SAMPLE TRANSFER RECORD

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE	TIME
SIGNATURE OF COLLECTOR:	7/11/95	15:00			

SK TCLP LAB USE ONLY

TEMPERATURE WHEN RECEIVED 1.3 °C SHIPPED VIA: ____ UPS ____ FED EX ____ OTHER

SAMPLE KIT OPENED AND CHECKED IN BY ____ AT ____ ON ____

C.O.C. SEALS SIGNED, DATED, AND INTACT ON ALL SAMPLE JARS? YES ____ NO ____ IF NO, EXPLAIN

SHIPPING NOTES/LAB COMMENTS:

3 B2