safety-kleen ®

September 30, 1997

Via Certified Mail No. P438851493

Mr. Robert M. Senga, Unit Chief
California Environmental Protection Agency
Department of Toxic Substances Control
Facility Permitting Branch
1011 N. Grandview Avenue
Glendale, California 91201

97 OCT -2 PM 12:29

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

Dear Mr. Senga:

Enclosed is the [redacted] monitoring and sampling report for 1997, which summarizes the groundwater monitoring and vapor extraction activities conducted at the above-referenced facility. This report covers the period from June through August 1997. 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.

A comparison of laboratory analytical results of groundwater samples collected prior to purging the wells versus the standard post-purge results is also included in the report. During future sampling activities, Safety-Kleen proposes to purge the wells using a low flow pump prior to sampling.

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.

Enclosure

cc: Keith Marcott, Safety-Kleen Corp.
Scott Davies, Safety-Kleen Corp.
Branch Environmental File (7-178-01)
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Steven Ritchie, California Regional Water Quality Control Board
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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
Sep 30, 97

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September 30, 1997

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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 1997 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. In addition to the normal quarterly groundwater sampling activities, a second set of groundwater samples were collected during this event to compare the analytical results of groundwater samples collected after completing low flow purge methods with those of groundwater samples collected prior to purging the wells. A description of the sample methods used is detailed in Section 3.3 and a discussion of the results of the study is included in Section 4.4 of this report.

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 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 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 consists of two 1,500-pound GAC vessels connected in series to a manifold attached to the seven horizontal vapor extraction lines. While the SVE system is operating, monitoring occurs biweekly and consists of measuring influent and effluent vapor concentrations using a photo-ionization detector (PID) or a flame-ionization detector (FID). During this quarter, SVE system influent and effluent vapor samples were collected on June 5, June 30, July 30, and August 28, 1997. 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 Environmental Protection Agency (EPA) Method 8015(modified) 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.

The SVE system was shut down on May 16, 1997, pending carbon change-out of the first GAC vessel. The carbon was replaced and the system was restarted on June 5, 1997. The SVE system was operated this quarter in a pulsed mode in an attempt to improve removal efficiency. The system operated in approximately two-week cycles. Table 1 summarizes dates when the SVE system was shut down and restarted.

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. Product has not been present in the skimmers since July 1996.

3.3 Groundwater Monitoring and Sampling

On July 17, 1997, on- and off-site monitoring wells were monitored for depth-to-water and groundwater samples were collected from monitoring wells MW-2, MW-3, MW-4, and MW-8 for laboratory analysis. Monitoring well MW-11 was not monitored or sampled because tree roots have grown through the well casing and are obstructing the well.

For this event, two sets of groundwater samples were collected in order to compare the results of laboratory analytical results of samples collected using low flow purge methods with those of samples collected prior to purging the wells. Blind duplicate samples were collected from monitoring well MW-8 for quality assurance and quality control purposes. The duplicate sample is labeled as MW-8D on the attached laboratory reports and chain-of-custody documents. Pre-purge and post-purge groundwater samples were collected using the following procedures:

- All accessible monitoring wells were monitored for depth-to-water using a water level indicator calibrated to 0.01-foot. During depth-to-water monitoring, care was taken to not splash or over immerse the probe. Depth-to-bottom measurements were not made prior to pre-purge groundwater sample collection. The depth-to-water measurements were used with well survey data to prepare a groundwater potentiometric surface map (Figure 4).

- Subsequent to collecting depth-to-water measurements and prior to purging, monitoring wells MW-2, MW-3, MW-4, and MW-8 were sampled. Groundwater samples were collected using a low flow pump and dedicated tubing, carefully lowered to the midpoint of the screened interval. Pre-purge groundwater samples were transferred from the tubing into laboratory supplied sample containers. The samples were then labeled, placed on ice in an insulated cooler, and logged onto the chain-of-custody document.

- Subsequent to collecting the pre-purge samples, the wells were purged using the low flow pump. In-line water quality indicator parameters were continuously monitored and water levels were taken during purging in order to adjust the flow rate for a minimal drawdown. Samples were collected after pH, temperature, conductivity, and turbidity had stabilized for at least three successive readings. The samples were placed into laboratory supplied sample containers in the same manner as the pre-purge samples, labeled, placed on ice in an insulated cooler, and logged onto the chain-of-custody document. 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 EPA Method 8015(modified), and for halogenated VOCs by EPA Method 8010.

Prior to use and between each well, all non-single-use 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 28, 1997, are summarized on Table 1. Table 1 presents data on the system flow rate and PID measurements from the SVE system vapor influent, the vapor effluent after each carbon adsorption vessel, and the system final vapor effluent. For this quarter, SVE system influent and effluent vapor samples were collected on June 5, June 30, July 30, and August 28, 1997. No benzene, toluene, or ethylbenzene analytes were detected in any of the influent or effluent samples collected during the quarter. Xylenes were detected in the SVE system influent samples on June 5, June 30, July 30, and August 28, 1997, at 5.5 $\mu g/\ell$, 4.1 $\mu g/\ell$, 0.98 $\mu g/\ell$, and 4.3 $\mu g/\ell$, respectively. PCE was detected in the influent sample collected on June 5, 1997, at 1.02 $\mu g/\ell$. No other VOC analytes were detected in the SVE system influent or effluent samples collected this quarter. TPHms were detected in the influent samples on June 5, June 30, July 30, and August 28, 1997, at 910 $\mu g/\ell$, 550 $\mu g/\ell$, 150 $\mu g/\ell$, and 550 $\mu g/\ell$, respectively. Based on the analytical data, the SVE system has continued to meet air permit requirements. Copies of soil vapor extraction system analytical reports are included as Appendix B.

In an attempt to improve system efficiency, Safety-Kleen operated the SVE system this quarter in a pulsed mode. Table 1 summarizes the dates when the SVE system was shut down and restarted. Table 2 summarizes the estimated SVE system mineral spirits removal to date. The SVE system removed an estimated 551 pounds of mineral spirits from May 1 through August 28, 1997. Data collected through August 28, 1997, indicate 5364 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 well MW-9 and recovery well RW-1 via passive recovery skimmers and by hand bailing at the time of SVE monitoring and groundwater sampling. No product was accumulated in the skimmers during this reporting period. The total volume of mineral spirits product removed from the subsurface to date is approximately 444.25 gallons.

4.3 Groundwater Elevations

Groundwater elevations and depth-to-water measurements for the July 17, 1997, event are presented in Table 3. The average water table elevation on July 17, 1997, was 1.55 feet above mean sea level, a decrease of 0.72 feet since the April 1997 event. A groundwater potentiometric surface map prepared with the July 17, 1997, 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 monitoring wells MW-4 and MW-2. The gradient is consistent with previous data for the site. A summary of groundwater elevations since January 1993 is provided as Table 4.

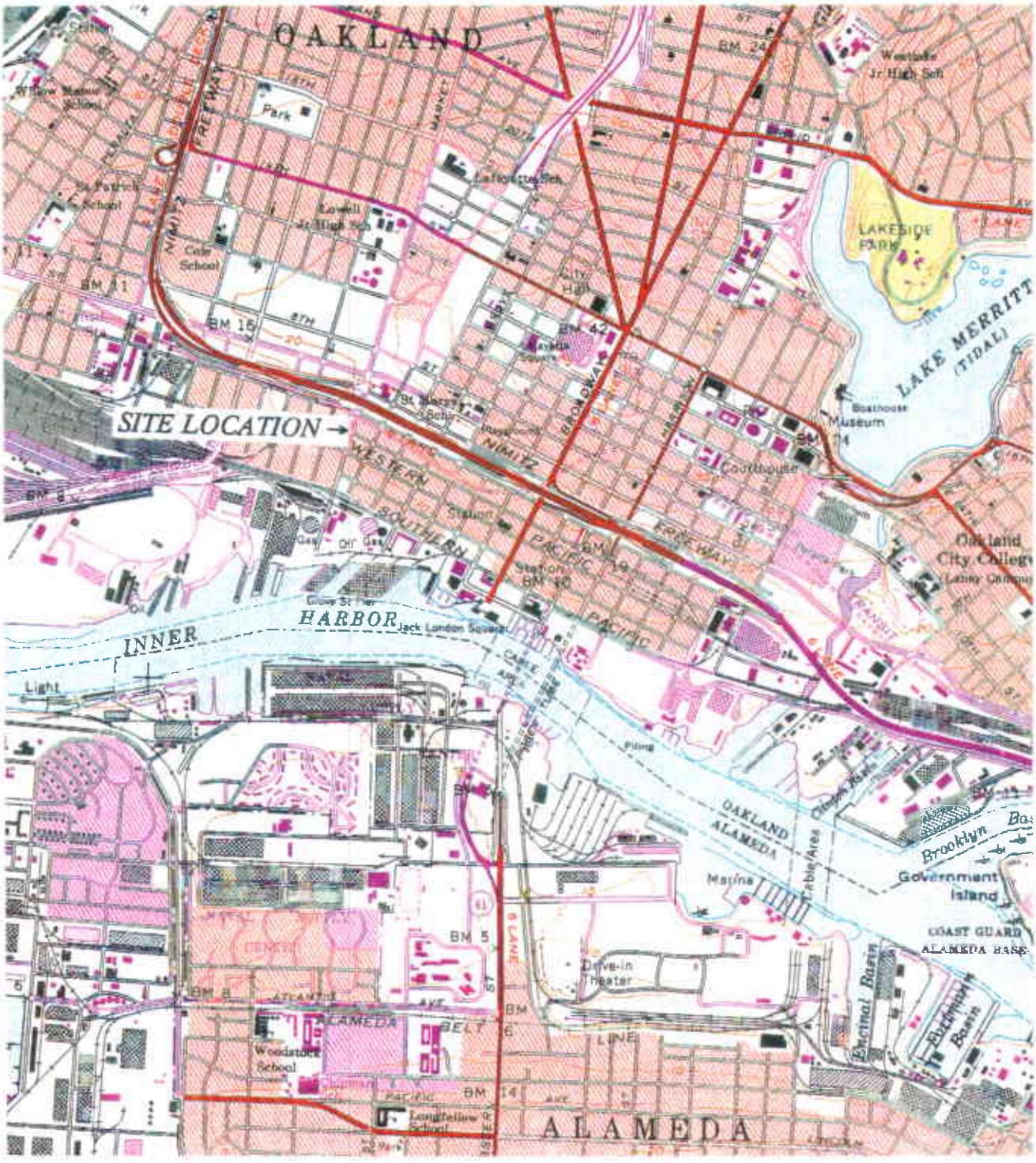
4.4 Groundwater Conditions

For consistency with historical data, this discussion of groundwater conditions at the site is based on the results of analysis of post-purge samples. A comparison of post-purge versus pre-purge sample analytical data is provided later in this section. No TPHms or BTEX were detected in any of the groundwater samples collected on July 17, 1997. In addition, no VOCs were detected in the groundwater samples from monitoring wells MW-2 or MW-3. Laboratory analyses of post-purge groundwater samples from monitoring wells MW-4 and MW-8 detected several VOCs including: 1,2-dichlorobenzene, 1,1-dichloroethane, 1,2-dichloroethane, 1,1-dichloroethene, *cis*-1,2-dichloroethene. *trans*-1,2-dichloroethene, 1,1,1-trichloroethane, trichloroethene, tetrachloroethene, chlorobenzene, vinyl chloride, and chloroform. Figure 5 depicts the chemical distribution in the post-purge samples collected on July 17, 1997. A summary of analytical test results showing compounds detected since the April 1993 sampling event are presented in Table 5. Copies of the groundwater laboratory analytical reports are included in Appendix C.

Two sets of groundwater samples were collected during this event in order to compare the results of laboratory analytes of pre-purge and post-purge groundwater samples. The results of analysis of pre-purge and post-purge samples are summarized in Table 6. The table lists the analytes detected in each sample and shows a relative percent difference (RPD) calculation for each sample pair. As shown in the table, the types and concentrations of analytes are consistent in most cases. Of the 15 detection pairs, 7 of the post-purge detections contained higher concentrations as compared to pre-purge detections. The relative percent difference between sample pairs was below 47 percent in all data pairs.

