safety-kleen.

October 23, 1996 *Via Certified Mail No. P193223607*

Mr. Robert M. Senga
Facility Permitting Branch
Environmental Protection Agency
Department of Toxic Substances Control, Region 4
245 West Broadway, Suite 350
Long Beach, California 90802-4444

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

Dear Mr. Senga:

Enclosed is the third quarter monitoring and sampling report for 1996 which summarizes the groundwater monitoring and vapor extraction activities conducted at the above-referenced facility. This report covers the period from June through August 1996. Safety-Kleen is following the modified groundwater sampling schedule 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.

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

Sincerely,

Greg Hoehn /for

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

ENVIRONMENTAL PROTECTION
96 OCT 30 PM 12:33

Enclosure

cc: Keith Marcott, Safety-Kleen Corp.
Scott Davies, Safety-Kleen Corp.
Branch Environmental File (7-178-01)
Jennifer Eberle, Alameda County - Department of Environmental Health
Steven Ritchie, California Regional Water Quality Control Board
Greg Hoehn, *SECOR*

OAKLAND7.L18
October 23, 1996
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 Avenue
Clackamas, Oregon 97015

10-23-96

Submitted By:
SECOR International Incorporated
1390 Willow Pass Road
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October 23, 1996

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1.0 INTRODUCTION

This report presents the results of groundwater monitoring and sampling activities conducted for the quarter of June through August 1996 at the Safety-Kleen Service Center located at 400 Market Street in Oakland, California (Figures 1 and 2). Also included are the results of soil vapor extraction (SVE) system monitoring and sampling for the period.

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-gallons 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 of product mineral spirits prior to distribution 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. The product pumping system was removed on November 20, 1995, and replaced with a passive hydrocarbon skimming device which is capable of removing product thickness within the well to a sheen.

The SVE system consists of seven horizontal vapor extraction lines and a vapor extraction and treatment system. A system to extract and treat soil vapor utilizing regenerative polymer adsorption began full-scale operation on June 1, 1993. The SVE system was modified and restarted on November 28, 1995, utilizing the current granular activated carbon (GAC) treatment system. Figure 3 depicts the layout of the vapor extraction lines and the vapor treatment system.

3.0 SCOPE OF WORK

Groundwater monitoring work conducted during this quarter consisted of product recovery and the monitoring of ten groundwater monitoring wells and one recovery well and the sampling of four groundwater monitoring wells as specified by the quarterly sampling schedule. SVE activities conducted during this quarter consisted of the operation and maintenance of the SVE system. The following sections provide a description of the work steps conducted.

3.1 Soil Vapor Extraction System

The SVE system was not operational from November 1994 through December 1994 due to a system fault and piping damaged during the installation of UST cathodic protection. The damage to the SVE piping was repaired in December 1994; however, the system remained non-operational pending modification to a carbon adsorption treatment system. Modifications to the system were completed in November 1995 and the system was re-started. The SVE system now consists of two 1,500-pound granular active carbon vessels connected in series to a manifold attached to the seven horizontal vapor extraction lines.

While the SVE system is operating, monitoring occurs bi-weekly and consists of measuring influent and effluent concentrations using a photo-ionization detector (PID). SVE system influent and effluent vapor samples are collected monthly. During this quarter, SVE system influent and effluent vapor samples were collected on May 31, July 1, and August 22, 1996. The vapor samples were submitted to a state-certified analytical laboratory under chain-of-custody manifest and analyzed for total petroleum hydrocarbons as mineral spirits (TPHms) by modified U.S. Environmental Protection Agency (EPA) Method 8015 and for volatile organic compounds (VOCs) by EPA Method 8010. The results of the SVE system operation and sampling are presented in Section 4.1.

3.2 Mineral Spirits Recovery

The mineral spirits recovery pump that was located in recovery well RW-1 failed and was replaced by a passive recovery skimmer in November 1995. A passive recovery skimmer was also placed in monitoring well MW-9 (Figure 2) at that time. Mineral spirits recovered from recovery well RW-1 and monitoring well MW-9 is emptied directly to the waste mineral spirits UST at the site and is incorporated into the Safety-Kleen recycling process. The amount of recovered product is recorded each time the skimmer is emptied. The results of mineral spirits recovery are presented in Section 4.2.

3.3 Groundwater Monitoring and Sampling

On July 1, 1996, on-site and off-site monitoring wells were monitored for depth-to-water using a water level indicator calibrated to 0.01-foot. The depth-to-water measurements were used with well survey data to construct a potentiometric surface map (Figure 4).

On July 1, 1996, subsequent to collecting depth-to-water measurements, monitoring wells MW-2, MW-3, MW-4, and MW-8 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. Monitoring well MW-9 was not purged for sampling due to the presence of floating product. Within two hours of completing well purging, the groundwater levels had recovered to at least 80 percent of the original level in the wells and groundwater samples were collected using single-use disposable samplers. The samples were placed into laboratory supplied sample containers, labeled with the date, time, and sample number, and placed on ice in an insulated cooler. Field data sheets that include depth-to-water measurements and well purge data are included in Appendix A.

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 EPA Method 8020, for TPHms by modified EPA Method 8015, and for halogenated 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 labeled containers pending transport for treatment at a Safety-Kleen facility.

4.0 RESULTS

4.1 Soil Vapor Extraction System

The results of SVE system monitoring conducted through August 31, 1996, are summarized on Table 1. Table 1 presents data on the system flow rate and PID measurements from the SVE system influent, the effluent after each carbon adsorption vessel, and the system effluent. The Bay Area Air Quality Management District (BAAQMD) permit requires of a maximum emission reading of 10 parts per million by volume (ppmv) at a maximum flow rate of 150 standard cubic feet per minute (scfm). Effluent PID readings indicated 6 ppmv on July 1, 1996, and 33 ppmv on July 17, 1996. A system effluent vapor sample was collected during the July 1, 1996 event and the subsequent laboratory analytical report showed no detectable concentrations of TPHms, VOCs and BTEX. No vapor samples were collected for laboratory analysis during the July 17, 1996 event, and the system was shut down pending carbon replacement. Based on the elevated PID reading from July 17, 1996, the BAAQMD was notified of the carbon breakthrough in a correspondence dated July 23, 1996. The system was restarted on August 20, 1996, after the carbon replacement was complete. PID monitoring data from that date showed 300 ppmv influent and 0 ppmv effluent. Based on the analytical data and subsequent monitoring data, the GAC system is sufficiently removing organic vapors to below the 10 ppmv permit requirement.

For this quarter, SVE system influent and effluent vapor samples were collected on May 31, July 1, and August 22, 1996. No TPHms, BTEX, or VOC analytes were detected in the any of the system effluent samples collected during this quarter. The laboratory analyses of system influent samples detected TPHms concentrations of 1,234 $\mu g/\ell$ on May 31, 82 $\mu g/\ell$ on July 1, and 3 $\mu g/\ell$ on August 22. Xylenes were detected in the influent samples collected on May 31 and August 22 at 1.06 $\mu g/\ell$ and 0.01 $\mu g/\ell$, respectively. No other analytes were detected in the May 31 or August 22 influent samples. No BTEX or VOC analytes were detected in the July 1, 1996 influent sample. Copies of soil vapor extraction system analytical reports are included as Appendix B.

The system monitoring data were used to calculate system mineral spirits removal rates and a cumulative mass of mineral spirits removed via vapor extraction. As shown on Table 2, the removal rate for each of the sampling events was estimated to range from 12.10 pounds per day (lbs/day) to 0.02 lbs/day. Data collected through August 22, 1996, indicate 4099.1 pounds of mineral spirits have been removed from the subsurface by the SVE system.

4.2 Mineral Spirits Recovery

Mineral spirits product is collected in monitoring wells MW-9 and recovery well RW-1 via passive recovery skimmers and by hand bailing at the time of SVE monitoring and groundwater sampling. Approximately 0.02 gallons of mineral spirits product were recovered during this reporting period. The total volume of mineral spirits product removed from the subsurface to date is approximately 144.25 gallons. The mineral spirits recovery data is shown in Table 3.

4.3 Groundwater Elevations

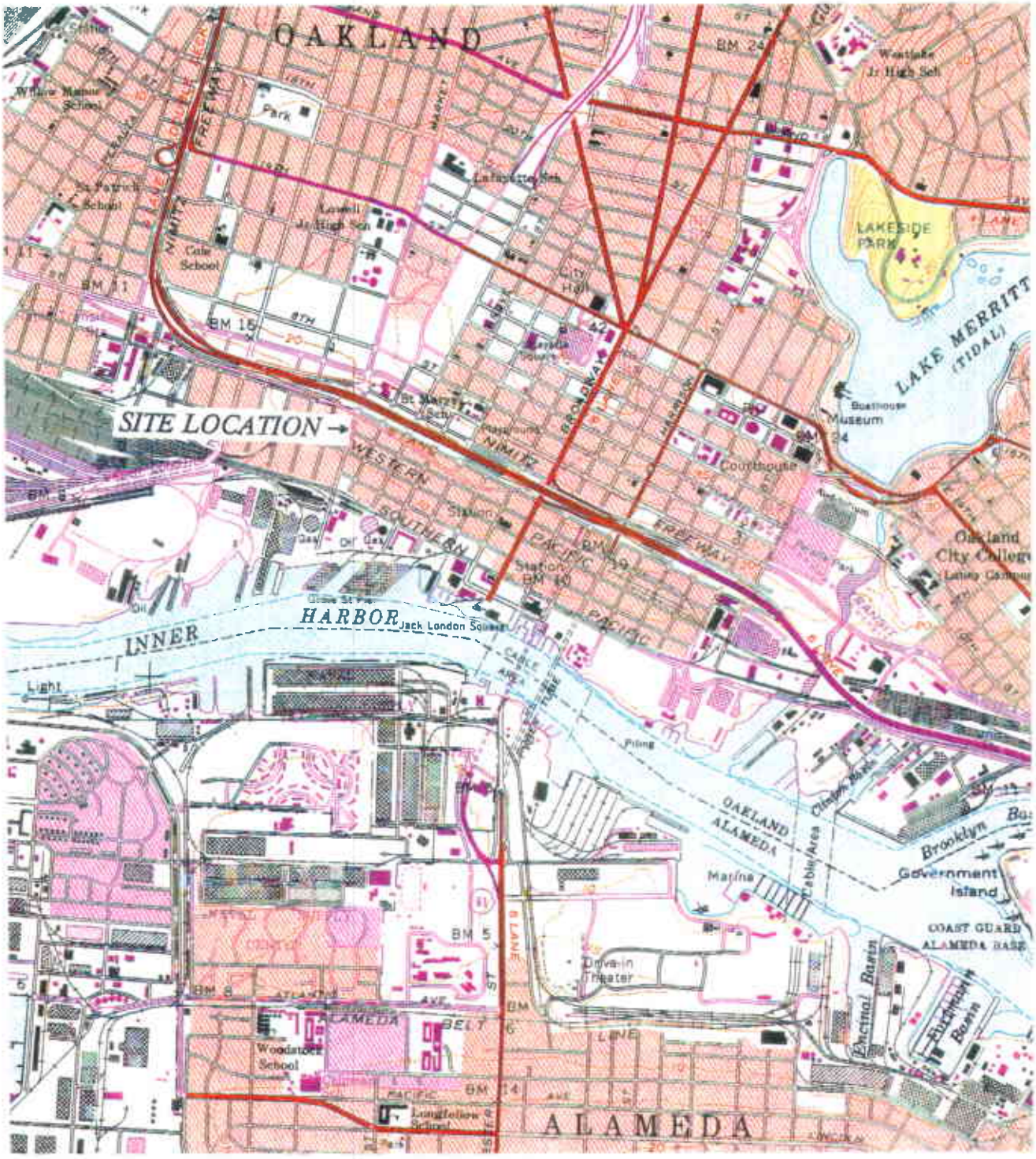
Groundwater elevations and depth-to-water measurements for the July 1, 1996, event are presented in Table 4. The average water table elevation on July 1, 1996, was 2.14 feet above mean sea level, a decrease of 0.70 feet since the April 1996 event. A potentiometric surface map prepared with the July 1, 1996, data is presented as Figure 4.

