

**QUARTERLY PROGRESS REPORT
SEPTEMBER - NOVEMBER 1999
SAFETY-KLEEN SYSTEMS, INC. SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA
EPA ID NO. CAD053044053**

SECOR Job No. 007.03788

12-21-99

Submitted By:

SECOR International Incorporated
1390 Willow Pass Road, Suite 360
Concord, CA 94520
925/ 686-9780

Prepared For:

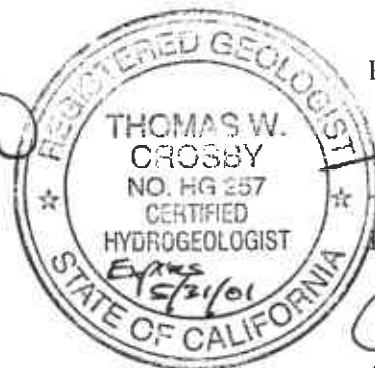
Sara Brothers
Safety-Kleen Systems, Inc.
5219 Guadalupe Trail, NW
Albuquerque, New Mexico 87107
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December 21, 1999

Prepared by:

Nyree Melancon

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Assistant Geologist



Reviewed by:

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Principal Engineering Geologist

Greg D. Hoehn
Greg D. Hoehn
Principal Geologist



December 13, 1999

Via Certified Mail No. Z 264 569 944

Mr. Robert M. Senga, Unit Chief
California Environmental Protection Agency
Department of Toxic Substances Control
Southern California Region
5796 Corporate Avenue
Cypress, California 90630

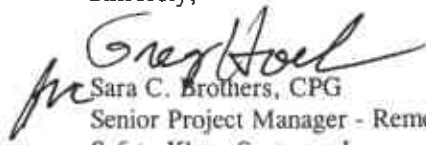
Re: **Quarterly Progress Report
September through November 1999
Safety-Kleen Systems, Inc., Service Center
400 Market Street
Oakland, California**

Dear Mr. Senga:

Enclosed are three copies of the Quarterly Progress Report which summarizes the groundwater monitoring and vapor extraction activities conducted at the above-referenced facility. This report covers the period of September through November 1999. Safety-Kleen Systems, Inc. (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. As requested by Alameda County, Safety-Kleen will sample monitoring well MW-9 quarterly as long as no sheen or measurable product is present in the well.

Additional groundwater sampling was performed this quarter to provide background water quality data, prior to implementing the *in-situ* chemical oxidation pilot study. The Pilot study was implemented on November 1, 1999. If you have any questions or require any additional information, please contact me at (505) 888-3952.

Sincerely,


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

Enclosure

cc: Steven LuQuire, Safety-Kleen
Heather Collins, Safety-Kleen
Branch Environmental File (999)
Larry Seto, Alameda County Environmental Health Services
Loretta Barsamian, California Regional Water Quality Control Board
Greg Hoehn, SECOR International Incorporated

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ENVIRONMENTAL PROTECTION

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December 8, 1999
SECOR Job No. 007.03788



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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 and sampling for the quarter of September through November 1999 at the Safety-Kleen Service Center located at 400 Market Street in Oakland, California (Figures 1 and 2). During the reporting period, the *in situ* chemical oxidation pilot study was implemented in accordance with the procedures detailed in the "In-Situ Chemical Oxidation Pilot Study Work Plan" dated March 8, 1999. The California Regional Water Quality Control Board - San Francisco Bay Region (CRWQCB), verbally approved the pilot study on September 30, 1999, and SECOR documented the conversation in a letter dated October 5, 1999.

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.

During the UST replacement program, underground piping was installed for use as a soil vapor extraction (SVE) network. 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 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 sheen 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.

On March 8, 1999, an "*In Situ* Chemical Oxidation Pilot Study Work Plan (Work Plan)" was submitted to the California Regional Water Quality Control Board - San Francisco Bay Region (RWQCB) and to Alameda County. The *in situ* chemical oxidation pilot study was implemented on November 1, 1999, and is ongoing.

3.0 SCOPE-OF-WORK

In order to provide background data prior to implementing the *in-situ* chemical oxidation pilot study, as part of this semi-annual event, groundwater samples were collected for analytical testing from 10 monitoring wells and the recovery well. SVE activities conducted during this quarter consisted of the pulsed operation and maintenance of the SVE system. Groundwater monitoring conducted during this quarter consisted of measuring depth-to-water in 11 groundwater monitoring wells and 1 recovery well on October 8, 1999. On November 1, 1999, the *in situ* chemical oxidation pilot study was implemented. The following sections provide a description of the activities conducted this report period.

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. SVE system samples were collected on October 19, 1999 for laboratory analysis at the influent and system effluent points. The results are discussed in Section 4.1 and presented on Table 2. The SVE system was shut off after sampling on October 19, 1999 and will remain off throughout the *in-situ* chemical oxidation pilot study.

3.2 Groundwater Monitoring and Sampling

On October 8, 1999, all monitoring wells were monitored for depth-to-water, and groundwater samples were collected from monitoring wells MW-1 through MW-6, MW-8, MW-9, MW-12, MW-13, and RW-1 for laboratory analysis. Monitoring wells MW-7 and MW-10 have been abandoned. Monitoring well MW-11 can no longer be sampled because tree roots have grown through the well casing and are obstructing the well. An equipment blank collected from the decontaminated pump was analyzed for quality assurance and quality control (QA/QC) purposes.

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 prepare a groundwater potentiometric surface map (Figure 4). Prior to collecting groundwater samples, the wells were purged using a low-flow submersible 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 minimal drawdown. Samples were collected after pH, temperature, conductivity, ORP, and dissolved oxygen had stabilized. The samples were placed into laboratory supplied sample containers, labeled, placed on ice in an insulated cooler, and logged onto the chain-of-custody manifests. 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 TPHms by EPA Method 8015 (modified) and for VOCs by EPA Method 8260. Additionally the samples were analyzed for total manganese and total chloride for background data, prior to implementing the chemical oxidation pilot study.

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 the waste mineral spirits UST pending transport for treatment at a Safety-Kleen recycle facility.

3.3 In-Situ Chemical Oxidation Pilot Study

On November 1, 1999, the *in-situ* chemical oxidation pilot study was implemented. The pilot study is being performed in accordance with the "In-Situ Chemical Oxidation Pilot Study Work Plan" dated March 8, 1999. The injection of potassium permanganate (KMnO₄) and subsequent monitoring was verbally approved by the RWQCB on September 30, 1999 and documented in a SECOR letter dated October 5, 1999. The study was implemented by injecting 440 pounds of KMnO₄ in solution (approximately 1000 gallons total) into recovery well RW-1. Groundwater characteristics including oxidation reduction potential, dissolved oxygen, pH, and electrical conductivity will be monitored in the recovery well and nearby monitoring wells to evaluate the effectiveness of the pilot study. Data will be reported in detail at the conclusion of the study.

4.0 RESULTS

4.1 Soil Vapor Extraction System

The results of SVE system monitoring conducted on September 13, 1999 through October 19, 1999 are summarized on Table 1, including 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. 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. For this quarter, SVE system influent and effluent vapor samples were collected on October 19, 1999. The results of analytical testing are summarized on Table 2.

The analysis of the influent sample collected on October 19, 1999, detected TPHms at a concentration of 50 milligrams per cubic meter (mg/m^3) and detected toluene and tetrachloroethene (PCE) at concentrations of $0.18 \text{ mg}/\text{m}^3$ and $16 \text{ mg}/\text{m}^3$, respectively. The system effluent detected TPHms at a concentration of $11 \text{ mg}/\text{m}^3$ and toluene at $0.1 \text{ mg}/\text{m}^3$ for the same date.

In an attempt to improve system efficiency, Safety-Kleen continued operating the SVE system this quarter in a pulsed (on/off) mode of approximately two-week cycles. Table 3 summarizes the estimated SVE system mineral spirits removal to date. Data collected from initial start-up through October 19, 1999, indicate a total of approximately 5514 pounds of mineral spirits have been removed from the subsurface by the SVE system; with approximately 29 pounds removed from July 20 through October 19, 1999. Copies of SVE system analytical reports are included as Appendix B.

After vapor sampling was completed on October 19, 1999, the SVE system operation was discontinued. The system will remain off throughout the duration of the chemical oxidation pilot study.

4.2 Groundwater Elevations

Groundwater elevations and depth-to-water measurements for the October 8, 1999, event are presented in Table 4. The average water-table elevation on October 8, 1999 was 1.71 feet above mean sea level (amsl), an increase of 0.34 feet since the July 1999 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 0.0038 feet/foot (ft/ft) across the site as measured between monitoring wells MW-4 and MW-2. The hydraulic gradient is consistent with previous data for the site. A summary of groundwater elevations since January 1993 is provided as Table 5.

4.3 Groundwater Conditions

A semi-annual and pre-pilot study background groundwater sampling event of monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, MW-6, MW-8, MW-9, MW-12, MW-13 and RW-1 was performed on October 8, 1999. Figure 5 depicts the chemical distribution in the groundwater

samples collected on October 8, 1999. A summary of analytical test results showing compounds detected since the April 1993 sampling event are presented in Table 6. Copies of the groundwater laboratory analytical reports are included in Appendix C.

The distribution and magnitude of the dissolved VOCs in groundwater are consistent with previous monitoring events with one exception. The compounds methyl-tert-butyl-ether; 1,3,5-trimethylbenzene; bromomethane; n-butylbenzene; sec-butylbenzene; carbon disulfide; iodomethane; isopropylbenzene; p-isopropylbenzene; and acetonitrile are new detections. The majority of these compounds were detected in wells MW-9 and RW-1, located within or on the edge of the tank cavity. These compounds were not included on laboratory reports for the site prior to April 1998 and recovery well RW-1 has not been sampled previously. Well RW-1 has historically had measurable product or a sheen present and is constructed within the tank cavity.

The duplicate sample (DUP-1) was collected from monitoring well MW-8. The compounds 1,2-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, and xylenes were detected in the duplicate sample at concentrations within 15% of the sample concentrations from monitoring well MW-8; however, the compounds 1,2-dichlorobenzene, 1,1,1-trichloroethane, and trichloroethene were within 40%. The compounds trans-1,2-dichloroethene, 1,2,4-trimethylbenzene, and vinyl chloride were detected in MW-8 but not detected in DUP-1, and naphthalene was detected in DUP-1 and not detected in MW-8. Acetone, toluene, and xylenes were detected at low concentrations (<5 µg/L) in the equipment blank (EB).

5.0 ACTIVITIES SCHEDULED FOR DECEMBER 1999 – FEBRUARY 2000

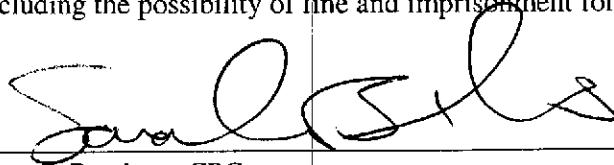
The following activities have been or are scheduled to be performed next quarter:

- Continue to monitor groundwater data in conjunction with the *in-situ* chemical oxidation pilot.

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.



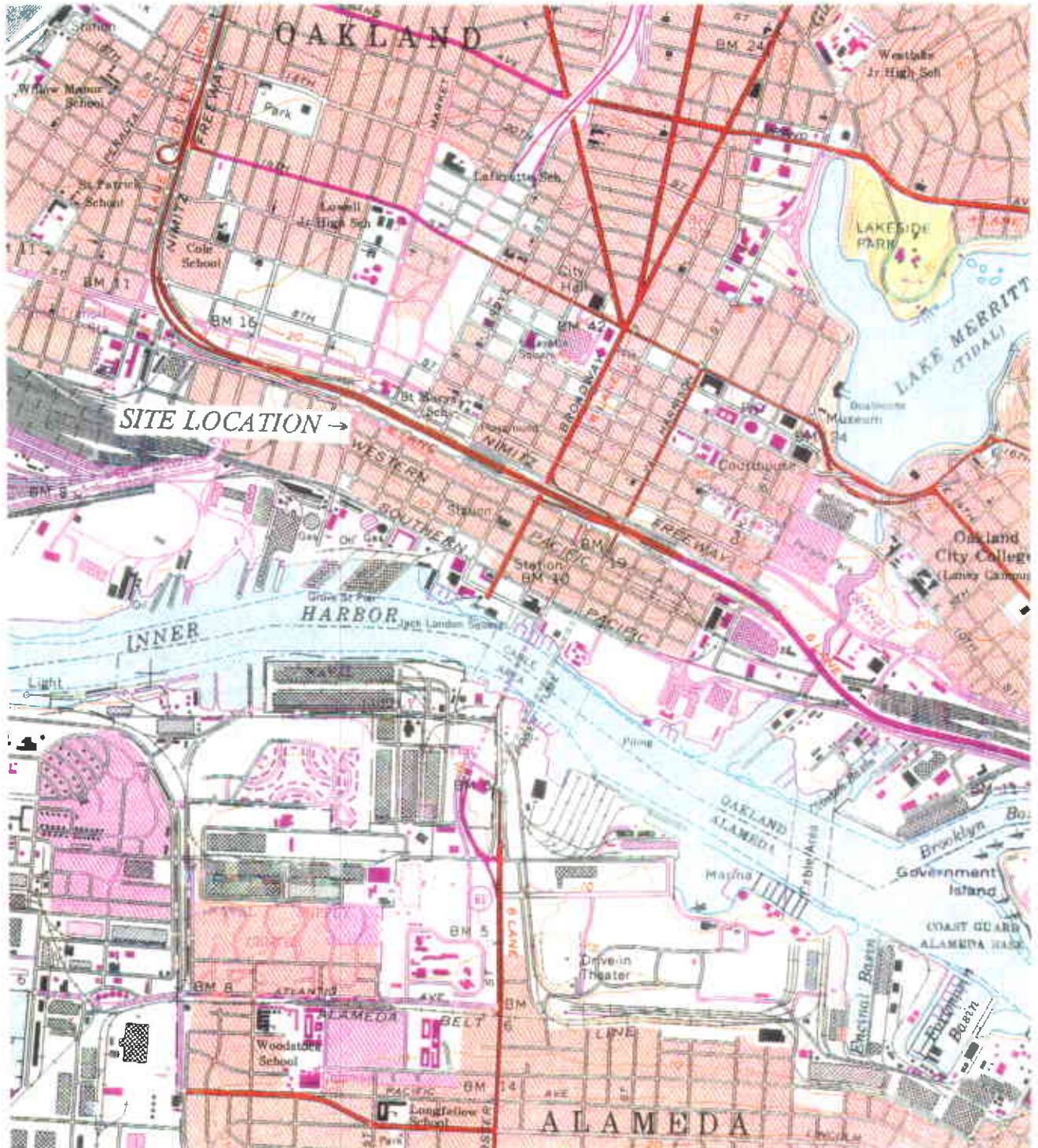
Sara C. Brothers, CPG
Safety-Kleen Systems, Inc.
Senior Project Manager - Remediation