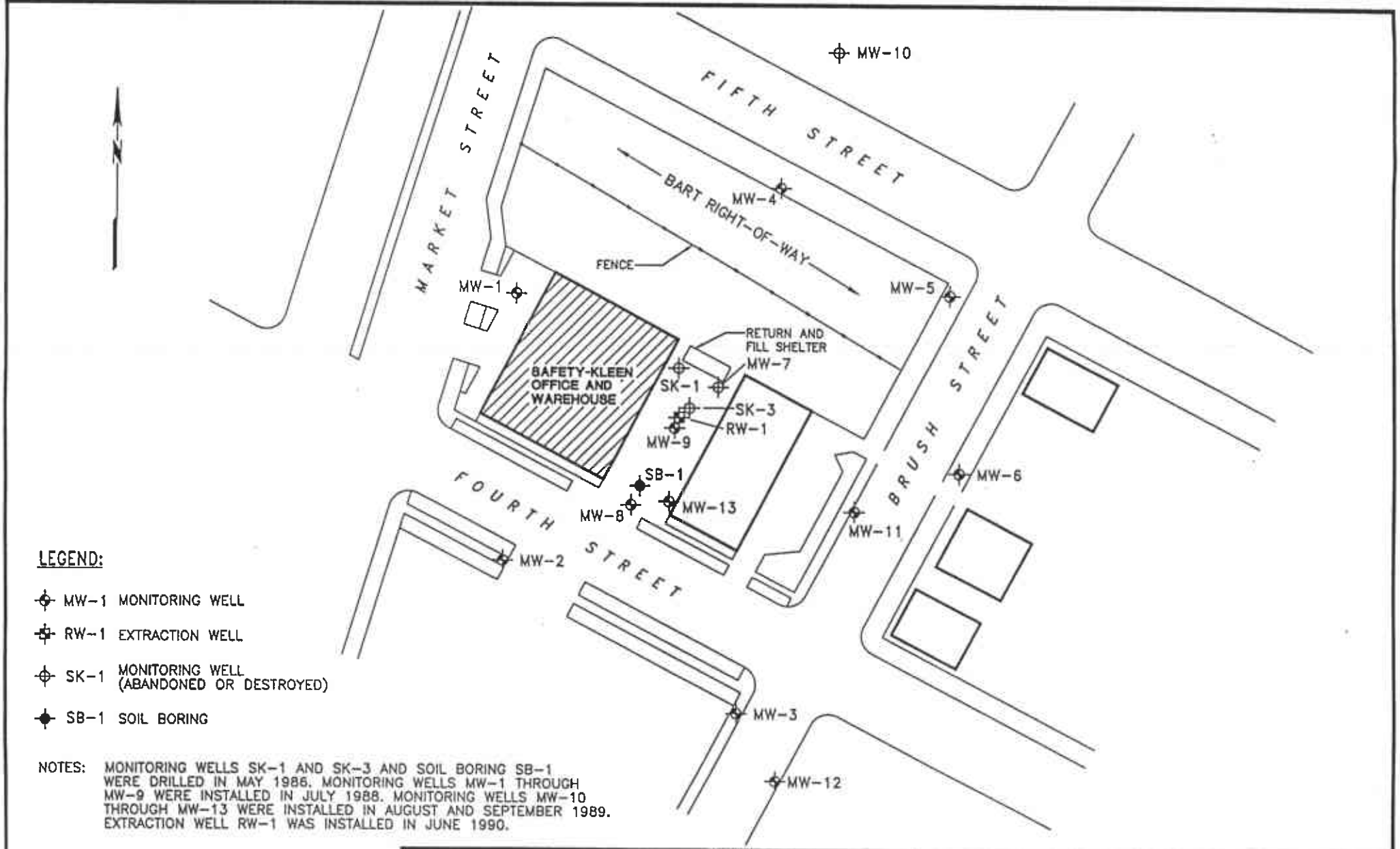
Safety-Kleen has collected and analyzed pre-purge and post-purge groundwater samples during the last four monitoring event. Based on an analysis of the data sets, samples collected from wells with relatively high concentrations of VOCs typically have significantly higher post-purge detections compared to pre-purge detections. These results may be attributed to a combination of site-specific conditions including specific well construction parameters and a three-dimensionally variable lithologic and contaminant source distribution. Consequently, future groundwater sampling events, Safety-Kleen proposes purging using a low flow pump prior to collecting samples from the monitoring wells.

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.

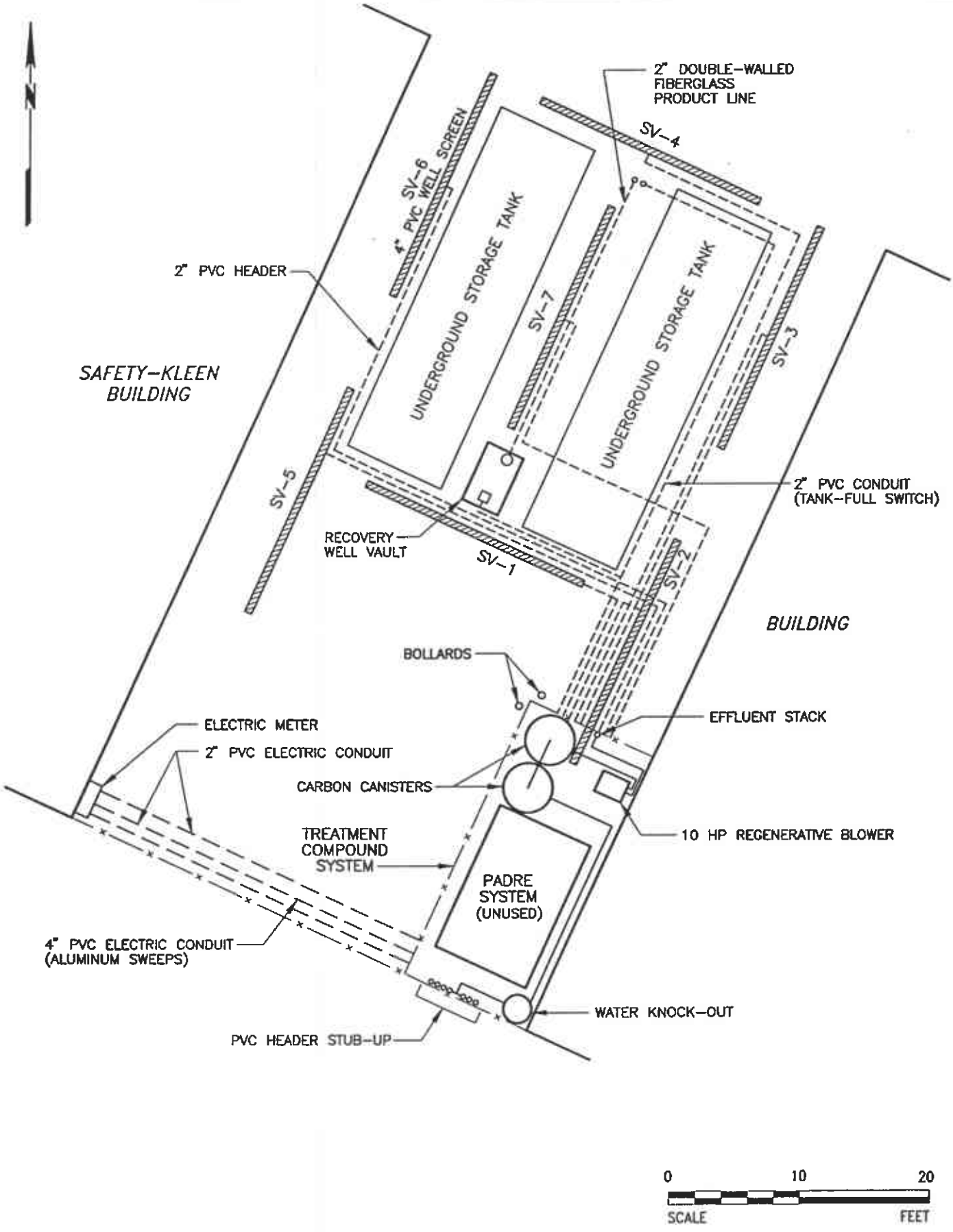
0 80 160
SCALE FEET

SECOR
INTERNATIONAL
INCORPORATED

DRAWN	CCR
APPR	RR/GH
DATE	26NOV96
JOB NO.	70005-009

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

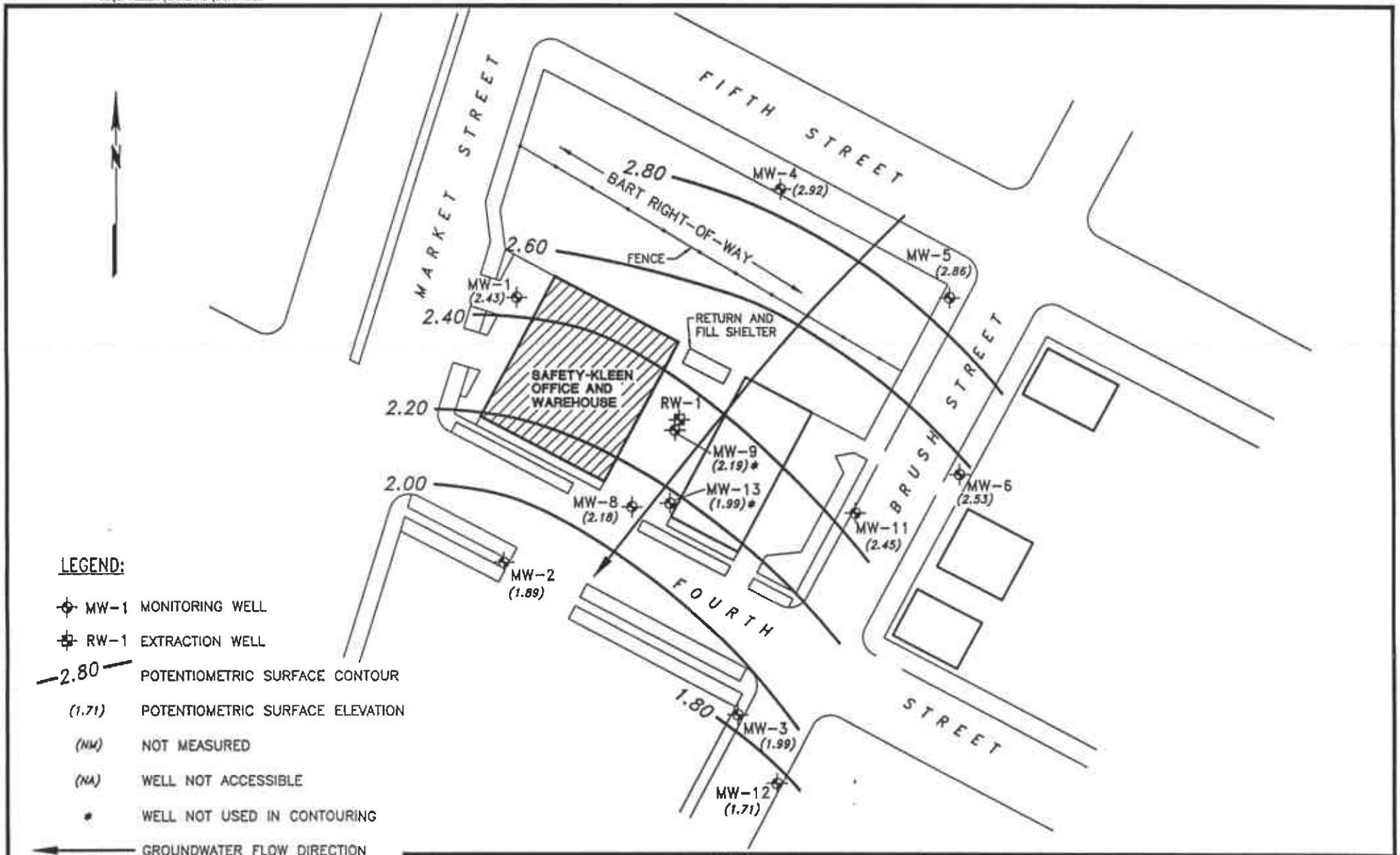
SITE PLAN



SECOR INTERNATIONAL INCORPORATED	DRAWN: CCR APPR: GH DATE: 08DEC95 JOB NO.: 70005-009	FIGURE 3 SAFETY-KLEEN SERVICE CENTER 400 MARKET STREET OAKLAND, CALIFORNIA **SOIL VAPOR EXTRACTION SYSTEM LAYOUT**

199512.071928 X:\18-KLEEN\OAKLAND\SITE2

199706.171247 X:\S-KLEEN\OAKLAND\SURFACE9



LEGEND:

- MW-1 MONITORING WELL
- RW-1 EXTRACTION WELL
- 2.80 POTENTIOMETRIC SURFACE CONTOUR
- (1.71) POTENTIOMETRIC SURFACE ELEVATION
- (NM) NOT MEASURED
- (NA) WELL NOT ACCESSIBLE
- * WELL NOT USED IN CONTOURING
- GROUNDWATER FLOW DIRECTION

0 80 160
SCALE FEET

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INCORPORATED

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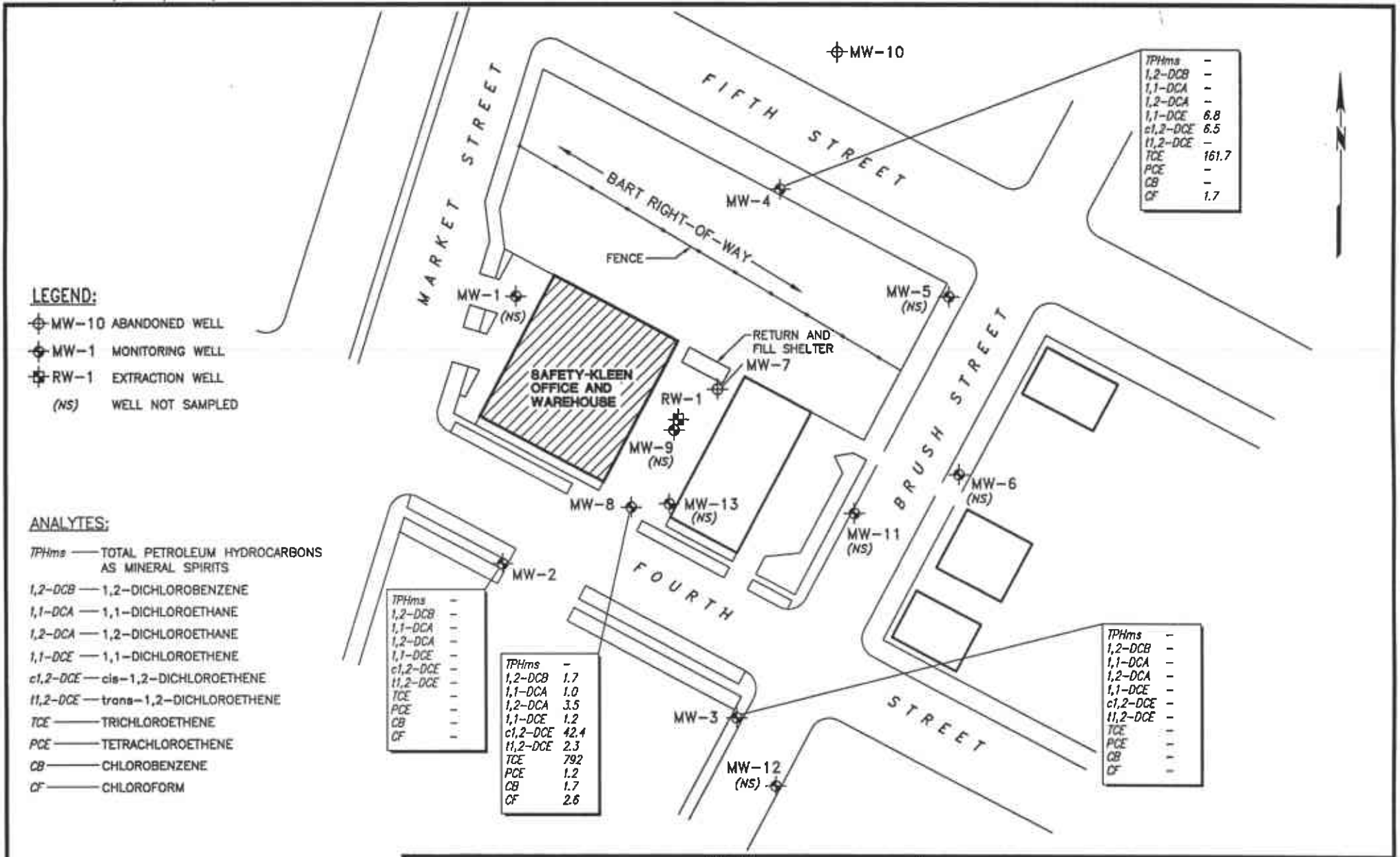
DATE	17JUN97
JOB NO.	70005-009

FIGURE 4
SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA
POTENTIOMETRIC SURFACE MAP
JULY 17, 1997

199709.031558 X:\S-KLEEN\OAKLAND\CHEMGW07



LEGEND:

- MW-10 ABANDONED WELL
- MW-1 MONITORING WELL
- RW-1 EXTRACTION WELL
- (NS) WELL NOT SAMPLED

ANALYTES:

- TPHms — TOTAL PETROLEUM HYDROCARBONS AS MINERAL SPIRITS
- 1,2-DCB — 1,2-DICHLOROBENZENE
- 1,1-DCA — 1,1-DICHLOROETHANE
- 1,2-DCA — 1,2-DICHLOROETHANE
- 1,1-DCE — 1,1-DICHLOROETHENE
- c1,2-DCE — cis-1,2-DICHLOROETHENE
- t1,2-DCE — trans-1,2-DICHLOROETHENE
- TCE — TRICHLOROETHENE
- PCE — TETRACHLOROETHENE
- CB — CHLOROBENZENE
- CF — CHLOROFORM

NOTE: CONCENTRATIONS IN MICROGRAMS PER LITER (ug/l).

0 80 160

SCALE FEET

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JOB NO.	70005-009

FIGURE 5

SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA

CHEMICAL DISTRIBUTION IN GROUNDWATER (POST PURGE) JULY 17, 1997

Table 1
Soil Vapor Extraction System Monitoring Data
Safety-Kleen Service Center
400 Market Street
Oakland, California

Date	Elapsed Time* (hours)	Well Extraction Vacuum (inches H20)	KO Vacuum (inches H20)	Extraction Flow Rate (ft/min)	Extraction Flow Rate (scfm)	System Influent (PID/FID units)	#1 Carbon Effluent (PID/FID units)	#2 Carbon Effluent (PID/FID units)	System Effluent (PID/FID units)	Notes
12/08/95	363	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	6	20	5000	107	79.5	36.2	1.2	1.2	Influent and Effluent samples collected
01/09/96	1134	9	22	5000	106	169	42.4	2.8	1.7	Influent and Effluent samples collected
01/24/95	1489	5.5	17	2200	47	43	43.2	24.2	6.1	
02/06/96	1803	5	16	6000	129	63.4	61.1	33.4	16.1	Influent and Effluent samples collected
02/21/96	2158	8	20	5500	117	60.1	48	38.2	8.4	
03/08/96	2540	10	23	5000	106	183.7	52.3	44.8	15.5	Influent and Effluent samples collected
03/20/96	2635	12	23	5000	106	430	362.1	311.4	22.4	
04/03/96	2906	12	25	5000	106	290	45	32	2	FID used, Influent and Effluent samples collected, Carbon changed.
04/18/96	3268	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	NA	23	5000	109	117.3	150.9	3.2	1	
05/31/96	4289	0.15	25	5000	109	53.7	61	0.7	0	Influent and Effluent samples collected
07/01/96	5039	11	23	5000	106	325	150	75	37	Influent and Effluent samples collected
07/17/96	5422	10	24	5000	106	159	160	163	33	System shut down for carbon replacement
08/20/96	5424	7	17	3200	68	300	0	0	0	System restarted with new carbon
08/22/96	5470	7	17	3000	64	300	1.4	1.4	0	Influent and Effluent samples collected
09/03/96	5760	0.15	16	3500	76	131.2	0	0	0	
09/26/96	6316	8	15	3550	76	165	30	1.2	2.2	Influent and Effluent samples collected
10/03/96	6478	8	15	3000	64	231	70	42	13	
10/10/96	6645	8	15	3500	75	269.4	189	20.5	12.5	Influent and Effluent samples collected
10/22/96	6939	7	15	3000	64	480	442	1.8	1.2	Influent and Effluent samples collected
10/29/96	71040	8	16	4000	85	148.8	142.7	7.5	1.2	
11/13/96	7467	8	16	3500	75	120	90	40	8	Influent and Effluent samples collected
12/03/96	7944	0.19	25	5000	109	60.3	52.6	0	0	
12/18/96	8299	0.14	26	5500	120	50.5	55.1	5	4.7	Influent and Effluent samples collected
01/06/97	8684	24	38	4000	82	40	17	6	4	
01/17/97	8950	24	36	4000	82	147	153	83	7	Influent and Effluent samples collected
01/30/97	9259	24	37	3000	61	20	7	7	2	
02/10/97	9523	24	35	3500	72	192	306.4	111.2	3.6	Influent and Effluent samples collected
02/25/97	9887	22	34	3500	72	50	20	10	2	
03/07/97	10124	20	35	4000	83	40	9	5	2	Influent and Effluent samples collected
03/26/97	10587	22	35	3500	72	72	191	82	1.5	
04/10/97	10941	19	34	4000	83	15.4	32.5	3.9	3.2	
05/01/97	11440	23	30	3000	62	5.2	2.9	1.3	0.08	Influent and Effluent samples collected
05/14/97	11752	31	38	2000	40	18.7	17.4	8.9	0.4	
05/16/97	11798	NA	NA	NA	NA	NA	NA	NA	NA	System shutdown for carbon changeout
06/05/97	11798	20	30	8000	165	35.2	16.8	2	2	Carbon Changeout, Restart System, Influent and Effluent samples collected
06/17/97	12090	NM	30	8500	185	22.6	0	0	0	Shutdown system
06/30/97	12091	NM	29	4200	91	110.1	0.5	0.2	0	Restart system, Influent and Effluent samples collected
07/17/97	12496	NM	28	4800	104	6.4	0	0	0	Shutdown system
07/30/97	12497	NM	28	8000	174	19.4	0	0	0	Restart system, Influent and Effluent samples collected
08/13/97	12837	NM	27	8500	185	12.4	0	0	0	Shutdown system
08/28/97	12837	18	30	8000	166	35	2.2	1	0	Restart system, 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)	Extraction Flow Rate (scfm)	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	677	109	823	8.07	2026.0	
01/09/96	1134	457	109	1116	10.95	2234.5	
02/06/96	1803	669	131	999	11.75	2562.1	
03/08/96	2540	737	109	1821	17.86	3110.5	
04/03/96	2906	366	109	1116	10.95	3277.4	
05/02/96	3594	688	109	1586	15.56	3723.4	
05/31/96	4289	695	109	1234	12.10	4073.9	
07/01/96	5039	750	109	82	0.81	4099.1	
08/22/96	5470	431	65	500	2.94	4151.9	
09/26/96	6316	846	77	1300	9.05	4470.7	
10/10/96	6645	329	76	880	6.04	4553.6	
10/22/96	6939	294	65	670	3.94	4601.9	
11/13/96	7467	528	109	460	4.51	4701.1	
12/18/96	8299	833	120	220	2.37	4783.5	
01/17/97	8950	651	82	69	0.51	4797.2	
02/10/97	9523	573	72	98	0.63	4812.4	
03/07/97	10124	601	83	ND (<50)	0.00	4812.4	
05/01/97	11440	1316	62	ND (<50)	0.00	4812.4	
06/05/97	11798	358	165	910	13.50	5013.7	
06/30/97	12091	293	91	550	4.50	5068.7	
07/30/97	12497	406	174	150	2.35	5108.4	
08/28/97	12837	746	166	550	8.21	5363.6	

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

Table 3
Groundwater Monitoring Data
July 17, 1997
Safety-Kleen Service Center
400 Market Street
Oakland, California

Well I.D.	TOC Elevation (ft msl)	DTW (ft)	DTP (ft)	PT (ft)	Adjusted Elevation (ft msl)
MW-1	7.99	6.29	-	-	1.70
MW-2	8.20	7.01	-		1.19
MW-3	6.66	5.41	-	-	1.25
MW-4	10.32	8.17	-	-	2.15
MW-5	10.28	8.16	-	-	2.12
MW-6	8.97	7.11	-	-	1.86
MW-8	7.80	6.36	-	-	1.44
MW-9	8.21	6.93	6.92	0.01	1.29
MW-10*	-	-	-	-	-
MW-11	7.91	NM	-	-	-
MW-12	6.74	5.62	-	-	1.12
MW-13	8.08	6.73	-	-	1.35
RW-1	-	5.59	5.56	0.03	-