As shown in Figure 4, the groundwater flow direction remains to the south and southwest, consistent with historic site data. The hydraulic gradient was 0.003 feet/foot (ft/ft) across the site as measured between monitoring wells MW-4 and MW-2. The gradient is the same as that measured during the last event and is consistent with previous data for the site. A summary of groundwater elevations since January 1993 is provided as Table 5.

4.4 Groundwater Conditions

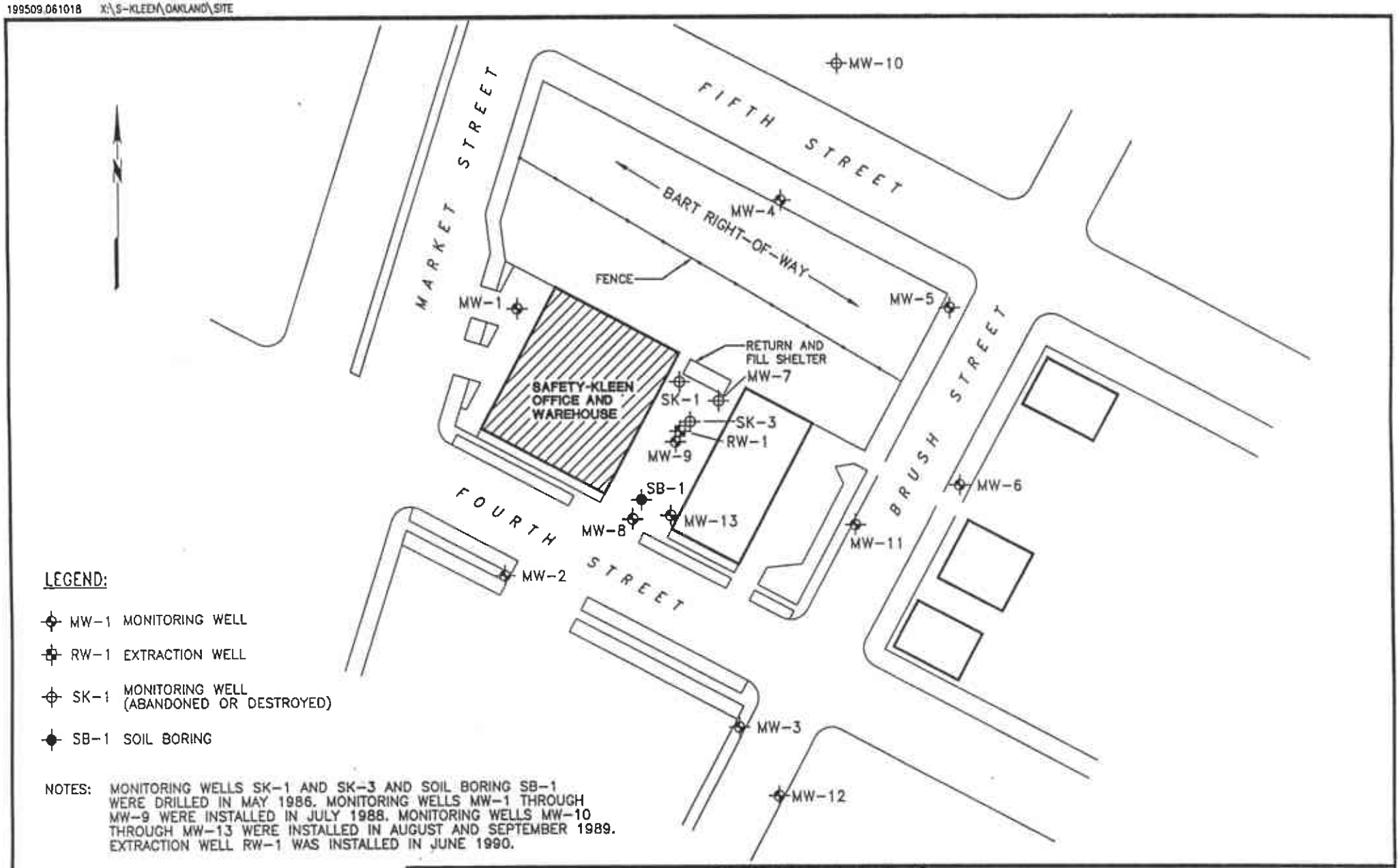
No concentrations of TPHms or BTEX were detected above the laboratory detection limits in any of the groundwater samples collected on July 1, 1996. In addition, no VOCs were detected in the groundwater samples from monitoring wells MW-2 and MW-3. Laboratory analyses of groundwater samples from monitoring wells MW-4 and MW-8 show that several VOCs exist at concentrations exceeding the detection limits. The compounds detected were *cis*-1,2-dichloroethene (DCE), trans-1,2-DCE, 1,1-DCE, 1,1-dichloroethane (DCA), 1,2-DCA, trichloroethene (TCE), tetrachloroethene (PCE), chloroform, vinyl chloride, chlorobenzene, 1,2-dichlorobenzene (DCB), 1,4-DCB, 1,1,1-trichloroethane (TCA), and dichlorodifluoromethane. The groundwater sample from monitoring well MW-4 contained *cis*-1,2-DCE at 11.3 $\mu g/\ell$, trans-1,2-DCE at 1.2 $\mu g/\ell$, TCE at 224 $\mu g/\ell$, and 1,1-DCE at 4.8 $\mu g/\ell$. The groundwater sample from monitoring well MW-8 contained TCE at 1352 $\mu g/\ell$, *cis*-1,2-DCE at 72.7 $\mu g/\ell$, trans-1,2-DCE at 3.5 $\mu g/\ell$, 1,1-DCE at 1.7 $\mu g/\ell$, 1,1-DCA at 7.5 $\mu g/\ell$, 1,2-DCA at 8.7 $\mu g/\ell$, vinyl chloride at 6.3 $\mu g/\ell$, chlorobenzene at 9 $\mu g/\ell$, 1,2-DCB at 9.1 $\mu g/\ell$, 1,4-DCB at 1.1 $\mu g/\ell$, PCE at 2 $\mu g/\ell$, 1,1,1-TCA at 1.3 $\mu g/\ell$, chloroform at 4.3 $\mu g/\ell$ and dichlorodifluoromethane at 2.9 $\mu g/\ell$. Analytical test results showing compounds detected since the April 1993 sampling event are presented in Table 6. Copies of the groundwater laboratory analytical reports are included in Appendix C.

OAKLAND WEST QUADRANGLE
California
7.5 Minute Series (Topographic)



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

199509.061018 X:\S-KLEEN\OAKLAND\SITE



LEGEND:

- MW-1 MONITORING WELL
- RW-1 EXTRACTION WELL
- SK-1 MONITORING WELL (ABANDONED OR DESTROYED)
- SB-1 SOIL BORING

NOTES: MONITORING WELLS SK-1 AND SK-3 AND SOIL BORING SB-1 WERE DRILLED IN MAY 1986. MONITORING WELLS MW-1 THROUGH MW-9 WERE INSTALLED IN JULY 1988. MONITORING WELLS MW-10 THROUGH MW-13 WERE INSTALLED IN AUGUST AND SEPTEMBER 1989. EXTRACTION WELL RW-1 WAS INSTALLED IN JUNE 1990.

0 80 160
SCALE FEET

SECOR
INTERNATIONAL
INCORPORATED

DRAWN	CCR
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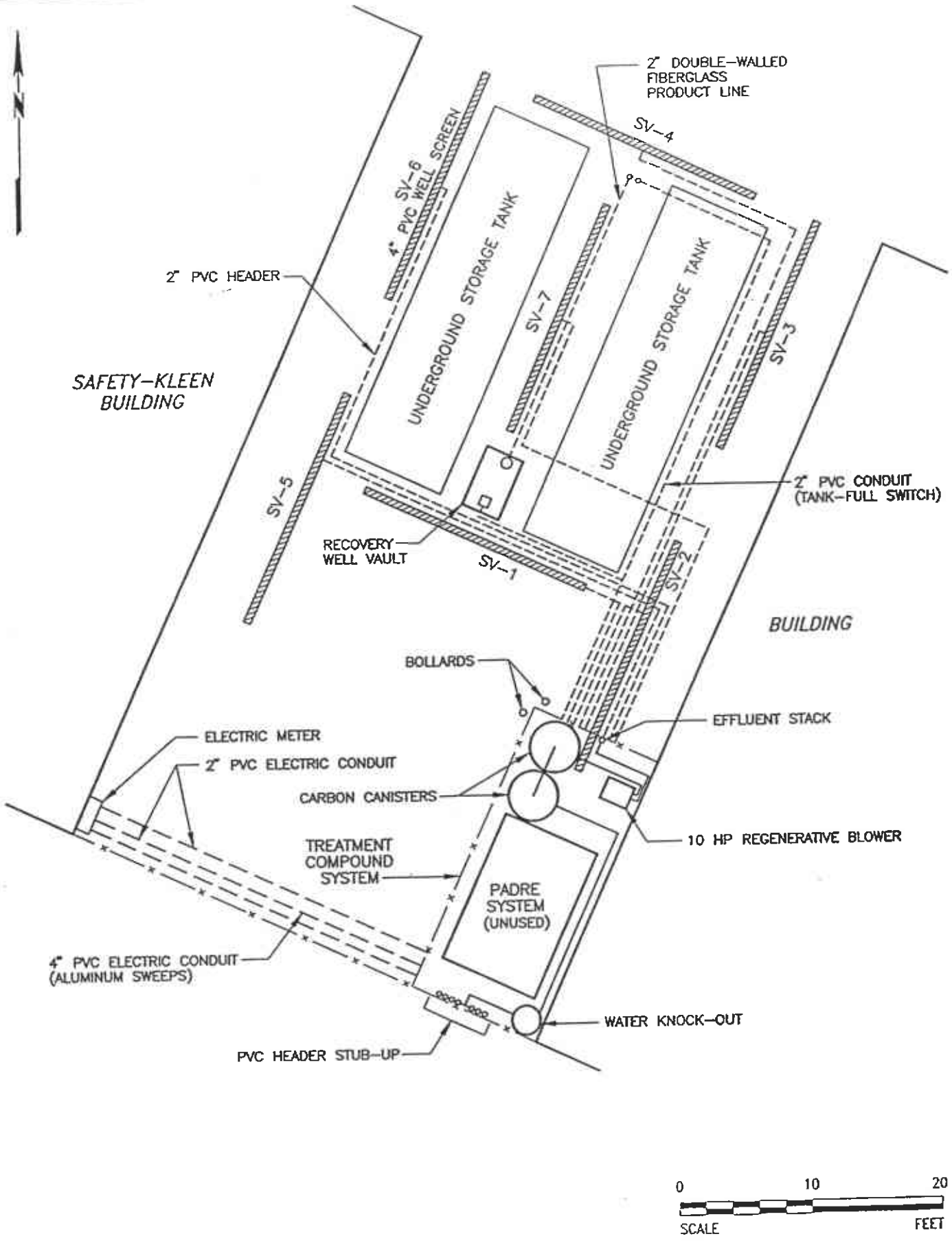
DATE	03JUN96
JOB NO.	70005-009