12 | 21 | 99
Date

FIGURES

Quarterly Progress Report (July - September 1999)
SECOR International Incorporated
1390 Willow Pass Road, Suite 360
Concord, CA 94520
SECOR Job No. 007.50809.003
December 21, 1999

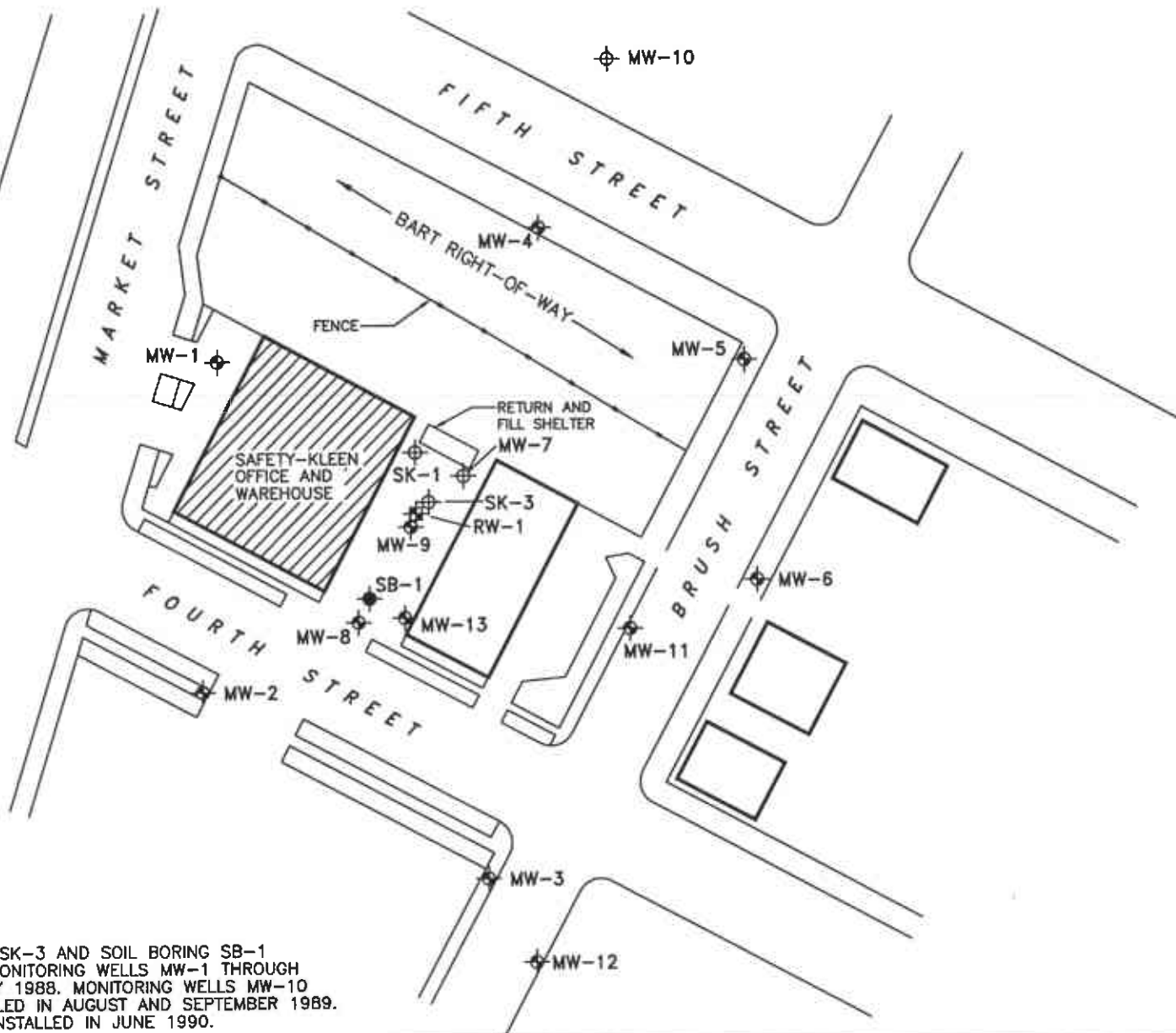
OAKLAND WEST QUADRANGLE
California
7.5 Minute Series (Topographic)



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				Safety-Kleen Corp. 400 Market Street Oakland, California	Site Location Map
FILE NAME: Oakland7.F01						



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.

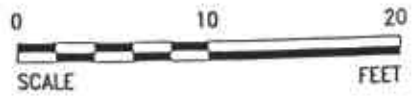
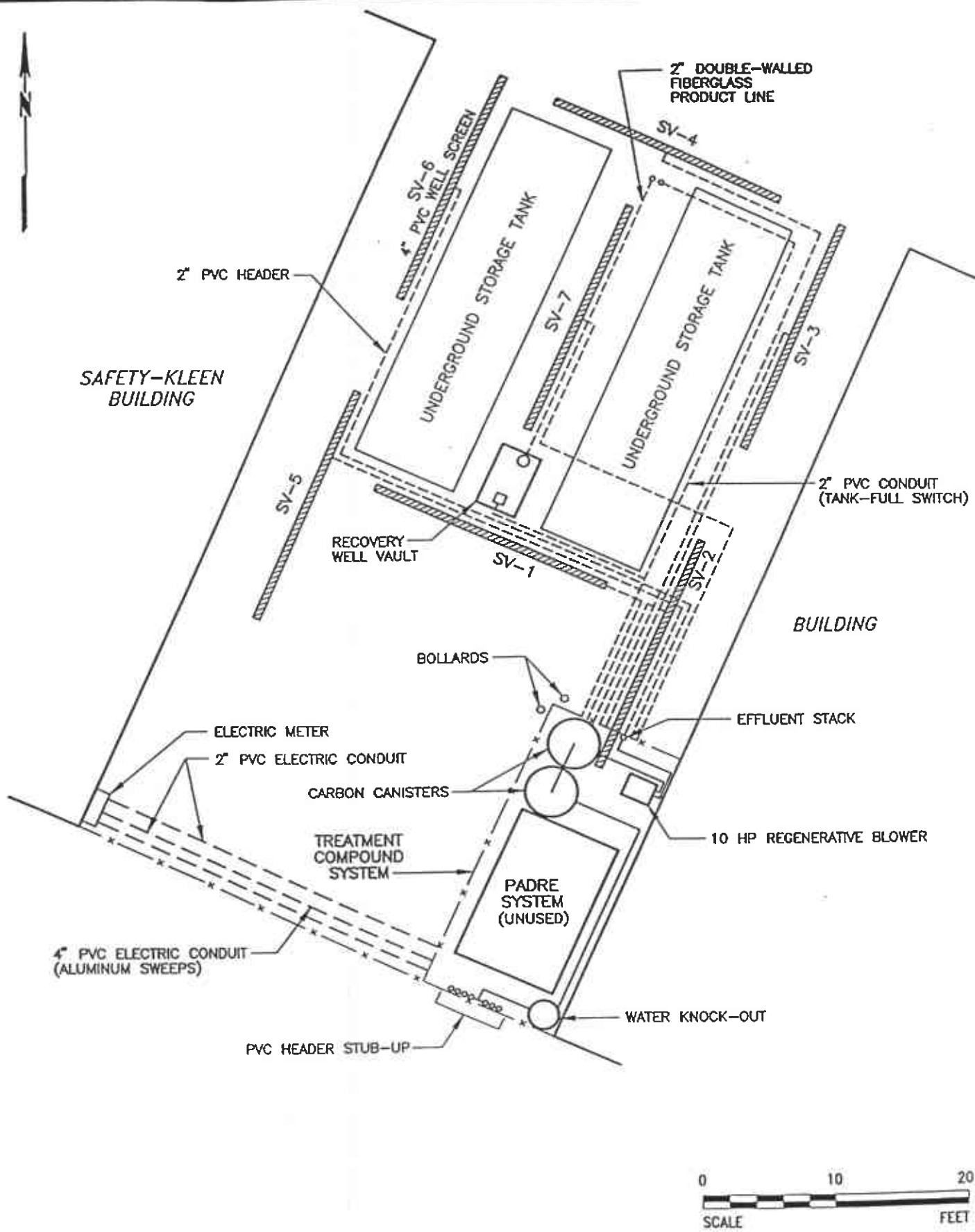


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DATE	1 JUN 99
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FIGURE 2
SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA
SITE PLAN

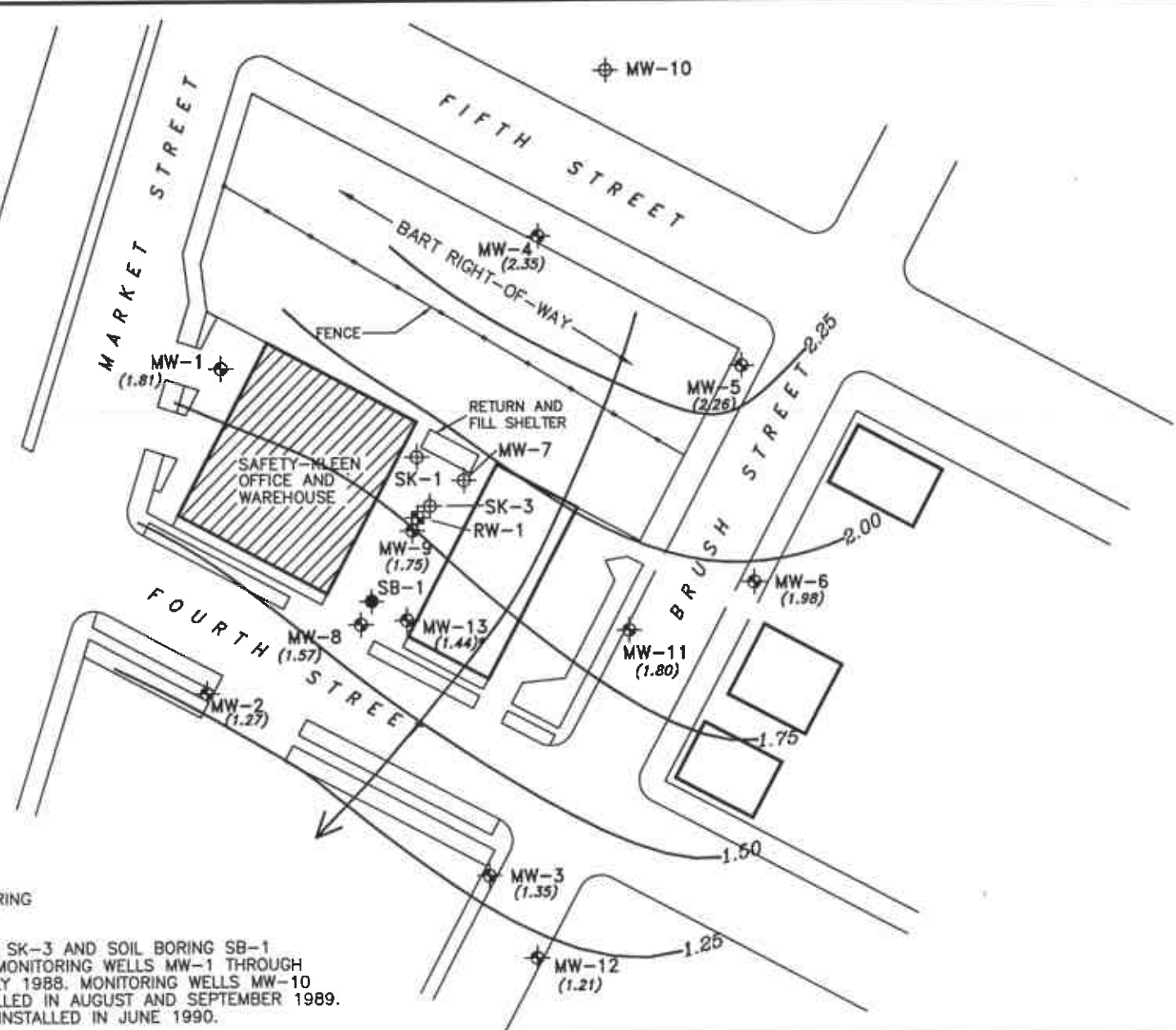
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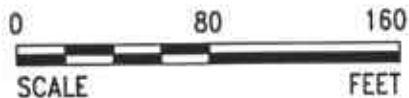
FIGURE 3
SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA
**SOIL VAPOR EXTRACTION
SYSTEM LAYOUT**



LEGEND:

- ⊕ MW-1 MONITORING WELL
- ⊕ RW-1 EXTRACTION WELL
- ⊕ SK-1 MONITORING WELL (ABANDONED OR DESTROYED)
- ⊕ SB-1 SOIL BORING
- WELL NOT USED IN CONTOURING

