



92 JUN 19 11:20

June 15, 1992

404 Market
Oakland 94607

Project No. 020501659

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

RE: SUBMITTAL OF THE QUARTERLY REPORT OF GROUNDWATER MONITORING AND RELATED ACTIVITIES CONDUCTED AT THE SAFETY-KLEEN OAKLAND SERVICE CENTER, OAKLAND, CALIFORNIA.

Dear Mr. Ritchie:

Safety-Kleen Corporation is pleased to present this report which summarizes the activities conducted at the Safety-Kleen Oakland Service Center during the period from March through May 1992.

We hope this report meets your needs at this time. If you have any questions or comments, please call either Mr. Mike Wray of Groundwater Technology, Inc., at (510) 871-2387, or me at (310) 831-3903.

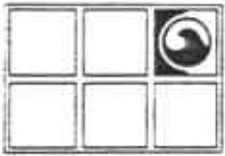
Sincerely,

Anne Lunt
Senior Project Manager - Remediation
Safety-Kleen Corporation

cc: Ms. Jane Maier, Safety-Kleen Corporation
Mr. Gary Long, Safety-Kleen Corporation
Mr. Ed Hoople, Safety-Kleen Corporation
Mr. Alfred Wong, State of California Department of Health Services
Mr. Dennis Byrnes, Alameda County Department of Environmental Services
Mr. Mike Wray, Groundwater Technology, Inc.

Enclosure

R1659A4.DH
(62)



GROUNDWATER TECHNOLOGY, INC.

4057 Port Chicago Highway, Concord, CA 94520 (415) 671-2387

FAX: (415) 685-9148

**QUARTERLY GROUNDWATER MONITORING REPORT
SAFETY-KLEEN OAKLAND SERVICE CENTER
OAKLAND, CALIFORNIA
MARCH THROUGH MAY 1992**

6-15-92

020501659

JUNE 15, 1992

Prepared for:
Ms. Anne Lunt
Safety-Kleen Corporation
P.O. Box 1429
San Pedro, CA 90733-1429

Groundwater Technologies, Inc.
Written/Submitted by

Deborah H. Horner

Deborah H. Horner
Geologist

Michael J. Wray

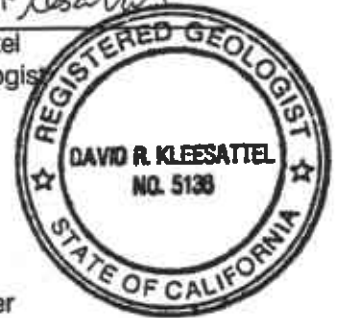
Michael J. Wray
Project Manager

R1659A4.DH
(62)

Groundwater Technologies, Inc.
Reviewed/Approved by

David R. Kleesattel

David R. Kleesattel
Registered Geologist
No. 5136



For:
John Gaines
Regional Manager

TABLE OF CONTENTS

	PAGE
1.0 INTRODUCTION	1
2.0 SITE BACKGROUND	1
3.0 SCOPE OF WORK	2
3.1 Groundwater Monitoring	2
3.2 Groundwater Sampling	2
4.0 FUTURE ACTIVITIES	3
5.0 CLOSURE	4

LIST OF FIGURES

- FIGURE 1 SITE LOCATION MAP
- FIGURE 2 POTENTIOMETRIC SURFACE MAP (04/27/92)
- FIGURE 3 DISTRIBUTION OF DISSOLVED TCE CONCENTRATIONS
- FIGURE 4 DISTRIBUTION OF DISSOLVED CHLOROBENZENE CONCENTRATIONS
- FIGURE 5 DISTRIBUTION OF DISSOLVED CHLOROFORM CONCENTRATIONS
- FIGURE 6 DISTRIBUTION OF DISSOLVED 1,2-DICHLOROETHANE CONCENTRATIONS

LIST OF TABLES

- TABLE 1 GROUNDWATER MONITORING DATA
- TABLE 2 ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

APPENDICES

- APPENDIX A LABORATORY REPORTS

**QUARTERLY GROUNDWATER MONITORING REPORT
SAFETY-KLEEN OAKLAND SERVICE CENTER
OAKLAND, CALIFORNIA
MARCH THROUGH MAY 1992**

JUNE 15, 1992

1.0 INTRODUCTION

This report discusses the groundwater monitoring and related environmental assessment activities conducted by Groundwater Technology, Inc. at the Safety-Kleen facility located at 404 Market Street in Oakland, California (Figure 1). The period discussed in this report is from March through May 1992. Activities performed previously were addressed in the Quarterly Report of Groundwater Monitoring, Safety-Kleen Oakland Service Center, for December 1991 through February 1992. 94607

2.0 SITE BACKGROUND

The Safety-Kleen Oakland Service Center serves as a local distribution center for Safety-Kleen products. The clean and spent mineral spirits were previously stored in three underground storage tanks (USTs). Two 6,000-gallon steel USTs were used to store spent mineral spirits before shipment to Safety-Kleen's recycling center in Reedley, California. A third, 10,000-gallon UST was used to store clean mineral spirits.

The three former USTs were replaced with two new double-walled tanks in June and July 1990. All appropriate permits were obtained before the tank removal operation. The Report of Underground Storage Tank Replacement Activities, dated September 1990, was submitted to the Department of Health Services and the California Regional Water Quality Control Board.

3.0 SCOPE OF WORK

3.1 Groundwater Monitoring

Monthly groundwater monitoring and sampling was performed at the Safety-Kleen Oakland Service Center for 20 months, ending August 1990, at which time a quarterly monitoring and sampling program began. The previous quarterly sampling event was conducted on February 14, 1992. This report presents the results of the April 27, 1992, monitoring and sampling event.

Wellhead elevations have been surveyed relative to mean sea level to allow determination of groundwater elevations relative to a known datum. The wells were monitored for depth to water using an INTERFACE PROBE™ Well Monitoring System. A clear bailer was used to measure 2.5 feet of separate-phase hydrocarbons in well MW-9. Table 1 summarizes the April 27, 1992, monitoring data.

Figure 2 illustrates the potentiometric surface of the shallow groundwater as interpreted from the monitoring data presented in Table 1. Because monitoring well MW-13 is completed in a deeper hydrogeologic zone, data from that well was excluded in preparing the potentiometric surface map (Figure 2). The apparent groundwater flow direction is toward the south-southwest with an average gradient of 0.002 ft/ft in the site vicinity.

3.2 Groundwater Sampling

Groundwater sampling was conducted by initially purging each well until the extracted water indicated that the temperature, pH, and conductivity had stabilized. Water levels were then allowed to recover to at least 80 percent of their original static level. Groundwater samples were then collected using a clean Teflon™ sampling bailer. The samples were placed into 40-milliliter glass vials, labeled, placed in an ice-chilled cooler and delivered under chain-of-custody protocol to GTEL Environmental Laboratories, Inc., a California-certified laboratory (CA Cert. No. E675).

The samples were analyzed for total petroleum hydrocarbons (TPH)-as-mineral spirits using modified Environmental Protection Agency (EPA) Method 8015 and for purgeable halocarbons using EPA Method 601. Well MW-11 contains an obstruction at approximately 8 feet below grade and could not be sampled. Well MW-9 was not sampled because separate-phase hydrocarbons were present.

Detectable concentrations of TPH-as-mineral spirits were not found in the groundwater samples collected on April 27, 1992. Table 2 summarizes the results of purgeable halocarbon analyses by EPA Method 601. Figures 3 through 6 present the distribution of trichloroethene (TCE), chlorobenzene, chloroform, and 1,2-dichloroethane (DCA) detected in water samples over the past year, including the results from the April 1992 sampling event.