Notes:
TOC = Top of casing
DTW = Depth-to-water
DTP = Depth-to-product
PT = Product thickness
ft msl = Feet (ft) relative to mean sea level (msl)
* Well destroyed in July 1995
NM = Well not accessible

Table 4

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	-	1.84
Nov-96	1.09	0.70	0.75	1.47	1.47	1.18	0.90	0.86	-	-	-	0.78
Jan-97	2.89	2.39	2.58	3.48	3.52	3.34	2.70	2.57	-	-	-	2.50
Apr-97	2.43	1.89	1.99	2.92	2.86	2.53	2.18	2.19	-	2.45	1.71	1.99
Jul-97	1.70	1.19	1.25	2.15	2.12	1.86	1.44	1.29	-	-	1.12	1.35

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

Table 5
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	11-96		1-97		4-97		7-97	
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)	(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
Benzene	1	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Toluene	150	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Ethyl-benzene	700	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Xylenes	1750	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
1,1-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
1,2-Dichloroethane	0.5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
trans-1,2-Dichloroethene	10	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Chloroform	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
1,1,1-Trichloroethane	200	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Trichloroethene	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Tetrachloroethene	5	-	-	-	-	-	NS	-	NS	0.7	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Chlorobenzene	70	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Chloroethane	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Chlorotoluene	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
1,3-Dichlorobenzene	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Trichloropropane	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	-	-	NS	NS	-	-	NS	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	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	11-96		1-97		4-97		7-97	
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)	(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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorotoluene	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloropropane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 5
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	11-96		1-97		4-97		7-97	
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)	(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	-	-	-	-	-	-	-	-	-	-	-	-	-	1.6	4.9	-	-	-	-	-	-
Tetrachloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorobenzene	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	150	-	-	-	-	1.8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorotoluene	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloropropane	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	11-96		1-97		4-97		7-97	
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)	(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	5.1	5	5.7	6.4	5.6	5.7	6.7	6.8
1,1-Dichloroethane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichloroethane	0.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
cis-1,2-Dichloroethene	6	-	-	-	-	-	-	-	-	-	11.8	-	17	10	11.3	5.1	9.2	4.4	7.2	7.5	9.7	6.6	6.5
trans-1,2-Dichloroethene	10	-	53	0.6	1.1	1.7	-	-	1.4	1	3.2	3	4	1.7	1.2	-	1.2	-	-	-	-	-	-
Chloroform	NE	7.6	-	1.9	-	5.0	-	-	-	-	-	3	6	1.3	1.8	1.6	1.8	1.9	2.3	1.5	1.4	2.5	1.7
1,1,1-Trichloroethane	200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	1.2	1.2	1.4	-	1.6	-
Trichloroethene	5	2400	1100	-	790	1600	410	650	700	440	247	207	157	140	224	242.4	269	156.2	188.7	152.6	215.9	136.8	161.7
Tetrachloroethene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.1	-	-	-	-
Chlorobenzene	70	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.2	-	-	-	-	-	-	-
1,2-Dichloropropane	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,4-Dichlorobenzene	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichlorofluoromethane	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorotoluene	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloropropane	NE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-

Table 5
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	11-96		1-97		4-97		7-97	
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)	(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	NS	-	-	NS	NS
Benzene	1	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Toluene	150	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Ethyl-benzene	700	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Xylenes	1750	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,1-Dichloroethene	6	1.5	0.6	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	NS	NS	-	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	NS	-	-	NS	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
trans-1,2-Dichloroethene	10	-	-	-	4.3	3.5	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chloroform	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	1.4	NS	NS	NS	NS	NS	3.2	2.9	NS	NS
1,1,1-Trichloroethane	200	4	6	12	-	7.2	NS	NS	NS	9.1	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	8.7	NS	NS	NS	NS	NS	3.6	3	NS	NS
Tetrachloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorobenzene	70	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichlorofluoromethane	150	18	19	-	-	7.9	NS	NS	NS	-	NS	NS	NS	4.5	NS	NS	NS	NS	NS	-	-	NS	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chloroethane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorotoluene	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,3-Dichlorobenzene	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichloropropane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	NS	NS	16	NS	NS	NS	-	NS	NS	NS	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	11-96		1-97		4-97		7-97	
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)	(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	NS	-	-	NS	NS
Benzene	1	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Toluene	150	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Ethyl-benzene	700	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Xylenes	1750	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,1-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	NS	NS	-	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	NS	-	-	NS	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	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	NS	-	-	NS	NS
Chloroform	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	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	NS	NS	NS	NS	-	-	NS	NS
Trichloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Tetrachloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorobenzene	70	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chloroethane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorotoluene	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,3-Dichlorobenzene	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichloropropane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS

Table 5
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	11-96		1-97		4-97		7-97	
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)	(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	-	3.2	1.3	-	-	-	-	-	1.2
1,1-Dichloroethane	5	3.4	-	-	8.6	3.7	NS	5.5	-	-	6.2	5	7	2.9	-	16.7	4.3	-	-	3.6	4.8	-	1.0
1,2-Dichloroethane	0.5	7.4	5	5.2	11	7.1	NS	-	-	-	9.8	10	11	5.1	-	9.5	6	-	2.1	2.1	3.4	3.5	3.5
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	-	-	25.57	63	56	63	-	44.5	60.6	1.2	22.6	17	50	38.6	42.4
trans-1,2-Dichloroethene	10	-	1	-	-	-	NS	-	-	-	2.3	6	4	2.9	-	1.1	2.9	-	1.3	-	-	2.3	2.3
Chloroform	NE	-	-	-	-	-	NS	-	-	-	-	-	13	-	-	1.7	3.9	-	1.4	-	-	3.2	2.6
1,1,1-Trichloroethane	200	-	-	-	2.5	1.5	NS	-	-	-	-	-	-	-	1.3	2.5	-	-	-	-	-	-	-
Trichloroethene	5	14	31	15	22	18	NS	23	2.6	15	163	557	486	569	1352	339.2	1156.8	2.9	500.3	95	241.9	803	792
Tetrachloroethene	5	1.8	-	-	2	0.8	NS	-	-	0.4	3.2	2	2	1.1	2	3.4	1.6	22.5	13	4.9	4.8	1.2	1.2
Chlorobenzene	70	11	-	5.4	16	-	NS	2.4	1.2	-	6.9	4	6	3.3	-	23.3	5.8	-	1.2	3.4	4.6	1.3	1.7
1,2-Dichloropropane	5	0.6	-	-	-	0.8	NS	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-
1,2-Dichlorobenzene	600	2.6	-	-	4.8	-	NS	-	-	-	3.8	3	5	2	-	24.4	5.7	-	1.4	3.3	4.5	1.4	1.7
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	-	-	-	-	-	-	-	1.1	3.9	1.1	-	-	-	-	-	-
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chloroethane	NE	-	-	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorotoluene	NE	-	-	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1,3-Dichlorobenzene	NE	-	-	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trichloropropane	NE	-	-	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinyl chloride	0.5	-	-	-	-	-	NS	-	-	-	2.6	4	5	1.6	6.3	9.8	3.5	-	-	-	-	-	-

Well No.	MW-9																						
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	11-96		1-97		4-97		7-97	
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)	(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	NS	NS	NS	NS	NS	NS	NS	NS	1536	1846	NS	NS
Benzene	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	14.9	17.4	NS	NS
Toluene	150	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	13.3	17.2	NS	NS
Ethyl-benzene	700	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	13.5	23.2	NS	NS
Xylenes	1750	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	12.3	19.3	NS	NS
1,1-Dichloroethene	6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS
1,1-Dichloroethane	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	48	56.6	NS	NS
1,2-Dichloroethane	0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.2	7.6	NS	NS
cis-1,2-Dichloroethene	6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	41.9	47.1	NS	NS
trans-1,2-Dichloroethene	10	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS
Chloroform	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	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	NS	NS	NS	NS	NS	NS	NS	NS	10.7	13.8	NS	NS
Trichloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	12.5	16.1	NS	NS
Tetrachloroethene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorobenzene	70	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	28.6	44.5	NS	NS
1,2-Dichloropropane	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6	1.4	NS	NS
1,2-Dichlorobenzene	600	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	77.2	131.8	NS	NS
1,4-Dichlorobenzene	5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	17.2	34.4	NS	NS
Trichlorofluoromethane	150	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS
Dichlorodifluoromethane	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS
Chloroethane	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	2	NS	NS
Chlorotoluene	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.9	19.2	NS	NS
1,3-Dichlorobenzene	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.6	4.2	NS	NS
Trichloropropane	NE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.6	4.2	NS	NS
Vinyl chloride	0.5	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	131.7	135.6	NS	NS

Table 5
Summary of Groundwater Analytical Results
Detected Compounds
Safety-Kleen Service Center
400 Market Street
Oakland, California

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	11-96		1-97		4-97		7-97	
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)	(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	Well Destroyed July 1995											
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	-	-	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												
Chloroethane	NE	-	-	-	-	NS	NS	NS	NS	NS	NS												
Chlorotoluene	NE	-	-	-	-	NS	NS	NS	NS	NS	NS												
1,3-Dichlorobenzene	NE	-	-	-	-	NS	NS	NS	NS	NS	NS												
Trichloropropane	NE	-	-	-	-	NS	NS	NS	NS	NS	NS												
Vinyl chloride	0.5	-	-	-	-	NS	NS	NS	NS	NS	NS												

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	11-96		1-97		4-97		7-97	
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)	(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	NS	NS	NS	NS	NS	NS
Benzene	1	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Toluene	150	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Ethyl-benzene	700	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Xylenes	1750	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethene	6	-	2	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1-Dichloroethane	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	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	NS	NS	NS	NS	NS	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
trans-1,2-Dichloroethene	10	-	3	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,1,1-Trichloroethane	200	-	2	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	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	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorobenzene	70	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chloroethane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Chlorotoluene	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
1,3-Dichlorobenzene	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Trichloropropane	NE	-	-	-	-	-	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	NS	NS	1.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

Table 5
Summary of Groundwater Analytical Results
Detected Compounds
Safety-Kleen Service Center
400 Market Street
Oakland, California

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	11-96		1-97		4-97		7-97	
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)	(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	NS
Benzene	1	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Toluene	150	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Ethyl-benzene	700	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Xylenes	1750	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,1-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS	2	NS	-	NS	NS	NS	NS	NS	-	-	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	NS	NS	NS	NS	6.2	6.3	NS	NS
1,2-Dichloroethane	0.5	-	2	-	1.2	1.9	NS	-	NS	-	NS	3	NS	1.6	NS	NS	NS	NS	NS	3.5	3.5	NS	NS
cis-1,2-Dichloroethene	6	-	-	-	-	-	NS	-	NS	-	NS	5	NS	-	NS	NS	NS	NS	NS	1.1	1.4	NS	NS
trans-1,2-Dichloroethene	10	-	3	-	-	-	NS	-	NS	-	NS	2	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chloroform	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	1.1	NS	NS	NS	NS	NS	-	-	NS	NS
1,1,1-Trichloroethane	200	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichloroethene	5	17	30	34	11	44	NS	24	NS	59	NS	95	NS	7.5	NS	NS	NS	NS	NS	9.5	24.3	NS	NS
Tetrachloroethene	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorobenzene	70	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,2-Dichloropropane	5	-	-	-	-	-	NS	-	NS	-	NS	2	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,2-Dichlorobenzene	600	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,4-Dichlorobenzene	5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichlorofluoromethane	150	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Dichlorodifluoromethane	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chloroethane	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorotoluene	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,3-Dichlorobenzene	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichloropropane	NE	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Vinyl chloride	0.5	-	-	-	-	-	NS	-	NS	-	NS	-	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS

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	11-96		1-97		5-97***		7-97	
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)	(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	NS	NS	NS	NS	-	-	NS	NS
Benzene	1	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Toluene	150	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Ethyl-benzene	700	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Xylenes	1750	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,1-Dichloroethene	6	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,1-Dichloroethane	5	-	NS	NS	NS	-	NS	NS	NS	-	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	NS	NS	NS	NS	-	-	NS	NS
cis-1,2-Dichloroethene	6	-	NS	NS	NS	-	NS	NS	NS	-	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	NS	NS	NS	NS	-	-	NS	NS
Chloroform	NE	-	NS	NS	NS	-	NS	NS	NS	-	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	NS	NS	NS	NS	-	-	NS	NS
Trichloroethene	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Tetrachloroethene	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorobenzene	70	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,2-Dichloropropane	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,2-Dichlorobenzene	600	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,4-Dichlorobenzene	5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichlorofluoromethane	150	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Dichlorodifluoromethane	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chloroethane	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Chlorotoluene	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
1,3-Dichlorobenzene	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Trichloropropane	NE	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS
Vinyl chloride	0.5	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	-	NS	NS	NS	NS	NS	-	-	NS	NS

Table 5
Summary of Groundwater Analytical Results
Detected Compounds
Safety-Kleen Service Center
400 Market Street
Oakland, California

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.
** This sample was collected prior to purging the monitor well.
*** Well MW-13 was sampled on 4/10/97. Analytical results were anomalous therefore the well was resampled on 5/16/97.

