

**QUARTERLY PROGRESS REPORT
DECEMBER 1998 - FEBRUARY 1999
SAFETY-KLEEN SYSTEMS, INC. SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA
EPA ID No. CAD053044053**

SECOR Job No. 70005-009-08

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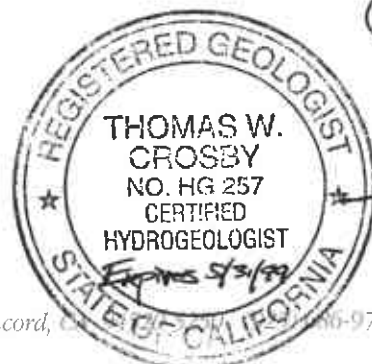
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1.0 INTRODUCTION

This Quarterly Progress Report has been prepared in accordance with the Safety-Kleen Systems, Inc. (Safety-Kleen) Hazardous Waste Facility Permit's reporting requirements. This report presents the results of groundwater monitoring and soil vapor extraction (SVE) system monitoring for the quarter of December 1998 through February 1999 at the Safety-Kleen Service Center located at 400 Market Street in Oakland, California (Figures 1 and 2).

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.

A product pumping system was installed in recovery well RW-1 to remove separate-phase product from the water table and 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. On August 5, 1998, the passive recovery skimmer was removed and oxygen releasing compound was suspended in RW-1 in an effort to enhance site remediation by oxidizing residual impacts in the vicinity of the USTs.

The SVE system consists of seven horizontal vapor extraction perforated pipelines 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 pipelines and the vapor treatment system.

2.1 Regulatory Status

The Safety-Kleen Oakland facility operates under a Hazardous Waste Facility Permit (Part B Permit; ID No. CAD053044053) which became effective on March 29, 1992. A RCRA Facility Assessment (RFA) performed by the Department of Toxic Substances Control (DTSC) identified three solid waste management units (SWMUs) and one area of concern (AOC) at the facility. The results of the RFA were transmitted in the RFA Report dated June 1993. The Corrective Action Module of the Part B Permit (Section V) specified the need to submit a RCRA Facility Investigation (RFI) Work Plan to assess impacts related to the three SWMUs and the AOC. The RFI Work Plan was submitted on February 1, 1996. The DTSC approved the RFI Work Plan in correspondence dated February 23, 1996. The RFI Work Plan summarized site characterization work conducted at the site to February 1996 for the AOC and SWMUs identified in the RFA.

Subsequent to approval of the RFI Work Plan, an RFI Report was submitted to the DTSC on March 27, 1996, and was approved by that agency in correspondence dated May 20, 1996. The RFI Report states that the extent of total petroleum hydrocarbons as mineral spirits (TPHms) and volatile organic compound (VOC) impact at the facility is well defined and that the site characterization activities have adequately assessed the subsurface in the vicinity of the USTs and the return and fill shelter. The investigations have determined that soil impact is present immediately adjacent to the UST pit and has migrated along the capillary fringe as far as monitoring well MW-8 (see Figure 2).

In a letter dated September 20, 1996, the California Environmental Protection Agency (Cal-EPA) - DTSC requested that Safety-Kleen prepare a Corrective Measures (CM) Report for the Oakland facility. Safety-Kleen submitted the CM Report on December 2, 1996. The purpose of the CM Report is to: (1) document the corrective measures which have been taken at the site to date, (2) evaluate the effectiveness of the corrective measures currently in use, and (3) provide an assessment of potential alternative methods. The CM Report is pending agency review.

Safety-Kleen is following the modified groundwater sampling schedule as described in the letter submitted on October 8, 1998, and as modified and approved by Alameda County Environmental Health Services in a response letter dated November 17, 1998. With the exception that monitoring well MW-9 continue to be sampled quarterly if no sheet or product is present in the well, the modified groundwater sampling schedule is to sample six wells semi-annually, all wells annually, and continue to collect depth-to-groundwater data quarterly.

3.0 SCOPE-OF-WORK

SVE activities conducted during this quarter consisted of the pulsed operation and maintenance of the SVE system. Groundwater monitoring work conducted during this quarter consisted of measuring depth-to-water in 11 groundwater monitoring wells as specified in the modified quarterly sampling schedule, approved by Alameda County Health Care Services in a correspondence dated November 17, 1998. As detailed in Safety-Kleen's correspondence dated December 18, 1998, monitoring well MW-9 was not sampled due to the presence of a hydrocarbon sheen on the water. The following sections provide a description of the activities 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 seven horizontal vapor extraction perforated pipelines (see Figure 3). The SVE system operated in approximately two-week cycles this quarter in an attempt to improve removal efficiency. 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). The results of the SVE system operation is presented in Section 4.1 and the monitoring data are summarized in Table 1.