FIGURE 2
SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA

SITE PLAN



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JOB NO.	70005-009

FIGURE 3
SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA

SOIL VAPOR EXTRACTION SYSTEM LAYOUT

199512.071928 X:\S-KLEEN\OAKLAND\SITE2

199608.151455 X:\S-KLEEN\OAKLAND\SURFACES

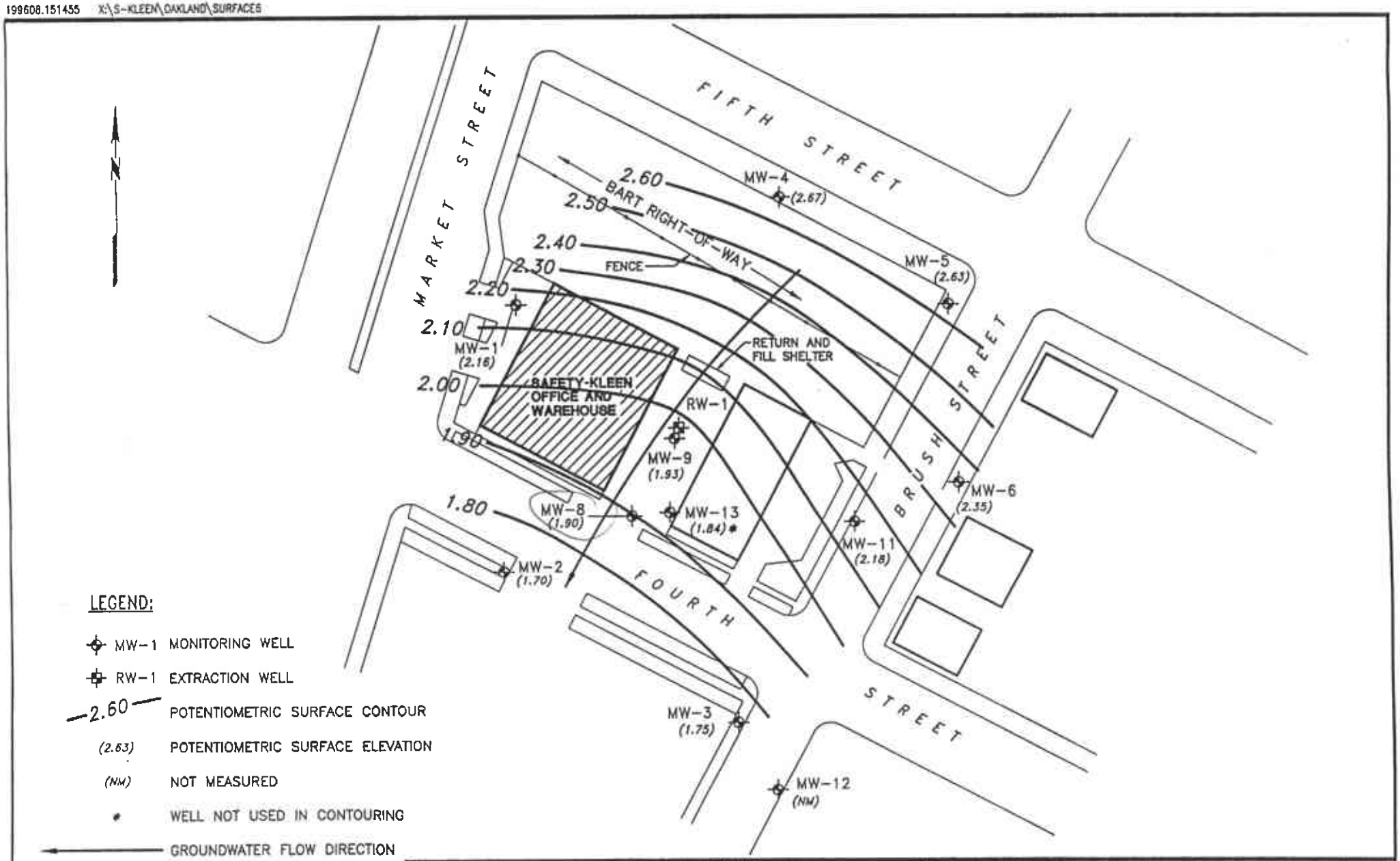

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FIGURE 4

SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA

POTENTIOMETRIC SURFACE MAP JULY 1, 1996

Table 1

Soil Vapor Extraction System Monitoring Data

Safety-Kleen Service Center
400 Market Street
Oakland, California

Date	Elapsed Time*	SV-1 Extraction Vacuum	KO Vacuum	Extraction Flow Rate		System Influent	#1 Carbon Effluent	#2 Carbon Effluent	System Effluent	Notes
	(hours)	(inches H20)	(inches H20)	(ft/min)	(scfm)	(PID units)	(PID units)	(PID units)	(PID units)	
12/08/95	362.6	6.5	22	5000	107	413	3.1	4.6	6.4	* System restarted using carbon adsorption on 11/28/95.
12/21/95	677.2	6	20	5000	107	79.5	36.2	1.2	1.2	Influent and Effluent samples collected
01/09/96	1134.2	9	22	5000	106	169	42.4	2.8	1.7	Influent and Effluent samples collected
01/24/95	1488.75	5.5	17	2200	47	43	43.2	24.2	6.1	
02/06/96	1803.3	5	16	6000	129	63.4	61.1	33.4	16.1	Influent and Effluent samples collected
02/21/96	2157.55	8	20	5500	117	60.1	48	38.2	8.4	
03/08/96	2540.1	10	23	5000	106	183.7	52.3	44.8	15.5	Influent and Effluent samples collected
03/20/96	2635.2	12	23	5000	106	430	362.1	311.4	22.4	
04/03/96	2905.9	12	25	5000	106	290	45	32	2	FID used, Influent and Effluent samples collected, Carbon changed.
04/18/96	3267.7	11	24	5000	106	500	30	9	3	FID used.
05/02/96	3594	NA	24	5000	109	109.3	44.5	0.2	0.2	Influent and Effluent samples collected
05/16/96	3934.3	NA	23	5000	109	117.3	150.9	3.2	1	
05/31/96	4289.2	0.15	25	5000	109	53.7	61	0.7	0	Influent and Effluent samples collected
07/01/96	5038.8	11	23	5000	106	325	150	75	37	Influent and Effluent samples collected
07/17/96	5421.7	10	24	5000	106	159	160	163	33	System shut down for carbon replacement
08/20/96	5423.6	7	17	3200	68	300	0	0	0	System restarted with new carbon
08/22/96	5469.5	7	17	3000	64	300	1.4	1.4	0	Influent and Effluent samples collected

Notes: ft/min = feet per minute
scfm = standard cubic feet per minute assuming ambient temperature and ideal gas
NA = not available

Table 2
Soil Vapor Extraction System
Mineral Spirits Removal
Safety-Kleen Service Center
400 Market Street
Oakland, California

Sample Date	Elapsed Time (hours)	Run Time This Period (hours)	Exctraction Flow Rate (cfm)	TPHms Influent (ug/L)	Removal Rate (lbs./day)	TPHms Removed (lbs.)	Notes
11/28/95	Carbon adsorbtion system start-up					1798.4	TPHms removed by prior system.
12/21/95	677.2	677.2	109.1	823	8.07	2026.0	
01/09/96	1134.2	457	109.1	1116	10.95	2234.4	
02/06/96	1803.3	669.1	130.9	999	11.75	2562.1	
03/08/96	2540.1	736.8	109.1	1821	17.86	3110.4	
04/03/96	2905.9	365.8	109.1	1116	10.95	3277.2	
05/02/96	3594	688.1	109.1	1586	15.56	3723.2	
05/31/96	4289.2	695.2	109.1	1234	12.10	4073.6	
07/01/96	5038.8	749.6	109.1	82	0.81	4098.8	
08/22/96	5469.5	430.7	65.4	3	0.02	4099.1	

Notes: cfm = cubic feet per minute
ug/L = micrograms per liter
lbs = pounds

TABLE 3
Product Recovery Data

Date	Product Recovered This Period (gallons)	Cumulative Product Recovered (gallons)
01-19-93	-0-	-0-
02-25-93	6.5	6.5
05-20-93	4.3	10.8
08-27-93	-0-	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
11-30-95	-0-	142.1
01-09-96	0.75	142.85
03-20-96	0.75	143.6
05-02-96	0.03	143.63
05-16-96	0.55	144.18
05-31-96	0.05	144.23
07-01-96	0.02	144.25

TABLE 4
Groundwater Monitoring Data
July 1, 1996

Well I.D.	TOC Elevation (ft msl)	DTW (ft)	DTP (ft)	PT (ft)	Adjusted Elevation (ft msl)
MW-1	7.99	5.83	-	-	2.16
MW-2	8.20	6.50	-	-	1.70
MW-3	6.66	4.91	-	-	1.75
MW-4	10.32	7.65	-	-	2.67
MW-5	10.28	7.65	-	-	2.63
MW-6	8.97	6.62	-	-	2.35
MW-8	7.80	5.90	-	-	1.90
MW-9	8.21	6.30	6.28	0.02	1.93
MW-10*	-	-	-	-	-
MW-11	7.91	5.73	-	-	2.18
MW-12	6.74	NM	-	-	NM
MW-13	8.08	6.24	-	-	1.84
RW-1	-	5.11	5.08	0.03	-