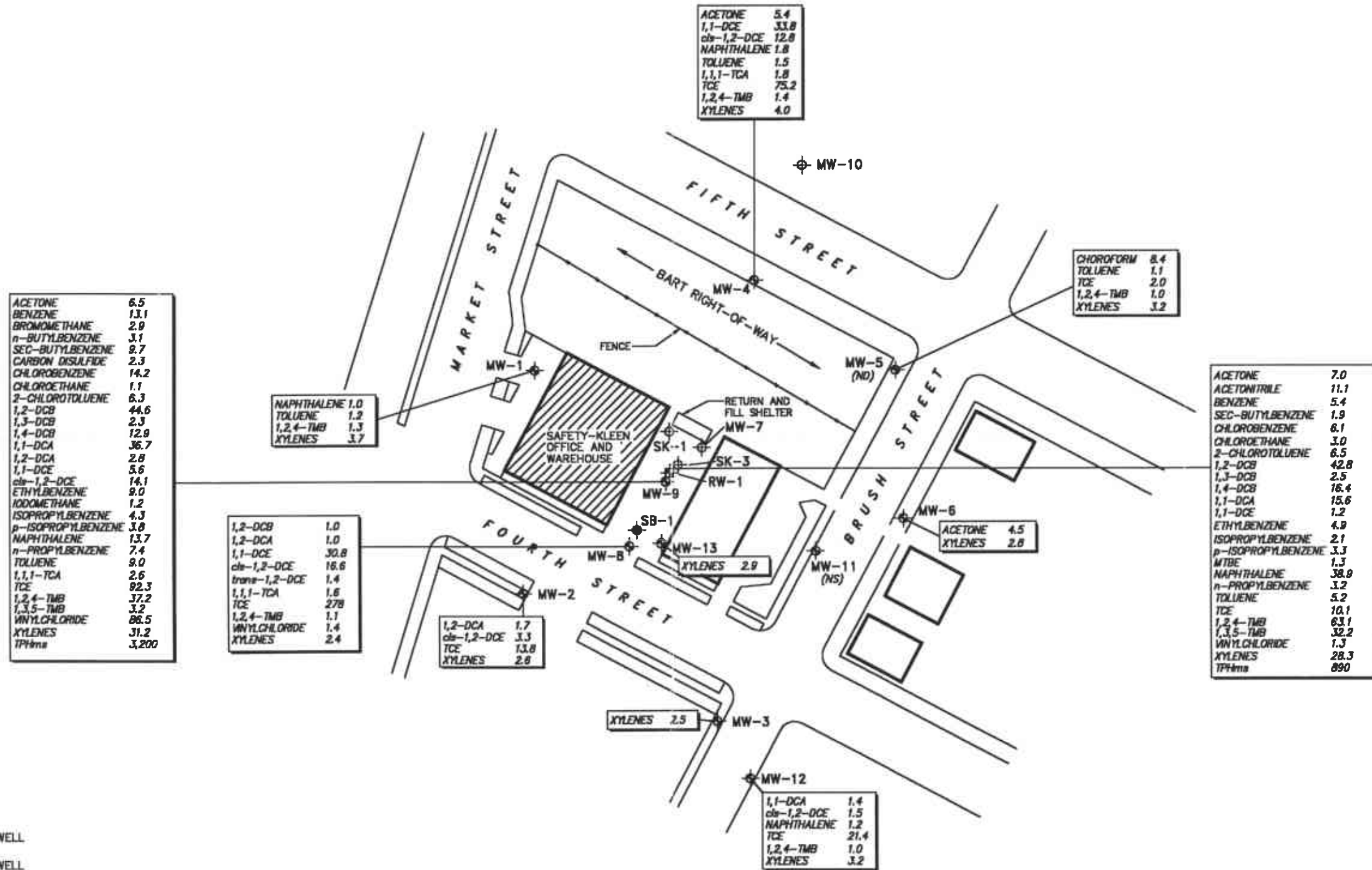
NOTES: MONITORING WELLS SK-1 AND SK-3 AND SOIL BORING SB-1 WERE DRILLED IN MAY 1986. MONITORING WELLS MW-1 THROUGH MW-9 WERE INSTALLED IN JULY 1988. MONITORING WELLS MW-10 THROUGH MW-13 WERE INSTALLED IN AUGUST AND SEPTEMBER 1989. EXTRACTION WELL RW-1 WAS INSTALLED IN JUNE 1990.



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FIGURE 4
SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA
POTENTIOMETRIC SURFACE MAP
OCTOBER 8, 1999



ACETONE	6.5
BENZENE	13.1
BROMOMETHANE	2.9
n-BUTYLBENZENE	3.1
SEC-BUTYLBENZENE	9.7
CARBON DISULFIDE	2.3
CHLOROBENZENE	14.2
CHLOROETHANE	1.1
2-CHLOROTOLUENE	6.3
1,2-DCB	44.6
1,3-DCB	2.3
1,4-DCB	12.9
1,1-DCA	36.7
1,2-DCA	2.8
1,1-DCE	5.6
cis-1,2-DCE	14.1
ETHYLBENZENE	9.0
IODOMETHANE	1.2
ISOPROPYLBENZENE	4.3
p-ISOPROPYLBENZENE	3.8
NAPHTHALENE	13.7
n-PROPYLBENZENE	7.4
TOLUENE	9.0
1,1,1-TCA	2.6
TCE	92.3
1,2,4-TMB	37.2
1,3,5-TMB	3.2
VINYLCHLORIDE	86.5
XYLENES	31.2
TPHms	3,200

NAPHTHALENE	1.0
TOLUENE	1.2
1,2,4-TMB	1.3
XYLENES	3.7

1,2-DCB	1.0
1,2-DCA	1.0
1,1-DCE	30.8
cis-1,2-DCE	16.6
trans-1,2-DCE	1.4
1,1,1-TCA	1.6
TCE	278
1,2,4-TMB	1.1
VINYLCHLORIDE	1.4
XYLENES	2.4

1,2-DCA	1.7
cis-1,2-DCE	3.3
TCE	13.8
XYLENES	2.6

XYLENES	2.5
---------	-----

ACETONE	5.4
1,1-DCE	33.8
cis-1,2-DCE	12.8
NAPHTHALENE	1.8
TOLUENE	1.5
1,1,1-TCA	1.8
TCE	75.2
1,2,4-TMB	1.4
XYLENES	4.0

CHOROFORM	8.4
TOLUENE	1.1
TCE	2.0
1,2,4-TMB	1.0
XYLENES	3.2

ACETONE	7.0
ACETONITRILE	11.1
BENZENE	5.4
SEC-BUTYLBENZENE	1.9
CHLOROBENZENE	6.1
CHLOROETHANE	3.0
2-CHLOROTOLUENE	6.5
1,2-DCB	42.8
1,3-DCB	2.5
1,4-DCB	16.4
1,1-DCA	15.6
1,1-DCE	1.2
ETHYLBENZENE	4.9
ISOPROPYLBENZENE	2.1
p-ISOPROPYLBENZENE	3.3
MTBE	1.3
NAPHTHALENE	38.8
n-PROPYLBENZENE	3.2
TOLUENE	5.2
TCE	10.1
1,2,4-TMB	63.1
1,3,5-TMB	32.2
VINYLCHLORIDE	1.3
XYLENES	28.3
TPHms	890

1,1-DCA	1.4
cis-1,2-DCE	1.5
NAPHTHALENE	1.2
TCE	21.4
1,2,4-TMB	1.0
XYLENES	3.2

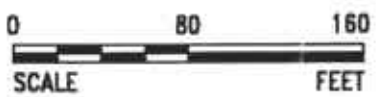
LEGEND:

- ⊕ MW-10 ABANDONED WELL
- ⊕ MW-1 EXTRACTION WELL
- ⊕ RW-1 MONITORING WELL
- ⊕ SB-1 SOIL BORING

ANALYTES:

- TPHms—TOTAL PETROLEUM HYDROCARBONS AS MINERAL SPIRITS
- MTBE—METHYL-TERT-BUTYL-ETHER
- TMB—TRIMETHYLBENZENE
- TCE—TRICHLOROETHENE
- TCA—TRICHLOROETHANE
- DCE—DICHLOROETHENE
- DCA—DICHLOROETHANE
- DCB—DICHLOROETHENE

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



SECOR
International
Incorporated

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DATE	8DEC99
JOB NO.	70005-009

FIGURE 5
SAFETY-KLEEN SERVICE CENTER
400 MARKET STREET
OAKLAND, CALIFORNIA
TPHms AND VOC DISTRIBUTION IN GROUNDWATER
OCTOBER 8, 1999

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TABLES

Quarterly Progress Report (July - September 1999)
SECOR International Incorporated
1390 Willow Pass Road, Suite 360
Concord, CA 94520
SECOR Job No. 007.50809.003
December 21, 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	
10/10/96	6645	8	15	3500	75	269	189	21	13	Influent and Effluent samples collected

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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
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

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Oakland, California

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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
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

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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	
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
03/30/99	19640	30	38	10000	202	7	1	1	0	Restarted system
04/14/99	19998	28	35	10000	203	2	1	0	0	Shutdown system
04/27/99	19999	30	39	10000	202	1	1	0	0	Restarted system
05/13/99	20361	30	36	10000	202	2	1	1	0	Shutdown system
05/25/99	20361	31	36	10000	190	16	1	0	0	Restarted system
06/14/99	20840	55	64	10000	188	8	1	0	0	System shutdown
06/28/99	20840	56	63	10000	188	57	2	2	0	Restarted system
07/06/99	21033	20	35	10000	207	58	2	1	1	System shutdown
07/20/99	21033	28	35	10000	203	28	11	10	4	Restarted system
08/03/99	21033	18	33	10000	208	18	8	3	1	System shutdown - Hobb's meter inoperable

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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
08/30/99	21034	27	35	10000	203	14	2	1	1	Restarted system
09/13/99	21368	20.5	43	10000	207	21	4	4	2	System shutdown
10/01/99	21369	18	33	10000	208	48	5	5	4	Restarted system
10/19/99	21802	30	32	10000	202	4	1	1	1	System shutdown for duration of the pilot study.

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

Table 2
Summary of Soil Vapor Analytical Results
Safety-Kleen Systems, Inc. Service Center
400 Market Street
Oakland, California

Sample ID	Date DRL/PQL	TPHms 10 mg/m ³	Toluene 0.10 mg/m ³	Ethylbenzene 0.10 mg/m ³	Xylenes 0.30 mg/m ³	1,1,1-TCA 0.10 mg/m ³	PCA 0.10 mg/m ³	PCE 0.10 mg/m ³
INF	6/25/98	29	0.18	0.11	1	-	-	-
	7/21/98	95	-	-	0.5	-	-	-
	8/21/98	-	-	-	0.3	0.1	-	-
	11/11/98	100	-	-	-	-	-	-
	3/3/99	13	-	-	-	-	-	-
	5/25/99	50	-	-	-	-	0.2	-
	7/20/99	64	-	-	-	-	-	16
	10/19/99	50	0.18	-	-	-	-	0.1
EFF	6/25/98	-	-	-	0.49	-	-	-
	7/21/98	-	-	-	-	-	-	-
	8/21/98	-	-	-	0.32	-	-	-
	11/11/98	-	-	-	1	-	-	-
	3/3/99	-	-	-	-	-	-	-
	5/25/99	-	-	-	-	-	-	-
	7/20/99	27	-	-	-	-	-	2.5
	10/19/99	11	0.1	-	-	-	-	-

TPHms = total petroleum hydrocarbons as mineral spirits
 TCA = trichloroethane
 PCA = tetrachloroethane
 DRL = detection reporting limit
 PQL = practical quantitation limit
 INF = system influent point
 EFF = system effluent point
 - = Not Detected

Table 3
Soil Vapor Extraction System
Mineral Spirits Removal

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

Sample Date	Elapsed Time (hours)	Run Time This Period (hours)	Extraction Flow Rate (scfm)	TPHms Influent (µg/L)	Removal Rate (lbs/day)	Cumulative TPHms Removed (lbs)	Notes
11/28/95		Carbon adsorbtion system start-up				1798	TPHms removed by prior system.
12/21/95	677	677	107	823	7.9	2020	
01/09/96	1134	457	106	1116	10.6	2221	
02/06/96	1803	669	129	999	11.5	2542	
03/08/96	2540	737	106	1821	17.2	3071	
04/03/96	2906	366	106	1116	10.6	3232	
05/02/96	3594	688	109	1586	15.4	3675	
05/31/96	4289	695	109	1234	12.0	4023	
07/01/96	5039	750	106	82	0.8	4047	
08/22/96	5470	431	64	500	2.9	4098	
09/26/96	6316	846	76	1300	8.8	4409	
10/10/96	6645	329	75	880	5.9	4490	
10/22/96	6939	294	64	670	3.8	4537	
11/13/96	7467	528	75	460	3.1	4604	
12/18/96	8299	833	120	220	2.4	4686	
01/17/97	8950	651	82	69	0.5	4700	
02/10/97	9523	573	72	98	0.6	4715	
03/07/97	10124	601	83	ND (<50)	0	4715	
05/01/97	11440	1316	62	ND (<50)	0	4715	
06/05/97	11798	358	165	910	13.4	4915	Began pulsing system.