3.2 Groundwater Monitoring

On January 22, 1999, all accessible monitoring wells were monitored for depth-to-water using a water-level indicator calibrated to 0.01-foot. The depth-to-water measurements were used with well survey data to calculate potentiometric surface elevations which were used to prepare a groundwater potentiometric surface map (Figure 4). Field data sheets that include depth-to-water measurements are included in Appendix A.

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.

4.0 RESULTS

4.1 Soil Vapor Extraction System

The results of SVE system monitoring conducted on December 11, 1998 through February 16, 1999 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. Based on the system monitoring data, the SVE system has continued to meet the Bay Area Air Quality Management District (BAAQMD) permit limits of 10 parts per million per unit volume (ppmv) in the system effluent, based on PID or FID readings.

4.2 Groundwater Elevations

Groundwater elevations and depth-to-water measurements for the January 22, 1999, event are presented in Table 2. The average water-table elevation on January 22, 1999 was 2.19 feet above mean sea level (amsl), a decrease of 0.04 feet since the October 1998 event. A groundwater potentiometric surface map prepared with this data is presented as Figure 4.

As shown in Figure 4, the on- and off-site groundwater flow direction remains to the southwest, consistent with historic site data. The hydraulic gradient was 0.0035 feet/foot (ft/ft) across the site as measured between monitoring wells MW-4 and MW-12. The hydraulic gradient is consistent with previous data for the site. A summary of groundwater elevations since January 1993 is provided as Table 3.

5.0 ACTIVITIES SCHEDULED FOR MARCH THROUGH MAY 1999

The following activities have been or are scheduled to be performed next quarter:

- On March 8, 1999, an *In Situ* Chemical Oxidation Work Plan was submitted for agency review and approval. The Work Plan details pilot test procedures which will be performed to evaluate the feasibility of using chemical oxidation to remediate residual VOC-impacts in groundwater at the facility. Safety-Kleen is proposing to perform this pilot study under the existing voluntary interim remedial activities being conducted at the site. Safety-Kleen will implement the Work Plan within one month of receiving approval from the RWQCB and/or Alameda County.
- In April 1999, perform the annual sampling event in accordance with the modified sampling program.

6.0 CERTIFICATION STATEMENT

Quarterly Progress Report
Safety-Kleen Systems, Inc., Service Center
400 Market Street
Oakland, California
CAD 053044053

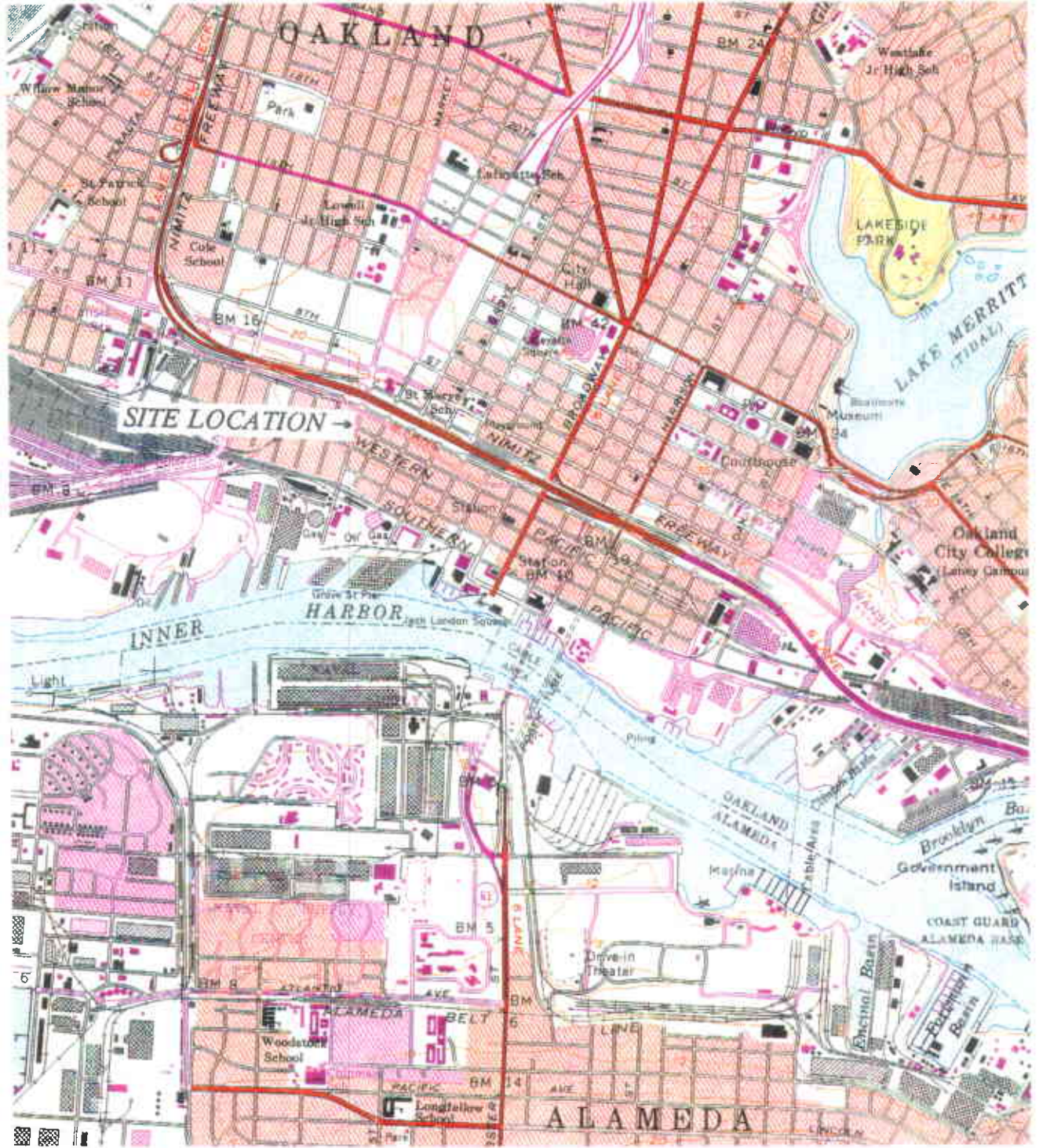
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Sara C. Brothers, CPG
Safety-Kleen Systems, Inc.
Senior Project Manager - Remediation