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
NM	=	Well not accessible

Table 5

Historical Summary of Groundwater Elevations

Safety-Kleen Service Center
400 Market Street
Oakland, California

Date	Well Identification											
	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-8	MW-9	MW-10	MW-11	MW-12	MW-13
Jan-93	1.29	1.00	0.86	1.57	1.48	1.27	1.08	1.15	1.73	1.16	0.44	0.58
Apr-93	1.09	0.51	0.38	1.52	1.42	1.08	0.74	0.95	1.85	0.90	0.10	0.40
Jul-93	0.27	-0.23	-0.27	0.68	0.62	0.37	-0.01	-0.68	0.99	0.20	-0.72	-0.15
Oct-93	-0.02	-0.51	-0.66	0.32	0.17	-0.12	-0.35	0.14	0.62	-0.22	-0.91	-0.57
Jan-94	-0.01	-0.52	-0.77	0.33	0.48	-0.10	-0.37	-0.49	0.60	-0.14	-1.05	-0.65
Apr-94	0.55	0.05	-0.09	0.85	0.74	0.46	0.22	0.33	-	0.34	-0.76	-0.09
Jul-94	0.25	-0.20	-0.31	0.62	0.55	0.23	-0.03	0.08	0.90	0.09	-0.70	-0.22
Oct-94	0.08	-0.33	-0.44	0.41	0.38	0.12	-0.15	0.01	-	0.01	-0.59	-0.33
Jan-95	1.95	1.53	1.64	2.41	2.49	2.24	1.79	1.85	-	2.06	1.44	1.33
Apr-95	3.09	2.46	2.49	3.71	3.73	3.42	2.79	2.95	-	3.18	2.22	1.98
Jul-95	2.04	1.53	1.53	2.54	2.50	2.26	1.76	1.93	-	2.01	1.33	1.53
Oct-95	1.38	0.94	1.01	1.81	1.27	1.56	1.15	1.32	-	1.42	0.94	1.06
Jan-96	1.82	1.40	0.64	2.21	2.21	2.04	1.61	1.54	-	1.85	-	1.51
Apr-96	2.81	2.40	2.46	3.33	3.36	3.17	2.58	2.51	-	2.91	2.24	2.38
Jul-96	2.16	1.70	1.75	2.67	2.63	2.35	1.90	1.93	-	2.18	NM	1.84

Notes:
Groundwater elevations are realative to mean sea-level datum
- = Not measured

TABLE 6
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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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
Benzene	1	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Toluene	150	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Ethyl-benzene	700	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Xylenes	1750	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,1-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,2-Dichloroethane	0.5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
trans-1,2-Dichloroethene	10	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Chloroform	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,1,1-Trichloroethane	200	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Trichloroethene	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Tetrachloroethene	5	-	-	-	-	-	NS	-	NS	0.7	NS	-	NS	-	NS
Chlorobenzene	70	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	-	NS	-	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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-

TABLE 6
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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	-	-	-	-	-	-	-	-	-	-	1	-	-	-
trans-1,2-Dichloroethene	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroform	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,1,1-Trichloroethane	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	0.7	-	-	-	-	-	-	-	-	-	-	-	-	-
Tetrachloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	-	-	-	-	-	-	-	0.7	0.8	5.2	4	3	6	4.8
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	6	-	-	-	-	-	-	-	-	-	11.8	-	17	10	11.3
trans-1,2-Dichloroethene	10	-	53	0.6	1.1	1.7	-	-	1.4	1	3.2	3	4	1.7	1.2
Chloroform	NE	7.6	-	1.9	-	5.0	-	-	-	-	-	3	6	1.3	1.8
1,1,1-Trichloroethane	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloroethene	5	2400	1100	-	790	1600	410	650	700	440	247	207	157	140	224
Tetrachloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	-	-	-	-	-	1	-	-	-

TABLE 6
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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	1.5	0.6	-	-	-	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	-	-	-	4.3	3.5	NS	NS	NS	-	NS	NS	NS	-	NS
Chloroform	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	1.4	NS
1,1,1-Trichloroethane	200	4	6	12	-	7.2	NS	NS	NS	9.1	NS	NS	NS	-	NS
Trichloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	8.7	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
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS
Trichlorofluoromethane	150	18	19	-	-	7.9	NS	NS	NS	-	NS	NS	NS	4.5	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	NS	NS	16	NS	NS	NS	-	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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	-	5	1.3	-	1	NS	NS	NS	0.4	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
1,4-Dichlorobenzene	5	-	-	-	-	-	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

TABLE 6
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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	7	19	7.2	-
1,1-Dichloroethane	5	3.4	-	-	8.6	3.7	NS	5.5	-	-	6.2	5	7	2.9	-
1,2-Dichloroethane	0.5	7.4	5	5.2	11	7.1	NS	-	-	-	9.8	10	11	5.1	-
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	-	-	25.57	63	56	63	-
trans-1,2-Dichloroethene	10	-	1	-	-	-	NS	-	-	-	2.3	6	4	2.9	-
Chloroform	NE	-	-	-	-	-	NS	-	-	-	-	-	13	-	-
1,1,1-Trichloroethane	200	-	-	-	2.5	1.5	NS	-	-	-	-	-	-	-	1.3
Trichloroethene	5	14	31	15	22	18	NS	23	2.6	15	163	557	486	569	1352
Tetrachloroethene	5	1.8	-	-	2	0.8	NS	-	-	0.4	3.2	2	2	1.1	2
Chlorobenzene	70	11	-	5.4	16	-	NS	2.4	1.2	-	6.9	4	6	3.3	-
1,2-Dichloropropane	5	0.6	-	-	-	0.8	NS	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	2.6	-	-	4.8	-	NS	-	-	-	3.8	3	5	2	-
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	-	-	-	-	-	-	-	1.1
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	NS	-	-	-	2.6	4	5	1.6	6.3

Well No.		MW-10 (Abandoned)													
Date		04-93	07-93	10-93	01-94	04-94	07-94	10-94	01-95	04-95	07-95	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	Well Destroyed July 1995			
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	-	-	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	0.4	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				
1,4-Dichlorobenzene	5	-	-	-	-	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 6
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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	NS
Benzene	1	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Toluene	150	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Ethyl-benzene	700	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Xylenes	1750	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
1,1-Dichloroethene	6	-	2	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
1,2-Dichloroethane	0.5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	10	-	3	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Chloroform	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	200	-	2	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Trichloroethene	5	9.1	36	11	2.6	3.1	NS	NS	NS	3.4	NS	NS	NS	NS	NS
Tetrachloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Chlorobenzene	70	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	NS	NS	1.4	NS	NS	NS	NS	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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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
Benzene	1	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Toluene	150	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Ethyl-benzene	700	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Xylenes	1750	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,1-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS	2	NS	-	NS
1,1-Dichloroethane	5	2.6	2	-	2.3	1.7	NS	1.6	NS	3.8	NS	4	NS	2.9	NS
1,2-Dichloroethane	0.5	-	2	-	1.2	1.9	NS	-	NS	-	NS	3	NS	1.6	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS	5	NS	-	NS
trans-1,2-Dichloroethene	10	-	3	-	-	-	NS	-	NS	-	NS	2	NS	-	NS
Chloroform	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	1.1	NS
1,1,1-Trichloroethane	200	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Trichloroethene	5	17	30	34	11	44	NS	24	NS	59	NS	95	NS	7.5	NS
Tetrachloroethene	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Chlorobenzene	70	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	-	NS	-	NS	2	NS	-	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS

TABLE 6
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
DETECTED COMPOUNDS

Safety-Kleen Service Center
400 Market Street
Oakland, California

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	10-95	01-96	04-96	07-96
Compound	MCL	(ug/l)	(ug/l)	(ug/l)	(ug/l)	(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	NS	NS	-	NS
Benzene	1	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Toluene	150	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Ethyl-benzene	700	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Xylenes	1750	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,1-Dichloroethene	6	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,1-Dichloroethane	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,2-Dichloroethane	0.5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
cis-1,2-Dichloroethene	6	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
trans-1,2-Dichloroethene	10	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Chloroform	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,1,1-Trichloroethane	200	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Trichloroethene	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Tetrachloroethene	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Chlorobenzene	70	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,2-Dichloropropane	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,2-Dichlorobenzene	600	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
1,4-Dichlorobenzene	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Trichlorofluoromethane	150	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Dichlorodifluoromethane	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS
Vinyl chloride	0.5	-	NS	NS	NS	-	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

Field Data Sheets

SECOR

HYDROLOGIC DATA SHEET

PROJECT: SAFETY-KLEEN 400 MARKET STREET OAKLAND, CALIFORNIA		**PROJECT NO.:** 70005-009-07 **TASK:** 001
DATE: 7-1-96	**TIME START:** 9:25	**TIME END:** 10:
EVENT: QUARTERLY/SEMI-ANNUAL/ANNUAL MONITORING AND SAMPLING		**PERSONNEL:** GARY CHPT

WELL ID	TOC	DTW	DTP	PT	TD	ELEV.	COMMENTS
MW-1	7.99	5.83	-	-		2.16	2"
MW-2	8.20	6.50	-	-	29.21	~~1.70~~	2"
MW-3	6.66	4.91	-	-	26.20	1.75	2"
MW-4	10.32	7.65	-	-	25.40	2.67	2"
MW-5	10.28	7.65	-	-		2.63	2"
MW-6	8.97	6.62	-	-		2.35	2"
MW-8	7.80	5.90	-	-	28.93	1.90	2"
MW-9	8.21	6.30	6.28	0.02	-	1.93	4"
MW-11	7.91	5.73	-	-		2.18	2"
MW-12	6.74	CAR OVER	-	-	-	-	2"
MW-13	8.08	6.24	-	-		1.84	4"(deep well)
RW-1	-	5.11	5.08	0.03		-	10"

NOTES: S-K Laboratory P.O. Number - E11819

MW-9 - 80 ML product

RW- No BAILable Product

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)

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70005-009-07 PURGED BY: GRC WELL I.D.: MW-2

CLIENT NAME: SAFETY KLEEN SAMPLED BY: GRC SAMPLE I.D.: MW-2

LOCATION: OAKLAND QA SAMPLES: None

DATE PURGED 7-1-96 START (2400hr) 14:20 END (2400hr) 15:00

DATE SAMPLED 7-1-96 SAMPLE TIME (2400hr) 15:05

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

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

DEPTH TO BOTTOM (feet) = 29.21 CASING VOLUME (gal) = 3.86

DEPTH TO WATER (feet) = 6.50 CALCULATED PURGE (gal) = 11.58

WATER COLUMN HEIGHT (feet) = 22.71 ACTUAL PURGE (gal) = 11.75

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY (visual)
7-1	14:30	4	74.0	392	7.90	TAN	High
7-1	14:40	8	75.6	362	7.56	TAN	High
7-1	14:50	11.50	73.5	359	7.47	TAN	High

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: — SAMPLE TURBIDITY: —

80% RECHARGE: X YES ___ NO ANALYSES: TPH as MS

ODOR: None SAMPLE VESSEL / PRESERVATIVE: 5 HCL VOAs

PURGING EQUIPMENT

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

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
X Bailer (___ PVC or X disposable)
___ Bailer (Stainless Steel)
___ Dedicated

Other: ____

WELL INTEGRITY: Good LOCK#: None

REMARKS: Box lid is very hard to Get OFF

SIGNATURE: [signature]