**Table 3
Soil Vapor Extraction System
Mineral Spirits Removal**

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

Sample Date	Elapsed Time (hours)	Run Time This Period (hours)	Extraction Flow Rate (scfm)	TPHms Influent (µg/L)	Removal Rate (lbs/day)	Cummulative TPHms Removed (lbs)	Notes
06/30/97	12091	293	91	550	4.5	4969	
07/30/97	12497	406	174	150	2.3	5009	
08/28/97	12837	340	166	550	8.2	5124	
09/24/97	13149	311	87	350	2.7	5160	
10/23/97	13488	340	167	220	3.3	5206	
12/11/97	14377	889	210	ND (<50)	0	5206	
12/22/97	14378	1	208	ND (<50)	0	5206	
03/17/98	14743	365	187	78	1.3	5226	
04/28/98	15222	479	214	70	1.3	5253	
05/28/98	15731	509	199	21	0.4	5261	
06/25/98	16091	360	214	29	0.6	5269	
07/21/98	16453	362	217	95	1.8	5297	
08/20/98	16809	356	202	13	0.2	5300	
11/11/98	18226	1417	205	100	1.8	5408	
03/03/99	19423	1197	199	13	0.2	5420	
05/25/99	20361	938	190	50	0.8	5453	
07/20/99	21033	672	203	64	1.2	5485	
10/19/99	21802	769	202	50	0.9	5514	

Notes:

scfm = cubic feet per minute
µg/L = micrograms per liter
lbs = pounds

Table 4
Groundwater Monitoring Data
October 8, 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	6.18	-	-	1.81
MW-2	8.20	6.93	-	-	1.27
MW-3	6.66	5.31	-	-	1.35
MW-4	10.32	7.97	-	-	2.35
MW-5	10.28	8.02	-	-	2.26
MW-6	8.97	6.99	-	-	1.98
MW-7*	-	-	-	-	-
MW-8	7.80	6.23	-	-	1.57
MW-9	8.21	6.46	-	-	1.75
MW-10**	-	-	-	-	-
MW-11	7.91	6.11	-	-	1.80
MW-12	6.74	5.53	-	-	1.21
MW-13	8.08	6.64	-	-	1.44
RW-1	-	5.48	-	-	-

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 5
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	1.00	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	0.90	0.10	0.40
07/20/93	0.27	-0.23	-0.27	0.68	0.62	0.37	-0.01	-0.68	0.99	0.20	-0.72	-0.15
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	-0.10	-0.37	-0.49	0.60	-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	-0.20	-0.31	0.62	0.55	0.23	-0.03	0.08	0.90	0.09	-0.70	-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	2.50	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	1.40	0.64	2.21	2.21	2.04	1.61	1.54	-	1.85	-	1.51
04/02/96	2.81	2.40	2.46	3.33	3.36	3.17	2.58	2.51	-	2.91	2.24	2.38
07/01/96	2.16	1.70	1.75	2.67	2.63	2.35	1.90	1.93	-	2.18	-	1.84

Table 5
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
11/01/96	1.09	0.70	0.75	1.47	1.47	1.18	0.90	0.86	-	-	-	0.78
01/17/97	2.89	2.39	2.58	3.48	3.52	3.34	2.70	2.57	-	-	-	2.50
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	1.70	1.19	1.25	2.15	2.12	1.86	1.44	1.29	-	-	1.12	1.35
10/08/97	1.40	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	2.50	2.48
04/13/98	3.92	3.20	3.43	4.77	4.50	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	2.50	2.71	-	2.85	2.21	2.35
10/12/98	2.28	1.68	1.79	2.97	2.90	2.55	2.04	1.47	-	2.33	1.72	1.93
01/22/99	2.30	1.78	2.06	2.81	2.82	2.51	2.10	1.88	-	2.41	1.71	1.76
04/14/99	3.15	2.49	2.78	3.75	3.75	3.49	2.86	3.01	-	3.24	2.33	2.59
07/06/99	2.21	1.64	1.76	2.72	2.72	2.40	1.94	1.41	-	2.24	1.71	1.81
10/08/99	1.81	1.27	1.35	2.35	2.26	1.98	1.57	1.75	-	1.80	1.21	1.44

Notes:

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

- = Not measured

Table 6
Summary of Groundwater Analytical Results
Detected Compounds (Results in µg/L)

Safety-Klean Services Center
400 Market Street
Oakland, California

Well No.	Date	TPHs	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	DCE				trans-1,2-DCE	Chloroform	TCA		TCF	PCE	Chloro-benzene		Dichloro-propene	1,2-DCB		1,4-DCB	1,2,4-TMB		1,3,5-TMB	TCFM	Freon 12	n-Propyl-benzene	Naph-thalene	Chloro-ethane	2-Chloro-toluene	Chloro-toluene	Trichloro-propane	Acetone	Vinyl chloride	Bromo-methane	n-Butyl-benzene	sec-Butyl-benzene	Carbon Disulfide	Iodo-methane	Isopropyl-benzene	p-Isopropyl-benzene	Aceto-nitrile													
								1,1-DCE	1,1-DCA	1,2-DCA	cis-1,2-DCE			1,1-TCA	TCE			70.0	5.0		600.0	NE		S	NE																				NE	NE	NE	NE	NE	NE	NE						
		MCL	NE	1.0	150.0	700.0	1750.0	6.0	5.0	0.3	6.0	10.0	NE	200.0	5.0	5.0	70.0	5.0	600.0	NE	S	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE	NE								
MW-8 (Continued)	Jan-97**		NA								1.2				2.3									NA	NA																																
	Jan-97		NA									1.3			1.4										NA	NA																															
	Apr-97**		NA						3.6																NA	NA																															
	Apr-97		NA						4.8																NA	NA																															
	Jul-97**		NA																						NA	NA																															
	Jul-97		NA					1.2	1.0																NA	NA																															
	Oct-97		NA																						NA	NA																															
	Jan-98		NA																						NA	NA																															
	Apr-98		NA																						NA	NA																															
	Jul-98		NA																						NA	NA																															
	Oct-98		NA																						NA	NA																															
	Apr-99				5.4		23.1		0.1		1.1	1.4																																													
	Oct-99						2.4	34.0																																																	
MW-9	Apr-93	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS			
MW-10	Apr-93	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		
MW-11	Apr-93	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
MW-12	Apr-93	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS

APPENDIX A

PURGE DATA SHEETS

Quarterly Progress Report (July - September 1999)

SECOR International Incorporated

1390 Willow Pass Road, Suite 360

Concord, CA 94520

SECOR Job No. 007.50809.003

December 21, 1999

HYDROLOGIC DATA SHEET

SAFETY-KLEEN SYSTEMS, INC
 400 MARKET STREET
 OAKLAND, CALIFORNIA

PROJECT NO.: 007.03788.007

DATE: 10-8-99

START TIME: 7:00

END TIME: 5:30

3
2
3
5
2
2
6
7
4
1
7

WELL ID	Well Diameter (inches)	Top Of Casing Elevation (ft msl)	Depth To Water (feet)	Depth To Product (feet)	Product Thickness (feet)	Total Depth (feet)	Adjusted Groundwater Elevation (ft msl)
MW-1	2	7.99	6.18				1.81
MW-2	2	8.20	6.93				1.27
MW-3	2	6.66	5.31				1.35
MW-4	2	10.32	7.97				2.35
MW-5	2	10.28	8.02				2.26
MW-6	2	8.97	6.99				1.98
MW-8	2	7.80	6.23				1.57
MW-9	4	8.21	6.46		Steel		1.75
MW-11	2	7.91	6.11				1.80
MW-12	2	6.74	5.53				1.21
MW-13	4	8.08	6.64				1.44
RW-1	10	-	5.48		Steel		

Notes:

collect equip. Blank

IN-SITU CHEMICAL OXIDATION PILOT STUDY
FIELD DATA SHEET

SAFETY-KLEEN SYSTEMS, INC
400 MARKET STREET
OAKLAND, CALIFORNIA

PROJECT NO.: 007.03788.012

DATE: 10-8-99
START TIME: 7:00
END TIME: 5:30

WELL ID	DTW (feet)	Oxidation Reduction Potential (millivolts)	Dissolved Oxygen (mg/L)	pH	Electrical Conductivity (u mhos/cm)	KMnO ₄		
						Purple Color Present	Concentration (g/L)	
MW-1	6.18	476	1.01	6.55	421			
MW-2	6.93	488	0.45	6.49	630			
MW-3	5.31	459	2.33	6.32	127			
MW-4	7.97	485	0.55	6.21	829			
MW-5	8.02	456	0.66	6.37	379			
MW-6	6.99	160	2.59	6.44	418			
MW-8	6.23	419	0.34	6.25	775			
MW-9	6.46	-72.6	0.06	6.58	931			
MW-11	6.11	could not retrieve H ₂ O due to roots						
MW-12	5.53	478	0.35	6.45	642			
MW-13	6.64	269	2.61	8.61	556			
RW-1	5.48	-50.8	0.24	6.67	855			

Notes:

**SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET**

Project #: 007-03788.007 Purged By: CM Well I.D.: MW-1
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: _____
 Location: 400 Market St., Oakland QA Samples: _____

Date Purged 10-8-99 Start (2400hr) 12:10 End (2400hr) 12:28
 Date Sampled 10-8-99 Sample Time (2400hr) 12:30
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 6.18 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	ORP Depth (ft)
10-8	12:10	1.0	20.45	419	6.49	cloudy	low	1.04	460
	12:13	1.2	20.58	417	6.53	"	"	1.11	469
	12:15	1.4	20.65	418	6.54	clear	low	1.10	471
	12:18	1.6	20.68	417	6.54	"	"	1.08	473
	12:20	1.8	20.74	418	6.55	"	"	1.04	474
	12:23	2.0	20.83	419	6.55	"	"	1.02	475
	12:25	2.2	20.93	420	6.55	"	"	1.02	475
	12:28	2.4	21.01	421	6.55	"	"	1.01	476

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: _____
 Analyses: 8260/TPHms/chloride/Permanganate
 Odor: none Sample Vessel/Preservative: 5 Vials / 2 liters

PURGING EQUIPMENT

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

Other: _____

Pump Depth: 8'

SAMPLING EQUIPMENT

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

Other: _____

Well Integrity: good Lock #: 0909

Remarks: _____

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

Signature: [Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007.03788.007 Purged By: CM Well I.D.: MW-2
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-2
 Location: 400 Market St., Oakland QA Samples:

Date Purged 10-8-99 Start (2400hr) 12:10 End (2400hr) 13:28
 Date Sampled 10-8-99 Sample Time (2400hr) 13:30
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 6.93 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)	<u>ORP</u> Depth (ft)
10-8	13:13	1.0	21.20	623	6.51	cloudy	mod	0.40	477
	13:15	1.2	21.47	624	6.50	"	"	0.42	482
	13:18	1.4	21.58	627	6.50	"	"	0.45	484
	13:20	1.6	21.73	629	6.50	cloudy	low	0.46	486
	13:23	1.8	21.81	629	6.49	"	"	0.46	487
	13:25	2.0	21.91	629	6.49	"	"	0.45	488
✓	13:28	2.2	22.00	670	6.49	"	"	0.45	488

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: low

Analyses: 8260/TPHms/chloride/Permanganate
 Odor: none Sample Vessel/Preservative: 5 Vials / 2 liters

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____
 Pump Depth: 8.5

SAMPLING EQUIPMENT

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

Well Integrity: good Lock #: 0909

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

Signature: [Signature] Page of

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007.03788.007 Purged By: CM Well I.D.: MW-3
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-3
 Location: 400 Market St., Oakland QA Samples: —

Date Purged 10-8-99 Start (2400hr) 11:10 End (2400hr) 11:28
 Date Sampled 10-8-99 Sample Time (2400hr) 11:30
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 5.31 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) ^{ORP}
10-8	11:10	1.0	20.04	123	6.44	Cloudy	mod	2.27	411
	11:13	1.2	20.05	119	6.41	"	"	2.29	423
	11:15	1.4	20.36	121	6.37	"	"	2.32	438
	11:18	1.6	20.82	125	6.34	"	"	2.29	451
	11:20	1.8	20.92	126	6.34	"	"	2.30	453
	11:23	2.0	21.00	126	6.34	"	"	2.30	455
	11:25	2.2	21.09	126	6.37	"	"	2.33	457
	11:28	2.4	21.17	127	6.32	"	"	2.33	459

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: mod
 Analyses: 8260/TPHms/chloride/Permanganate
 Odor: none Sample Vessel/Preservative: 5 Vials / 2 liters

PURGING EQUIPMENT

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

Other: _____
 Pump Depth: 8

SAMPLING EQUIPMENT

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

Other: _____

Well Integrity: good Lock #: 0909

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

Signature: [Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007-03788.007 Purged By: CM Well I.D.: MW-4
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-4
 Location: 400 Market St., Oakland QA Samples:

Date Purged 10-8-99 Start (2400hr) 15:10 End (2400hr) 15:28
 Date Sampled 10-8-99 Sample Time (2400hr) 15:30
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 7.97 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
10-8	15:10	1.0	21.29	835	6.23	cloudy	mod	0.54	428
	15:13	1.2	21.34	833	6.23	"	"	0.51	451
	15:15	1.4	21.48	831	6.22	"	"	0.49	466
	15:18	1.6	21.57	828	6.22	"	"	0.51	472
	15:20	1.8	21.65	829	6.22	"	"	0.52	476
	15:23	2.0	21.74	829	6.21	"	low	0.53	481
	15:25	2.2	21.84	828	6.21	"	"	0.54	484
	15:28	2.4	21.89	829	6.21	"	"	0.55	485

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: low
 Analyses: 8260/TPHms/chloride/Permanganate
 Odor: none Sample Vessel/Preservative: 5 Vials / 2 liters

PURGING EQUIPMENT

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

Other: _____

Pump Depth: 9.5

SAMPLING EQUIPMENT

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

Other: _____

Well Integrity: good Lock #: 0909

Remarks: _____

NOTE: Sample after three consecutive readings are within:
 pH \pm 0.1, turbidity and DO = \pm 10%, conductivity = \pm 5%.

Signature: [Signature] Page of

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007-03788.007 Purged By: CM Well I.D.: MW-5
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-5
 Location: 400 Market St., Oakland QA Samples: _____

Date Purged 10-8-99 Start (2400hr) 10:08 End (2400hr) 10:28
 Date Sampled 10-8-99 Sample Time (2400hr) 10:30
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 8.02 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS									
Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	ORP Depth (ft)
10-8	10:08	1.0	20.06	398	6.28	Cloudy	mod	0.58	401
	10:10	1.2	20.40	397	6.30	"	"	0.59	447
	10:13	1.4	20.54	392	6.32	"	"	0.62	457
	10:15	1.6	21.02	395	6.32	"	"	0.69	456
	10:18	1.8	21.68	382	6.37	"	"	0.71	451
	10:20	2.0	21.62	391	6.38	"	"	0.70	453
	10:23	2.2	21.58	390	6.38	"	"	0.69	454
	10:25	2.4	21.48	377	6.38	"	"	0.67	455
✓	10:28	2.6	21.50	379	6.37	"	"	0.66	456

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: mod.