The presence of TCE in the upgradient wells has been interpreted as an off-site plume, unrelated to activities at the Safety-Kleen facility. The highest TCE concentrations were detected in the samples from monitoring wells MW-4 and MW-10, upgradient (north) of the Safety-Kleen facility (Figure 3). Concentrations of TCE have been consistently detected in these wells since installation of the wells in 1988 and 1989 (Groundwater Technology Update Report Additional Assessment, June 1990). The chloroform concentrations are associated with the encroaching upgradient TCE plume. Since February 1991, TCE concentrations have decreased in samples from well MW-10. The TCE concentrations in samples from well MW-4 increased from July 1991 to April 1992, which suggests that the off-site plume may be encroaching further onto the Safety-Kleen property.

Figures 4, 5, and 6 present the distribution of chlorobenzene, chloroform, and 1,2-DCA detected in water samples over the past year. Chlorobenzene was detected at 1.6 ppb in the sample from well MW-3 and 7.2 ppb in the sample from well MW-8. Chloroform was detected in the sample from well MW-6 at 0.7 ppb. The halocarbon 1,2-DCA was found in the samples from well MW-3 at 2.3 ppb, well MW-8 at 5.3 ppb, and well MW-12 at 2.2 ppb.

4.0 FUTURE ACTIVITIES

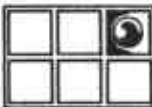
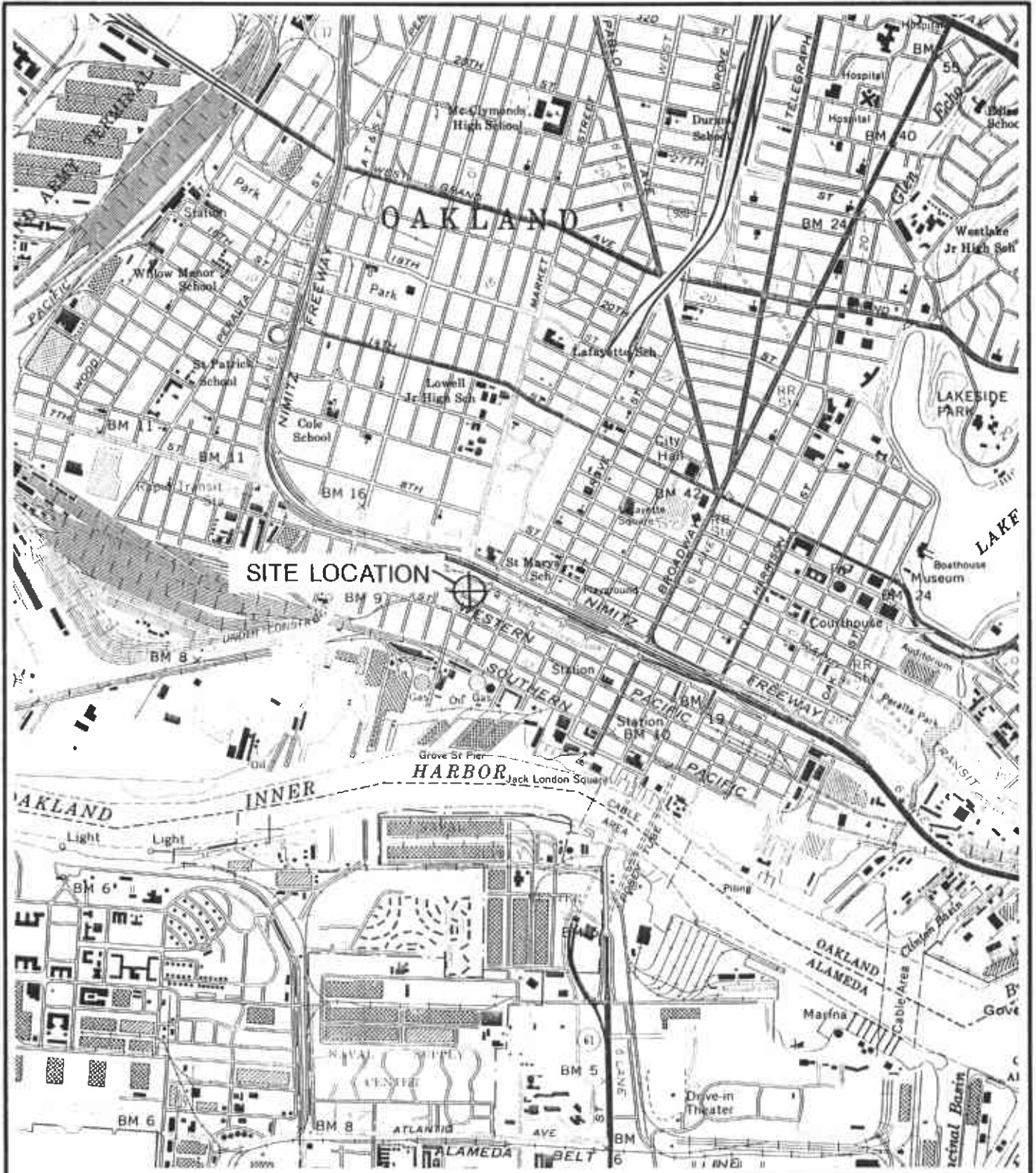
The next quarterly sampling and monitoring event will be conducted during July 1992.

5.0 CLOSURE

This concludes the Quarterly Groundwater Monitoring Report for the Oakland Service Center facility for March through May 1992. If you have any questions, or require additional information, please contact our Concord office at (510) 671-2387.

LIST OF FIGURES

- FIGURE 1 SITE LOCATION MAP
- FIGURE 2 POTENTIOMETRIC SURFACE MAP
- FIGURE 3 DISTRIBUTION OF DISSOLVED TCE CONCENTRATIONS
- FIGURE 4 DISTRIBUTION OF DISSOLVED CHLOROBENZENE CONCENTRATIONS
- FIGURE 5 DISTRIBUTION OF DISSOLVED CHLOROFORM CONCENTRATIONS
- FIGURE 6 DISTRIBUTION OF DISSOLVED 1,2-DICHLOROETHANE CONCENTRATIONS



**GROUNDWATER
TECHNOLOGY**

4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387



SCALE:



SITE LOCATION MAP

CLIENT:

**SAFETY-KLEEN
CORPORATION**

DATE:

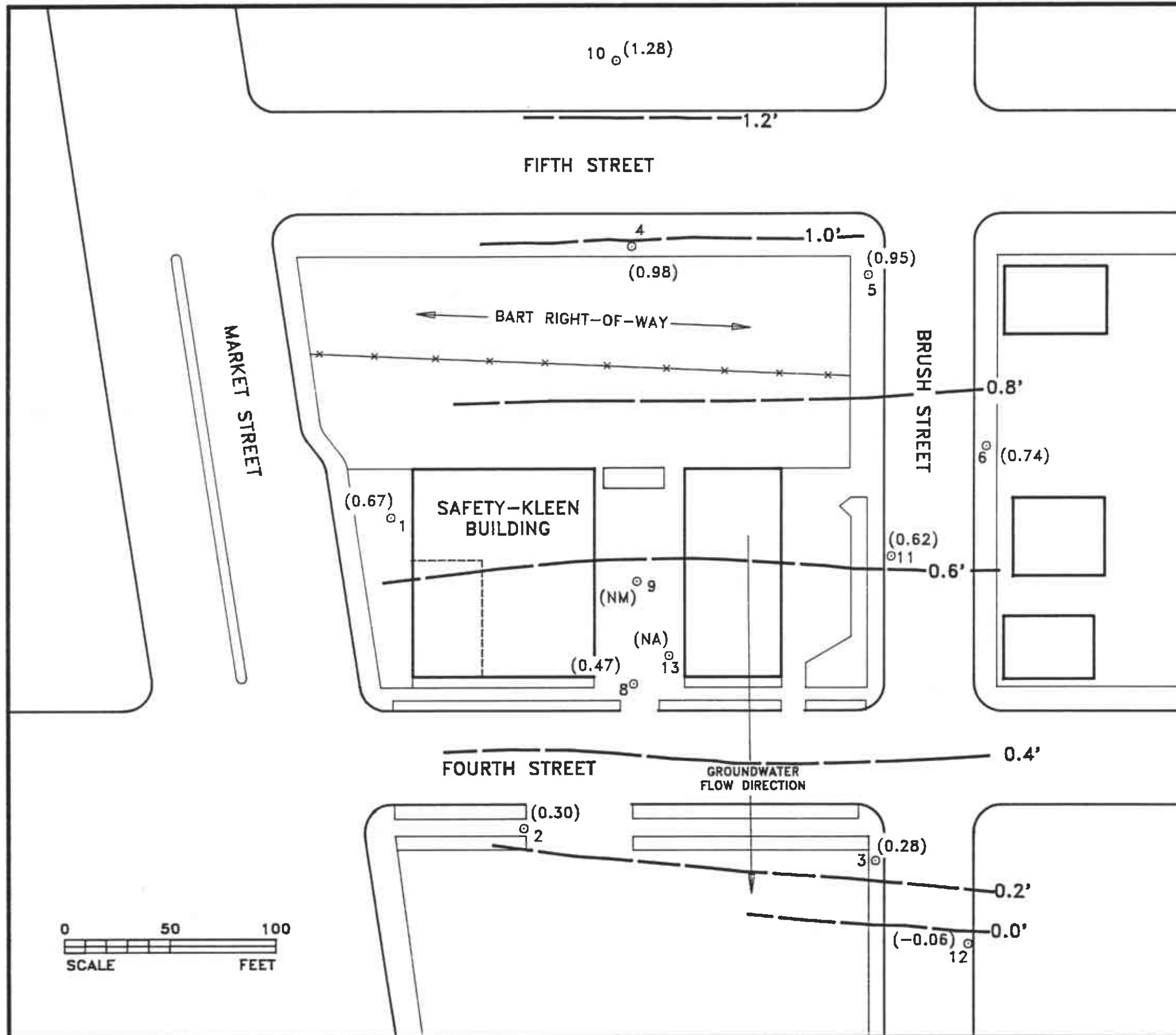
3/3/92

LOCATION:

**404 MARKET STREET
OAKLAND, CALIFORNIA**

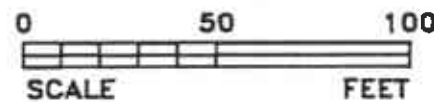
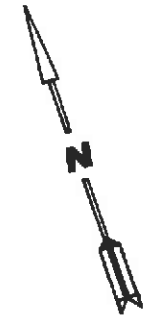
FIGURE:

1

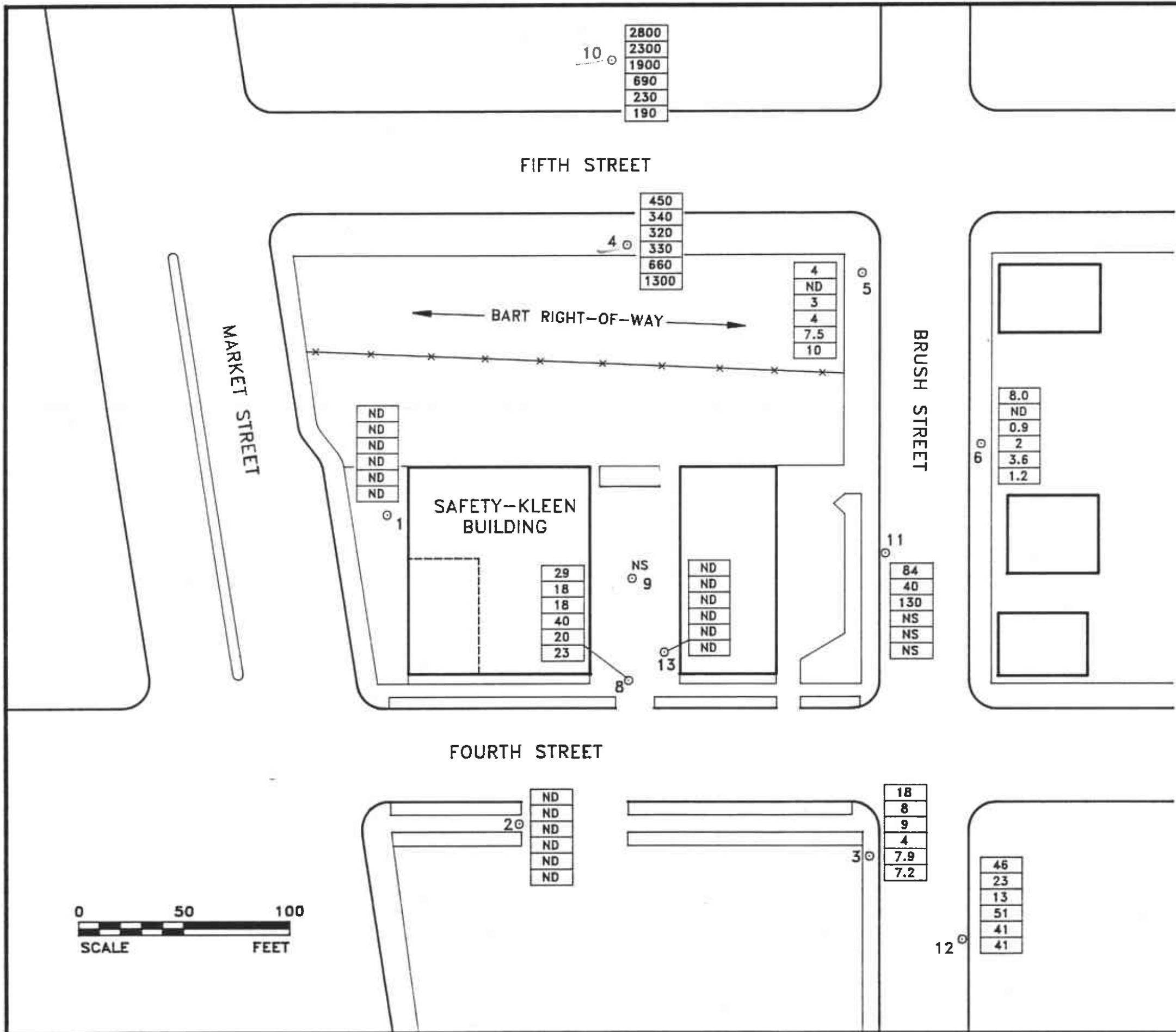


LEGEND

- MONITORING WELL
- () POTENTIOMETRIC SURFACE ELEVATION (RELATIVE TO MEAN SEA LEVEL)
- POTENTIOMETRIC SURFACE CONTOUR
- NA NOT APPLICABLE (DEEP WELL)
- NM NOT MEASURED