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70005-029.07 | PURGED BY: GRC | WELL I.D.: MW-3

CLIENT NAME: S/K. Oakland | SAMPLED BY: GRC | SAMPLE I.D.: MW-3

LOCATION: Oakland | QA SAMPLES: None

DATE PURGED 7-1-96 | START (2400hr) 11:00 | END (2400hr) 11:40

DATE SAMPLED 7-1-96 | SAMPLE TIME (2400hr) 11:45

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

CASING DIAMETER: 2" X | 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) = 26.20 | CASING VOLUME (gal) = 3.61

DEPTH TO WATER (feet) = 4.91 | CALCULATED PURGE (gal) = 10.85

WATER COLUMN HEIGHT (feet) = 21.29 | ACTUAL PURGE (gal) = 11.00

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY [redacted]VCSwi
7-1	11:10	3.5	71.2	200	7.57	TAN	High
7-1	11:20	8.0	69.7	211	7.15	TAN	High
7-1	11:35	11.0	69.6	222	7.09	TAN	High

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: — | SAMPLE TURBIDITY: —

80% RECHARGE: X YES ___ NO | ANALYSES: TPH gas MS

ODOR: None | SAMPLE VESSEL / PRESERVATIVE: 5 HCL VOAs

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated Disp

Other: ___

Pump Depth: ___

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
X Bailer (___ PVC or X disposable)
___ Bailer (Stainless Steel)
___ Dedicated ___

Other: ___

WELL INTEGRITY: Good | LOCK#: 0909

REMARKS: ___

SIGNATURE: GRC

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70005-004-07 | PURGED BY: GRC | WELL I.D.: MW-8

CLIENT NAME: Safety Kleen | SAMPLED BY: GRC | SAMPLE I.D.: MW-8

LOCATION: Oakland | QA SAMPLES: None

DATE PURGED 7-1-96 | START (2400hr) 11:45 | END (2400hr) 12:17

DATE SAMPLED 7-1-96 | SAMPLE TIME (2400hr) 12:20

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

CASING DIAMETER: Casing Volume: (gallons per foot)

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

DEPTH TO BOTTOM (feet) = 28.93 | CASING VOLUME (gal) = 3.91

DEPTH TO WATER (feet) = 5.90 | CALCULATED PURGE (gal) = 11.74

WATER COLUMN HEIGHT (feet) = 23.03 | ACTUAL PURGE (gal) = 12.00

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY ~~(NTU)~~ Visual
7-1	11:55	4	71.6	707	7.00	Cloudy	med
7-1	12:05	8	69.8	725	6.85	Cloudy	med
7-1	12:15	12	70.2	724	6.86	Cloudy	med

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: ___ | SAMPLE TURBIDITY: ___

80% RECHARGE: X YES ___ NO | ANALYSES: TPH as MS

ODOR: None | SAMPLE VESSEL / PRESERVATIVE: 5 HCL VOAs

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated Disp.

Other: ___

Pump Depth: ___

SAMPLING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
X Bailer (___ PVC or X disposable)
___ Bailer (Stainless Steel)
___ Dedicated ___

Other: ___

WELL INTEGRITY: Good | LOCK#: 0909

REMARKS: ___

SIGNATURE: GRC

SECOR International Inc.

WATER SAMPLE FIELD DATA SHEET

PROJECT #: 70005-009.07 PURGED BY: GRC WELL I.D.: MW-4

CLIENT NAME: SAFETY KLEEN SAMPLED BY: GRC SAMPLE I.D.: MW-4

LOCATION: OAKLAND QA SAMPLES: None

DATE PURGED 7-1-96 START (2400hr) 10:15 END (2400hr) 10:35

DATE SAMPLED 7-1-96 SAMPLE TIME (2400hr) 10:40

SAMPLE TYPE: Groundwater X Surface Water ____ Treatment Effluent ____ Other ____

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

DEPTH TO BOTTOM (feet) = 25.40 CASING VOLUME (gal) = 3.01

DEPTH TO WATER (feet) = 7.65 CALCULATED PURGE (gal) = 9.05

WATER COLUMN HEIGHT (feet) = 17.75 ACTUAL PURGE (gal) = 9.25

FIELD MEASUREMENTS

DATE	TIME (2400hr)	VOLUME (gal)	TEMP. (degrees F)	CONDUCTIVITY (umhos/cm)	pH (units)	COLOR (visual)	TURBIDITY ~~(NTU)~~ visual
7-1	10:20	3	71.8	729	6.50	TAN	Med
7-1	10:25	6	69.5	763	6.45	TAN	Med
7-1	10:30	9	69.6	760	6.45	TAN	Med

SAMPLE INFORMATION

SAMPLE DEPTH TO WATER: — SAMPLE TURBIDITY: —

80% RECHARGE: ___YES ___NO ANALYSES: TPH as MS

ODOR: None SAMPLE VESSEL / PRESERVATIVE: 5 VOAs HCL

PURGING EQUIPMENT

___ Bladder Pump
___ Centrifugal Pump
___ Submersible Pump
___ Peristaltic Pump
___ Bailer (Teflon)
___ Bailer (PVC)
___ Bailer (Stainless Steel)
X Dedicated Bypass

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

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

Other: ____

WELL INTEGRITY: Good LOCK#: 0909

REMARKS: ____

SIGNATURE: DRC

ENVIRONMENTAL CHAIN OF CUSTODY

DATE: 7-1-96

SAFety Kleen	Greg Hoehn	(510) 686-9780	
400 Market Street		(510) 686-3099 FAX	PROJECT # 70065-009-07
Oakland, CA			AUTHORIZATION #
GENERATOR SITE & ADDRESS	PROJECT MANAGER(S)	PHONE & FAX	

SAMPLER'S NAME

ANALYSIS REQUESTED

FIELD SAMPLE ID #	SAMPLE MATRIX	DATE/TIME SAMPLED	# OF CONTAINERS	PRESERVATION METHOD	TPH (8015) Mineral Spirits ___ Screen ___ Method / Purg. & Trap	TOTAL Cyanide 335.2 ___ Sulfide ___	TOTAL Volatiles (8240) ___ (624) ___ (601)	SEMI-VOA (8270) ___ (625) ___ (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 (150.2)	OIL & GREASE (413.2) ___ (9909)	Halog. Volatiles & BTEX 8010, 8020
MW-2	H2O	7-1 12:20	5	Ice HCL	X																	X
MW-3	H2O	7-1 11:45	5	Ice HCL	X																	X
MW-4	H2O	7-1 10.40	5	Ice HCL	X																	X
MW-8	H2O	7-1 15:05	5	Ice HCL	X																	X
TRIP BLANK	H2O		1																			X

COMMENTS/REMARKS:

REQUESTED TAT

SAMPLE TRANSFER RECORD

RELINQUISHED BY	DATE	TIME	RECEIVED BY	DATE
SIGNATURE OF COLLECTOR: Doug Clay	7-1-96	4:00		

SK TCLP LAB USE ONLY

TEMPERATURE WHEN RECEIVED _____ °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

APPENDIX B

Laboratory Reports - Vapor

Superior Analytical Laboratory

70005-009-08
Lmb

SECOR
1390 WILLOW PASS RD, STE. 360
CONCORD, CA 94520

Attn: GREG HOEHN

RECEIVED
JUN 12 1996

Date: June 10, 1996

Laboratory Number : 21432

Project Number/Name : 70005-0
Facility/Site : OAKLAND

Dear GREG HOEHN:

Attached is Superior Analytical Laboratory report for the samples received on May 31, 1996. This report has been reviewed and approved for release. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after June 30, 1996, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

Afsaneh Salimpour
Project Manager

Superior
Analytical Laboratory

CASE NARRATIVE

SECOR
Project Number/Name: 70005-009
Laboratory Number: 21432

Sample Receipt

Two air samples were received by
Superior Analytical Laboratory on May 31, 1996.

Cooler temperature was ROOM°C

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analysed for methods 8015M, 8020 and 8240.

8240:
- No MSD due to a bad purge. LCS/LCSD are within control

8015:
- LCS was out side of control limits.

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553
1555 Burke Street • Suite A • San Francisco, California 94124

Superior Analytical Laboratory

:OR
Attn: GREG HOEHN

Project 70005-009
Reported on June 10, 1996

EPA SW-846 Method 8240 Volatile Organics by GC/MS

Chronology

Laboratory Number 21432

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF 70005-009	05/31/96	05/31/96	05/31/96	05/31/96	CE311.09	01
INF 70005-009	05/31/96	05/31/96	05/31/96	05/31/96	CE311.09	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CE311.09-02	Laboratory Spike	LS	Water	05/31/96	05/31/96
CE311.09-03	Laboratory Spike Duplicate	LSD	Water	05/31/96	05/31/96
CE311.09-04	G4	MS 21416-01	Water	05/31/96	05/31/96
CE311.09-05	G4	MSD 21416-01	Water	05/31/96	05/31/96
CE311.09-06	Method Blank	MB	Air	05/31/96	05/31/96

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 10, 1996

EPA SW-846 Method 8240 Volatile Organics by GC/MS

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21432-01	EFF 70005-009	Air	1.0	-
21432-02	INF 70005-009	Air	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	21432-01 Conc. PPB (v/v)	RL	21432-02 Conc. PPB (v/v)	RL
Chloromethane	ND	4800	ND	4800
Bromomethane	ND	2500	ND	2500
Vinyl Chloride	ND	3800	ND	3800
Chloroethane	ND	3700	ND	3700
Dichloromethane	ND	2800	ND	2800
Carbon Disulfide	ND	950	ND	950
ichlorofluoromethane	ND	520	ND	520
,1-Dichloroethene	ND	740	ND	740
1,1-Dichloroethane	ND	730	ND	730
t-1,2-Dichloroethene	ND	740	ND	740
Chloroform	ND	600	ND	600
1,2-Dichloroethane	ND	240	ND	240
1,1,1-Trichloroethane	ND	540	ND	540
Bromodichloromethane	ND	410	ND	410
1,2-Dichloropropane	ND	640	ND	640
c-1,2-Dichloroethene	ND	740	ND	740
c-1,3-Dichloropropene	ND	650	ND	650
Trichloroethene	ND	550	ND	550
Dibromochloromethane	ND	350	ND	350
1,1,2-Trichloroethane	ND	540	ND	540
t-1,3-Dichloropropene	ND	650	ND	650
Bromoform	ND	280	ND	280
Tetrachloroethene	ND	440	ND	440
1,1,2,2-Tetrachloroethane	ND	430	ND	430
Chlorobenzene	ND	640	ND	640
1,3-Dichlorobenzene	ND	490	ND	490
1,4-Dichlorobenzene	ND	490	ND	490
1,2-Dichlorobenzene	ND	490	ND	490

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 10, 1996

EPA SW-846 Method 8240 Volatile Organics by GC/MS

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21432-01	EFF 70005-009	Air	1.0	-
21432-02	INF 70005-009	Air	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	21432-01 Conc. RL PPB (v/v)	21432-02 Conc. RL PPB (v/v)
>> Surrogate Recoveries (%) <<		
>> Surrogate Recoveries (%) <<		
1,2-Dichloroethane-d4	108	109
Toluene-d8	100	101
-omofluorobenzene	95	95