4/5/99
Date

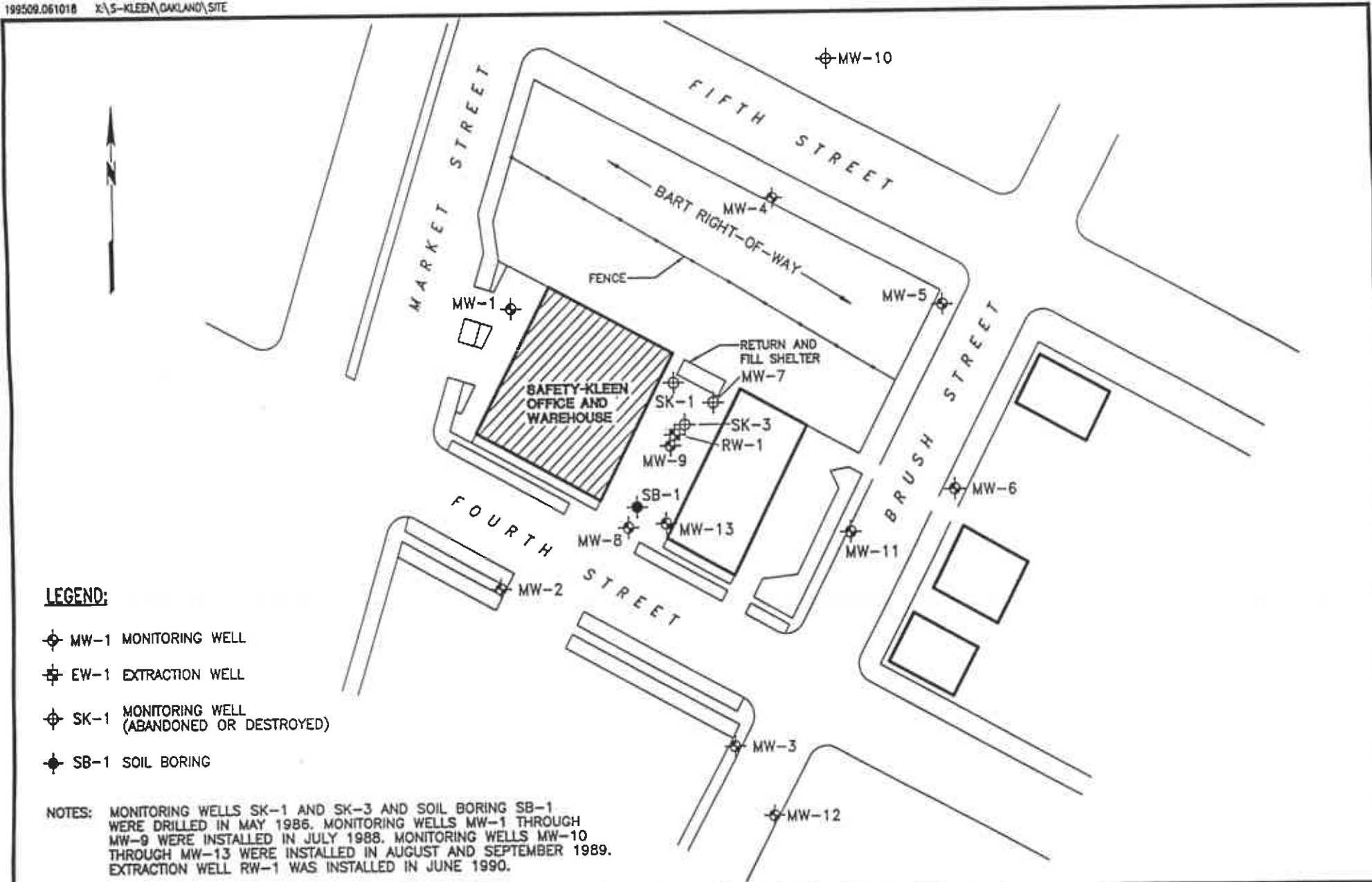
OAKLAND WEST QUADRANGLE
California
7.5 Minute Series (Topographic)