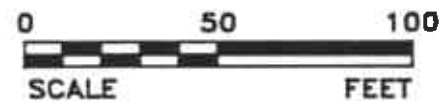


		GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387	
REV. NO.:	DATE:	ACAD. FILE:	
0	5/12/92	PSM42792/SP991	
POTENTIOMETRIC SURFACE MAP (4/27/92)			
CLIENT:		PM	
SAFETY-KLEEN CORPORATION		<i>mju</i>	
LOCATION:		PE/RG	
404 MARKET STREET OAKLAND, CALIFORNIA		DRK	
DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
DH	ML	020501659	2

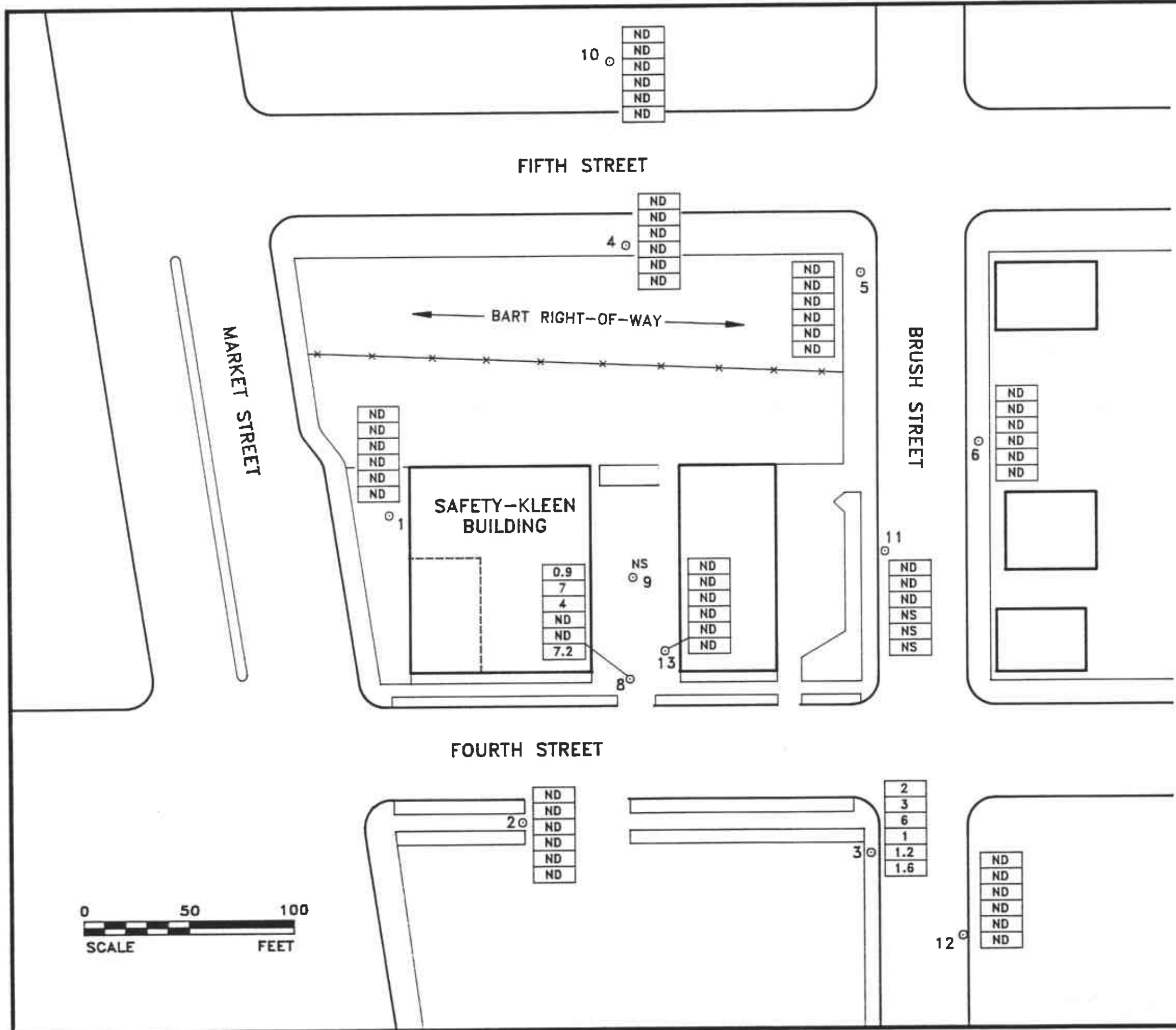


LEGEND

- MONITORING WELL
- ▨ TCE CONCENTRATION (ppb)
- DATE OF SAMPLE
 - 2/27/91
 - 4/30/91
 - 7/22/91
 - 10/16/91
 - 2/14/92
 - 4/27/92
- ND NOT DETECTABLE
- NS NOT SAMPLED



		GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387	
REV. NO.: 0	DATE: 2/26/92	ACAD FILE: TCE492/SP991	
DISSOLVED TRICHLOROETHENE (TCE) DISTRIBUTION			
CLIENT: SAFETY-KLEEN CORPORATION		PM <i>[Signature]</i>	
LOCATION: 404 MARKET AVENUE OAKLAND, CALIFORNIA		PE/RG ORK	
DESIGNED DH	DETAILED ML	PROJECT NO.: 020501659	FIGURE: 3



LEGEND

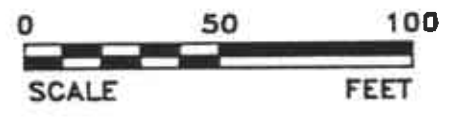
○ MONITORING WELL

CHLOROBENZENE CONCENTRATION (ppb)