Superior Analytical Laboratory

EPA SW-846 Method 8240 Volatile Organics by GC/MS

Quality Assurance and Control Data

Laboratory Number: 21432
Method Blank(s)

	CE311.09-06 Conc. PPB (v/v)	RL
Chloromethane	ND	4800
Bromomethane	ND	2500
Vinyl Chloride	ND	3800
Chloroethane	ND	3700
Dichloromethane	ND	2800
Carbon Disulfide	ND	950
Trichlorofluoromethane	ND	520
1,1-Dichloroethene	ND	740
1,1-Dichloroethane	ND	730
t-1,2-Dichloroethene	ND	740
Chloroform	ND	600
1,2-Dichloroethane	ND	240
1,1-Trichloroethane	ND	540
Bromodichloromethane	ND	410
1,2-Dichloropropane	ND	640
c-1,2-Dichloroethene	ND	740
c-1,3-Dichloropropene	ND	650
Trichloroethene	ND	550
Dibromochloromethane	ND	350
1,1,2-Trichloroethane	ND	540
t-1,3-Dichloropropene	ND	650
Bromoform	ND	280
Tetrachloroethene	ND	440
1,1,2,2-Tetrachloroethane	ND	430
Chlorobenzene	ND	640
1,3-Dichlorobenzene	ND	490
1,4-Dichlorobenzene	ND	490
1,2-Dichlorobenzene	ND	490

>> Surrogate Recoveries (%) <<

1,2-Dichloroethane-d4	104
Toluene-d8	100
Bromofluorobenzene	92

Superior Analytical Laboratory

EPA SW-846 Method 8240 Volatile Organics by GC/MS

Quality Assurance and Control Data

Laboratory Number: 21432

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CE311.09 02 / 03 - Laboratory Control Spikes						
1,1-Dichloroethene		40	47/41	118/103	61-145	14
Trichloroethene		40	42/41	105/103	71-120	2
Chlorobenzene		40	47/47	118/118	75-130	0
>> Surrogate Recoveries (%) <<						
1,2-Dichloroethane-d4				111/103	83-114	
Toluene-d8				101/102	90-110	
Bromofluorobenzene				93/93	78-103	
For Water Matrix (ug/L)						
CE311.09 04 / 05 - Sample Spiked: 21416 - 01						
1,1-Dichloroethene	ND	40	36/*	90/0	61-145	0
Trichloroethene	ND	40	35/*	88/0	71-120	0
Chlorobenzene	ND	40	38/*	95/0	75-130	0
>> Surrogate Recoveries (%) <<						
1,2-Dichloroethane-d4				112/0	83-114	
Toluene-d8				99/0	90-110	
Bromofluorobenzene				89/0	78-103	

*- No MSD due to a bad purge. LCS/LCSD are within control

Definitions:
ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Superior
Analytical Laboratory

'OR
Attn: GREG HOEHN

Project 70005-009
Reported on June 3, 1996

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Chronology

Laboratory Number 21432

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF 70005-009	05/31/96	05/31/96	05/31/96	05/31/96	CE311.37	01
INF 70005-009	05/31/96	05/31/96	05/31/96	05/31/96	CE311.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CE311.37-16	Method Blank	MB	Air	05/31/96	05/31/96
CE311.37-03	Laboratory Spike	LS	Water	05/31/96	05/31/96
CE311.37-14	BT2550D 530	MS 21428-01	Water	05/31/96	05/31/96
CE311.37-15	BT2550D 530	MSD 21428-01	Water	05/31/96	05/31/96

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 3, 1996

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21432-01	EFF 70005-009	Air	1.0	-
21432-02	INF 70005-009	Air	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	21432-01 Conc. ppm-v	21432-01 RL	21432-02 Conc. ppm-v	21432-02 RL
Gasoline	NA	14	NA	14
Mineral Spirits	ND	8.4	210	8.4

Superior
Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 21432
Method Blank(s)

	CE311.37-16 Conc. ppm-v	 RL
Gasoline	ND	14
Mineral Spirits	ND	8.45

Superior Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 21432

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Water Matrix (ug/L)				
		CE311.37 03 / - Laboratory Control Spikes				
Gasoline		2000	2800#	140	65-135	
		For Water Matrix (ug/L)				
		CE311.37 14 / 15 - Sample Spiked: 21428 - 01				
Gasoline	ND	2000	2400/2600	120/130	65-135	8

- LCS recovery was out of control limits.

Definitions:
ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Superior Analytical Laboratory

OR
Attn: GREG HOEHN

Project 70005-009
Reported on June 3, 1996

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Chronology

Laboratory Number 21432

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF 70005-009	05/31/96	05/31/96	05/31/96	05/31/96	CE311.37	01
INF 70005-009	05/31/96	05/31/96	05/31/96	05/31/96	CE311.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CE311.37-02	Laboratory Spike	LS	Water	05/31/96	05/31/96
CE311.37-12	BT255OD 530	MS 21428-01	Water	05/31/96	05/31/96
CE311.37-13	BT255OD 530	MSD 21428-01	Water	05/31/96	05/31/96
CE311.37-16	Method Blank	MB	Air	05/31/96	05/31/96

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 3, 1996

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21432-01	EFF 70005-009	Air	1.0	-
21432-02	INF 70005-009	Air	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	21432-01 Conc. ppm-v	21432-01 RL	21432-02 Conc. ppm-v	21432-02 RL
Benzene	ND	0.15	ND	0.15
Toluene	ND	0.13	ND	0.13
Ethyl Benzene	ND	0.11	ND	0.11
Xylenes	ND	0.11	0.24	0.11
>> Surrogate Recoveries (%) <<				
-ifluorotoluene (SS)	93		103	

Superior
Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 21432
Method Blank(s)

	CE311.37-16 Conc. ppm-v	 RL
Benzene	ND	0.15
Toluene	ND	0.130
Ethyl Benzene	ND	0.11
Xylenes	ND	0.11
>> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	100	

Superior Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 21432

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CE311.37 02 / - Laboratory Control Spikes						
Benzene		20	19	95	65-125	
Toluene		20	21	105	65-125	
Ethyl Benzene		20	22	110	65-125	
Xylenes		60	60	100	65-125	
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				98	50-150	
For Water Matrix (ug/L)						
CE311.37 12 / 13 - Sample Spiked: 21428 - 01						
Benzene	ND	20	19/18	95/90	65-125	5
Toluene	ND	20	20/19	100/95	65-125	5
Ethyl Benzene	ND	20	21/20	105/100	65-125	5
Xylenes	ND	60	58/56	97/93	65-125	4
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				102/93	50-150	

Definitions:

ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

21432

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: CONCORD

Address: 1390 Willow Pass Rd.
CONCORD, CA.

☐ Additional documents are attached, and are a part of this Record.

Job Name: SAFETY KLEEN

Location: 400 MARKET ST.
OAKLAND, CA.

Project # 70005-009 Task #

Project Manager GREG HOEHN

Laboratory SUPERIOR

Turnaround Time STANDARD

Sampler's Name R. RIVERA

Sampler's Signature

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	TPH as mineral spirits 8015		Comments/ Instructions	Number of Containers
Eff	5/31/96	9:30	Air							X						X			2
INF	5/31/96	10:00	Air							X						X			2

Special Instructions/Comments:

Please Initial: JF

Samples Stored in ice. No

Appropriate containers yes

Samples preserved No

VOA's without headspace N/A

Comments: Room Temp

Relinquished by: SECOR
Sign
Print R. RIVERA
Company SECOR
Time Date 5/31/96

Received by:
Sign
Print R.
Company
Time Date

Relinquished by:
Sign
Print
Company
Time Date

Received by:
Sign
Print Ray Ferrara
Company Superior
Time 10:20 Date 5/31/96

Sample Receipt
Total no. of containers:
Chain of custody seals:
Rec'd. in good condition/cold:
Conforms to record:

Client: SECOR
Client Contact: GREG HOEHN
Client Phone: (510) 686-9780

SECOR CUSTREC Rev. 1/95

Date: 5/31/96 Page 1 of 1

Superior Analytical Laboratory

SECOR
1390 WILLOW PASS RD, STE. 360
CONCORD, CA 94520

Attn: GREG HOEHN

RECEIVED
SEP - 5 1996

Date: August 31, 1996

Laboratory Number : 21788

Project Number/Name : 70005-009
Facility/Site : SAFETY KLEEN
400 MARKET ST
OAKLAND, CA

Dear GREG HOEHN:

Attached is Superior Analytical Laboratory report for the samples received on August 22, 1996. This report has been reviewed and approved for release. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after September 21, 1996, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

Afsaneh Salimpour
Project Manager

Superior
Analytical Laboratory

CASE NARRATIVE

SECOR
Project Number/Name: 70005-009
Laboratory Number: 21788

Sample Receipt

Two air samples were received by
Superior Analytical Laboratory on August 22, 1996.

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analysed for methods 8015M and 8020.

Customer Service: (800) 521-6109 . Laboratory: (510) 313-0850 . Facsimile: (510) 229-0916
Post Office Box 2648 . 835 Arnold Drive . Suite #106 . Martinez, California 94553
1555 Burke Street . Suite A . San Francisco, California 94124

Superior Analytical Laboratory

:)R
Attn: GREG HOEHN

Project 70005-009
Reported on August 31, 1996

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Chronology

Laboratory Number 21788

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	08/22/96	08/22/96	08/30/96	08/30/96	CH301.37	01
INF	08/22/96	08/22/96	08/30/96	08/30/96	CH301.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CH301.37-14	Method Blank	MB	Air	08/30/96	08/30/96
CH301.37-02	Laboratory Spike	LS	Water	08/30/96	08/30/96
CH301.37-12	MW-7	MS 21823-01	Water	08/30/96	08/30/96
CH301.37-13	MW-7	MSD 21823-01	Water	08/30/96	08/30/96

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on August 31, 1996

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21788-01	EFF	Air	1.0	-
21788-02	INF	Air	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	21788-01 Conc. ppb	RL	21788-02 Conc. ppb	RL
Gasoline	NA	50	NA	50
Mineral Spirits	ND	50	500	50
>> Surrogate Recoveries (%) <<				
Trifluorotoluene (SS)	110		108	

Superior Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 21788
Method Blank(s)

	CH301.37-14 Conc. ug/L	RL
Gasoline	ND	50
Mineral Spirits	ND	50
>> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	105	

Superior Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 21788

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CH301.37 02 / - Laboratory Control Spikes						
Gasoline		2000	2000	100	65-135	
For Water Matrix (ug/L)						
CH301.37 12 / 13 - Sample Spiked: 21823 - 01						
Gasoline	ND	2000	2100/1900	105/95	65-135	5

Definitions:

ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on August 31, 1996

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Chronology

Laboratory Number 21788

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	08/22/96	08/22/96	08/30/96	08/30/96	CH301.37	01
INF	08/22/96	08/22/96	08/30/96	08/30/96	CH301.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CH301.37-09	MW-7	MS 21823-01	Water	08/30/96	08/30/96
CH301.37-10	MW-7	MSD 21823-01	Water	08/30/96	08/30/96
CH301.37-14	Method Blank	MB	Air	08/30/96	08/30/96

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on August 31, 1996

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21788-01	EFF	Air	1.0	-
21788-02	INF	Air	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	21788-01 Conc. ppb	RL	21788-02 Conc. ppb	RL
Benzene	ND	0.5	ND	0.5
Toluene	ND	0.5	ND	0.5
Ethyl Benzene	ND	0.5	ND	0.5
Xylenes	ND	0.5	2.7	0.5
>> Surrogate Recoveries (%) <<				
[illegible]fluorotoluene (SS)	107		105	

Superior
Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 21788
Method Blank(s)

	CH301.37-14 Conc. (ug/L)	RL
Benzene	ND	0.5
Toluene	ND	0.5
Ethyl Benzene	ND	0.5
Xylenes	ND	0.5
>> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	105	

Superior
Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 21788

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L) CH301.37 09 / 10 - Sample Spiked: 21823 - 01						
Benzene	ND	20	18/17	90/85	65-125	6
Toluene	ND	20	19/19	95/90	65-125	0
Ethyl Benzene	ND	20	19/18	95/90	65-125	5
Xylenes	ND	60	57/54	95/90	65-125	5
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				106/103	50-150	

Definitions:

ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Chain-of Custody Number: 21788

SECOR Chain-of Custody Record

Field Office: SECOR

Address: 1390 willow PASS Road Suite 360
Concord CA 94519

☐ Additional documents are attached, and are a part of this Record.

Job Name: SAFety Kleen

Location: 400 MARket St.
Oakland CA

Project # 70005-009 Task #

Project Manager Greg Hoehn

Laboratory Superior

Turnaround Time STandard

Sampler's Name GARY CLIFT

Sampler's Signature Gary Clift

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	TPH as MS BTEX		Comments/ Instructions	Number of Containers
EFF	8/22	11:00	Air													X			1
INF	8/22	11:05	Air													X			1

Special Instructions/Comments:

Relinquished by: SECOR
Sign Gary Clift
Print GARY L CLIFT
Company SECOR
Time 12:50 Date 8/22/96

Received by: Kelly Kolitsky
Sign Kelly Kolitsky
Print
Company
Time 8/22/96 Date 12:50

Relinquished by:
Sign
Print
Company
Time Date

Received by:
Sign
Print
Company
Time Date

Sample Receipt

Total no. of containers:	2
Chain of custody seals:	
Rec'd. in good condition/cold:	
Conforms to record:	

Client: SECOR

Client Contact: Greg Hoehn

Client Phone: (510) 686-9780

SECOR CUSTREC Rev. 1/95

Date: 8/22/96 Page 1 of 1

Superior Analytical Laboratory

SECOR
1390 WILLOW PASS RD, STE. 360
CONCORD, CA 94520

Attn: GREG HOEHN

RECEIVED
JUL 15 1996

Date: July 11, 1996

Laboratory Number : 21565

Project Number/Name : 70005-009-08
Facility/Site : SAFETY KLEEN
400 MARKET ST
OAKLAND

Dear GREG HOEHN:

Attached is Superior Analytical Laboratory report for the samples received on July 2, 1996. This report has been reviewed and approved for release. Following the cover letter is the Case Narrative detailing sample receipt and analysis. Also enclosed is a copy of the original Chain-of-Custody record confirming receipt of samples.

Please note that any unused portion of the sample will be discarded after August 1, 1996, unless you have requested otherwise.

We appreciate the opportunity to be of service to you. If you have any questions, please contact our Laboratory at (510) 313-0850.

Sincerely,

Afsaneh Salimpour

Afsaneh Salimpour
Project Manager

Superior
Analytical Laboratory

CASE NARRATIVE

SECOR
Project Number/Name: 70005-009-08
Laboratory Number: 21565

Sample Receipt

Two air samples were received by Superior Analytical Laboratory on July 2, 1996.

Cooler temperature was ROOM°C

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analysed for methods 8010, 8015M and 8020.

Customer Service: (800) 521-6109 • Laboratory: (510) 313-0850 • Facsimile: (510) 229-0916
Post Office Box 2648 • 835 Arnold Drive • Suite #106 • Martinez, California 94553
1555 Burke Street • Suite A • San Francisco, California 94124

Superior Analytical Laboratory

.)R
Attn: GREG HOEHN

Project 70005-009-08
Reported on July 10, 1996
Revised on July 10, 1996

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Chronology

Laboratory Number 21565

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
INF	07/01/96	07/02/96	07/02/96	07/02/96	CG021.37	01
EFF	07/01/96	07/02/96	07/02/96	07/02/96	CG021.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CG021.37-19	BLDG 908S.DECON 01	DUP 21535-10	Water	07/02/96	07/02/96
CG021.37-02	Laboratory Spike	LS	Water	07/02/96	07/02/96
CG021.37-03	Laboratory Spike Duplicate	LSD	Water	07/02/96	07/02/96
CG021.37-15	BLDG 908S.DECON 01	MS 21535-10	Water	07/02/96	07/02/96
CG021.37-16	BLDG 908S.DECON 01	MSD 21535-10	Water	07/02/96	07/02/96
CG021.37-01	Method Blank	MB	Air	07/02/96	07/02/96

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009-08
Reported on July 10, 1996
Revised on July 10, 1996

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21565-01	INF	Air	1.0	-
21565-02	EFF	Air	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	21565-01 Conc. ppm-v	RL	21565-02 Conc. ppm-v	RL
Benzene	ND	0.15	ND	0.15
Toluene	ND	0.13	ND	0.13
Ethyl Benzene	ND	0.11	ND	0.11
Xylenes	ND	0.11	ND	0.11
Surrogate Recoveries (%) <<				
...rifluorotoluene (SS)	102		107	

Superior Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 21565
Method Blank(s)

	CG021.37-01 Conc. ug/L	RL
Benzene	ND	0.15
Toluene	ND	0.13
Ethyl Benzene	ND	0.11
Xylenes	ND	0.11
>> Surrogate Recoveries (%) <<		
Trifluorotoluene (SS)	109	

Superior Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 21565

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CG021.37 02 / 03 - Laboratory Control Spikes						
Benzene		20	19/18	95/90	65-125	5
Toluene		20	21/20	105/100	65-125	5
Ethyl Benzene		20	22/21	110/105	65-125	5
Xylenes		60	61/58	102/97	65-125	5
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				108/101	50-150	
For Water Matrix (ug/L)						
CG021.37 15 / 16 - Sample Spiked: 21535 - 10						
Benzene	ND	20	18/18	90/90	65-125	0
Toluene	ND	20	19/20	95/100	65-125	5
Ethyl Benzene	ND	20	20/20	100/100	65-125	0
Xylenes	ND	60	57/58	95/97	65-125	2
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				100/96	50-150	

Superior Analytical Laboratory

Volatile Aromatic Hydrocarbons by EPA SW-846 Method 5030/8020

Quality Assurance and Control Data

Laboratory Number: 21565
Sample Duplicates

	QC Batch CG021.37-19 21535-10 Sample DUP	ug/L	RPD	Limit
Benzene	ND	ND	0	25
Toluene	ND	ND	0	25
Ethyl Benzene	ND	ND	0	25
Xylenes	ND	ND	0	25
>> Surrogate Recoveries (%) <<				
Trifluorotoluene (SS)	99	103		

Definitions:
ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Superior Analytical Laboratory

:OR
Attn: GREG HOEHN

Project 70005-009-08
Reported on July 10, 1996
Revised on July 10, 1996

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Chronology

Laboratory Number 21565

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
INF	07/01/96	07/02/96	07/02/96	07/02/96	CG021.37	01
EFF	07/01/96	07/02/96	07/02/96	07/02/96	CG021.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CG021.37-01	Method Blank	MB	Air	07/02/96	07/02/96
CG021.37-04	Laboratory Spike	LS	Water	07/02/96	07/02/96
CG021.37-17	BLDG 908S.DECON 01	MS 21535-10	Water	07/02/96	07/02/96
CG021.37-18	BLDG 908S.DECON 01	MSD 21535-10	Water	07/02/96	07/02/96

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009-08
Reported on July 10, 1996
Revised on July 10, 1996

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21565-01	INF	Air	1.0	-
21565-02	EFF	Air	1.0	-

RESULTS OF ANALYSIS

Compound	21565-01 Conc. ppm-v	RL	21565-02 Conc. ppm-v	RL
Gasoline	NA	14	NA	14
Mineral Spirits	14	8.5	ND	8.5

Superior Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 21565
Method Blank(s)

	CG021.37-01 Conc. ug/L	RL
Gasoline	ND	14
Mineral Spirits	ND	8.5

Superior Analytical Laboratory

Total Volatile Petroleum Hydrocarbons by EPA SW-846 5030/8015M

Quality Assurance and Control Data

Laboratory Number: 21565

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L) CG021.37 04 / - Laboratory Control Spikes						
Gasoline		2000	2200	110	65-135	
For Water Matrix (ug/L) CG021.37 17 / 18 - Sample Spiked: 21535 - 10						
Gasoline	ND	2000	2100/2000	105/100	65-135	5

Definitions:
ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009-08
Reported on July 2, 1996

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Chronology

Laboratory Number 21565

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
INF	07/01/96	07/02/96	07/02/96	07/02/96	CG021.08	01
EFF	07/01/96	07/02/96	07/02/96	07/02/96	CG021.08	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
CG021.08-01	Method Blank	MB	Air	07/02/96	07/02/96
CG021.08-02	Laboratory Spike	LS	Water	07/02/96	07/02/96
CG021.08-03	TAP WATER	MS 21512-14	Water	07/02/96	07/02/96
CG021.08-04	TAP WATER	MSD 21512-14	Water	07/02/96	07/02/96

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009-08
Reported on July 2, 1996

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
21565-01	INF	Air	1.0	-
21565-02	EFF	Air	1.0	-

R E S U L T S O F A N A L Y S I S

Compound	21565-01 Conc. PPB (V/V)	RL	21565-02 Conc. PPB (V/V)	RL
Chloromethane	ND	480	ND	480
Vinyl Chloride	ND	390	ND	390
Bromomethane	ND	250	ND	250
Chloroethane	ND	270	ND	270
Trichlorofluoromethane	ND	88	ND	88
1,1-Dichloroethene	ND	120	ND	120
chloromethane	ND	140	ND	140
,2-Dichloroethene	ND	120	ND	120
1,1-Dichloroethane	ND	120	ND	120
c-1,2-Dichloroethene	ND	120	ND	120
Chloroform	ND	100	ND	100
1,1,1-Trichloroethane	ND	90	ND	90
Carbon tetrachloride	ND	78	ND	78
1,2-Dichloroethane	ND	120	ND	120
Trichloroethene	ND	92	ND	92
c-1,3-Dichloropropene	ND	110	ND	110
1,2-Dichloropropane	ND	110	ND	110
t-1,3-Dichloropropene	ND	110	ND	110
Bromodichloromethane	ND	68	ND	68
1,1,2-Trichloroethane	ND	90	ND	90
Tetrachloroethene	ND	73	ND	73
Dibromochloromethane	ND	58	ND	58
Chlorobenzene	ND	110	ND	110
Bromoform	ND	48	ND	48
1,1,2,2-Tetrachloroethane	ND	72	ND	72
1,3-Dichlorobenzene	ND	82	ND	82
1,2-Dichlorobenzene	ND	82	ND	82
1,4-Dichlorobenzene	ND	82	ND	82