Analyses: 8260/TPHms/chloride/Permanganate
 Odor: none Sample Vessel/Preservative: 5 Hoas / 2 liters

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)	<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC or disposable)
<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated _____	<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated _____
Other: _____		Other: _____	

Pump Depth: 9.5 Lock #: 0909

Well Integrity: good

Remarks: _____

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

Signature: [Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007.03788.007 Purged By: CM Well I.D.: MW-6
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-6
 Location: 400 Market St., Oakland QA Samples: _____

Date Purged 10-8-99 Start (2400hr) 9:07 End (2400hr) 9:28
 Date Sampled 10-8-99 Sample Time (2400hr) 9:30
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 6.99 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS									
Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	ORP Depth (ft)
10-8	9:07	1	19.30	447	6.49	cloudy	mod	2.48	177
	9:10	1.2	19.55	370	6.47	"	"	3.16	188
	9:13	1.4	19.77	361	6.44	"	"	3.22	196
	9:15	1.6	20.09	408	6.41	"	"	2.87	183
	9:18	1.8	20.39	411	6.42	"	low	2.77	172
	9:20	2.0	20.64	410	6.43	"	"	2.73	167
	9:23	2.2	20.86	417	6.44	"	"	2.66	163
	9:25	2.4	21.07	419	6.44	"	"	2.60	161
	9:28	2.6	21.16	418	6.44	"	"	2.59	160

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: low

Analyses: 8260/TPTms/Chloride/Permanganate
 Odor: none Sample Vessel/Preservative: 5 Vials / 2 Liters

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)	<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC or disposable)
<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	

Pump Depth: 8.5
 Well Integrity: good Lock #: 0909

Remarks: _____
 NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1 , turbidity and DO = $\pm 10\%$, conductivity = $\pm 3\%$

Signature: [Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007-03788.007 Purged By: CM Well I.D.: MW-8
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-8
 Location: 400 Market St., Oakland QA Samples: Dup-1

Date Purged 10-8-99 Start (2400hr) 16:10 End (2400hr) 16:25
 Date Sampled 10-8-99 Sample Time (2400hr) 16:30
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 6.23 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS

Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	OKP Depth (ft) mV
10-8	16:10	1.0	21.25	768	6.26	cloudy	mod	0.43	437
	16:13	1.2	21.47	771	6.25	"	low	0.39	428
	16:15	1.4	21.60	769	6.25	"	"	0.38	425
	16:17	1.6	21.73	772	6.25	"	"	0.36	423
	16:20	1.8	21.91	773	6.25	"	"	0.35	422
	16:22	2.0	22.01	775	6.25	"	"	0.35	420
	16:25	2.2	22.11	775	6.25	"	"	0.34	419

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: low
 Analyses: 8260/TPHms/chloride/Permanganate
 Odor: Faint Sample Vessel/Preservative: 5 Vials / 2 Liters

PURGING EQUIPMENT

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

SAMPLING EQUIPMENT

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

Other: _____
 Pump Depth: 8'

Well Integrity: good Lock #: 0909

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

Signature: [Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007.03788.007 Purged By: CM Well I.D.: MW-9
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-9
 Location: 400 Market St., Oakland QA Samples: —

Date Purged 10-8-99 Start (2400hr) 17:40 End (2400hr) 17:58
 Date Sampled 10-8-99 Sample Time (2400hr) 18:00
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 6.46 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS									
Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	ORP Depth (ft)
10-8	17:43	1.0	23.35	935	6.55	Black	High	0.12	-75.7
	17:45	1.2	23.29	938	6.57	"	"	0.09	-77.4
	17:48	1.4	23.20	933	6.58	"	"	0.08	-78.3
	17:50	1.6	23.09	935	6.58	Grey	mod	0.08	-75.5
	17:53	1.8	22.97	937	6.58	"	"	0.07	-77.3
	17:55	2.0	22.93	931	6.58	"	"	0.06	-72.5
	17:58	2.2	22.87	931	6.58	"	"	0.06	-72.6

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: mod

Odor: Strong Analyses: 8260/TPHms/Chloride/Permanganate
 Sample Vessel/Preservative: 5 Vials / 2 Liters

PURGING EQUIPMENT

Bladder Pump Bailer (Teflon)
 Centrifugal Pump Bailer (PVC)
 Submersible Pump Bailer (Stainless Steel)
 Peristaltic Pump Dedicated _____
 Other: _____
 Pump Depth: 8'

SAMPLING EQUIPMENT

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

Well Integrity: good Lock #: 0909

Remarks: Green on water
 NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1 , turbidity and DO = $\pm 10\%$, conductivity = $\pm 3\%$

Signature: [Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007-03788.007 Purged By: CM Well I.D.: MW-12
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-12
 Location: 400 Market St., Oakland QA Samples: —

Date Purged 10-8-99 Start (2400hr) 14:07 End (2400hr) 14:25
 Date Sampled 10-8-99 Sample Time (2400hr) 14:30
 Sample Type: Groundwater Other

Casing Diameter 2" 3" _____ 4" _____ 5" _____ 6" _____ 8" _____ Other _____
 Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 5.53 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)
10-8	14:07	1.0	20.04	635	6.51	cloudy	mod	0.38	418
	14:10	1.2	20.37	636	6.47	"	"	0.38	454
	14:13	1.4	20.49	636	6.45	"	"	0.37	461
	14:15	1.6	20.68	639	6.44	"	"	0.37	466
	14:18	1.8	20.81	635	6.44	"	"	0.37	470
	14:20	2.0	20.90	641	6.44	"	low	0.37	474
	14:22	2.2	20.99	640	6.45	"	"	0.36	477
	14:25	2.4	21.07	642	6.45	"	"	0.35	478

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: low
 Analyses: 8260/TTHms/Chloride/Permanganate
 Odor: none Sample Vessel/Preservative: 5 Vials / 2 liters

PURGING EQUIPMENT

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

Other: _____
 Pump Depth: 8'

SAMPLING EQUIPMENT

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

Other: _____

Well Integrity: good Lock #: 0909

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

Signature: [Handwritten Signature] Page _____ of _____

SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET

Project #: 007.03788.007 Purged By: CM Well I.D.: MW-13
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: MW-13
 Location: 400 Market St., Oakland QA Samples:

Date Purged 10-8-99 Start (2400hr) 8:05 End (2400hr) 8:25
 Date Sampled 10-8-99 Sample Time (2400hr) 8:30
 Sample Type: Groundwater Other

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

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 6.64 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS									
Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
10-8	8:05	0.6	18.76	560	8.59	Clear	low	2.61	235
	8:07	0.8	18.64	559	8.60	"	"	2.65	238
	8:10	1.0	18.54	558	8.61	"	"	2.62	245
	8:13	1.2	18.48	558	8.60	"	"	2.61	253
	8:15	1.4	18.44	555	8.60	"	"	2.60	259
	8:18	1.6	18.42	556	8.61	"	"	2.63	263
	8:20	1.8	18.40	557	8.61	"	"	2.61	266
	8:22	2.0	18.38	558	8.61	"	"	2.60	268
	8:25	2.2	18.37	556	8.61	"	"	2.61	269

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: low

Analyses: 8260/TPHms/Chloride/Permanganate
 Odor: none Sample Vessel/Preservative: 5 Vials / 2 Liters

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)	<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC or disposable)
<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated	<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated
Other: _____		Other: _____	
Pump Depth: <u>68'</u>			

Well Integrity: good Lock #: 0909

Remarks: _____
 NOTE: Sample after three consecutive readings are within:
 pH \pm 0.1, turbidity and DO = \pm 10%, conductivity = \pm 3%.

Signature: [Signature] Page of

**SECOR International Incorporated
WATER SAMPLE FIELD DATA SHEET**

Project #: 007.03788.007 Purged By: CM Well I.D.: RW-1
 Client Name: Safety-Kleen Sampled By: CM Sample I.D.: _____
 Location: 400 Market St., Oakland QA Samples: _____

Date Purged 10-8-99 Start (2400hr) 17:10 End (2400hr) 17:25
 Date Sampled 10-8-99 Sample Time (2400hr) 17:30
 Sample Type: Groundwater Other

Casing Diameter 2" _____ 3" _____ 4" _____ 5" _____ 6" _____ 8" X? Other _____

Depth to Bottom (feet) = _____ Purge (gal) = _____
 Depth to Water (feet) = 5.48 Purge Rate (gal or liter/min) _____

FIELD MEASUREMENTS									
Date	Time (2400hr)	Volume (gal)	Temp. (degrees C)	Conductivity (μ mhos/cm)	pH (units)	Color (visual)	Turbidity (NTU)	D.O. (mg/l)	Depth (ft)
<u>10-8</u>	<u>17:10</u>	<u>1.0</u>	<u>22.74</u>	<u>849</u>	<u>6.68</u>	<u>cloudy</u>	<u>low</u>	<u>0.33</u>	<u>-47.1</u>
	<u>17:13</u>	<u>1.2</u>	<u>22.87</u>	<u>851</u>	<u>6.67</u>	<u>"</u>	<u>"</u>	<u>0.30</u>	<u>-47.9</u>
	<u>17:15</u>	<u>1.4</u>	<u>22.99</u>	<u>845</u>	<u>6.67</u>	<u>"</u>	<u>"</u>	<u>0.28</u>	<u>-48.7</u>
	<u>17:18</u>	<u>1.6</u>	<u>23.06</u>	<u>843</u>	<u>6.67</u>	<u>"</u>	<u>"</u>	<u>0.27</u>	<u>-49.1</u>
	<u>17:20</u>	<u>1.8</u>	<u>23.12</u>	<u>846</u>	<u>6.67</u>	<u>"</u>	<u>"</u>	<u>0.26</u>	<u>-50.0</u>
	<u>17:22</u>	<u>2.0</u>	<u>23.18</u>	<u>854</u>	<u>6.67</u>	<u>"</u>	<u>"</u>	<u>0.25</u>	<u>-50.4</u>
<u>✓</u>	<u>17:25</u>	<u>2.2</u>	<u>23.21</u>	<u>855</u>	<u>6.67</u>	<u>"</u>	<u>"</u>	<u>0.24</u>	<u>-50.8</u>

SAMPLE INFORMATION

Sample Depth to Water: _____ Sample Turbidity: low

Odor: mod. Analyses: 8260/TPTms/chloride/Permanganate
 Sample Vessel/Preservative: 5 Vials / 2 liters

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)	<input type="checkbox"/> Bladder Pump	<input type="checkbox"/> Bailer (Teflon)
<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC)	<input type="checkbox"/> Centrifugal Pump	<input type="checkbox"/> Bailer (PVC or disposable)
<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)	<input checked="" type="checkbox"/> Submersible Pump	<input type="checkbox"/> Bailer (Stainless Steel)
<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated _____	<input type="checkbox"/> Peristaltic Pump	<input type="checkbox"/> Dedicated _____
Other: _____		Other: _____	

Pump Depth: 8.5' Lock #: 0909

Well Integrity: good
 Remarks: Slight Sheen
 NOTE: Sample after three consecutive readings are within:
 pH - ± 0.1 , turbidity and DO = $\pm 10\%$, conductivity = $\pm 3\%$.

Signature: [Signature] Page _____ of _____

APPENDIX B
LABORATORY REPORTS - VAPOR SAMPLES
Quarterly Progress Report (July - September 1999)
SECOR International Incorporated
1390 Willow Pass Road, Suite 360
Concord, CA 94520
SECOR Job No. 007.50809.003
DECEMBER 21, 1999

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

October 27, 1999

Greg Hoehn
SECOR International
1390 Willow Pass Road, Suite 360
Concord, CA 94520

Order: 17026
Project Name: Safety-Kleen
Project Number: 007.03788.008
Project Notes:

Date Collected: 10/19/99
Date Received: 10/20/99
P.O. Number:

On October 20, 1999, 2 samples were received under documented chain of custody. Results for the following analyses are attached:

<u>Matrix</u>	<u>Test</u>	<u>Method</u>
Air	BTEX	EPA 8020
	EPA 8010	EPA 8010
	TPH as Mineral Spirits	EPA 8015 MOD. (Purgeable)

Chemical analysis of these samples has been completed. Summaries of the data are contained on the following pages. USEPA protocols for sample storage and preservation were followed.

Entech Analytical Labs, Inc. is certified by the State of California (#I-2346). If you have any questions regarding procedures or results, please call me at 408-735-1550.

Sincerely,



Michelle L. Anderson
Lab Director

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Certified Analytical Report Purgeable Halocarbons by EPA Method 8010

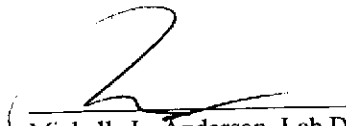
Client: SECOR International
 Sample Matrix: Air
 Sample Date/Time: 10/19/99 16:00
 Lab #: 17026-001
 Client ID: EFFL

Date Reported: 10/27/99
 Date Received: 10/20/99
 Date Analyzed: 10/21/99
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Bromodichloromethane	ND	0.1	0.1	trans-1,2-Dichloroethene	ND	0.1	0.1
Bromoform	ND	0.2	0.2	1,2-Dichloropropane	ND	0.1	0.1
Bromomethane	ND	0.2	0.2	cis-1,3-Dichloropropene	ND	0.1	0.1
Carbon Tetrachloride	ND	0.1	0.1	trans-1,3-Dichloropropene	ND	0.1	0.1
Chlorobenzene	ND	0.1	0.1	Methylene Chloride	ND	0.2	0.2
Chloroethane	ND	0.2	0.2	1,1,2,2-Tetrachloroethane	ND	0.1	0.1
Chloroform	ND	0.2	0.2	Tetrachloroethene	ND	0.1	0.1
Chloromethane	ND	0.1	0.1	1,1,1-Trichloroethane	ND	0.1	0.1
Dibromochloromethane	ND	0.2	0.2	1,1,2-Trichloroethane	ND	0.1	0.1
Dichlorodifluoromethane	ND	0.1	0.1	Trichloroethene	ND	0.1	0.1
1,2-Dichlorobenzene	ND	0.1	0.1	Trichlorofluoromethane	ND	0.1	0.1
1,3-Dichlorobenzene	ND	0.1	0.1	Vinyl Chloride	ND	0.1	0.1
1,4-Dichlorobenzene	ND	0.1	0.1				
1,1-Dichloroethane	ND	0.1	0.1				
1,2-Dichloroethane	ND	0.1	0.1				
1,1-Dichloroethene	ND	0.1	0.1				
cis-1,2-Dichloroethene	ND	0.1	0.1				

Surrogate Recovery (%)
 Bromochloromethane 101

- Results are reported in mg/m³
- DLR = DF x PQL
- Analysis performed by Entech Analytical Labs, Inc. (CAELAP #1-2346)


 Michelle L. Anderson, Lab Director

ND: None Detected at or above DLR
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Certified Analytical Report Purgeable Halocarbons by EPA Method 8010