SCALE 1:24 000



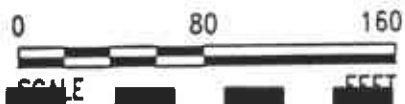
DRAFTED BY: TS	CHECKED BY: GDH	PROJECT NO. 70005-009	FIGURE 1	SECOR 1390 Willow Pass Road Suite 360 Concord, CA 94520
DWG. DATE: 04-05-94	REV. DATE: 06-15-95			
FILE NAME: Oakland7.F01				



LEGEND:

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

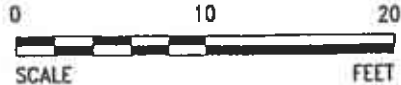
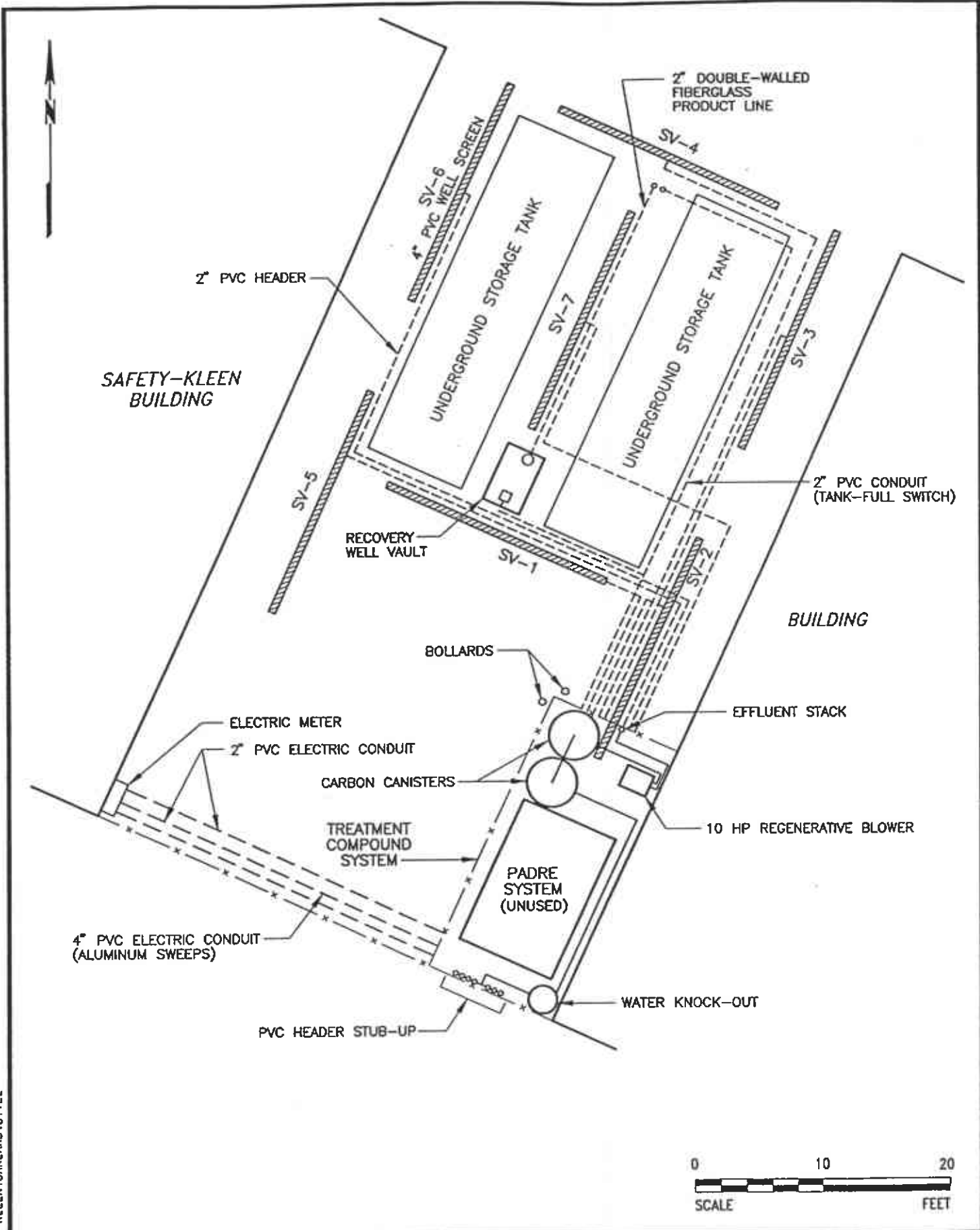
NOTES: MONITORING WELLS SK-1 AND SK-3 AND SOIL BORING SB-1 WERE DRILLED IN MAY 1986. MONITORING WELLS MW-1 THROUGH MW-9 WERE INSTALLED IN JULY 1988. MONITORING WELLS MW-10 THROUGH MW-13 WERE INSTALLED IN AUGUST AND SEPTEMBER 1989. EXTRACTION WELL RW-1 WAS INSTALLED IN JUNE 1990.