>> Surrogate Recoveries (%) <<

Bromochloromethane	78	72

Superior
Analytical Laboratory

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Quality Assurance and Control Data

Laboratory Number: 21565
Method Blank(s)

	CG021.08-01 Conc. PPB (V/V)	RL
Chloromethane	ND	480
Vinyl Chloride	ND	390
Bromomethane	ND	250
Chloroethane	ND	270
Trichlorofluoromethane	ND	88
1,1-Dichloroethene	ND	120
Dichloromethane	ND	140
t-1,2-Dichloroethene	ND	120
1,1-Dichloroethane	ND	120
c-1,2-Dichloroethene	ND	120
Chloroform	ND	100
1,1,1-Trichloroethane	ND	90
arbon tetrachloride	ND	78
.,2-Dichloroethane	ND	120
Trichloroethene	ND	92
c-1,3-Dichloropropene	ND	110
1,2-Dichloropropane	ND	110
t-1,3-Dichloropropene	ND	110
Bromodichloromethane	ND	68
1,1,2-Trichloroethane	ND	90
Tetrachloroethene	ND	73
Dibromochloromethane	ND	58
Chlorobenzene	ND	110
Bromoform	ND	48
1,1,2,2-Tetrachloroethane	ND	72
1,3-Dichlorobenzene	ND	82
1,2-Dichlorobenzene	ND	82
1,4-Dichlorobenzene	ND	82
>> Surrogate Recoveries (%) <<		
Bromochloromethane	97	

Superior Analytical Laboratory

Halogenated Volatile Organics by EPA SW-846 Methods 5030/8010

Quality Assurance and Control Data

Laboratory Number: 21565

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
CG021.08 02 / - Laboratory Control Spikes						
1,1-Dichloroethene		20	24	120	50-189	
Trichloroethene		20	20	100	53-161	
Chlorobenzene		20	22	110	57-171	
>> Surrogate Recoveries (%) <<						
Bromochloromethane				79	50-125	
For Water Matrix (ug/L)						
CG021.08 03 / 04 - Sample Spiked: 21512 - 14						
1,1-Dichloroethene	ND	20	24/24	120/120	50-189	0
Trichloroethene	ND	20	20/20	100/100	53-161	0
Chlorobenzene	ND	20	22/22	110/110	57-171	0
>> Surrogate Recoveries (%) <<						
Bromochloromethane				74/70	50-125	

Definitions:

ND = Not Detected
RL = Reporting Limit
NA = Not Analysed
RPD = Relative Percent Difference
ug/L = parts per billion (ppb)
mg/L = parts per million (ppm)
ug/kg = parts per billion (ppb)
mg/kg = parts per million (ppm)

21563

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: SECOR Concord
Address: 1390 Willow Pass Road
Suite 360 Concord, CA 94520

☐ Additional documents are attached, and are a part of this Record.

Job Name: Safety Kleen
Location: 400 Market St. Oakland CA

Project # 70005-009-08 Task # 001
Project Manager Greg Hoehn
Laboratory Superior
Turnaround Time Standard

Sampler's Name GARY CLIFT
Sampler's Signature Gary Clift

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPHg/BTEX/WTPH-G 8015 (modified)/8020	TPHd/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	TPHMS and BTEX by modified EPA method 8015 + 8020	EPA method 8015 + 8020	Purgeable halocarbons 8010	Comments/ Instructions	Number of Containers
INF	7-1	14:10	Air													X	X	X		1
EFF	7-1	13:50	Air													X	X	X		1

Special Instructions/Comments:
Please Initial: DC
Samples Stored in ice. $\not C$. [illegible]
Appropriate containers yes
Samples preserved No
VOA's without headspace N/A
Comments: Room Temp

Relinquished by: SECOR	Received by: CAL
Sign [signature]	Sign [signature]
Print GARY R. CLIFT	Print Dennis Chaney
Company SECOR	Company CAL
Time 8:00 Date 7-2-96	Time 11:04 Date 7/2/96
Relinquished by: CAL	Received by:
Sign [signature]	Sign [signature]
Print Dennis Chaney	Print Ray Farrow
Company CAL	Company SAL
Time 11:30 Date 7/2/96	Time 11:30 Date 7/2/96

Sample Receipt
Total no. of containers: 2
Chain of custody seals:
Rec'd. in good condition/cold:
Conforms to record:

Client: SECOR
Client Contact: Greg Hoehn
Client Phone: (510)686-9780

SECOR CUSTREC Rev. 1/95

Date: 7/2/96 Page 1 of 1

APPENDIX C

Laboratory Reports - Groundwater

safety-kleen®

July 12, 1996

Mr. Greg Hoehn
Secor International
1390 Willow Pass Road
Suite 360
Concord, CA 94520

Re: SK Lab Project #96-179
Project ID Name: Oakland, CA

Dear Greg:

Enclosed please find the analytical results for the sample received by SK Environmental Laboratory on 7/2/96.

A formal Quality Control/Quality Assurance program is maintained by Safety-Kleen, which is designed to meet or exceed the EPA requirements. This information is available upon request.

If you have any questions concerning this analysis, or if we can be of further assistance, please contact Rick Cook at 312-825-7351.

Sincerely,

Mark A. Hartwig
Environmental Lab Manager

MAH:

Allan A. Manteuffel Technical Center

P.O. Box 92050
Elk Grove Village, IL
60009-2050

12555 W. Old Higgins Rd.
Elk Grove Village, IL 60007
Telephone: 312/694-2700
Fax: 312/825-7850

Project ID #: 70005-009-07
Project ID Name: Oakland, CA
SK Lab Project #: 96-179
Date Reported: 7/12/96

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Mineral Spirits in Water

Modified EPA Method 8015

Reporting Limit: 50.0

Work Order #	Collector's Sample #	Date Sampled	Date Analyzed	Concentration ug/L
01	MW-2	7/1/96	7/3/96	<50
02	MW-3	7/1/96	7/3/96	<50
03	MW-4	7/1/96	7/3/96	<50
04	MW-8	7/1/96	7/3/96	<50

Analytical Review / Date: 7/12/96

Project ID #: 70005-009-07
Project ID Name: Oakland, CA
SK Lab Project #: 96-179
Date Reported: 7/12/96

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8010

Work Order #		01	02	03	04	05
Collector's Sample #		MW-2	MW-3	MW-4	MW-8	Trip Blank
Date Sampled		7/1/96	7/1/96	7/1/96	7/1/96	7/1/96
Date Analyzed		7/9/96	7/9/96	7/9/96	7/9/96	7/9/96
Dilution Factor		1	1	1	1	1
Analyte	Report Limit µg/L	Concentration µg/L				
Bromobenzene	1	<1	<1	<1	<1	<1
Bromodichloromethane	1	<1	<1	<1	<1	<1
Bromoform	2	<2	<2	<2	<2	<2
Bromomethane	2	<2	<2	<2	<2	<2
Carbon Tetrachloride	1	<1	<1	<1	<1	<1
Chlorobenzene	1	<1	<1	<1	9.0	<1
Chloroethane	1	<1	<1	<1	<1	<1
Chloroform	1	<1	<1	1.8	4.3	<1
Chloromethane	1	<1	<1	<1	<1	<1
Chlorotoluene	2	<2	<2	<2	<2	<2
Dibromochloromethane	2	<2	<2	<2	<2	<2
Dibromomethane	1	<1	<1	<1	<1	<1
1,2-Dichlorobenzene	1	<1	<1	<1	9.1 **	<1
1,3-Dichlorobenzene	1	<1	<1	<1	<1	<1
1,4-Dichlorobenzene	1	<1	<1	<1	1.1	<1
Dichlorodifluoromethane	1	<1	<1	<1	2.9	<1
1,1-Dichloroethane	1	<1	<1	<1	7.5	<1
1,2-Dichloroethane	1	<1	<1	<1	8.7	<1
1,1-Dichloroethylene	1	<1	<1	4.8	1.7	<1
cis-1,2-Dichloroethylene	1	<1	<1	11.3 *	72.7 **	<1
trans-1,2-Dichloroethylene	1	<1	<1	1.2	3.5	<1
Dichloromethane	2	<2	<2	<2	<2	<2

Project ID #: 70005-009-07

Project ID Name: Oakland, CA

SK Lab Project #: 96-179

Date Reported: 7/12/96

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8010

Work Order #		01	02	03	04	05
Collector's Sample #		MW-2	MW-3	MW-4	MW-8	Trip Blank
Date Sampled		7/1/96	7/1/96	7/1/96	7/1/96	7/1/96
Date Analyzed		7/9/96	7/9/96	7/9/96	7/9/96	7/9/96
Dilution Factor		1	1	1	1	1
Analyte	Report Limit µg/L	Concentration µg/L				
1,2-Dichloropropane	1	<1	<1	<1	<1	<1
trans-1,3-Dichloropropylene	1	<1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	2	<2	<2	<2	<2	<2
1,1,1,2-Tetrachloroethane	1	<1	<1	<1	<1	<1
Tetrachloroethylene	1	<1	<1	<1	2.0	<1
1,1,1-Trichloroethane	1	<1	<1	<1	1.3	<1
1,1,2-Trichloroethane	1	<1	<1	<1	<1	<1
Trichloroethylene	1	<1	<1	224 ***	1352 ****	<1
Trichlorofluoromethane	1	<1	<1	<1	<1	<1
Vinyl Chloride	2	<2	<2	<2	6.3	<2

* 1:5 Dilution

** 1:10 Dilution

*** 1:100 Dilution

**** 1:200 Dilution

Analytical Review / Date: 7/12/96

Project ID #: 70005-009-07

Project ID Name: Oakland, CA

SK Lab Project #: 96-179

Date Reported: 7/12/96

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8020

Work Order #		01	02	03	04	05
Collector's Sample #		MW-2	MW-3	MW-4	MW-8	Trip Blank
Date Sampled		7/1/96	7/1/96	7/1/96	7/1/96	7/1/96
Date Analyzed		7/9/96	7/9/96	7/9/96	7/9/96	7/9/96
Dilution Factor		1	1	1	1	1
Analyte	Report Limit µg/L	Concentration µg/L				
Benzene	1	<1	<1	<1	<1	<1
Ethylbenzene	1	<1	<1	<1	<1	<1
Toluene	1	<1	<1	<1	<1	<1
Xylenes(Total)	1	<1	<1	<1	<1	<1

Analytical Review / Date: 7/12/96