Client: SECOR International
 Sample Matrix: Air
 Sample Date/Time: 10/19/99 16:10
 Lab #: 17026-002
 Client ID: INFL

Date Reported: 10/27/99
 Date Received: 10/20/99
 Date Analyzed: 10/21/99
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Bromodichloromethane	ND	0.1	0.1	trans-1,2-Dichloroethene	ND	0.1	0.1
Bromoform	ND	0.2	0.2	1,2-Dichloropropane	ND	0.1	0.1
Bromomethane	ND	0.2	0.2	cis-1,3-Dichloropropene	ND	0.1	0.1
Carbon Tetrachloride	ND	0.1	0.1	trans-1,3-Dichloropropene	ND	0.1	0.1
Chlorobenzene	ND	0.1	0.1	Methylene Chloride	ND	0.2	0.2
Chloroethane	ND	0.2	0.2	1,1,2,2-Tetrachloroethane	ND	0.1	0.1
Chloroform	ND	0.2	0.2	Tetrachloroethene	0.1	0.1	0.1
Chloromethane	ND	0.1	0.1	1,1,1-Trichloroethane	ND	0.1	0.1
Dibromochloromethane	ND	0.2	0.2	1,1,2-Trichloroethane	ND	0.1	0.1
Dichlorodifluoromethane	ND	0.1	0.1	Trichloroethene	ND	0.1	0.1
1,2-Dichlorobenzene	ND	0.1	0.1	Trichlorofluoromethane	ND	0.1	0.1
1,3-Dichlorobenzene	ND	0.1	0.1	Vinyl Chloride	ND	0.1	0.1
1,4-Dichlorobenzene	ND	0.1	0.1				
1,1-Dichloroethane	ND	0.1	0.1				
1,2-Dichloroethane	ND	0.1	0.1				
1,1-Dichloroethene	ND	0.1	0.1				
cis-1,2-Dichloroethene	ND	0.1	0.1				

Surrogate Recovery (%)
 Bromochloromethane 107

1. Results are reported in mg/m³
2. DLR= DF x PQL
3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #I-2346)


 Michelle L. Anderson, Lab Director

ND: None Detected at or above DLR
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

Certified Analytical Report Purgeable Halocarbons by EPA Method 8010


Client: SECOR International
 Sample Matrix: Air
 Sample Date/Time: 10/19/99 16:00
 Lab #: 17026-001
 Client ID: EFFL

Date Reported: 10/27/99
 Date Received: 10/20/99
 Date Analyzed: 10/21/99
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Bromodichloromethane	ND	0.014	0.014	trans-1,2-Dichloroethene	ND	0.023	0.023
Bromoform	ND	0.018	0.018	1,2-Dichloropropane	ND	0.02	0.02
Bromomethane	ND	0.047	0.047	cis-1,3-Dichloropropene	ND	0.02	0.02
Carbon Tetrachloride	ND	0.015	0.015	trans-1,3-Dichloropropene	ND	0.02	0.02
Chlorobenzene	ND	0.02	0.02	Methylene Chloride	ND	0.016	0.016
Chloroethane	ND	0.069	0.069	1,1,2,2-Tetrachloroethane	ND	0.013	0.013
Chloroform	ND	0.038	0.038	Tetrachloroethene	ND	0.014	0.014
Chloromethane	ND	0.044	0.044	1,1,1-Trichloroethane	ND	0.017	0.017
Dibromochloromethane	ND	0.022	0.022	1,1,2-Trichloroethane	ND	0.017	0.017
Dichlorodifluoromethane	ND	0.019	0.019	Trichloroethene	ND	0.017	0.017
1,2-Dichlorobenzene	ND	0.015	0.015	Trichlorofluoromethane	ND	0.016	0.016
1,3-Dichlorobenzene	ND	0.015	0.015	Vinyl Chloride	ND	0.036	0.036
1,4-Dichlorobenzene	ND	0.015	0.015				
1,1-Dichloroethane	ND	0.023	0.023				
1,2-Dichloroethane	ND	0.023	0.023				
1,1-Dichloroethene	ND	0.023	0.023				
cis-1,2-Dichloroethene	ND	0.023	0.023				

Surrogate Recovery (%)
 Bromochloromethane 101

- Results are reported in ppmV
- DLR= DF x PQL
- Analysis performed by Entech Analytical Labs, Inc. (CAELAP #I-2346)


 Michelle L. Anderson, Lab Director

ND: None Detected at or above DLR
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor

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Certified Analytical Report Purgeable Halocarbons by EPA Method 8010

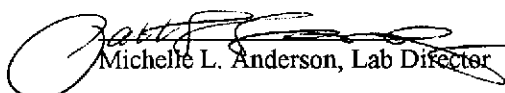
Client: SECOR International
 Sample Matrix: Air
 Sample Date/Time: 10/19/99 16:10
 Lab #: 17026-002
 Client ID: INFL

Date Reported: 10/27/99
 Date Received: 10/20/99
 Date Analyzed: 10/21/99
 Dilution Factor: 1

Compound	Value	PQL	DLR	Compound	Value	PQL	DLR
Bromodichloromethane	ND	0.014	0.014	trans-1,2-Dichloroethene	ND	0.023	0.023
Bromoform	ND	0.018	0.018	1,2-Dichloropropane	ND	0.02	0.02
Bromomethane	ND	0.047	0.047	cis-1,3-Dichloropropene	ND	0.02	0.02
Carbon Tetrachloride	ND	0.015	0.015	trans-1,3-Dichloropropene	ND	0.02	0.02
Chlorobenzene	ND	0.02	0.02	Methylene Chloride	ND	0.016	0.016
Chloroethane	ND	0.069	0.069	1,1,2-Tetrachloroethane	ND	0.013	0.013
Chloroform	ND	0.038	0.038	Tetrachloroethene	0.014	0.014	0.014
Chloromethane	ND	0.044	0.044	1,1,1-Trichloroethane	ND	0.017	0.017
Dibromochloromethane	ND	0.022	0.022	1,1,2-Trichloroethane	ND	0.017	0.017
Dichlorodifluoromethane	ND	0.019	0.019	Trichloroethene	ND	0.017	0.017
1,2-Dichlorobenzene	ND	0.015	0.015	Trichlorofluoromethane	ND	0.016	0.016
1,3-Dichlorobenzene	ND	0.015	0.015	Vinyl Chloride	ND	0.036	0.036
1,4-Dichlorobenzene	ND	0.015	0.015				
1,1-Dichloroethane	ND	0.023	0.023				
1,2-Dichloroethane	ND	0.023	0.023				
1,1-Dichloroethene	ND	0.023	0.023				
cis-1,2-Dichloroethene	ND	0.023	0.023				

Surrogate Recovery (%)
 Bromochloromethane 107

1. Results are reported in ppmV
2. DLR= DF x PQL
3. Analysis performed by Entech Analytical Labs, Inc. (CAELAP #I-2346)


 Michelle L. Anderson, Lab Director

ND: None Detected at or above DLR
 DLR: Detection Reporting Limit

PQL: Practical Quantitation Limit
 DF: Dilution Factor

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

SECOR International
 1390 Willow Pass Road, Suite 360
 Concord, CA 94520
 Attn: Greg Hoehn

Date: 10/27/99
 Date Received: 10/20/99
 Project: 007.03788.008
 PO #:
 Sampled By: Client


Certified Analytical Report

Air Sample Analysis:

Sample ID	EFFL			INFL							
Sample Date	10/19/99			10/19/99							
Sample Time	16:00			16:10							
Lab #	17026-001			17026-002							
	Result	DF	DLR	Result	DF	DLR				PQL	Method
Results in mg/m ³ :											
Analysis Date	10/20/99			10/20/99							
Mineral Spirits	11	1.0	10	50	1.0	10				10	8015M
Benzene	ND	1.0	0.10	ND	1.0	0.10				0.10	8020
Toluene	0.10	1.0	0.10	0.18	1.0	0.10				0.10	8020
Ethyl Benzene	ND	1.0	0.10	ND	1.0	0.10				0.10	8020
Xylenes (total)	ND	1.0	0.30	ND	1.0	0.30				0.30	8020

DF=Dilution Factor ND= None Detected above DLR PQL=Practical Quantitation Limit DLR=Detection Reporting Limit

• Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)


 Michelle L. Anderson, Lab Director

Entech Analytical Labs, Inc.

CA ELAP# I-2346

525 Del Rey Avenue, Suite E • Sunnyvale, CA 94086 • (408) 735-1550 • Fax (408) 735-1554

SECOR International
1390 Willow Pass Road, Suite 360
Concord, CA 94520
Attn: Greg Hoehn

Date: 10/27/99
Date Received: 10/20/99
Project: 007.03788.008
PO #:
Sampled By: Client

Certified Analytical Report

Air Sample Analysis:

Sample ID	EFFL			INFL					
Sample Date	10/19/99			10/19/99					
Sample Time	16:00			16:10					
Lab #	17026-001			17026-002					
	Result	DF	DLR	Result	DF	DLR		PQL	Method
Results in ppmV:									
Analysis Date	10/20/99			10/20/99					
Mineral Spirits	2.6	1.0	2.4	12	1.0	2.4		2.4	8015M
Benzene	ND	1.0	0.029	ND	1.0	0.029		0.029	8020
Toluene	0.024	1.0	0.024	0.044	1.0	0.024		0.024	8020
Ethyl Benzene	ND	1.0	0.021	ND	1.0	0.021		0.021	8020
Xylenes (total)	ND	1.0	0.063	ND	1.0	0.063		0.063	8020

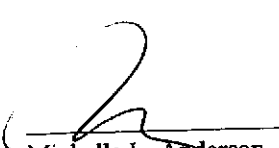
DF=Dilution Factor

ND= None Detected above DLR

PQL=Practical Quantitation Limit

DLR=Detection Reporting Limit

Analysis performed by Entech Analytical Labs, Inc. (CA ELAP #I-2346)


Michelle L. Anderson, Lab Director

Environmental Analysis Since 1983

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY
METHOD: Gas Chromatography - Volatile Organics
Laboratory Control Spikes

QC Batch #: VOC1W991021
Matrix: Liquid
Units: µg/L

Date Analyzed: 10/21/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	SA	SR	SP	SP	SPD	SPD	RPD	QC LIMITS	
		µg/L	µg/L	µg/L	% R	µg/L	%R	%	RPD	%R
Benzene	602/8020	40	ND	42	105	41	102	2.7	25	75-124
Chlorobenzene	601/8010	40	ND	46	114	45	113	0.7	25	78-123
1,1-Dichloroethane	601/8010	40	ND	46	114	46	114	0.2	25	83-133
Toluene	602/8020	40	ND	32	79	31	77	3.2	25	68-119
Trichloroethene	601/8010	40	ND	46	115	41	103	11.1	25	55-143
Bromochloromethane	601/8010		104%	100%		102%				65-135
Fluorobenzene	602/8020		113%	109%		107%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike Duplicate % Recovery
- NC: Not Calculated

Entech Analytical Labs, Inc.

525 Del Rey Avenue, Suite E
Sunnyvale, CA 94086

QUALITY CONTROL RESULTS SUMMARY

METHOD: Gas Chromatography
Laboratory Control Sample

QC Batch #: GBG2991020
Matrix: Water
Units: µg/Liter

Date Analyzed: 10/20/99
Quality Control Sample: Blank Spike

PARAMETER	Method #	MB µg/Liter	SA µg/Liter	SR µg/Liter	SP µg/Liter	SP % R	SPD µg/Liter	SPD %R	RPD	QC LIMITS	
										RPD	%R
Benzene	8020	<0.50	4.0	ND	3.5	88	3.9	98	10.2	25	67-115
Toluene	8020	<0.50	25.7	ND	24	94	26	100	7.0	25	82-122
Ethyl Benzene	8020	<0.50	5.2	ND	5.0	97	5.4	104	6.7	25	77-114
Xylenes	8020	<0.50	27.9	ND	28	101	30	107	5.2	25	85-125
Gasoline	8015	<50.0	500	ND	488	98	522	104	6.7	25	75-125
aaa-TFT(S.S.)-PID	8020			98%	99%		101%				65-135
aaa-TFT(S.S.)-FID	8015			104%	101%		105%				65-135

Definition of Terms:

- na: Not Analyzed in QC batch
- MB: Method Blank
- SA: Spike Added
- SR: Sample Result
- RPD(%): Duplicate Analysis - Relative Percent Difference
- SP: Spike Result
- SP (%R): Spike % Recovery
- SPD: Spike Duplicate Result
- SPD (%R): Spike % Recovery
- nc: Not Calculated

SECOR Chain-of Custody Record

Field Office: Concord
 Address: 1390 Willow Pass Rd. Ste. 360
Concord, CA 94520

Additional documents are attached, and are a part of this Record.
 Job Name: Safety - Klean
 Location: 400 Market St.
Oakland, CA

Project # 007.03788.008 Task # _____
 Project Manager Gregg Hoehn
 Laboratory ENTECH
 Turnaround Time Standard

Analysis Request

Sampler's Name Charles Melancon
 Sampler's Signature [Signature]

Sample ID	Date	Time	Matrix
EFFL	10/18/99	16:00	Air
INFL	10/18/99	16:10	Air

HCID	TPHq/BTEX/WTPH-G 8015 (modified)/8020	TPHq/WTPH-D 8015 (modified)	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	BTEX	Volatile Organics 624/8240 (GC/MS)	Halogenated Volatiles 601/8010	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 603/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	TPH - mmp/8015	Comments/ Instructions	Number of Containers
														17026-001	1
														-002	1

Special Instructions/Comments:

Relinquished by: [Signature]
 Sign [Signature]
 Print Charles Melancon
 Company SECOR
 Time 7:00 Date 10/19/99

Relinquished by: [Signature]
 Sign [Signature]
 Print JEFF GRIMES
 Company World Courier
 Time 1115 Date 10/20/99

Received by: JEFF GRIMES
 Sign [Signature]
 Print JEFF GRIMES
 Company World Courier
 Time 0950 Date 10/20/99

Received by: Paulina Thai
 Sign [Signature]
 Print PAULINA THAI
 Company ENTECH
 Time 1115 Date 10/20/99

Sample Receipt

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

Client: _____
 Client Contact: _____
 Client Phone: _____

APPENDIX C
LABORATORY REPORTS - GROUNDWATER SAMPLES
Quarterly Progress Report (July - September 1999)
SECOR International Incorporated
1390 Willow Pass Road, Suite 360
Concord, CA 94520
SECOR Job No. 007.50809.003
December 21, 1999



Allan A. Manteuffel Technical Center

November 2, 1999

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

Re: SK Lab Project #99-249
Project ID Name: Oakland, CA

Dear Greg:

Enclosed please find the analytical results for the sample received by SK Environmental Laboratory on 10/12/99.