NOTE

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

Table 6
Comparison of Pre-Purge and Post-Purge Groundwater Analytical Data
July 17, 1997
Safety-Kleen Service Center
400 Market Street
Oakland, California

Sample Name	Analyte												
	TPHms	1,2-DCB	1,1-DCA	1,2-DCA	1,1-DCE	c1,2-DCE	t1,2-DCE	1,1,1-TCA	TCE	PCE	CB	VC	CF
	(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)*
MW-2 Pre-Purge	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1
MW-2 Post Purge	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1
RPD	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
MW-3 Pre-Purge	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1
MW-3 Post Purge	<50	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<2	<1
RPD	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
MW-4 Pre-Purge	<50	<1	<1	<1	**6.7**	**6.6**	<1	**1.6**	**136.8**	<1	<1	<2	**2.5**
MW-4 Post Purge	<50	<1	<1	<1	**6.8**	**6.5**	<1	<1	**161.7**	<1	<1	<2	**1.7**
RPD	0%	0%	0%	0%	**-1%**	**2%**	0%	**46%**	**-17%**	0%	0%	0%	**38%**
MW-8 Pre-Purge	<50	**1.4**	<1	**3.5**	<1	**38.6**	**2.3**	<1	**803**	**1.2**	**1.3**	<2	**3.2**
MW-8 Post Purge	<50	**1.7**	**1.0**	**3.5**	**1.2**	**42.4**	**2.3**	<1	**792**	**1.2**	**1.7**	<2	**2.6**
RPD	0%	**-19%**	**0%**	**0%**	**-18%**	**-9%**	**0%**	0%	**1%**	**0%**	**-27%**	0%	**21%**
DUPLICATES: MW-8D Post Purge	<50	**1.9**	**1.0**	**4.0**	**1.2**	**45**	**3.6**	<1	**818**	**1.2**	**2.0**	**1.5**	**3.0**

Notes:
TPHms = Total Petroleum Hydrocarbons as Mineral Spirits
DCB = Dichlorobenzene
DCA = Dichloroethane
DCE = Dichloroethene
TCA = Trichloroethane
TCE = Trichloroethene
PCE = Tetrachloroethene
CB = Chlorobenzene
VC = Vinyl Chloride
CF = Chloroform
RPD = Relative Percent Difference = [(A-B) / { A+B) / 2}] *100
Duplicate sample labeled MW-8D was collected from well MW-8, post-purge

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: 7/17/97	**TIME START:** 6:30 AM	**TIME END:**	
EVENT:	QUARTERLY/SEMI-ANNUAL/ANNUAL MONITORING AND SAMPLING	**PERSONNEL:** RN	

WELL ID	TOC	DTW	DTP	PT	TD	ELEV.	COMMENTS
MW-1	7.99	6.29	-	-			2"
MW-2	8.20	7.01	-	-			2"
MW-3	6.66	5.41	-	-			2"
MW-4	10.32	8.17	-	-			2"
MW-5	10.28	8.18	-	-			2"
MW-6	8.97	7.11	-	-			2"
MW-8	7.80	6.36	-	-			2"
MW-9	8.21	6.93	6.92	0.01			4"
MW-11	7.91	—	-	-			OBSOLETE-- 2"
MW-12	6.74	5.62	-	-			2"
MW-13	8.08	6.73	-	-			4"(deep well)
RW-1	-	5.59	5.56	0.03			10"

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

NOTE: NO FREE PRODUCT COLLECTED ON SKIMMERS RW-1
" " " " MW-9

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 Incorporated

WATER SAMPLE FIELD DATA SHEET

Project #: 70005-009 | Purged By: AA | Well I.D.: MW-2

Client Name: SK | Sampled By: AA | Sample I.D.: MW-2

Location: OAK | QA Samples: ______

Date Purged 7/17/97 | Start (2400hr) 9:23 | End (2400hr) 9:47

Date Sampled 7/17/97 | Sample Time (2400hr) 9:25 / 10:10

Sample Type: ☒ Groundwater ☐ Other

Casing Diameter 2" ✓ 3" ___ 4" ___ 5" ___ 6" ___ 8" ___ Other ___

Depth to Bottom (feet) = 29.21 | Purge (gal) = 1.5

Depth to Water (feet) = 7.01 | Purge Rate (☐ gal or ☐ liter/min) ______

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μmhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
7/17	9:43	–	21.1	67.6	6.31	clear	10	1.12	7.01
"	–	–	21.2	64.9	6.46	"	10	1.06	–
"	–	–	21.2	63.3	6.53	"	10	0.82	–
"	–	–	21.3	62.4	6.57	"	10	0.64	–
"	–	–	21.4	61.5	6.61	"	10	0.57	–
"	9:47	1.5	21.4	61.4	6.62	"	10	0.53	7.38
"									

SAMPLE INFORMATION

Sample Depth to Water: ______ | Sample Turbidity: ______

Analyses: ______

Odor: ______ | Sample Vessel/Preservative: ______

PURGING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (PVC)
___ Submersible Pump ___ Bailer (Stainless Steel)
✓ Peristaltic Pump ___ Dedicated ______
Other: ______
Pump Depth: ______

SAMPLING EQUIPMENT

___ Bladder Pump ___ Bailer (Teflon)
___ Centrifugal Pump ___ Bailer (PVC or disposable)
___ Submersible Pump ___ Bailer (Stainless Steel)
✓ Peristaltic Pump ___ Dedicated ______
Other: ______

Well Integrity: OK | Lock #: NO

Remarks: trouble getting sample.

NOTE: Sample after three consecutive readings are within:
pH - ± 0.1, turbidity and DO = ± 10%, conductivity = ± 3%.

Signature: AA | Page 1 of 1

SECOR International Incorporated

WATER SAMPLE FIELD DATA SHEET

Project #: 70005-004 | Purged By: AA | Well I.D.: MW-4

Client Name: SIC | Sampled By: AA | Sample I.D.: MW-4

Location: OAK | QA Samples: _____

Date Purged 7/17/97 | Start (2400hr) 8:40 | End (2400hr) 8:55

Date Sampled 7/17/97 | Sample Time (2400hr) 8:45 / 9:10

Sample Type: ☑ Groundwater ☐ Other

Casing Diameter 2" ✓ 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____

Depth to Bottom (feet) = 25.40 | Purge (gal) = 2 GLS

Depth to Water (feet) = 8.17 | Purge Rate (☐ gal or ☐ liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μmhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
7/17	8:47	—	19.5	103	6.41	clear	10	2.15	8.17
"	—	—	19.5	107	6.37	"	10	1.31	—
"	—	—	19.5	108	6.37	"	10	0.89	—
"	—	—	19.6	108	6.36	"	10	0.77	—
"	—	—	19.6	107	6.36	"	10	0.69	—
"	8:55	2.00	19.6	107	6.37	"	10	0.62	8.35
"									

SAMPLE INFORMATION

Sample Depth to Water: _____ | Sample Turbidity: _____

Analyses: _____

Odor: _____ | Sample Vessel/Preservative: _____

PURGING EQUIPMENT

___Bladder Pump ___Bailer (Teflon)

___Centrifugal Pump ___Bailer (PVC)

___Submersible Pump ___Bailer (Stainless Steel)

1 Peristaltic Pump ___Dedicated _____

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

___Bladder Pump ___Bailer (Teflon)

___Centrifugal Pump ___Bailer (PVC or disposable)

___Submersible Pump ___Bailer (Stainless Steel)

1 Peristaltic Pump ___Dedicated _____

Other: _____

Well Integrity: OK | Lock #: NO

Remarks: _____

NOTE: Sample after three consecutive roadings are within:

pH - ± 0.1, turbidity and DO = ± 10%, conductivity = ± 3%.

Signature: AM

SECOR International Incorporated

WATER SAMPLE FIELD DATA SHEET

Project #: 70005-009 | Purged By: AA | Well I.D.: MW-3

Client Name: SU | Sampled By: AA | Sample I.D.: MW-3

Location: OAK | QA Samples: _____

Date Purged 7/17/97 | Start (2400hr) 7:20 | End (2400hr) 7:39

Date Sampled 7/17/97 | Sample Time (2400hr) 7:50 / 7:35

Sample Type: ☑ Groundwater ☐ Other

Casing Diameter 2" / 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____

Depth to Bottom (feet) = 26.20 | Purge (gal) = 1.75

Depth to Water (feet) = 5.41 | Purge Rate (☐ gal or ☐ liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (µmhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
7/17	7:35	—	20.0	35.1	4.33	TAN	110	2.56	5.41
"	—	—	20.1	29.2	5.63	"	119	2.33	—
"	—	—	20.1	27.0	5.94	"	106	2.14	—
"	—	—	20.2	26.0	6.10	"	125	2.10	—
"	—	—	20.3	25.8	6.20	"	139	2.00	—
"	7:39	1.75	20.2	25.8	6.27	"	139	1.94	6.15

SAMPLE INFORMATION

Sample Depth to Water: _____ | Sample Turbidity: _____

Analyses: _____

Odor: _____ | Sample Vessel/Preservative: _____

PURGING EQUIPMENT

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

Other: _____

Pump Depth: _____

SAMPLING EQUIPMENT

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

Other: _____

Well Integrity: OK | Lock #: NO

Remarks: Problems sampling MW-3 purged.

NOTE: Sample after three consecutive roadings are within:

pH - ± 0.1, turbidity and DO = ± 10%, conductivity = ± 3%.

Signature: AA

SECOR International Incorporated

WATER SAMPLE FIELD DATA SHEET

Project #: 70005-009 | Purged By: AR | Well I.D.: MW-8

Client Name: SW | Sampled By: AR | Sample I.D.: MW-8

Location: OAK | QA Samples: MW-8D

Date Purged 7/17/97 | Start (2400hr) 10:34 | End (2400hr) 10:58

Date Sampled 7/17/97 | Sample Time (2400hr) 10:50/11:00 | Dup 11:30

Sample Type: ☑ Groundwater ☐ Other

Casing Diameter 2" / 3" ____ 4" ____ 5" ____ 6" ____ 8" ____ Other ____

Depth to Bottom (feet) = 28.93 | Purge (gal) = 2 Gals

Depth to Water (feet) = 6.36 | Purge Rate (☐ gal or ☐ liter/min) ____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (µmhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
7/17	10:55		19.6	106	6.46	CLEAR	10	1.09	
"			19.6	104	6.43		10	0.99	
"			19.6	103	6.43		10	0.77	
"			19.5	[illegible]	6.42		10	0.65	
"	10:58	2	19.5	103	6.42		10	0.60	6.41
"									
"									

SAMPLE INFORMATION

Sample Depth to Water: ____ | Sample Turbidity: ____

Analyses: ____

Odor: ____ | Sample Vessel/Preservative: ____

PURGING EQUIPMENT

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

Other: ____

Pump Depth: ____

SAMPLING EQUIPMENT

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

Other: ____

Well Integrity: OK | Lock #: ____

Remarks: ____

NOTE: Sample after three consecutive roadings are within:

pH - ± 0.1, turbidity and DO = ± 10%, conductivity = ± 3%.

Signature: AM

APPENDIX B

Laboratory Reports - Soil Vapor Extraction System Samples

Superior Analytical Laboratory

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

Attn: GREG HOEHN

Date: August 8, 1997

Laboratory Number : 23026

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 July 30, 1997. This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety. 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 29, 1997, 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

Sanjay Panda
QA/QC Officer

Superior
Analytical Laboratory

CASE NARRATIVE

SECOR
Project Number/Name: 70005-009
Laboratory Number: 23026

Sample Receipt

Two air samples were received by Superior Analytical Laboratory on July 30, 1997.