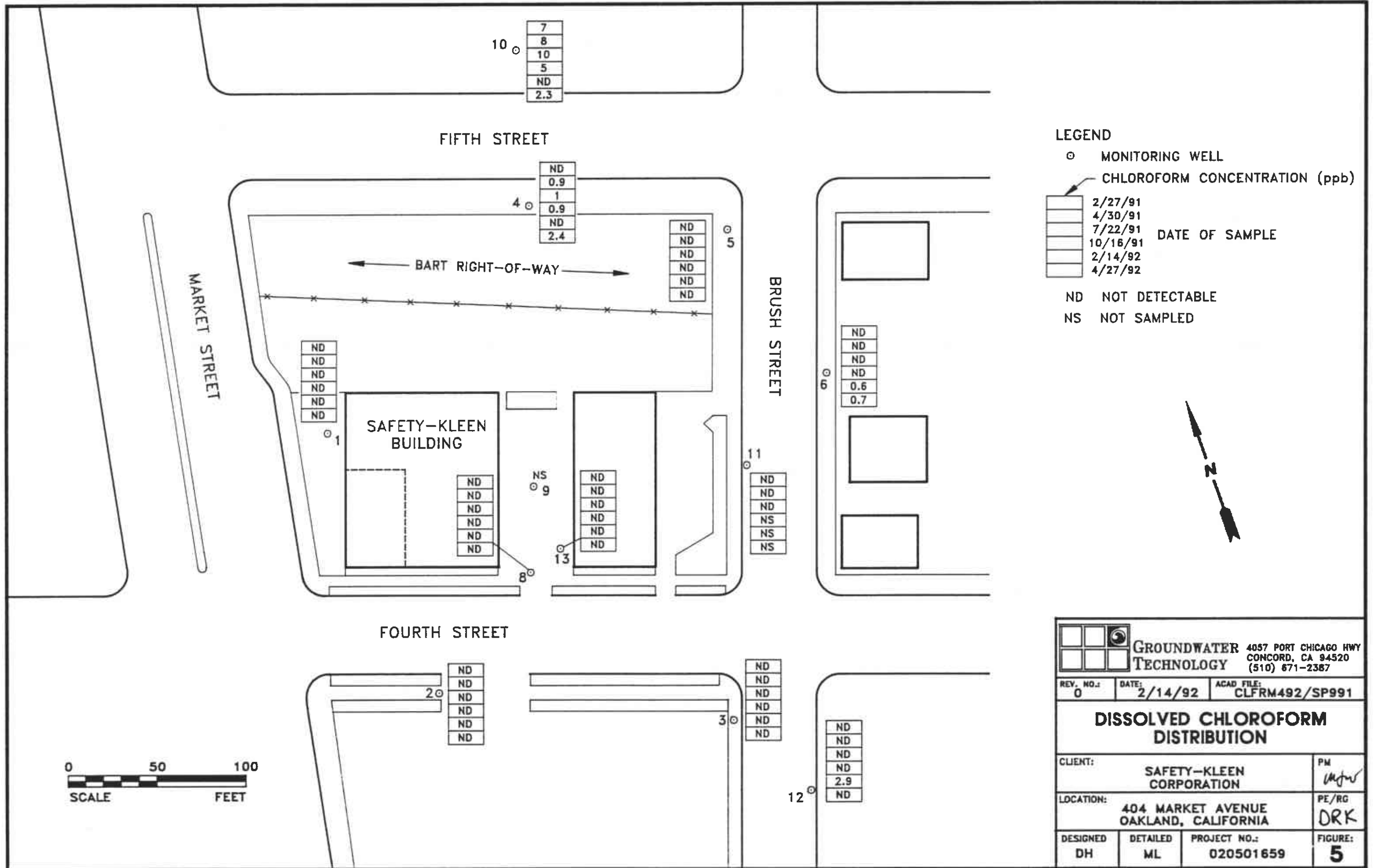
White	2/27/91
Light Gray	4/30/91
Medium Gray	7/22/91
Dark Gray	10/16/91
Black	2/14/92
White	4/27/92

DATE OF SAMPLE

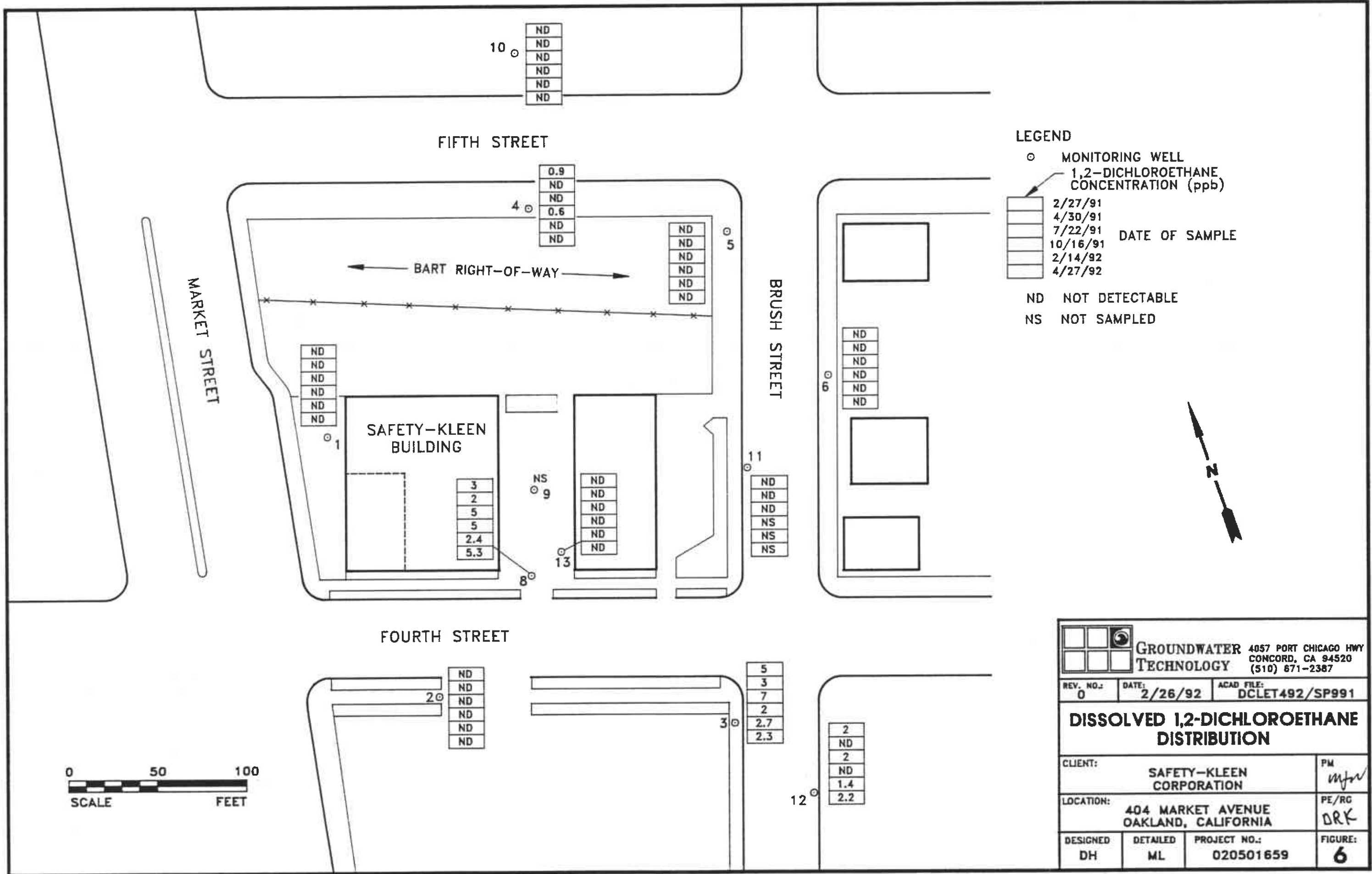
ND NOT DETECTABLE
NS NOT SAMPLED



		GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2387	
REV. NO.:	DATE:	ACAD. FILE:	
0	2/26/92	CLBNZ492/SP991	
DISSOLVED CHLOROBENZENE DISTRIBUTION			
CLIENT: SAFETY-KLEEN CORPORATION			PM <i>WJR</i>
LOCATION: 404 MARKET AVENUE OAKLAND, CALIFORNIA			PE/RC <i>DRK</i>
DESIGNED DH	DETAILED ML	PROJECT NO.: 020501659	FIGURE: 4



		4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 671-2367	
REV. NO.:	DATE:	ACAD FILE:	
0	2/14/92	CLFRM492/SP991	
DISSOLVED CHLOROFORM DISTRIBUTION			
CLIENT:	SAFETY-KLEEN CORPORATION		PM <i>[Signature]</i>
LOCATION:	404 MARKET AVENUE OAKLAND, CALIFORNIA		PE/RG DRK
DESIGNED DH	DETAILED ML	PROJECT NO.:	FIGURE:
		020501659	5