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 773-825-7068.

Sincerely,

Ian H. Graska
Project Manager

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 Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	01	02	03	04	
Collector's Sample #	MW-1	MW-2	MW-3	MW-4	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/15/1999	10/15/1999	10/15/1999	10/18/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
Acetone	4	<4	<4	<4	5.4
Acetonitrile	10	<10	<10	<10	<10
Acrylonitrile	3	<3	<3	<3	<3
Allyl Chloride	2	<2	<2	<2	<2
Benzene	1	<1	<1	<1	<1
Benzyl Chloride	1	<1	<1	<1	<1
Bromobenzene	1	<1	<1	<1	<1
Bromochloromethane	1	<1	<1	<1	<1
Bromodichloromethane	1	<1	<1	<1	<1
Bromoform	1	<1	<1	<1	<1
Bromomethane	2	<2	<2	<2	<2
2-Butanone	4	<4	<4	<4	<4
n-Butylbenzene	1	<1	<1	<1	<1
sec-Butylbenzene	1	<1	<1	<1	<1
tert-Butylbenzene	1	<1	<1	<1	<1
Carbon Disulfide	1	<1	<1	<1	<1
Carbon Tetrachloride	0.5 *	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	1	<1	<1	<1	<1
Chlorodibromomethane	1	<1	<1	<1	<1
Chloroethane	1	<1	<1	<1	<1
2-Chloroethyl vinyl ether	4	<4	<4	<4	<4

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	01	02	03	04	
Collector's Sample #	MW-1	MW-2	MW-3	MW-4	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/15/1999	10/15/1999	10/15/1999	10/18/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
Chloroform	1	<1	<1	<1	<1
Chloromethane	1	<1	<1	<1	<1
2-Chlorotoluene	1	<1	<1	<1	<1
4-Chlorotoluene	1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	1	<1	<1	<1	<1
1,2-Dibromoethane	1	<1	<1	<1	<1
Dibromomethane	1	<1	<1	<1	<1
1,2-Dichlorobenzene	1	<1	<1	<1	<1
1,3-Dichlorobenzene	1	<1	<1	<1	<1
1,4-Dichlorobenzene	1	<1	<1	<1	<1
1,4-Dichloro-2-butene	1	<1	<1	<1	<1
Dichlorodifluoromethane	1	<1	<1	<1	<1
1,1-Dichloroethane	1	<1	<1	<1	<1
1,2-Dichloroethane	0.5 *	<0.5	1.7	<0.5	<0.5
1,1-Dichloroethene	1	<1	<1	<1	33.8 **
cis-1,2-Dichloroethene	1	<1	3.3	<1	12.8
trans-1,2-Dichloroethene	1	<1	<1	<1	<1
1,2-Dichloropropane	1	<1	<1	<1	<1
1,3-Dichloropropane	1	<1	<1	<1	<1
2,2-Dichloropropane	1	<1	<1	<1	<1
cis-1,3-Dichloropropene	0.5 *	<0.5	<0.5	<0.5	<0.5

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	01	02	03	04	
Collector's Sample #	MW-1	MW-2	MW-3	MW-4	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/15/1999	10/15/1999	10/15/1999	10/18/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
trans-1,3-Dichloropropene	0.5 *	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	<1
Ethyl methacrylate	1	<1	<1	<1	<1
2-Hexanone	3	<3	<3	<3	<3
Hexachlorobutadiene	1	<1	<1	<1	<1
Iodomethane	1	<1	<1	<1	<1
Isobutyl Alcohol	50	<50	<50	<50	<50
Isopropylbenzene	1	<1	<1	<1	<1
p-Isopropyltoluene	1	<1	<1	<1	<1
Methacrylonitrile	1	<1	<1	<1	<1
4-Methyl-2-pentanone	1	<1	<1	<1	<1
Methylene Chloride	1	<1	<1	<1	<1
Methyl methacrylate	1	<1	<1	<1	<1
Methyl-tert-butyl ether	1	<1	<1	<1	<1
Naphthalene	1	1.0	<1	<1	1.8
n-Propylbenzene	1	<1	<1	<1	<1
Styrene	1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1
Tetrachloroethene	1	<1	<1	<1	<1
Toluene	1	1.2	<1	<1	1.5

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	01	02	03	04	
Collector's Sample #	MW-1	MW-2	MW-3	MW-4	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/15/1999	10/15/1999	10/15/1999	10/18/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
1,2,3-Trichlorobenzene	1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	1	<1	<1	<1	<1
1,1,1-Trichloroethane	1	<1	<1	<1	1.8
1,1,2-Trichloroethane	1	<1	<1	<1	<1
Trichloroethene	1	<1	13.8	<1	75.2 **
Trichlorofluoromethane	1	<1	<1	<1	<1
1,2,3-Trichloropropane	1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	1	1.3	<1	<1	1.4
1,3,5-Trimethylbenzene	1	<1	<1	<1	<1
Vinyl Acetate	1	<1	<1	<1	<1
Vinyl Chloride	0.5 *	<0.5	<0.5	<0.5	<0.5
m+p-Xylenes	1	1.9	1.3	1.2	2.1
o-Xylene	1	1.8	1.3	1.3	1.9

* Analysis performed at the MDL level.

** Diluted so result is within the calibration curve.

Report Review / Date:

 11-2-99

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	05	06	07	08	
Collector's Sample #	MW-5	MW-6	MW-8	MW-9	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/14/1999	10/14/1999	10/14/1999	10/14/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit ug/L	Concentration ug/L			
Acetone	4	<4	4.5	<4	6.5
Acetonitrile	10	<10	<10	<10	<10
Acrylonitrile	3	<3	<3	<3	<3
Allyl Chloride	2	<2	<2	<2	<2
Benzene	1	<1	<1	<1	13.1
Benzyl Chloride	1	<1	<1	<1	<1
Bromobenzene	1	<1	<1	<1	<1
Bromochloromethane	1	<1	<1	<1	<1
Bromodichloromethane	1	<1	<1	<1	<1
Bromoform	1	<1	<1	<1	<1
Bromomethane	2	<2	<2	<2	2.9
2-Butanone	4	<4	<4	<4	<4
n-Butylbenzene	1	<1	<1	<1	3.1
sec-Butylbenzene	1	<1	<1	<1	9.7
tert-Butylbenzene	1	<1	<1	<1	<1
Carbon Disulfide	1	<1	<1	<1	2.3
Carbon Tetrachloride	0.5 *	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	1	<1	<1	<1	14.2
Chlorodibromomethane	1	<1	<1	<1	<1
Chloroethane	1	<1	<1	<1	1.1
2-Chloroethyl vinyl ether	4	<4	<4	<4	<4

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	05	06	07	08	
Collector's Sample #	MW-5	MW-6	MW-8	MW-9	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/14/1999	10/14/1999	10/14/1999	10/14/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
Chloroform	1	8.4	<1	<1	<1
Chloromethane	1	<1	<1	<1	<1
2-Chlorotoluene	1	<1	<1	<1	6.3
4-Chlorotoluene	1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	1	<1	<1	<1	<1
1,2-Dibromoethane	1	<1	<1	<1	<1
Dibromomethane	1	<1	<1	<1	<1
1,2-Dichlorobenzene	1	<1	<1	1.0	44.6 **
1,3-Dichlorobenzene	1	<1	<1	<1	2.3
1,4-Dichlorobenzene	1	<1	<1	<1	12.9
1,4-Dichloro-2-butene	1	<1	<1	<1	<1
Dichlorodifluoromethane	1	<1	<1	<1	<1
1,1-Dichloroethane	1	<1	<1	<1	36.7
1,2-Dichloroethane	0.5 *	<0.5	<0.5	1.0	2.8
1,1-Dichloroethene	1	<1	<1	30.8	5.6
cis-1,2-Dichloroethene	1	<1	<1	16.6	14.1
trans-1,2-Dichloroethene	1	<1	<1	1.4	<1
1,2-Dichloropropane	1	<1	<1	<1	<1
1,3-Dichloropropane	1	<1	<1	<1	<1
2,2-Dichloropropane	1	<1	<1	<1	<1
cis-1,3-Dichloropropene	0.5 *	<0.5	<0.5	<0.5	<0.5

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	05	06	07	08	
Collector's Sample #	MW-5	MW-6	MW-8	MW-9	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/14/1999	10/14/1999	10/14/1999	10/14/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
trans-1,3-Dichloropropene	0.5 *	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	<1	9.0
Ethyl methacrylate	1	<1	<1	<1	<1
2-Hexanone	3	<3	<3	<3	<3
Hexachlorobutadiene	1	<1	<1	<1	<1
Iodomethane	1	<1	<1	<1	1.2
Isobutyl Alcohol	50	<50	<50	<50	<50
Isopropylbenzene	1	<1	<1	<1	4.3
p-Isopropyltoluene	1	<1	<1	<1	3.8
Methacrylonitrile	1	<1	<1	<1	<1
4-Methyl-2-pentanone	1	<1	<1	<1	<1
Methylene Chloride	1	<1	<1	<1	<1
Methyl methacrylate	1	<1	<1	<1	<1
Methyl-tert-butyl ether	1	<1	<1	<1	<1
Naphthalene	1	<1	<1	<1	13.7
n-Propylbenzene	1	<1	<1	<1	7.4
Styrene	1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1
Tetrachloroethene	1	<1	<1	<1	<1
Toluene	1	1.1	<1	<1	9.0

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	05	06	07	08	
Collector's Sample #	MW-5	MW-6	MW-8	MW-9	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/14/1999	10/14/1999	10/14/1999	10/14/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
1,2,3-Trichlorobenzene	1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	1	<1	<1	<1	<1
1,1,1-Trichloroethane	1	<1	<1	1.6	2.6
1,1,2-Trichloroethane	1	<1	<1	<1	<1
Trichloroethene	1	2.0	<1	278 **	92.3 **
Trichlorofluoromethane	1	<1	<1	<1	<1
1,2,3-Trichloropropane	1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	1	1.0	<1	1.1	37.2 **
1,3,5-Trimethylbenzene	1	<1	<1	<1	3.2
Vinyl Acetate	1	<1	<1	<1	<1
Vinyl Chloride	0.5 *	<0.5	<0.5	1.4 ***	86.5 **
m+p-Xylenes	1	1.6	1.5	1.2	7.7
o-Xylene	1	1.6	1.3	1.2	23.5

* Analysis performed at the MDL level.

** Diluted so result is within the calibration curve.

*** Result may be biased high due to high recovery for this compound in the spike standard.

Report Review / Date:


 Handwritten signature and date: 11-2-99

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	09	10	11	12	
Collector's Sample #	MW-12	MW-13	RW-1	Dup-1	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/18/1999	10/18/1999	10/18/1999	10/18/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
Acetone	4	<4	<4	7.0	<4
Acetonitrile	10	<10	<10	11.1	<10
Acrylonitrile	3	<3	<3	<3	<3
Allyl Chloride	2	<2	<2	<2	<2
Benzene	1	<1	<1	5.4	<1
Benzyl Chloride	1	<1	<1	<1	<1
Bromobenzene	1	<1	<1	<1	<1
Bromochloromethane	1	<1	<1	<1	<1
Bromodichloromethane	1	<1	<1	<1	<1
Bromoform	1	<1	<1	<1	<1
Bromomethane	2	<2	<2	<2	<2
2-Butanone	4	<4	<4	<4	<4
n-Butylbenzene	1	<1	<1	<1	<1
sec-Butylbenzene	1	<1	<1	1.9	<1
tert-Butylbenzene	1	<1	<1	<1	<1
Carbon Disulfide	1	<1	<1	<1	<1
Carbon Tetrachloride	0.5 *	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	1	<1	<1	6.1	<1
Chlorodibromomethane	1	<1	<1	<1	<1
Chloroethane	1	<1	<1	3.0	<1
2-Chloroethyl vinyl ether	4	<4	<4	<4	<4

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	09	10	11	12	
Collector's Sample #	MW-12	MW-13	RW-1	Dup-1	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/18/1999	10/18/1999	10/18/1999	10/18/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
Chloroform	1	<1	<1	<1	<1
Chloromethane	1	<1	<1	<1	<1
2-Chlorotoluene	1	<1	<1	6.5	<1
4-Chlorotoluene	1	<1	<1	<1	<1
1,2-Dibromo-3-chloropropane	1	<1	<1	<1	<1
1,2-Dibromoethane	1	<1	<1	<1	<1
Dibromomethane	1	<1	<1	<1	<1
1,2-Dichlorobenzene	1	<1	<1	42.8 **	1.3
1,3-Dichlorobenzene	1	<1	<1	2.5	<1
1,4-Dichlorobenzene	1	<1	<1	16.4	<1
1,4-Dichloro-2-butene	1	<1	<1	<1	<1
Dichlorodifluoromethane	1	<1	<1	<1	<1
1,1-Dichloroethane	1	1.4	<1	15.6	<1
1,2-Dichloroethane	0.5 *	<0.5	<0.5	<0.5	1.0
1,1-Dichloroethene	1	<1	<1	1.2	30.9
cis-1,2-Dichloroethene	1	1.5	<1	<1	16.9
trans-1,2-Dichloroethene	1	<1	<1	<1	<1
1,2-Dichloropropane	1	<1	<1	<1	<1
1,3-Dichloropropane	1	<1	<1	<1	<1
2,2-Dichloropropane	1	<1	<1	<1	<1
cis-1,3-Dichloropropene	0.5 *	<0.5	<0.5	<0.5	<0.5