Cooler temperature was R.T.°C

No abnormalities were noted with sample recieving.

Sample Analysis

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

I / I

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

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on July 31, 1997

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

Chronology

Laboratory Number 23026

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	07/30/97	07/30/97	07/30/97	07/30/97	DG301.07	01
INF	07/30/97	07/30/97	07/30/97	07/30/97	DG301.07	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
DG301.07-01	Method Blank	MB	Water	07/30/97	07/30/97
DG301.07-02	Laboratory Spike	LS	Water	07/30/97	07/30/97
DG301.07-03	Laboratory Spike Duplicate	LSD	Water	07/30/97	07/30/97
DG301.07-04	E1	MS 23023-01	Water	07/30/97	07/30/97
DG301.07-05	E1	MSD 23023-01	Water	07/30/97	07/30/97

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on July 31, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23026-01	EFF	Air	1.0	-
23026-02	INF	Air	1.0	-

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

Compound	23026-01 Conc. PPB (V/V)	RL	23026-02 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
Dichloromethane	ND	140	ND	140
t-1,2-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	86		74	

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on July 31, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23026-01	EFF	Air	1.0	-
23026-02	INF	Air	1.0	-

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

Compound	23026-01 Conc. PPB (V/V)	RL	23026-02 Conc. PPB (V/V)	RL
4-Bromofluorobenzene	82		74	

Superior Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 23026
Method Blank(s)

	DG301.07-01 Conc. ug/L	RL
Chloromethane	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Chloroethane	ND	0.5
Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5
Dichloromethane	ND	0.5
t-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
c-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
c-1,3-Dichloropropene	ND	0.5
1,2-Dichloropropane	ND	0.5
t-1,3-Dichloropropene	ND	0.5
Bromodichloromethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
>> Surrogate Recoveries (%) <<		
Bromochloromethane	91	
4-Bromofluorobenzene	89	

Superior Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 23026

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L) DG301.07 02 / 03 - Laboratory Control Spikes						
1,1-Dichloroethene		20	19/19	95/95	70-130	0
Trichloroethene		20	18/19	90/95	60-130	5
Chlorobenzene		20	20/21	100/105	75-130	5
>> Surrogate Recoveries (%) <<						
Bromochloromethane				103/106	70-120	
4-Bromofluorobenzene				115/112	60-125	
For Water Matrix (ug/L) DG301.07 04 05 - Sample Spiked: 23023 - 01						
1,1-Dichloroethene	ND	20	19/20	95/100	70-130	5
Trichloroethene	ND	20	19/19	95/95	60-130	0
Chlorobenzene	ND	20	22/23	110/115	75-130	4
>> Surrogate Recoveries (%) <<						
Bromochloromethane				107/110	70-120	
4-Bromofluorobenzene				118/123	60-125	

Definitions:
ND = Not Detected
RL = Reporting Limit
NA = Not Analyzed
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 8, 1997

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

Chronology

Laboratory Number 23026

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	07/30/97	07/30/97	07/30/97	07/30/97	DG302.37	01
INF	07/30/97	07/30/97	07/30/97	07/30/97	DG302.37	02

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
DG302.37-10	Method Blank	MB		Water	07/30/97	07/30/97
DG302.37-02	Laboratory Spike	LS		Water	07/30/97	07/30/97
DG302.37-03	MW-7	MS	23004-02	Water	07/30/97	07/30/97
DG302.37-04	MW-7	MSD	23004-02	Water	07/30/97	07/30/97

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on August 8, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23026-01	EFF	Air	1.0	-
23026-02	INF	Air	1.0	-

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

Compound	23026-01 Conc. ug/L	RL	23026-02 Conc. ug/L	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	0.9SP	0.5
>> Surrogate Recoveries (%) <<				
Trifluorotoluene (SS)	97		96	

Superior

Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 23026
Method Blank(s)

	DG302.37-10 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)	96	

Superior Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 23026

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Water Matrix (ug/L)				
	DG302.37 02 /	- Laboratory Control Spikes				
Benzene		20	20	100	65-135	
Toluene		20	22	110	65-135	
Ethyl Benzene		20	22	110	65-135	
Xylenes		60	67	112	65-135	
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				94	50-150	
		For Water Matrix (ug/L)				
	DG302.37 03 / 04	- Sample Spiked: 23004 - 02				
Benzene	ND	20	20/20	100/100	65-135	0
Toluene	ND	20	21/22	105/110	65-135	5
Ethyl Benzene	ND	20	21/22	105/110	65-135	5
Xylenes	ND	60	65/67	108/112	65-135	4
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				95/93	50-150	

P - There is a greater than 25% difference for detected concentration between the two GC columns.

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 8, 1997

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

Chronology

Laboratory Number 23026

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	07/30/97	07/30/97	07/30/97	07/30/97	DG302.37	01
INF	07/30/97	07/30/97	07/30/97	07/30/97	DG302.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
DG302.37-05	Method Blank	MB	Water	07/30/97	07/30/97
DG302.37-06	Laboratory Spike	LS	Water	07/30/97	07/30/97
DG302.37-07	MW-7	MS 23004-02	Water	07/30/97	07/30/97
DG302.37-08	MW-7	MSD 23004-02	Water	07/30/97	07/30/97

Superior
Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on August 8, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23026-01	EFF	Air	1.0	-
23026-02	INF	Air	1.0	-

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

Compound	23026-01 Conc. ug/L	RL	23026-02 Conc. ug/L	RL
Gasoline	ND	50	ND	50
Mineral Spirits	ND	50	150	50
>> Surrogate Recoveries (%) <<				
4-Bromofluorobenzene (SS)	96		113	

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 23026
Method Blank(s)

DG302.37-05

	Conc.	RL
Gasoline	ND	50
Mineral Spirits	ND	50
>> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene (SS)	98	

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 23026

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Water Matrix (ug/L)				
	DG302.37 06 /	- Laboratory Control Spikes				
Gasoline		2000	2100	105	65-135	
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene (SS)				102	50-150	
		For Water Matrix (ug/L)				
	DG302.37 07	08 - Sample Spiked: 23004 - 02				
Gasoline	ND	2000	2100/2000	105/100	65-135	5
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene (SS)				102/97	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)

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on August 8, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
23026-01	EFF	Air	1.0	-
23026-02	INF	Air	1.0	-

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

Compound	23026-01 Conc. ug/L	RL	23026-02 Conc. ug/L	RL
Mineral Spirits	ND	50	150	50
>> Surrogate Recoveries (%) <<				
4-Bromofluorobenzene (SS)	96		113	

Superior
Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on August 8, 1997

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

Chronology

Laboratory Number 23026

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	07/30/97	07/30/97	07/30/97	07/30/97	DG302.37	01
INF	07/30/97	07/30/97	07/30/97	07/30/97	DG302.37	02

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
DG302.37-05	Method Blank	MB		Water	07/30/97	07/30/97
DG302.37-06	Laboratory Spike	LS		Water	07/30/97	07/30/97
DG302.37-07	MW-7	MS	23004-02	Water	07/30/97	07/30/97
DG302.37-08	MW-7	MSD	23004-02	Water	07/30/97	07/30/97

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 23026
Method Blank(s)

	DG302.37-05 Conc.	RL
Gasoline	ND	5
Mineral Spirits	ND	5
>> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene (SS)	98	

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 23026

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Water Matrix (ug/L)				
	DG302.37 06 /	- Laboratory Control Spikes				
Gasoline		2000	2100	105	65-135	
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene (SS)				102	50-150	
		For Water Matrix (ug/L)				
	DG302.37 07 / 08	Sample Spiked: 23004 - 02				
Gasoline	ND	2000	2100/2000	105/100	65-135	5
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene (SS)				102/97	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)

Superior Analytical Laboratory

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

JUL 1 8 1997

Date: July 14, 1997

Attn: GREG HOEHN

Laboratory Number : 22912

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

Dear GREG HOEHN:

Attached is Superior Analytical Laboratory report for the samples received on June 30, 1997. This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety. 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 July 30, 1997, 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: 22912

Sample Receipt

Two air samples were received by
Superior Analytical Laboratory on June 30, 1997.

Cooler temperature was R.T.°C

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analyzed 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

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on July 14, 1997

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

Chronology

Laboratory Number 22912

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	06/30/97	06/30/97	06/30/97	06/30/97	DF302.37	01
INF	06/30/97	06/30/97	06/30/97	06/30/97	DF302.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
DF302.37-06	Method Blank	MB	Water	06/30/97	06/30/97
DF302.37-02	Laboratory Spike	LS	Water	06/30/97	06/30/97
DF302.37-03	BAK13-0627	MS 22910-01	Water	06/30/97	06/30/97
DF302.37-04	BAK13-0627	MSD 22910-01	Water	06/30/97	06/30/97

Superior
Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on July 14, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22912-01	EFF	Air	1.0	-
22912-02	INF	Air	1.0	-

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

Compound	22912-01 Conc. ug/L	RL	22912-02 Conc. ug/L	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	4.1P	0.5
>> Surrogate Recoveries (%) <<				
Trifluorotoluene (SS)	99		100	

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22912
Method Blank(s)

	DF302.37-06 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)	93	

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22912

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Water Matrix (ug/L)				
	DF302.37 02 /	- Laboratory Control Spikes				
Benzene		20	20	100	65-135	
Toluene		20	20	100	65-135	
Ethyl Benzene		20	20	100	65-135	
Xylenes		60	61	102	65-135	
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				100	50-150	
		For Water Matrix (ug/L)				
	DF302.37 03 / 04	- Sample Spiked: 22910 - 01				
Benzene	ND	20	20/20	100/100	65-135	0
Toluene	ND	20	20/20	100/100	65-135	0
Ethyl Benzene	ND	20	20/20	100/100	65-135	0
Xylenes	ND	60	61/59	102/98	65-135	4
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				98/100	50-150	

P - There is a greater than 25% difference for detected concentration between the two GC columns.

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 July 14, 1997

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

Chronology

Laboratory Number 22912

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	06/30/97	06/30/97	06/30/97	06/30/97	DF302.37	01
INF	06/30/97	06/30/97	06/30/97	06/30/97	DF302.37	02

QC Samples

QC Batch #	QC Sample ID	Type	Ref.	Matrix	Extract.	Analyzed
DF302.37-07	Method Blank	MB		Water	06/30/97	06/30/97
DF302.37-08	Laboratory Spike	LS		Water	06/30/97	06/30/97
DF302.37-09	BAK13-0627	MS	22910-01	Water	06/30/97	06/30/97
DF302.37-10	BAK13-0627	MSD	22910-01	Water	06/30/97	06/30/97

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Attn: GREG HOEHN

Project 70005-009
Reported on July 14, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22912-01	EFF	Air	1.0	-
22912-02	INF	Air	1.0	-

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

Compound	22912-01 Conc. ug/L	RL	22912-02 Conc. ug/L	RL
Mineral Spirits	ND	50	550	50
>> Surrogate Recoveries (%) <<				
4-Bromofluorobenzene (SS)	101		140	

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Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22912
Method Blank(s)

DF302.37-07

	Conc.	RL
Mineral Spirits	ND	50
>> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene (SS)	105	

Superior Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22912

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Water Matrix (ug/L)				
	DF302.37 08 /	- Laboratory Control Spikes				
Gasoline		2000	2100	105	65-135	
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene (SS)				103	50-150	
		For Water Matrix (ug/L)				
	DF302.37 09 / 10	- Sample Spiked: 22910 - 01				
Gasoline	ND	2000	2100/2100	105/105	65-135	0
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene (SS)				91/101	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)

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Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on July 7, 1997

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

Chronology

Laboratory Number 22912

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
EFF	06/30/97	06/30/97	07/03/97	07/03/97	DG031.07	01
INF	06/30/97	06/30/97	07/03/97	07/03/97	DG031.07	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
DG031.07-01	Method Blank	MB	Water	07/03/97	07/03/97
DG031.07-02	Laboratory Spike	LS	Water	07/03/97	07/03/97
DG031.07-03	Laboratory Spike Duplicate	LSD	Water	07/03/97	07/03/97
DG031.07-04	MW-6	MS 22908-06	Water	07/03/97	07/03/97
DG031.07-05	MW-6	MSD 22908-06	Water	07/03/97	07/03/97