		4057 PORT CHICAGO HWY CONCORD, CA 94520 (510) 871-2387	
REV. NO.:	0	DATE:	2/26/92
ACAD FILE:	DCLET492/SP991		
DISSOLVED 1,2-DICHLOROETHANE DISTRIBUTION			
CLIENT:	SAFETY-KLEEN CORPORATION		PM <i>mjr</i>
LOCATION:	404 MARKET AVENUE OAKLAND, CALIFORNIA		PE/RC <i>DRK</i>
DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
DH	ML	020501659	6



LIST OF TABLES

- TABLE 1 GROUNDWATER MONITORING DATA
- TABLE 2 ANALYTICAL RESULTS OF GROUNDWATER SAMPLES

TABLE 1
GROUNDWATER MONITORING DATA
APRIL 27, 1992

WELL ID	TOC ELEVATION (ft. msl)	DTW (ft)	DTP (ft)	PT (ft)	ADJ ELEVATION (ft msl)
MW-1	7.99	7.32	-	-	0.67
MW-2	8.20	7.90	-	-	0.30
MW-3	6.66	6.38	-	-	0.28
MW-4	10.32	9.34	-	-	0.98
MW-5	10.28	9.33	-	-	0.95
MW-6	8.97	8.23	-	-	0.74
MW-8	7.80	7.33	-	-	0.47
MW-9	8.21	NM	7.22*	2.5*	-
MW-10	10.43	9.15	-	-	1.28
MW-11	7.91	7.29	-	-	0.62
MW-12	6.74	6.80	-	-	-0.06
MW-13	8.08	11.43	-	-	-3.35

- TOC = Top of casing
 DTW = Depth-to-water
 DTP = Depth-to-product (separate-phase hydrocarbons)
 PT = Product thickness
 ADJ ELEVATION = Adjusted water level elevation. If product is present in the well, the water level elevation is adjusted by adding 0.8 x the product thickness.
 * = Product thickness measured with clear bailer.
 NM = Not measured

TABLE 2
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
EPA METHOD 601
APRIL 27, 1992
(Results in parts per billion)

WELL ID	1,1-DCE	1,1-DCA	1,2-DCA	1,2-DCE	CHLRFORM	1,1,1-TCA	TCE	CHLRBENZ	1,2-DCP	FREON II	PCE	1,4-DCB
MW-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.9	ND
MW-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	ND	4.8	2.3	1.4	ND	ND	7.2	1.6	ND	ND	0.5	ND
MW-4	ND	ND	ND	82	2.4	ND	1,300	ND	ND	ND	ND	ND
MW-5	ND	ND	ND	ND	ND	1.7	10	ND	ND	6.5	ND	ND
MW-6	ND	ND	ND	ND	0.7	ND	1.2	ND	ND	ND	ND	ND
MW-8	ND	2.4	5.3	0.9	ND	ND	23	7.2	0.7	ND	1.1	2
MW-10	0.6	ND	ND	34	2.3	ND	190	ND	ND	ND	ND	ND
MW-11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
MW-12	ND	3.3	2.2	2.8	ND	ND	41	ND	ND	ND	ND	ND
MW-13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

Only detected compounds are listed. For a complete list of analytes see Appendix A.

NS = Not sampled

ND = Not detected. See laboratory reports in Appendix A for detection

Abbreviations:

1,1-DCE = 1,1-Dichloroethene
 1,1-DCA = 1,1-Dichloroethane
 1,2-DCA = 1,2-Dichloroethane
 1,2-DCE = 1,2-Dichloroethene
 1,2-DCP = 1,2-Dichloropropane
 PCE = Tetrachloroethene

1,1,1-TCA = 1,1,1-Trichloroethane
 TCE = Trichloroethene
 CHLRBENZ = Chlorobenzene
 CHLRFORM = Chloroform
 FREON II = Trichlorofluoromethane
 1,4-DCB = 1,4-Dichlorobenzene

APPENDIX A
LABORATORY REPORTS



GTEL

ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region

4080-C Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California
(510) 825-0720 (FAX)

Client Number: GTI72SFK01
Consultant Project Number: 020501659
Project ID: Oakland
Work Order Number: C2-04-768

May 4, 1992

Mike Wray
Groundwater Technology, Inc.
4057 Port Chicago Hwy.
Concord, CA 94520

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 04/28/92, under chain of custody records 72-13356, 72-13394 and 72-13395.

A formal Quality Control/Quality Assurance (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria, unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Eileen F. Bullen
Eileen F. Bullen
Laboratory Director

Table 1

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Mineral Spirits in Water

Modified EPA Method 5030/8015^a

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986.

GTEL Sample Number		01	02	03	04
Client Identification		RBMW13	MW13	MW1	MW2
Date Sampled		04/27/92	04/27/92	04/27/92	04/27/92
Date Analyzed		04/29/92	04/29/92	04/29/92	04/29/92
Analyte	Quantitation Limit, mg/L	Concentration, mg/L			
Mineral spirits	1	<1	<1	<1	<1
Quantitation Limit Multiplier		1	1	1	1

GTEL Sample Number		05	06	07	08
Client Identification		MW6	MW5	MW3	MW10
Date Sampled		04/27/92	04/27/92	04/27/92	04/27/92
Date Analyzed		04/29/92	04/29/92	04/29/92	04/29/92
Analyte	Quantitation Limit, mg/L	Concentration, mg/L			
Mineral spirits	1	<1	<1	<1	<1
Quantitation Limit Multiplier		1	1	1	1

Table 1 (Continued)

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Mineral Spirits in Water

Modified EPA Method 5030/8015^a

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986.

GTEL Sample Number		09	10	11	
Client Identification		MW12	MW8	MW4	
Date Sampled		04/27/92	04/27/92	04/27/92	
Date Analyzed		04/29/92	04/29/92	04/29/92	
Analyte	Quantitation Limit, mg/L	Concentration, mg/L			
Mineral spirits	1	<1	<1	<1	
Quantitation Limit Multiplier		1	1	1	



Northwest Region
4080 Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California

Client Number: GT172SFK01
Consultant Project Number: 020501659
Project ID: Oakland
Work Order Number: C2-04-769

May 4, 1992

Mike Wray
Groundwater Technology, Inc.
4057 Port Chicago Hwy.
Concord, CA 94520

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 04/28/92, under chain of custody records 72-13356, 72-13394 and 72-13395.

A formal Quality Control/Quality Assurance (QA/QC) program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria, unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

If you have any questions concerning this analysis or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,
GTEL Environmental Laboratories, Inc.

Eileen F. Bullen
Eileen F. Bullen
Laboratory Director

Table 1
ANALYTICAL RESULTS
Purgeable Halocarbons in Water
EPA Method 601^a

GTEL Sample Number		01	02	03	04
Client Identification		MW13	MW1	MW2	MW6
Date Sampled		04/27/92	04/27/92	04/27/92	04/27/92
Date Analyzed		04/29/92	04/29/92	04/29/92	04/29/92
Analyte	Quantitation Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	1	<1	<1	<1	<1
Chloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Methylene chloride	0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	0.2	<0.2	<0.2	<0.2	<0.2
1,1-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloroethene	0.5	<0.5	<0.5	<0.5	<0.5
Chloroform	0.5	<0.5	<0.5	<0.5	0.7
1,2-Dichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5	<0.5	<0.5	<0.5	1.2
Dichlorodifluoromethane	0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1	<1	<1	<1	<1
Bromoform	0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	0.5	<0.5	0.9	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	0.5	<0.5	<0.5	<0.5	<0.5
Quantitation Limit Multiplier		1	1	1	1

a. Federal Register, Vol. 49, October 26, 1984.