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	09	10	11	12	
Collector's Sample #	MW-12	MW-13	RW-1	Dup-1	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/18/1999	10/18/1999	10/18/1999	10/18/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
trans-1,3-Dichloropropene	0.5 *	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	1	<1	<1	4.9	<1
Ethyl methacrylate	1	<1	<1	<1	<1
2-Hexanone	3	<3	<3	<3	<3
Hexachlorobutadiene	1	<1	<1	<1	<1
Iodomethane	1	<1	<1	<1	<1
Isobutyl Alcohol	50	<50	<50	<50	<50
Isopropylbenzene	1	<1	<1	2.1	<1
p-Isopropyltoluene	1	<1	<1	3.3	<1
Methacrylonitrile	1	<1	<1	<1	<1
4-Methyl-2-pentanone	1	<1	<1	<1	<1
Methylene Chloride	1	<1	<1	<1	<1
Methyl methacrylate	1	<1	<1	<1	<1
Methyl-tert-butyl ether	1	<1	<1	1.3	<1
Naphthalene	1	1.2	<1	38.9 **	2.4
n-Propylbenzene	1	<1	<1	3.2	<1
Styrene	1	<1	<1	<1	<1
1,1,1,2-Tetrachloroethane	1	<1	<1	<1	<1
1,1,2,2-Tetrachloroethane	1	<1	<1	<1	<1
Tetrachloroethene	1	<1	<1	<1	<1
Toluene	1	<1	<1	5.2	<1

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS**Volatile Organics in Water**

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	09	10	11	12	
Collector's Sample #	MW-12	MW-13	RW-1	Dup-1	
Date Sampled	10/8/1999	10/8/1999	10/8/1999	10/8/1999	
Date Analyzed	10/18/1999	10/18/1999	10/18/1999	10/18/1999	
Dilution Factor	1	1	1	1	
Analyte	Report Limit µg/L	Concentration µg/L			
1,2,3-Trichlorobenzene	1	<1	<1	<1	<1
1,2,4-Trichlorobenzene	1	<1	<1	<1	<1
1,1,1-Trichloroethane	1	<1	<1	<1	2.2
1,1,2-Trichloroethane	1	<1	<1	<1	<1
Trichloroethene	1	21.4	<1	10.1	168 **
Trichlorofluoromethane	1	<1	<1	<1	<1
1,2,3-Trichloropropane	1	<1	<1	<1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	1	<1	<1	<1	<1
1,2,4-Trimethylbenzene	1	1.0	<1	63.1 **	<1
1,3,5-Trimethylbenzene	1	<1	<1	32.2	<1
Vinyl Acetate	1	<1	<1	<1	<1
Vinyl Chloride	0.5 *	<0.5	<0.5	1.3	<0.5
m+p-Xylenes	1	1.7	1.6	10.1	1.5
o-Xylene	1	1.5	1.3	18.2	1.3

* Analysis performed at the MDL level.

** Diluted so result is within the calibration curve.

Report Review / Date:


 Handwritten signature and date: 11-2-99

Project ID #: 007.03788.007

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #		13
Collector's Sample #		EB-1
Date Sampled		10/8/1999
Date Analyzed		10/18/1999
Dilution Factor		1
Analyte	Report Limit µg/L	Concentration µg/L
Acetone	4	4.7
Acetonitrile	10	<10
Acrylonitrile	3	<3
Allyl Chloride	2	<2
Benzene	1	<1
Benzyl Chloride	1	<1
Bromobenzene	1	<1
Bromochloromethane	1	<1
Bromodichloromethane	1	<1
Bromoform	1	<1
Bromomethane	2	<2
2-Butanone	4	<4
n-Butylbenzene	1	<1
sec-Butylbenzene	1	<1
tert-Butylbenzene	1	<1
Carbon Disulfide	1	<1
Carbon Tetrachloride	0.5 *	<0.5
Chlorobenzene	1	<1
Chlorodibromomethane	1	<1
Chloroethane	1	<1
2-Chloroethyl vinyl ether	4	<4

Project ID #: 007.03788.007

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	13	
Collector's Sample #	EB-1	
Date Sampled	10/8/1999	
Date Analyzed	10/18/1999	
Dilution Factor	1	
Analyte	Report Limit µg/L	Concentration µg/L
Chloroform	1	<1
Chloromethane	1	<1
2-Chlorotoluene	1	<1
4-Chlorotoluene	1	<1
1,2-Dibromo-3-chloropropane	1	<1
1,2-Dibromoethane	1	<1
Dibromomethane	1	<1
1,2-Dichlorobenzene	1	<1
1,3-Dichlorobenzene	1	<1
1,4-Dichlorobenzene	1	<1
1,4-Dichloro-2-butene	1	<1
Dichlorodifluoromethane	1	<1
1,1-Dichloroethane	1	<1
1,2-Dichloroethane	0.5 *	<0.5
1,1-Dichloroethene	1	<1
cis-1,2-Dichloroethene	1	<1
trans-1,2-Dichloroethene	1	<1
1,2-Dichloropropane	1	<1
1,3-Dichloropropane	1	<1
2,2-Dichloropropane	1	<1
cis-1,3-Dichloropropene	0.5 *	<0.5

Project ID #: 007.03788.007

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #		13
Collector's Sample #		EB-1
Date Sampled		10/8/1999
Date Analyzed		10/18/1999
Dilution Factor		1
Analyte	Report Limit µg/L	Concentration µg/L
trans-1,3-Dichloropropene	0.5 *	<0.5
Ethylbenzene	1	<1
Ethyl methacrylate	1	<1
2-Hexanone	3	<3
Hexachlorobutadiene	1	<1
Iodomethane	1	<1
Isobutyl Alcohol	50	<50
Isopropylbenzene	1	<1
p-Isopropyltoluene	1	<1
Methacrylonitrile	1	<1
4-Methyl-2-pentanone	1	<1
Methylene Chloride	1	<1
Methyl methacrylate	1	<1
Methyl-tert-butyl ether	1	<1
Naphthalene	1	<1
n-Propylbenzene	1	<1
Styrene	1	<1
1,1,1,2-Tetrachloroethane	1	<1
1,1,2,2-Tetrachloroethane	1	<1
Tetrachloroethene	1	<1
Toluene	1	1.2

Project ID #: 007.03788.007

Volatiles Page 16 of 16

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS

Volatile Organics in Water

EPA Method 8260B

Special Reporting List, Special Reporting Limits

Work Order #	13	
Collector's Sample #	EB-1	
Date Sampled	10/8/1999	
Date Analyzed	10/18/1999	
Dilution Factor	1	
Analyte	Report Limit ug/L	Concentration ug/L
1,2,3-Trichlorobenzene	1	<1
1,2,4-Trichlorobenzene	1	<1
1,1,1-Trichloroethane	1	<1
1,1,2-Trichloroethane	1	<1
Trichloroethene	1	<1
Trichlorofluoromethane	1	<1
1,2,3-Trichloropropane	1	<1
1,1,2-Trichloro-1,2,2-trifluoroethane	1	<1
1,2,4-Trimethylbenzene	1	<1
1,3,5-Trimethylbenzene	1	<1
Vinyl Acetate	1	<1
Vinyl Chloride	0.5 *	<0.5
m+p-Xylenes	1	1.9
o-Xylene	1	1.5

* Analysis performed at the MDL level.

Report Review / Date:

QCB 11-2-99

Project ID #: 007.03788.007

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Mineral Spirits in Water

Modified EPA Method 8015B

Report Limit: 50 ug/L

Work Order #	Collector's Sample #	Date Sampled	Date Analyzed	Concentration ug/L
01	MW-1	10/8/1999	10/12/1999	<50
02	MW-2	10/8/1999	10/12/1999	<50
03	MW-3	10/8/1999	10/12/1999	<50
04	MW-4	10/8/1999	10/12/1999	<50
05	MW-5	10/8/1999	10/12/1999	<50
06	MW-6	10/8/1999	10/12/1999	<50
07	MW-8	10/8/1999	10/12/1999	<50
08	MW-9	10/8/1999	10/14/1999	3200 @
09	MW-12	10/8/1999	10/20/1999	<50
10	MW-13	10/8/1999	10/12/1999	<50
11	RW-1	10/8/1999	10/20/1999	890 **
12	Dup-1	10/8/1999	10/12/1999	<50
13	EB-1	10/8/1999	10/12/1999	<50

** Diluted so result is within the calibration curve.

@ Sample was analyzed at a dilution but the result is still above the calibration curve. The result is reported as an estimated minimum concentration.

Report Review / Date:

P. C. G. 11-2-99

Project ID #: 007.03788.007

Total Manganese Page 1 of 1

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS

Total Manganese in Water

EPA Method 6010B

Report Limit: 0.010 mg/L

Work Order #	Collector's Sample #	Date Sampled	Date Analyzed	Concentration mg/L
01	MW-1	10/8/1999	10/13/1999	0.880
02	MW-2	10/8/1999	10/13/1999	0.352
03	MW-3	10/8/1999	10/13/1999	0.659
04	MW-4	10/8/1999	10/13/1999	1.28
05	MW-5	10/8/1999	10/13/1999	1.46
06	MW-6	10/8/1999	10/13/1999	0.085
07	MW-8	10/8/1999	10/13/1999	0.141
08	MW-9	10/8/1999	10/13/1999	4.37
09	MW-12	10/8/1999	10/13/1999	0.907
10	MW-13	10/8/1999	10/13/1999	0.034
11	RW-1	10/8/1999	10/13/1999	7.51

Report Review / Date:

Q. C. G. 11-2-99

Project ID #: 007.03788.007

Total Chloride Page 1 of 1

Project ID Name: Oakland, CA

SK Lab Project #: 99-249

Date Reported: 11/2/1999

ANALYTICAL RESULTS

Total Chloride in Water

Method SK 9601 (Neat)

Report Limit: 0.80 mg/L

Work Order #	Collector's Sample #	Date Sampled	Date Analyzed	Concentration mg/L
01	MW-1	10/8/1999	10/13/1999	15.8
02	MW-2	10/8/1999	10/13/1999	31.3
03	MW-3	10/8/1999	10/13/1999	6.0
04	MW-4	10/8/1999	10/13/1999	50.4
05	MW-5	10/8/1999	10/13/1999	18.0
06	MW-6	10/8/1999	10/13/1999	40.6
07	MW-8	10/8/1999	10/15/1999	37.6
08	MW-9	10/8/1999	10/14/1999	44.5
09	MW-12	10/8/1999	10/14/1999	54.3
10	MW-13	10/8/1999	10/14/1999	67.8
11	RW-1	10/8/1999	10/14/1999	30.4

Report Review / Date:

R. C. 11-2-99

9/24/99
2cl/VOA
7 days

Chain-of Custody Number:

SECOR Chain-of Custody Record

Field Office: Concord
 Address: 1390 Willow Pass Rd., Ste. 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 # 007.03788.007 Task # _____
 Project Manager Greg Hoehn
 Laboratory Safety-Kleen
 Turnaround Time Standard

Analysis Request

Sampler's Name Charles Meluncon
 Sampler's Signature [Signature]

Sample ID	Date	Time	Matrix	HCID	TPH/g/BTEX/WTPH-G 8015 (modified)/8020	TPH/d/WTPH-G 8015 (modified) <u>Spills</u>	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8240 (GC/MS)	Heavy Metals	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	Manganese	Chloride	Comments/ Instructions	Number of Containers
01 MW-1	10-8-99	12:30	H ₂ O		X	X		X	X	X						X	X	Temp 3.49951639	7
02 MW-2		13:30			X	X		X	X	X						X	X	9951640	7
03 MW-3		11:30			X	X		X	X	X						X	X	641	7
04 MW-4		15:30			X	X		X	X	X						X	X	642	7
05 MW-5		10:30			X	X		X	X	X						X	X	643	7
06 MW-6		9:30			X	X		X	X	X						X	X	644	7
07 MW-8		16:30			X	X		X	X	X						X	X	645	7
08 MW-9		18:00			X	X		X	X	X						X	X	646	7
09 MW-12		14:30			X	X		X	X	X						X	X	647	7
10 MW-13		8:30			X	X		X	X	X						X	X	648	7

2Pl SW

Special Instructions/Comments:
 5xVOA PH L2
 1 poly Cl- } water,
 12 poly metals }
 ↓
 pH 2
 EB-1 one Brake VOA
 Recovered upon arrival

Relinquished by: [Signature]
 Sign _____
 Print Charles Meluncon
 Company SECOR
 Time 10:00 Date 10-11-99

Received by: L. Latick
 Sign [Signature]
 Print L. Latick
 Company Fedex
 Time 11:20 Date 10/11

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

SECOR Chain-of Custody Record

Field Office: Concord
 Address: 1390 Willow Pass Rd, Ste. 360
Concord, CA 94521

Additional documents are attached, and are a part of this Record.
 Job Name: Safety-Kleen
 Location: 400 Market St.
Oakland, CA

Project # 007.03788.007 Task # _____
 Project Manager Greg Hoehn
 Laboratory Safety-Kleen
 Turnaround Time Standard

Sampler's Name Charles Meluncon
 Sampler's Signature [Signature]

Analysis Request

Sample ID	Date	Time	Matrix	HCID	TPH/g/BTEX/WTPH-G 8015 (modified)/8020	TPH/d/WTPH-B 8015 (modified) <u>Miscel Spirits</u>	TPH 418.1/WTPH 418.1	Aromatic Volatiles 602/8020	Volatile Organics 624/8260 (GC/MS)	Highly Volatile Organics 604/8040	Semi-volatile Organics 625/8270 (GC/MS)	Pesticides/PCBs 608/8080	Total Lead 7421	Priority Pollutant Metals (13)	TCLP Metals	Manganese Chloride	Comments/ Instructions	Number of Containers	
11 RW-1	10-8-99	17:30	H ₂ O		X	X			X	X						X	X	9951649	7
12 Dup-1	↓		↓		X	X			X	X								651	5 -VOA
13 EB-1	↓		↓		X	X			X	X								652	5 -VOA
																			4

Special Instructions/Comments:

Relinquished by: [Signature]
 Sign _____
 Print Charles Meluncon
 Company SECOR
 Time 10:00 Date 10-11-99

Received by: L. Latias
 Sign [Signature]
 Print L. Latias
 Company Fedex
 Time 11:22 Date 10/11

Sample Receipt

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

Client: _____
 Client Contact: _____
 Client Phone: _____