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Attn: GREG HOEHN

Project 70005-009
Reported on July 7, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22912-01	EFF	Air	1.0	-
22912-02	INF	Air	1.0	-

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

Compound	22912-01 Conc. PPB (V/V)	RL	22912-02 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
Dichloromethane	ND	140	ND	140
t-1,2-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	95		67	

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Project 70005-009
Reported on July 7, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22912-01	EFF	Air	1.0	-
22912-02	INF	Air	1.0	-

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

Compound	22912-01 Conc. PPB (V/V)	RL	22912-02 Conc. PPB (V/V)	RL
4-Bromofluorobenzene	74		64	

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

Quality Assurance and Control Data

Laboratory Number: 22912
Method Blank(s)

	DG031.07-01 Conc. ug/L	RL
Chloromethane	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Chloroethane	ND	0.5
Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5
Dichloromethane	0.8	0.5
t-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
c-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
c-1,3-Dichloropropene	ND	0.5
1,2-Dichloropropane	ND	0.5
t-1,3-Dichloropropene	ND	0.5
Bromodichloromethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
>> Surrogate Recoveries (%) <<		
Bromochloromethane	103	
4-Bromofluorobenzene	81	

2

Chain-of Custody Number: 22912

SECOR Chain-of Custody Record

Field Office: CONCORD

Address: 1390 Willow Pass Rd.
CONCORD, CA - 94520

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

Job Name: SL

Location: 400 MARKET ST
OAKLAND, CA

Project # 70005-009 Task #

Project Manager Gregg Hobbs

Laboratory Superior

Turnaround Time STANDARD

Sampler's Name R. RANGO

Sampler's Signature

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 motor oil, diesel, BTEX		Comments/ Instructions	Number of Containers
EFF	6/30/97	1400	AIR							X						X			1
INF	"	1430	"							X						X			1

Special Instructions/Comments:

RUSH

Relinquished by:
Sign
Print R. RANGO
Company SECOR
Time 15:52 Date 6/30/97

Received by:
Sign R. Bu
Print R. BOONGALIOG
Company SAL
Time 1952 Date 6/30/97

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:	NA
Rec'd. in good condition/cold:	/
Conforms to record:	/

Client: SECOR

Client Contact: Gregg Hobbs

Client Phone: (510) 686-9780

SECOR CUSTREC Rev. 1/95

Date: 6/30/97 Page 1 of 1

Superior Analytical Laboratory

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

Date: June 12, 1997

Attn: GREG HOEHN

Laboratory Number : 22835

Project Number/Name : 70005-009
Facility/Site : SAFETYKLEEN MARKET ST. OAKLAND

Dear GREG HOEHN:

Attached is Superior Analytical Laboratory report for the samples received on June 5, 1997. This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety. 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 July 5, 1997, 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
Laboratory Number: 22835

Sample Receipt

Two air samples were received by
Superior Analytical Laboratory on June 5, 1997.

No abnormalities were noted with sample recieving.

Sample Analysis

The samples were analyzed 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

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 12, 1997

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

Laboratory Number 22835

Chronology

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
INF 11:05AM	06/05/97	06/05/97	06/06/97	06/06/97	DF061.06	01
EFF 11:00AM	06/05/97	06/05/97	06/06/97	06/06/97	DF061.06	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
DF061.06-01	Method Blank	MB	Water	06/06/97	06/06/97
DF061.06-02	Laboratory Spike	LS	Water	06/06/97	06/06/97
DF061.06-03	Laboratory Spike Duplicate	LSD	Water	06/06/97	06/06/97
DF061.06-04	EFF 11:00AM	MS 22835-02	Air	06/06/97	06/06/97
DF061.06-05	EFF 11:00AM	MSD 22835-02	Air	06/06/97	06/06/97

Superior
Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 12, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22835-01	INF 11:05AM	Air	1.0	-
22835-02	EFF 11:00AM	Air	1.0	-

RESULTS OF ANALYSIS

Compound	22835-01 Conc. PPB (V/V)	22835-01 RL (V/V)	22835-02 Conc. PPB (V/V)	22835-02 RL (V/V)
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
Dichloromethane	ND	140	ND	140
t-1,2-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	150	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	100		96	

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 12, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22835-01	INF 11:05AM	Air	1.0	-
22835-02	EFF 11:00AM	Air	1.0	-

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

Compound	22835-01 Conc. RL PPB (V/V)	22835-02 Conc. RL PPB (V/V)
4-Bromofluorobenzene	89	86

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

Quality Assurance and Control Data

Laboratory Number: 22835
Method Blank(s)

DF061.06-01

	Conc. ug/L	RL
Chloromethane	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	0.5
Chloroethane	ND	0.5
Trichlorofluoromethane	ND	0.5
1,1-Dichloroethene	ND	0.5
Dichloromethane	ND	0.5
t-1,2-Dichloroethene	ND	0.5
1,1-Dichloroethane	ND	0.5
c-1,2-Dichloroethene	ND	0.5
Chloroform	ND	0.5
1,1,1-Trichloroethane	ND	0.5
Carbon tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Trichloroethene	ND	0.5
c-1,3-Dichloropropene	ND	0.5
1,2-Dichloropropane	ND	0.5
t-1,3-Dichloropropene	ND	0.5
Bromodichloromethane	ND	0.5
1,1,2-Trichloroethane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
Chlorobenzene	ND	0.5
Bromoform	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5

>> Surrogate Recoveries (%) <<	
Bromochloromethane	93
4-Bromofluorobenzene	88

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22835

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
DF061.06 02 / 03 - Laboratory Control Spikes						
1,1-Dichloroethene		20	18/21	90/105	50-189	15
Trichloroethene		20	17/17	85/85	53-161	0
Chlorobenzene		20	19/20	95/100	57-171	5
>> Surrogate Recoveries (%) <<						
Bromochloromethane				107/99	50-125	
4-Bromofluorobenzene				90/87	50-150	
For Air Matrix (PPB (V)						
DF061.06 04 / 05 - Sample Spiked: 22835 - 02						
1,1-Dichloroethene	ND	4960	4200/4500	85/91	50-189	7
Trichloroethene	ND	3660	2600/2700	71/74	53-161	4
Chlorobenzene	ND	4280	3400/3420	79/80	57-171	1
>> Surrogate Recoveries (%) <<						
Bromochloromethane				87/88	50-125	
4-Bromofluorobenzene				73/70	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)

Superior

Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 12, 1997

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

Laboratory Number 22835

Chronology

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
INF 11:05AM	06/05/97	06/05/97	06/06/97	06/06/97	DF061.37	01
EFF 11:00AM	06/05/97	06/05/97	06/06/97	06/06/97	DF061.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
DF061.37-01	Method Blank	MB	Water	06/06/97	06/06/97
DF061.37-02	Laboratory Spike	LS	Water	06/06/97	06/06/97
DF061.37-03	MW-08	MS 22815-03	Water	06/06/97	06/06/97
DF061.37-04	MW-08	MSD 22815-03	Water	06/06/97	06/06/97

Superior
Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 12, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22835-01	INF 11:05AM	Air	1.0	-
22835-02	EFF 11:00AM	Air	1.0	-

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

Compound	22835-01 Conc. ug/L	RL	22835-02 Conc. ug/L	RL
Benzene	ND	0.5	ND	0.5
Toluene	ND	0.5	ND	0.5
Ethyl Benzene	ND	0.5	ND	0.5
Xylenes	5.5	0.5	ND	0.5
>> Surrogate Recoveries (%) <<				
Trifluorotoluene (SS)	103		101	

Superior

Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22835
Method Blank(s)

	DF061.37-01 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)	94	

Superior
Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22835

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
		For Water Matrix (ug/L)				
		DF061.37 02 / - Laboratory Control Spikes				
Benzene		20	21	105	65-135	
Toluene		20	22	110	65-135	
Ethyl Benzene		20	23	115	65-135	
Xylenes		60	69	115	65-135	
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				98	50-150	
		For Water Matrix (ug/L)				
		DF061.37 03 / 04 - Sample Spiked: 22815 - 03				
Benzene	ND	20	21/21	105/105	65-135	0
Toluene	ND	20	21/22	105/110	65-135	5
Ethyl Benzene	ND	20	22/22	110/110	65-135	0
Xylenes	ND	60	67/67	112/112	65-135	0
>> Surrogate Recoveries (%) <<						
Trifluorotoluene (SS)				96/99	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)

Superior Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 12, 1997

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

Laboratory Number 22835

Chronology

Sample ID	Sampled	Received	Extract.	Analyzed	QC Batch	LAB #
INF 11:05AM	06/05/97	06/05/97	06/06/97	06/06/97	DF060.37	01
EFF 11:00AM	06/05/97	06/05/97	06/06/97	06/06/97	DF060.37	02

QC Samples

QC Batch #	QC Sample ID	TypeRef.	Matrix	Extract.	Analyzed
DF060.37-01	Method Blank	MB	Water	06/06/97	06/06/97
DF060.37-02	Laboratory Spike	LS	Water	06/06/97	06/06/97
DF060.37-03	MW-08	MS 22815-03	Water	06/06/97	06/06/97
DF060.37-04	MW-08	MSD 22815-03	Water	06/06/97	06/06/97

Superior
Analytical Laboratory

SECOR
Attn: GREG HOEHN

Project 70005-009
Reported on June 12, 1997

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

LAB ID	Sample ID	Matrix	Dil.Factor	Moisture
22835-01	INF 11:05AM	Air	1.0	-
22835-02	EFF 11:00AM	Air	1.0	-

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

Compound	22835-01 Conc. ug/L	RL	22835-02 Conc. ug/L	RL
Mineral Spirits	910	50	ND	50
>> Surrogate Recoveries (%) <<				
4-Bromofluorobenzene (SS)	132		94	

Superior

Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22835
Method Blank(s)

	DF060.37-01 Conc.	RL
	mg/Kg	
Mineral Spirits	ND	50
>> Surrogate Recoveries (%) <<		
4-Bromofluorobenzene (SS)	88	

Superior Analytical Laboratory

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

Quality Assurance and Control Data

Laboratory Number: 22835

Compound	Sample conc.	SPK Level	SPK Result	Recovery %	Limits %	RPD %
For Water Matrix (ug/L)						
DF060.37 02 / - Laboratory Control Spikes						
Gasoline		2000	2000	100	65-135	
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene (SS)				101	50-150	
For Water Matrix (ug/L)						
DF060.37 03 / 04 - Sample Spiked: 22815 - 03						
Gasoline	ND	2000	1900/1900	95/95	65-135	0
>> Surrogate Recoveries (%) <<						
4-Bromofluorobenzene (SS)				118/208I	50-150	

I - The surrogate recovery was high due to the presence of interfering compounds in the sample.

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)

22835

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: SECOR

Address: 1390 willowPASS Road Suite 360
CONCord, CA 94520

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

Job Name: SAFETY KLEEN

Location: 400 MARKET STREET
oAKLAND, CA

Project # 70005-009 Task #

Project Manager Greg Hoehn

Laboratory Superior

Turnaround Time STANDARD

Sampler's Name GARY CLIFT

Sampler's Signature [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 M.S. BTEX		Comments/ Instructions	Number of Containers
INF	6-5	11:05	Air							X						X			1
EFF	6-5	11:08	Air							X						X			1

Please Initial:
Samples Stored in Ice. MD
Appropriate containers LMC
Samples preserved MD
VOA's without headspace
Comments:

Special Instructions/Comments:

Relinquished by: SECOR
Sign [signature]
Print GARY R. CLIFT
Company SECOR
Time ____ Date 6-5-97

Received by: Superior Lab
Sign [signature]
Print LIN KAWEI
Company Superior Lab
Time 3:30p Date 6/5/97

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: 6/5/97 Page 1 of 1

APPENDIX C

Laboratory Reports - Groundwater Samples

safety-kleen ®

Allan A. Manteuffel Technical Center

July 31, 1997

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

Re: SK Lab Project #97-232
Project ID Name: Oakland, CA

Dear Greg:

Enclosed please find the analytical results for the sample received by SK Environmental Laboratory on 7/18/97.

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.

This report may not be reproduced except in its entirety.

If you have any questions concerning this analysis, or if we can be of further assistance, please contact me at 773-825-7351.