Table 1 (Continued)
 ANALYTICAL RESULTS
 Purgeable Halocarbons in Water
 EPA Method 601^a

GTEL Sample Number		05	06	07	08
Client Identification		MW5	MW3	MW4	MW10
Date Sampled		04/27/92	04/27/92	04/27/92	04/27/92
Date Analyzed		04/29/92	04/29/92	04/29/92	04/29/92
Analyte	Quantitation Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5	<0.5	<0.5	<0.5	<0.5
Vinyl chloride	1	<1	<1	<1	<1
Chloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Methylene chloride	0.5	<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethene	0.2	<0.2	<0.2	<0.2	0.6
1,1-Dichloroethane	0.5	<0.5	4.8	<0.5	<0.5
1,2-Dichloroethene	0.5	<0.5	1.4	82	34
Chloroform	0.5	<0.5	<0.5	2.4	2.3
1,2-Dichloroethane	0.5	<0.5	2.3	<0.5	<0.5
1,1,1-Trichloroethane	0.5	1.7	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5	<0.5	<0.5	<0.5	<0.5
Bromodichloromethane	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichloropropane	0.5	<0.5	<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5	10	7.2	1300	190
Dichlorodifluoromethane	0.5	<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	0.5	<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5	<0.5	<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1	<1	<1	<1	<1
Bromoform	0.5	<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	0.5	<0.5	0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	1.6	<0.5	<0.5
1,2-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	0.5	6.5	<0.5	<0.5	<0.5
Quantitation Limit Multiplier		1	1	1	1

a. Federal Register, Vol. 49, October 26, 1984.

Table 1 (Continued)
ANALYTICAL RESULTS
 Purgeable Halocarbons in Water
 EPA Method 601^a

GTEL Sample Number		09	10		
Client Identification		MW12	MW8		
Date Sampled		04/27/92	04/27/92		
Date Analyzed		04/29/92	04/29/92		
Analyte	Quantitation Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5	<0.5		
Bromomethane	0.5	<0.5	<0.5		
Vinyl chloride	1	<1	<1		
Chloroethane	0.5	<0.5	<0.5		
Methylene chloride	0.5	<0.5	<0.5		
1,1-Dichloroethene	0.2	<0.2	<0.2		
1,1-Dichloroethane	0.5	3.3	2.4		
1,2-Dichloroethene	0.5	2.8	0.9		
Chloroform	0.5	<0.5	<0.5		
1,2-Dichloroethane	0.5	2.2	5.3		
1,1,1-Trichloroethane	0.5	<0.5	<0.5		
Carbon tetrachloride	0.5	<0.5	<0.5		
Bromodichloromethane	0.5	<0.5	<0.5		
1,2-Dichloropropane	0.5	<0.5	0.7		
cis-1,3-Dichloropropene	0.5	<0.5	<0.5		
Trichloroethene	0.5	41	23		
Dichlorodifluoromethane	0.5	<0.5	<0.5		
Dibromochloromethane	0.5	<0.5	<0.5		
1,1,2-Trichloroethane	0.5	<0.5	<0.5		
trans-1,3-Dichloropropene	0.5	<0.5	<0.5		
2-Chloroethylvinyl ether	1	<1	<1		
Bromoform	0.5	<0.5	<0.5		
Tetrachloroethene	0.5	<0.5	1.1		
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5		
Chlorobenzene	0.5	<0.5	7.2		
1,2-Dichlorobenzene	0.5	<0.5	<0.5		
1,3-Dichlorobenzene	0.5	<0.5	<0.5		
1,4-Dichlorobenzene	0.5	<0.5	2		
Trichlorofluoromethane	0.5	<0.5	<0.5		
Quantitation Limit Multiplier		1	1		

a. Federal Register, Vol. 49, October 26, 1984.



4080- Pike Lane
Concord, CA 94520
415-685-7852

800-544-3422 (In CA)
800-423-7143 (Outside CA)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST 77-13394

ANALYSIS REQUEST

Project Manager: **MIKE WRAY** Phone #: _____
 Address: **Concord** Site location: **Oakland**
 Project Number: **020501659** Project Name: **SAFE 4004 METAST.**
 I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): **HECTOR MERINO**

BTEX 602	<input type="checkbox"/>	8020	<input type="checkbox"/>	with MTBE	<input type="checkbox"/>			
BTEX/TPH Gas	602/8015	<input type="checkbox"/>	8020/8015	<input type="checkbox"/>	MTBE	<input type="checkbox"/>		
TPH as Gas	<input type="checkbox"/>	Gas	<input type="checkbox"/>	Diesel	<input type="checkbox"/>	Jet Fuel	<input type="checkbox"/>	
Product I.D. by GC (SIMDIS)	<input type="checkbox"/>							
Total Oil & Grease	413.1	<input type="checkbox"/>	413.2	<input type="checkbox"/>	503A	<input type="checkbox"/>		
Total Petroleum Hydrocarbons	418.1	<input type="checkbox"/>	503E	<input type="checkbox"/>				
EPA 601	<input type="checkbox"/>	8010	<input type="checkbox"/>	DCA only	<input type="checkbox"/>			
EPA 602	<input type="checkbox"/>	8020	<input type="checkbox"/>					
EPA 608	<input type="checkbox"/>	8080	<input type="checkbox"/>	PCBs only	<input type="checkbox"/>			
EPA 610	<input type="checkbox"/>	8310	<input type="checkbox"/>					
EPA 624	<input type="checkbox"/>	8240	<input type="checkbox"/>	NBS +15	<input type="checkbox"/>			
EPA 625	<input type="checkbox"/>	8270	<input type="checkbox"/>	NBS +25	<input type="checkbox"/>			
EPTOX: Metals	<input type="checkbox"/>	Pesticides	<input type="checkbox"/>	Herbicides	<input type="checkbox"/>			
TCLP Metals	<input type="checkbox"/>	VOA	<input type="checkbox"/>	Semi VOA	<input type="checkbox"/>			
EPA Priority Pollutant Metals	<input type="checkbox"/>	HSL	<input type="checkbox"/>					
LEAD	7420	<input type="checkbox"/>	239.2	<input type="checkbox"/>	6010	<input type="checkbox"/>	Org. Lead	<input type="checkbox"/>
CAM Metals	<input type="checkbox"/>	STLC	<input type="checkbox"/>	TTLIC	<input type="checkbox"/>			
Corrosivity	<input type="checkbox"/>	Flashpoint	<input type="checkbox"/>	Reactivity	<input type="checkbox"/>			

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix						Method Preserved					Sampling	
				WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO3	H2SO4	ICE	NONE	OTHER	DATE	TIME
Blank			1						X						4/	
RB MW3		82	1						X						4/	
MW3		82	2						X							
MW3		82	2						X							
RB MW1		03	1						X						27	
MW1		03	2						X							
MW1		03	2						X							
RB MW2		02	1						X							
MW2		02	2						X							
MW2		02	2						X							

SPECIAL HANDLING

24 HOURS
 EXPEDITED 48 Hours
 SEVEN DAY
 OTHER _____ (#) BUSINESS DAYS
 QA/QC CLP Level Blue Level
 FAX

SPECIAL DETECTION LIMITS (Specify)

1003

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS: 1/3 8015 TPH Mineral Slits
 601 Purgeable Halocarbons

Lab Use Only _____ Storage Location _____
 Lot #: _____ Work Order #: _____

Received by:	Time	Date
Received by:	Time	Date
Received by Laboratory:	Time	Date

Way bill # _____
 Received by: *[Signature]*
 Date: 4-28 9:05



4080- Pike Lane
Concord, CA 94520
415-685-7852

800-544-3422 (In CA)
800-423-7143 (Outside CA)