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

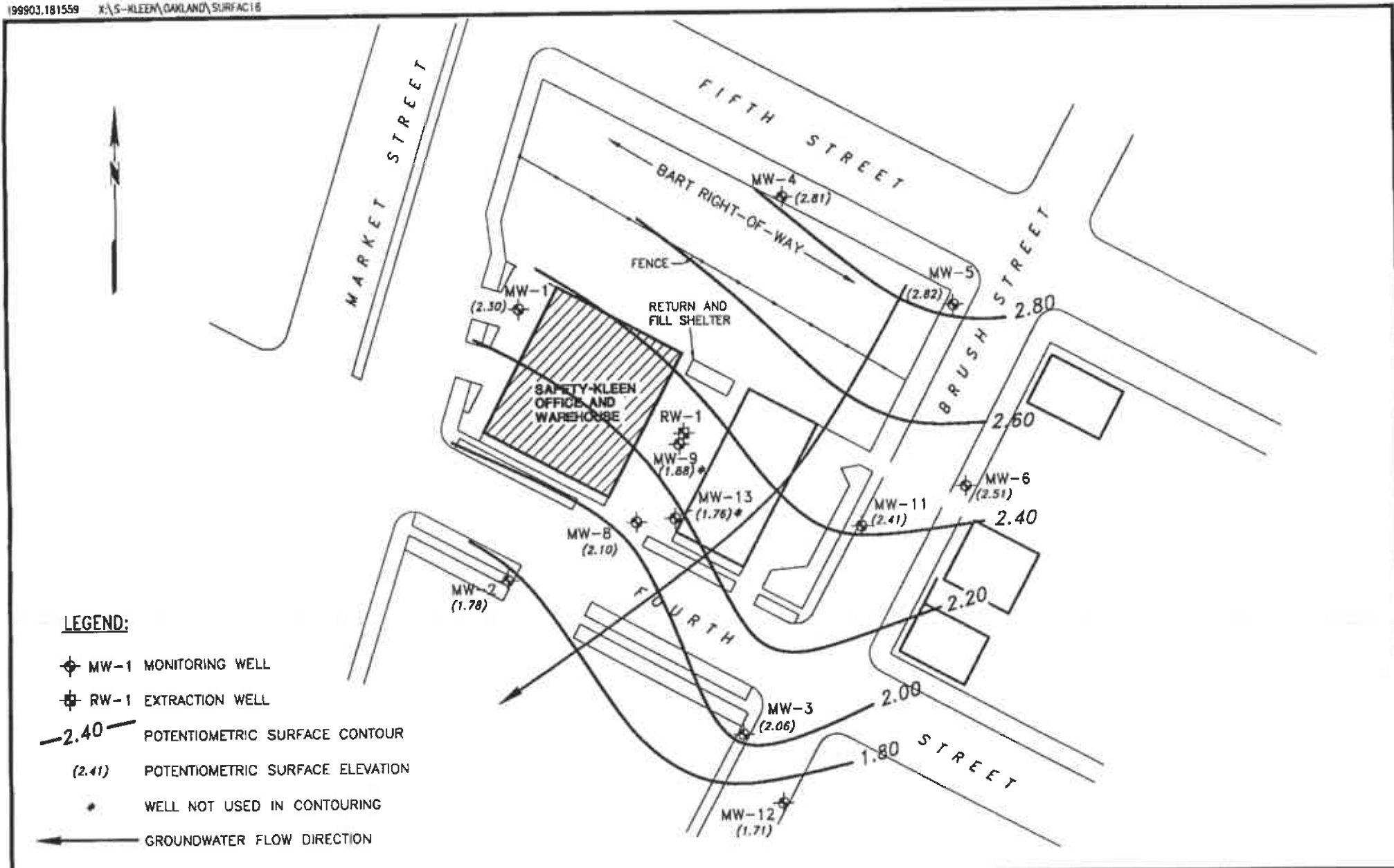


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FIGURE 3
SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA
**SOIL VAPOR EXTRACTION
SYSTEM LAYOUT**



LEGEND:

◆ MW-1 MONITORING WELL

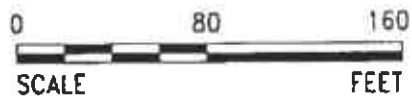
⊕ RW-1 EXTRACTION WELL

— 2.40 — POTENTIOMETRIC SURFACE CONTOUR

(2.41) POTENTIOMETRIC SURFACE ELEVATION

• WELL NOT USED IN CONTOURING

← GROUNDWATER FLOW DIRECTION



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FIGURE 4
SAFETY-KLEEN SYSTEMS, INC.
400 MARKET STREET
OAKLAND, CALIFORNIA
POTENTIOMETRIC SURFACE MAP
JANUARY 22, 1999

Table 1
Soil Vapor Extraction System Monitoring Data

Safety-Kleen Systems, Inc. Service Center
400 Market Street
Oakland, California

Date	Elapsed Time* (hours)	Well Extraction Vacuum (inches H2O)	KO Vacuum (inches H2O)	Extraction Flow Rate (ft/min) (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	5	6	* System restarted using carbon adsorption on 11/28/95.
12/21/95	677	6	20	5000	107	80	36	1	1	Influent and Effluent samples collected
01/09/96	1134	9	22	5000	106	169	42	3	2	Influent and Effluent samples collected
01/24/95	1489	5.5	17	2200	47	43	43	24	6	
02/06/96	1803	5	16	6000	129	63	61	33	16	Influent and Effluent samples collected
02/21/96	2158	8	20	5500	117	60	48	38	8	
03/08/96	2540	10	23	5000	106	184	52	45	16	Influent and Effluent samples collected
03/20/96	2635	12	23	5000	106	430	362	311	22	
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	NM	24	5000	109	109	45	0	0	Influent and Effluent samples collected
05/16/96	3934	NM	23	5000	109	117	151	3	1	
05/31/96	4289	0.15	25	5000	109	54	61	1	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	1	0	Influent and Effluent samples collected
09/03/96	5760	0.15	16	3500	76	131	0	0	0	
09/26/96	6316	8	15	3550	76	165	30	1	2	Influent and Effluent samples collected
10/03/96	6478	8	15	3000	64	231	70	42	13	

Table 1
Soil Vapor Extraction System Monitoring Data

Safety-Kleen Systems, Inc. Service Center
400 Market Street
Oakland, California

Date	Elapsed Time* (hours)	Well Extraction Vacuum (inches H2O)	KO Vacuum (inches H2O)	Extraction Flow Rate (ft/min) (scfm)		System Influent (PID/FID units)	#1 Carbon Effluent (PID/FID units)	#2 Carbon Effluent (PID/FID units)	System Effluent (PID/FID units)	Notes
10/10/96	6645	8	15	3500	75	269	189	21	13	Influent and Effluent samples collected
10/22/96	6939	7	15	3000	64	480	442	2	1	Influent and Effluent samples collected
10/29/96	71040	8	16	4000	85	149	143	8	1	
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	53	0	0	
12/18/96	8299	0.14	26	5500	120	51	55	5	5	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	111	4	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	2	
04/10/97	10941	19	34	4000	83	15	33	4	3	
05/01/97	11440	23	30	3000	62	5	3	1	0	Influent and Effluent samples collected
05/14/97	11752	31	38	2000	40	19	17	9	0	
05/16/97	11798	NM	NM	NM	NM	NM	NM	NM	NM	System shutdown for carbon changeout
06/05/97	11798	20	30	8000	165	35	17	2	2	Carbon Changeout, Restart System, Influent and Effluent samples collected
06/17/97	12090	NM	30	8500	185	23	0	0	0	Shutdown system
06/30/97	12091	NM	29	4200	91	110	1	0	0	Restart system, Influent and Effluent samples collected

Table 1
Soil Vapor Extraction System Monitoring Data

Safety-Kleen Systems, Inc. Service Center
400 Market Street
Oakland, California

Date	Elapsed Time* (hours)	Well Extraction Vacuum (inches H2O)	KO Vacuum (inches H2O)	Extraction Flow Rate (ft/min) (scfm)		System Influent (PID/FID units)	#1 Carbon Effluent (PID/FID units)	#2 Carbon Effluent (PID/FID units)	System Effluent (PID/FID units)	Notes
07/17/97	12496	NM	28	4800	104	6	0	0	0	Shutdown system
07/30/97	12497	NM	28	8000	174	19	0	0	0	Restart system, Influent and Effluent samples collected
08/13/97	12837	NM	27	8500	185	12	0	0	0	Shutdown system
08/28/97	12837	18	30	8000	166	35	2	1	0	Restart system, Influent and Effluent samples collected
09/10/97	13148	> 1	29	8250	179	9	0	0	0	Shutdown system
09/24/97	13149	NM	27	4000	87	25	0	0	0	Restart system, Influent and Effluent samples collected
10/08/97	13488	NM	26	8000	174	9	0	0	0	Shutdown system
10/23/97	13488	16	29	8000	167	25	4	0	0	Restart system, Influent and Effluent samples collected
11/14/97	14018	NM	28	8000	174	68	0	0	0	Shutdown system
11/26/97	14020	10	29	8000	170	6	22	0	0	Restart system
12/11/97	14377	15	30	10000	210	0	0	0	0	Influent and Effluent samples collected, Shutdown system
12/22/97	14378	18	30	10000	208	20	1	1	1	Restart system, Influent and Effluent samples collected
01/06/98	14742	6.5	28	NM	-	2	0	0	0	Shutdown system
03/17/98	14743	58	42	10000	187	0	0	0	0	Restart system, Influent and Effluent samples collected
04/06/98	15222	24	30	10000	205	33	4	4	1	Shutdown system
04/28/98	15222	6.5	23	NM	-	17	2	2	0	Restart system, Influent and Effluent samples collected
05/19/98	15731	> 1	43	NM	-	3	2	3	0	Shutdown system
05/28/98	15731	34	40	10000	199	4	1	0	0	Restart system, Influent and Effluent samples collected
06/12/98	16090	40	51	10000	196	3	3	2	0	Shutdown system
06/25/98	16091	7.5	9	NM	-	3	3	2	0	Restart system

Table 1
Soil Vapor Extraction System Monitoring Data

Safety-Kleen Systems, Inc. Service Center
400 Market Street
Oakland, California

Date	Elapsed Time* (hours)	Well Extraction Vacuum (inches H2O)	KO Vacuum (inches H2O)	Extraction Flow Rate (ft/min) (scfm)		System Influent (PID/FID units)	#1 Carbon Effluent (PID/FID units)	#2 Carbon Effluent (PID/FID units)	System Effluent (PID/FID units)	Notes
07/10/98	16452	1.5	9	NM	-	3	0	0	0	Shutdown system
07/21/98	16453	1	8	NM	-	2	0	0	0	Restart system
08/05/98	16809	7	2.5	NM	-	3	0	0	0	Shutdown system
08/20/98	16809	30	30	10000	202	17	1	0	0	Restart system
09/10/98	17316	20	30	10000	207	10	4	2	0	System left running
10/02/98	17839	27	31	10000	203	1	1	0	0	Shutdown system
10/26/98	17839	22	32	10000	206	15	6	3	0	Restart system
11/11/98	18226	24	32	10000	205	5	2	1	1	Shutdown system
12/11/98	18226	28	35	10000	203	8	2	1	1	Restarted system
12/22/98	18491	26	35	10000	204	12	2	1	1	
01/05/99	18825	24	37	10000	205	1	1	1	1	Shutdown system
01/22/99	18827	28	40	10000	203	17	3	1	0	Restarted system
02/16/99	19423	36	47	10000	198	67	3	3	1	Shutdown system
03/03/99	19423	35	46	10000	199	8	1	1	0	Restarted system
03/12/99	19638	30	40	10000	202	1	1	0	0	Shutdown system

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

Table 2
Groundwater Monitoring Data
January 22, 1999

Safety-Kleen Systems, Inc. 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	5.69	-	-	2.30
MW-2	8.20	6.42	-	-	1.78
MW-3	6.66	4.60	-	-	2.06
MW-4	10.32	7.51	-	-	2.81
MW-5	10.28	7.46	-	-	2.82
MW-6	8.97	6.46	-	-	2.51
MW-7*	-	-	-	-	-
MW-8	7.80	5.70	-	-	2.10
MW-9	8.21	6.33	6.32	0.01	1.88
MW-10**	-	-	-	-	-
MW-11	7.91	5.50	-	-	2.41
MW-12	6.74	5.03	-	-	1.71
MW-13	8.08	6.32	-	-	1.76
RW-1	-	5.16	-	-	-

Notes:

- * Well destroyed in May 1990.
- ** Well destroyed in July 1995.

TOC = Top-of-casing
DTW = Depth-to-water
DTP = Depth-to-product
PT = Product thickness
ft msl = Feet relative to mean sea level

Table 3
Historical Summary of Groundwater Elevations
(in feet relative to mean sea level)

Safety-Kleen Systems, Inc. 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
01/20/93	1.29	1	0.86	1.57	1.48	1.27	1.08	1.15	1.73	1.16	0.44	0.58
04/20/93	1.09	0.51	0.38	1.52	1.42	1.08	0.74	0.95	1.85	0.9	0.1	0.4
07/20/93	0.27	-0.23	-0.27	0.68	0.62	0.37	-0.01	-0.68	0.99	0.2	-0.72	-0.15
10/20/93	-0.02	-0.51	-0.66	0.32	0.17	-0.12	-0.35	0.14	0.62	-0.22	-0.91	-0.57
01/19/94	-0.01	-0.52	-0.77	0.33	0.48	-0.1	-0.37	-0.49	0.6	-0.14	-1.05	-0.65
04/20/94	0.55	0.05	-0.09	0.85	0.74	0.46	0.22	0.33	-	0.34	-0.76	-0.09
07/19/94	0.25	-0.2	-0.31	0.62	0.55	0.23	-0.03	0.08	0.9	0.09	-0.7	-0.22
10/19/94	0.08	-0.33	-0.44	0.41	0.38	0.12	-0.15	0.01	-	0.01	-0.59	-0.33
01/04/95	1.95	1.53	1.64	2.41	2.49	2.24	1.79	1.85	-	2.06	1.44	1.33
04/10/95	3.09	2.46	2.49	3.71	3.73	3.42	2.79	2.95	-	3.18	2.22	1.98
07/11/95	2.04	1.53	1.53	2.54	2.5	2.26	1.76	1.93	-	2.01	1.33	1.53
10/12/95	1.38	0.94	1.01	1.81	1.27	1.56	1.15	1.32	-	1.42	0.94	1.06
01/09/96	1.82	1.4	0.64	2.21	2.21	2.04	1.61	1.54	-	1.85	-	1.51

Table 3
Historical Summary of Groundwater Elevations
(in feet relative to mean sea level)

Safety-Kleen Systems, Inc. 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
04/02/96	2.81	2.4	2.46	3.33	3.36	3.17	2.58	2.51	-	2.91	2.24	2.38
07/01/96	2.16	1.7	1.75	2.67	2.63	2.35	1.9	1.93	-	2.18	-	1.84
11/01/96	1.09	0.7	0.75	1.47	1.47	1.18	0.9	0.86	-	-	-	0.78
01/17/97	2.89	2.39	2.58	3.48	3.52	3.34	2.7	2.57	-	-	-	2.5
04/10/97	2.43	1.89	1.99	2.92	2.86	2.53	2.18	2.19	-	2.45	1.71	1.99
07/17/97	1.7	1.19	1.25	2.15	2.12	1.86	1.44	1.29	-	-	1.12	1.35
10/08/97	1.4	0.94	0.97	1.79	1.76	1.51	1.16	1.35	-	-	0.84	1.06
01/12/98	3.02	2.99	3.12	3.45	3.49	3.34	2.89	2.63	-	3.15	2.5	2.48
04/13/98	3.92	3.2	3.43	4.77	4.5	4.17	3.63	3.91	-	3.91	3.08	3.37
07/21/98	2.79	2.15	2.13	3.37	3.37	3.05	2.5	2.71	-	2.85	2.21	2.35
10/12/98	2.28	1.68	1.79	2.97	2.9	2.55	2.04	1.47	-	2.33	1.72	1.93
01/22/99	2.3	1.78	2.06	2.81	2.82	2.51	2.1	1.88	-	2.41	1.71	1.76

Notes:

Groundwater elevations are in feet relative to mean sea-level datum.

- = Not measured

HYDROLOGIC DATA SHEET

PROJECT: SAFETY-KLEEN 400 MARKET STREET OAKLAND, CALIFORNIA				PROJECT NO.: 70005-009-07 TASK: 001			
DATE: 1/22/99		TIME START: 11:30		TIME END: 13:35			
EVENT: QUARTERLY/SEMI-ANNUAL/ANNUAL MONITORING AND SAMPLING				PERSONNEL: GARY CLIFT			
WELL ID	TOC	DTW	DTP	PT	TD	ELEV.	COMMENTS
MW-1	7.99	5.69	-	-		2.30	2"
MW-2	8.20	6.42	-	-		1.78	2"
MW-3	6.66	4.60	-	-		2.00	2"
MW-4	10.32	7.51	-	-		2.81	2"
MW-5	10.28	7.46	-	-		2.52	2"
MW-6	8.97	6.46	-	-		2.57	2"
MW-8	7.80	5.70	-	-		2.1	2"
MW-9	8.21	6.33	6.32	.01		1.88	Shoen 4"
MW-11	7.91	5.50	-	-		2.41	Td 6.45 2"
MW-12	6.74	5.03	-	-		1.71	2"
MW-13	8.08	6.32	-	-		1.76	4"(deep well)
RW-1	-	5.16					10"
NOTES: S-K Laboratory P.O. Number - E11819 * MW-9 - Shoen checked with Bailer to confirm							

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)