Sincerely,

Richard H. Cook
Environmental Section Leader

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

12555 W. Old Higgins Road
Elk Grove Village, IL 60007
Telephone: 773/694-2700
Fax: 773/825-7850

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

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 Pre	7/17/97	7/28/97	<50
02	MW-3 Pre	7/17/97	7/28/97	<50
03	MW-4 Pre	7/17/97	7/28/97	<50
04	MW-8 Pre	7/17/97	7/28/97	<50
05	MW-2 Post	7/17/97	7/28/97	<50
06	MW-3 Post	7/17/97	7/28/97	<50
07	MW-4 Post	7/17/97	7/28/97	<50
08	MW-8 Post	7/17/97	7/28/97	<50
09	MW-8D	7/17/97	7/28/97	<50

Analytical Review / Date: 7/31/97

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8010

Work Order #		01	02	03	04
Collector's Sample #		MW-2 Pre	MW-3 Pre	MW-4 Pre	MW-8 Pre
Date Sampled		7/17/97	7/17/97	7/17/97	7/17/97
Date Analyzed		7/21/97	7/21/97	7/21/97	7/21/97
Dilution Factor		1	1	1	1
Analyte	Report Limit ug/L	Concentration µg/L			
Benzyl Chloride	1	<1	<1	<1	<1
Bromobenzene	1	<1	<1	<1	<1
Bromodichloromethane	1	<1	<1	<1	<1
Bromoform	1	<1	<1	<1	<1
Bromomethane	1	<1	<1	<1	<1
Carbon Tetrachloride	1	<1	<1	<1	<1
Chlorobenzene	1	<1	<1	<1	1.3
Chloroethane	1	<1	<1	<1	<1
Chloroform	1	<1	<1	2.5	3.2
Chloromethane	1	<1	<1	<1	<1
Chlorotoluene	1	<1	<1	<1	<1
Dibromochloromethane	1	<1	<1	<1	<1
Dibromomethane	1	<1	<1	<1	<1
1,2-Dichlorobenzene	1	<1	<1	<1	1.4
1,3-Dichlorobenzene	1	<1	<1	<1	<1
1,4-Dichlorobenzene	1	<1	<1	<1	<1
Dichlorodifluoromethane	1	<1	<1	<1	<1
1,1-Dichloroethane	1	<1	<1	<1	<1
1,2-Dichloroethane	1	<1	<1	<1	3.5
1,1-Dichloroethylene	1	<1	<1	6.7	<1
cis-1,2-Dichloroethylene	1	<1	<1	6.6	38.6 *

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8010

Work Order #		01	02	03	04
Collector's Sample #		MW-2 Pre	MW-3 Pre	MW-4 Pre	MW-8 Pre
Date Sampled		7/17/97	7/17/97	7/17/97	7/17/97
Date Analyzed		7/21/97	7/21/97	7/21/97	7/21/97
Dilution Factor		1	1	1	1
Analyte	Report Limit µg/L	Concentration µg/L			
trans-1,2-Dichloroethylene	1	<1	<1	<1	2.3
Dichloromethane	1	<1	<1	<1	<1
1,2-Dichloropropane	1	<1	<1	<1	<1
trans-1,3-Dichloropropylene	1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	1	<1	<1	<1	<1
Tetrachloroethylene	1	<1	<1	<1	1.2
1,1,1-Trichloroethane	1	<1	<1	1.6	<1
1,1,2-Trichloroethane	1	<1	<1	<1	<1
Trichloroethylene	1	<1	<1	136.8 *	803 *
Trichlorofluoromethane	1	<1	<1	<1	<1
Trichloropropane	1	<1	<1	<1	<1
Vinyl Chloride	1	<1	<1	<1	<1

* Diluted so result is within the calibration curve.

Analytical Review / Date: 7/31/97

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8020

Work Order #		01	02	03	04
Collector's Sample #		MW-2 Pre	MW-3 Pre	MW-4 Pre	MW-8 Pre
Date Sampled		7/17/97	7/17/97	7/17/97	7/17/97
Date Analyzed		7/21/97	7/21/97	7/21/97	7/21/97
Dilution Factor		1	1	1	1
Analyte	Report Limit ug/L	Concentration ug/L			
Benzene	1	<1	<1	<1	<1
Ethylbenzene	1	<1	<1	<1	<1
Toluene	1	<1	<1	<1	<1
Xylenes	1	<1	<1	<1	<1

Analytical Review / Date: 7/31/97

Project ID Name: Oakland, CA

SK Lab Project #: 97-232

Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8010

	Work Order #	05	06	07	08
	Collector's Sample #	MW-2 Post	MW-3 Post	MW-4 Post	MW-8 Post
	Date Sampled	7/17/97	7/17/97	7/17/97	7/17/97
	Date Analyzed	7/22/97	7/21/97	7/24/97	7/24/97
	Dilution Factor	1	1	1	1
Analyte	Report Limit ug/L	Concentration ug/L			
Benzyl Chloride	1	<1	<1	<1	<1
Bromobenzene	1	<1	<1	<1	<1
Bromodichloromethane	1	<1	<1	<1	<1
Bromoform	1	<1	<1	<1	<1
Bromomethane	1	<1	<1	<1	<1
Carbon Tetrachloride	1	<1	<1	<1	<1
Chlorobenzene	1	<1	<1	<1	**1.7**
Chloroethane	1	<1	<1	<1	<1
Chloroform	1	<1	<1	**1.7**	**2.6**
Chloromethane	1	<1	<1	<1	<1
Chlorotoluene	1	<1	<1	<1	<1
Dibromochloromethane	1	<1	<1	<1	<1
Dibromomethane	1	<1	<1	<1	<1
1,2-Dichlorobenzene	1	<1	<1	<1	**1.7**
1,3-Dichlorobenzene	1	<1	<1	<1	<1
1,4-Dichlorobenzene	1	<1	<1	<1	<1
Dichlorodifluoromethane	1	<1	<1	<1	<1
1,1-Dichloroethane	1	<1	<1	<1	**1.0**
1,2-Dichloroethane	1	<1	<1	<1	**3.5**
1,1-Dichloroethylene	1	<1	<1	**6.8**	**1.2**
cis-1,2-Dichloroethylene	1	<1	<1	**6.5**	**42.4 ***

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8010

Work Order #		05	06	07	08
Collector's Sample #		MW-2 Post	MW-3 Post	MW-4 Post	MW-8 Post
Date Sampled		7/17/97	7/17/97	7/17/97	7/17/97
Date Analyzed		7/22/97	7/21/97	7/24/97	7/24/97
Dilution Factor		1	1	1	1
Analyte	Report Limit ug/L	Concentration ug/L			
trans-1,2-Dichloroethylene	1	<1	<1	<1	2.3
Dichloromethane	1	<1	<1	<1	<1
1,2-Dichloropropane	1	<1	<1	<1	<1
trans-1,3-Dichloropropylene	1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	1	<1	<1	<1	<1
Tetrachloroethylene	1	<1	<1	<1	1.2
1,1,1-Trichloroethane	1	<1	<1	<1	<1
1,1,2-Trichloroethane	1	<1	<1	<1	<1
Trichloroethylene	1	<1	<1	161.7 *	792 *
Trichlorofluoromethane	1	<1	<1	<1	<1
Trichloropropane	1	<1	<1	<1	<1
Vinyl Chloride	1	<1	<1	<1	<1

* Diluted so result is within the calibration curve.

Analytical Review / Date: 7/31/97

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8020

Work Order #		05	06	07	08
Collector's Sample #		MW-2 Post	MW-3 Post	MW-4 Post	MW-8 Post
Date Sampled		7/17/97	7/17/97	7/17/97	7/17/97
Date Analyzed		7/22/97	7/21/97	7/24/97	7/24/97
Dilution Factor		1	1	1	1
Analyte	Report Limit µg/L	Concentration µg/L			
Benzene	1	<1	<1	<1	<1
Ethylbenzene	1	<1	<1	<1	<1
Toluene	1	<1	<1	<1	<1
Xylenes	1	<1	<1	<1	<1

Analytical Review / Date: 7/31/97

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8010

	Work Order #	09	10
	Collector's Sample #	MW-8D	Trip Blank
	Date Sampled	7/17/97	7/17/97
	Date Analyzed	7/24/97	7/24/97
	Dilution Factor	1	1
Analyte	Report Limit ug/L	Concentration ug/L	
Benzyl Chloride	1	<1	<1
Bromobenzene	1	<1	<1
Bromodichloromethane	1	<1	<1
Bromoform	1	<1	<1
Bromomethane	1	<1	<1
Carbon Tetrachloride	1	<1	<1
Chlorobenzene	1	**2.0**	<1
Chloroethane	1	<1	<1
Chloroform	1	**3.0**	<1
Chloromethane	1	<1	<1
Chlorotoluene	1	<1	<1
Dibromochloromethane	1	<1	<1
Dibromomethane	1	<1	<1
1,2-Dichlorobenzene	1	**1.9**	<1
1,3-Dichlorobenzene	1	<1	<1
1,4-Dichlorobenzene	1	<1	<1
Dichlorodifluoromethane	1	<1	<1
1,1-Dichloroethane	1	**1.0**	<1
1,2-Dichloroethane	1	**4.0**	<1
1,1-Dichloroethylene	1	**1.2**	<1
cis-1,2-Dichloroethylene	1	**45.0** *	<1

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8010

		Work Order #	09	10
		Collector's Sample #	MW-8D	Trip Blank
		Date Sampled	7/17/97	7/17/97
		Date Analyzed	7/24/97	7/24/97
		Dilution Factor	1	1
Analyte	Report Limit µg/L		Concentration µg/L	
trans-1,2-Dichloroethylene	1		**3.6**	<1
Dichloromethane	1		<1	<1
1,2-Dichloropropane	1		<1	<1
trans-1,3-Dichloropropylene	1		<1	<1
1,1,2,2-Tetrachloroethane	1		<1	<1
1,1,1,2-Tetrachloroethane	1		<1	<1
Tetrachloroethylene	1		**1.2**	<1
1,1,1-Trichloroethane	1		<1	<1
1,1,2-Trichloroethane	1		<1	<1
Trichloroethylene	1		**818** *	<1
Trichlorofluoromethane	1		<1	<1
Trichloropropane	1		<1	<1
Vinyl Chloride	1		**1.5**	<1

* Diluted so result is within the calibration curve.

Analytical Review / Date: 7/31/97

Project ID #: 70005-009
Project ID Name: Oakland, CA
SK Lab Project #: 97-232
Date Reported: 7/31/97

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8020

	Work Order #	09	10
	Collector's Sample #	MW-8D	Trip Blank
	Date Sampled	7/17/97	7/17/97
	Date Analyzed	7/24/97	7/24/97
	Dilution Factor	1	1
Analyte	Report Limit µg/L	Concentration µg/L	
Benzene	1	<1	<1
Ethylbenzene	1	<1	<1
Toluene	1	<1	<1
Xylenes	1	<1	<1

Analytical Review / Date: 7/31/97

Chain-of Custody Number: 97-2?-?6

SECOR Chain-of Custody Record

(VOA ...)

Field Office: CONCORD

Address: 1390 Willow Pass Rd. 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 Task # ______

Project Manager GREG HOEHN

Laboratory SK

Turnaround Time STANDARD

Sampler's Name R. NAVEGO

Sampler's Signature [signature]

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 mineral spirits TPH-G + TPH-D 8015	BTEX-8020	Comments/ Instructions	Number of Containers
01	MW-2 PRE	7/17/97	9:25	Water							X						X	X	9705325	4
02	MW-3 PRE	"	7:35	"							X						X	X	5326	4
03	MW-4 PRE	"	8:45	"							X						X	X	5327	4
04	MW-8 PRE	"	10:50	"							X						X	X	5328	4
05	MW-2 POST	"	10:10	"							X						X	X	5329	4
06	MW-3 POST	"	7:50	"							X						X	X	5330	4
07	MW-4 POST	"	9:10	"							X						X	X	5331	4
08	MW-8 POST	"	11:00	"							X						X	X	5332	4
09	MW-8D	"	11:30	"							X						X	X	5333	4
10	TRIP BLANK	"	—	"							X							X	5334	1

Special Instructions/Comments:

Relinquished by:	Received by:
Sign [signature]	Sign [signature]
Print R. NAVEGO	Print [illegible]
Company SECOR	Company
Time ______ Date 7/17/97	Time 11AM Date 7/18/97

Relinquished by:	Received by:
Sign	Sign
Print	Print
Company	Company
Time ______ Date ______	Time ______ Date ______

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: 7/17/97 Page 1 of 1