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST 72-13395

CUSTODY RECORD

ANALYSIS REQUEST

Project Manager: **MIKE WRAY** Phone #: _____
FAX #: _____

Address: **Concord** Site location: **Oakland**

Project Number: **020501659** Project Name: **SAFE/404 Market St.**

I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): **HECTOR MERINO**

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix					Method Preserved					Sampling			
				WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO ₃	H ₂ SO ₄	ICE	NONE	OTHER	DATE	TIME	
RBMW6			1							X							
MW6		05	2							X							
MW6			2									X					
RBMW5			1							X							
MW5		08	2							X							
MW5			2									X					
RBMW3			1							X							
MW3		07	2							X							
MW3			2									X					
RBMW4			1							X							
MW4			2							X							

BTEX 602 <input type="checkbox"/>	8020 <input type="checkbox"/>	with MTBE <input type="checkbox"/>	BTEX/TPH Gas 602/8015 <input type="checkbox"/>	8020/8015 <input type="checkbox"/>	MTBE <input type="checkbox"/>	TPH as <input type="checkbox"/>	Gas <input type="checkbox"/>	Diesel <input type="checkbox"/>	Jet Fuel <input type="checkbox"/>	Product I.D. by GC (SIMDIS) <input type="checkbox"/>	Total Oil & Grease: 413.1 <input type="checkbox"/>	413.2 <input type="checkbox"/>	503A <input type="checkbox"/>	503E <input type="checkbox"/>	Total Petroleum Hydrocarbons: 418.1 <input type="checkbox"/>	DCA only <input type="checkbox"/>	EPA 601 <input type="checkbox"/>	8010 <input type="checkbox"/>	8020 <input type="checkbox"/>	EPA 608 <input type="checkbox"/>	8080 <input type="checkbox"/>	PCBs only <input type="checkbox"/>	EPA 610 <input type="checkbox"/>	8310 <input type="checkbox"/>	EPA 624 <input type="checkbox"/>	8240 <input type="checkbox"/>	NBS +15 <input type="checkbox"/>	EPA 625 <input type="checkbox"/>	8270 <input type="checkbox"/>	NBS +25 <input type="checkbox"/>	EPTOX: Metals <input type="checkbox"/>	Pesticides <input type="checkbox"/>	Herbicides <input type="checkbox"/>	TCLP Metals <input type="checkbox"/>	VOA <input type="checkbox"/>	Semi VOA <input type="checkbox"/>	EPA Priority Pollutant Metals <input type="checkbox"/>	HSL <input type="checkbox"/>	LEAD 7420 <input type="checkbox"/>	7421 <input type="checkbox"/>	239.2 <input type="checkbox"/>	6010 <input type="checkbox"/>	Org. Lead <input type="checkbox"/>	CAM Metals <input type="checkbox"/>	STLC <input type="checkbox"/>	TTLIC <input type="checkbox"/>	Corrosivity <input type="checkbox"/>	Flashpoint <input type="checkbox"/>	Reactivity <input type="checkbox"/>
-----------------------------------	-------------------------------	------------------------------------	--	------------------------------------	-------------------------------	---------------------------------	------------------------------	---------------------------------	-----------------------------------	--	--	--------------------------------	-------------------------------	-------------------------------	--	-----------------------------------	----------------------------------	-------------------------------	-------------------------------	----------------------------------	-------------------------------	------------------------------------	----------------------------------	-------------------------------	----------------------------------	-------------------------------	----------------------------------	----------------------------------	-------------------------------	----------------------------------	--	-------------------------------------	-------------------------------------	--------------------------------------	------------------------------	-----------------------------------	--	------------------------------	------------------------------------	-------------------------------	--------------------------------	-------------------------------	------------------------------------	-------------------------------------	-------------------------------	--------------------------------	--------------------------------------	-------------------------------------	-------------------------------------

TPH MINERAL SPIITS 8015
PURGEABLE HALOCARBONS 601
X HOLD

Received by:	Date	Time	Received by:	Date	Time	Received by:	Date	Time
	4/28/92							

Way bill #
4-28-92-501659-4

SPECIAL HANDLING

24 HOURS

EXPEDITED 48 Hours

SEVEN DAY

OTHER _____ (#) BUSINESS DAYS

QA/OC CLP Level Blue Level

FAX

SPECIAL DETECTION LIMITS (Specify)

283

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:

TPH MINERAL SPIITS - 8015
PURGEABLE HALOCARBONS 601

2/3

Lab Use Only _____ Storage Location _____

Lot #: _____ Work Order #: _____

Relinquished by Sampler: **Mike Wray**

Relinquished by: _____

Relinquished by: _____



4080- Pike Lane
Concord, CA 94520
415-685-7852

800-544-3422 (In CA)
800-423-7143 (Outside CA)

**CHAIN-OF-CUSTODY RECORD
AND ANALYSIS REQUEST**

72-13356

CUSTODY RECORD

Project Manager: **MIKE WRAY** Phone #:
FAX #:

Address: **CONCORD** Site location: **OAKLAND**

Project Number: **020501659** Project Name: **SAFE/401 MARKET ST.**

I attest that the proper field sampling procedures were used during the collection of these samples. Sampler Name (Print): **HECTOR MEENO**

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix				Method Preserved				Sampling					
				WATER	SOIL	AIR	SLUDGE	OTHER	HCl	HNO ₃	H ₂ SO ₄	ICE	NONE	OTHER	DATE	TIME	
BMW10		08	1	X													
MW10		08	2	X													
MW10		08	2	X													
BMW12		09	1														
MW12		09	2														
MW12		09	2														
BMW8		10	1														
MW8		10	2														
MW8		10	2														
MW4		11	2														

ANALYSIS REQUEST

with MTBE BTEX 602 8020 8020/8015 MTBE

BTEX/TPH Gas: 602/8015 8020/8015 MTBE

TPH as Gas Diesel Jet Fuel

Product I.D. by GC (SIMDIS)

Total Oil & Grease: 413.1 413.2 503A

Total Petroleum Hydrocarbons: 418.1 503E

EPA 601 8010 DCA only

EPA 602 8020

EPA 606 8080 PCBs only

EPA 610 8310

EPA 624 8240 NBS +15

EPA 625 8270 NBS +25

EPTOX: Metals Pesticides Herbicides

TCLP Metals VOA Semi VOA

EPA Priority Pollutant Metals HSL

LEAD 7420 7421 239.2 6010 Org. Lead

CAM Metals STL TLCL

Corrosivity Flashpoint Reactivity

TPH MINERAL SPIRITS 8015

PURGEABLE HALOCARBONS

HOLD

Received by:	Time	Date
Received by:	Time	Date
Received by Laboratory:	Time	Date

Way bill #

SPECIAL HANDLING

24 HOURS

EXPEDITED 48 Hours

SEVEN DAY

OTHER _____ (#) BUSINESS DAYS

QA/OC CLP Level Blue Level

FAX

SPECIAL DETECTION LIMITS (Specify)

383

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:

3/3

TPH-MINERAL SPIRITS-8015 (ACIDIFIED)

PURGEABLE HALOCARBONS -601 (NOT ACIDIFIED)

Lab Use Only Storage Location

Lot #: Work Order #:

Relinquished by Sampler:

Relinquished by:

Relinquished by: