safety-kleen

March 18, 1992

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 December 1991 through February 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. 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

R1659A3.DH
(62)

777 BIG TIMBER ROAD ELGIN, ILLINOIS 60123 PHONE 708/697-8460 FAX 708/697-4295

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
DECEMBER 1991 THROUGH FEBRUARY 1992

3-18-92

MARCH 18, 1992

Prepared for:

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

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GROUNDWATER TECHNOLOGY, INC.

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SAFETY-KLEEN OAKLAND SERVICE CENTER
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Prepared for:

Ms. Anne Lunt
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San Pedro, CA 90733-1429

Prepared by:

GROUNDWATER TECHNOLOGY, INC.
4057 Port Chicago Highway
Concord, CA 94520

Deborah H. Horner
Geologist

Michael J. Wray
Project Manager

David R. Kleesattel
Registered Geologist
No. 5136

REGISTERED GEOLOGIST
DAVID R. KLEESATTEL
NO. 5136
STATE OF CALIFORNIA

R1659A3.DH
(62)

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QUARTERLY GROUNDWATER MONITORING REPORT
SAFETY-KLEEN OAKLAND SERVICE CENTER
OAKLAND, CALIFORNIA
DECEMBER 1991 THROUGH FEBRUARY 1992

MARCH 18, 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 December 1991 through February 1992. Activities performed previously were addressed in the Quarterly Report of Groundwater Monitoring, Safety-Kleen Oakland Service Center, for September 1991 through November 1991.

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 underground storage tanks (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 existing 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 October 16, 1991. This report presents the results of the February 14, 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 and depth to separate-phase hydrocarbons (product) using an INTERFACE PROBE™ Well Monitoring System. Interface probe measurements in well MW-9 showed 1.53 feet of separate-phase hydrocarbons. Table 1 summarizes the February 14, 1992, monitoring data.

Figure 2 illustrates the potentiometric surface of the shallow groundwater as interpreted from the data in Table 1. Data from monitoring well MW-13, a deep well, was excluded in preparing the potentiometric surface map. The 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.

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 7.78 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 February 14, 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 February 1992 sampling event.

The presence of TCE in the upgradient wells has been interpreted as an additional 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). Since April 1991, TCE concentrations have decreased in samples from well MW-10. The TCE concentrations in samples from well MW-4 increased from October 1991 to February 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 1.2 ppb in the sample from one well, MW-3, which is located downgradient of the tank pit. Chloroform was detected in samples from MW-6 and MW-12 at 0.6 ppb and 2.9 ppb, respectively. The halocarbon 1,2-DCA was found in the samples from well MW-3 at 2.7 ppb, well MW-8 at 2.4 ppb, and well MW-12 at 1.4 ppb.

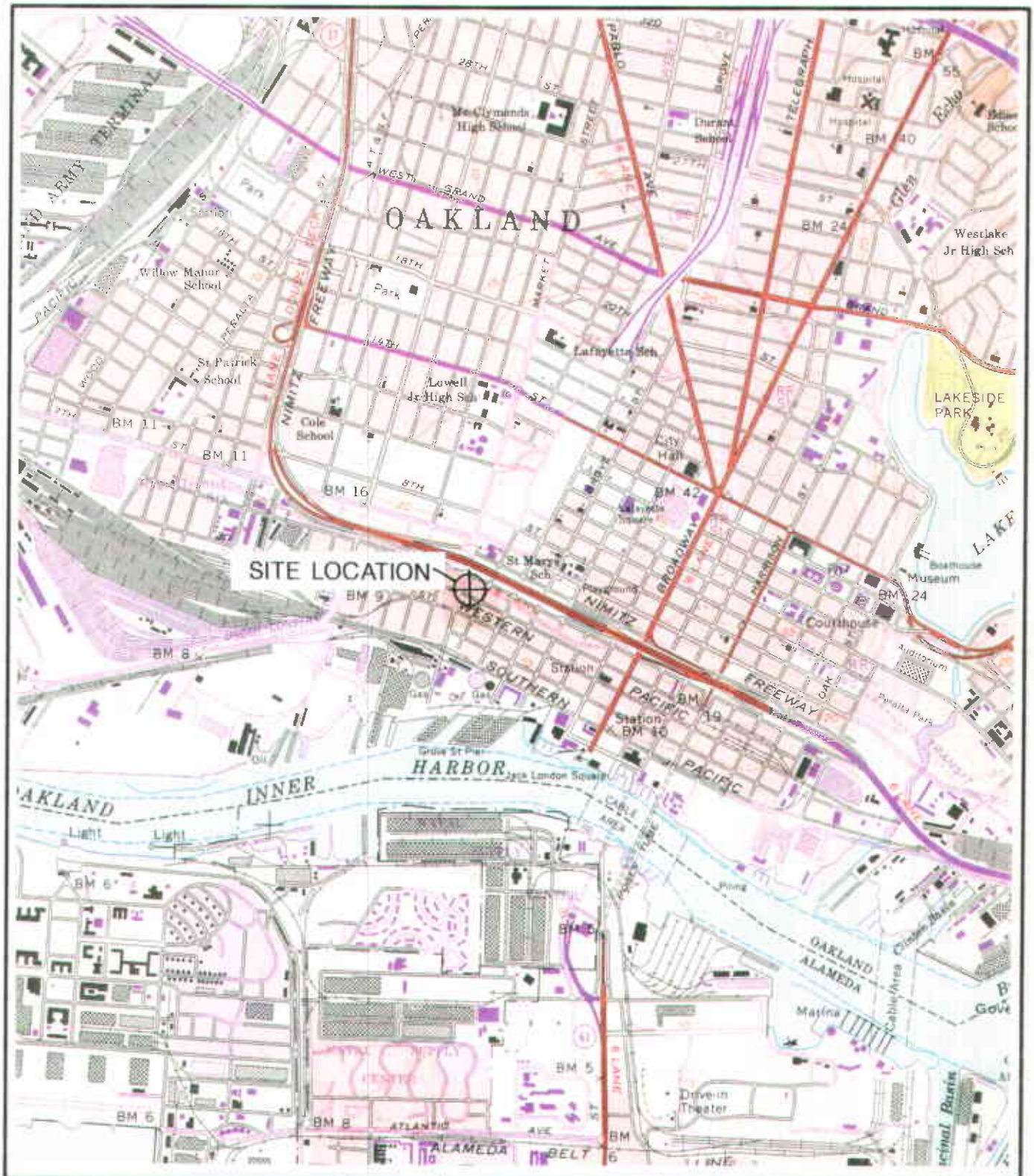
4.0 FUTURE ACTIVITIES

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

5.0 CLOSURE

Groundwater Technology, Inc. has prepared this report on behalf of Safety-Kleen Corporation. If you have any questions, or require additional information, please contact our Concord office at (510) 671-2387.

LIST OF FIGURES



GROUNDWATER TECHNOLOGY

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

N

SCALE: 0 FEET 2000

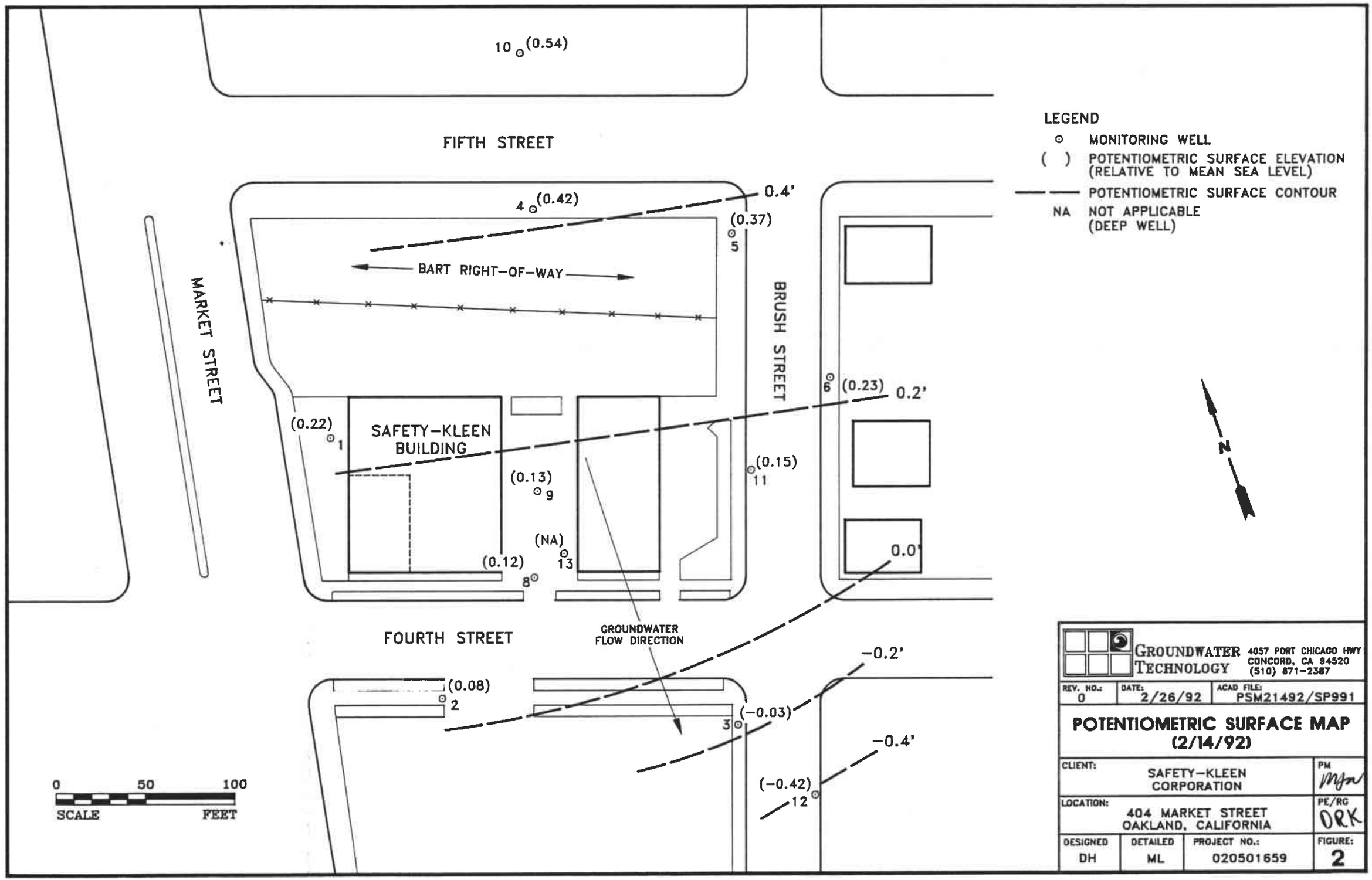
SITE LOCATION MAP

CLIENT: SAFETY-KLEEN CORPORATION

DATE: 3/3/92

LOCATION: 404 MARKET STREET OAKLAND, CALIFORNIA

FIGURE: 1



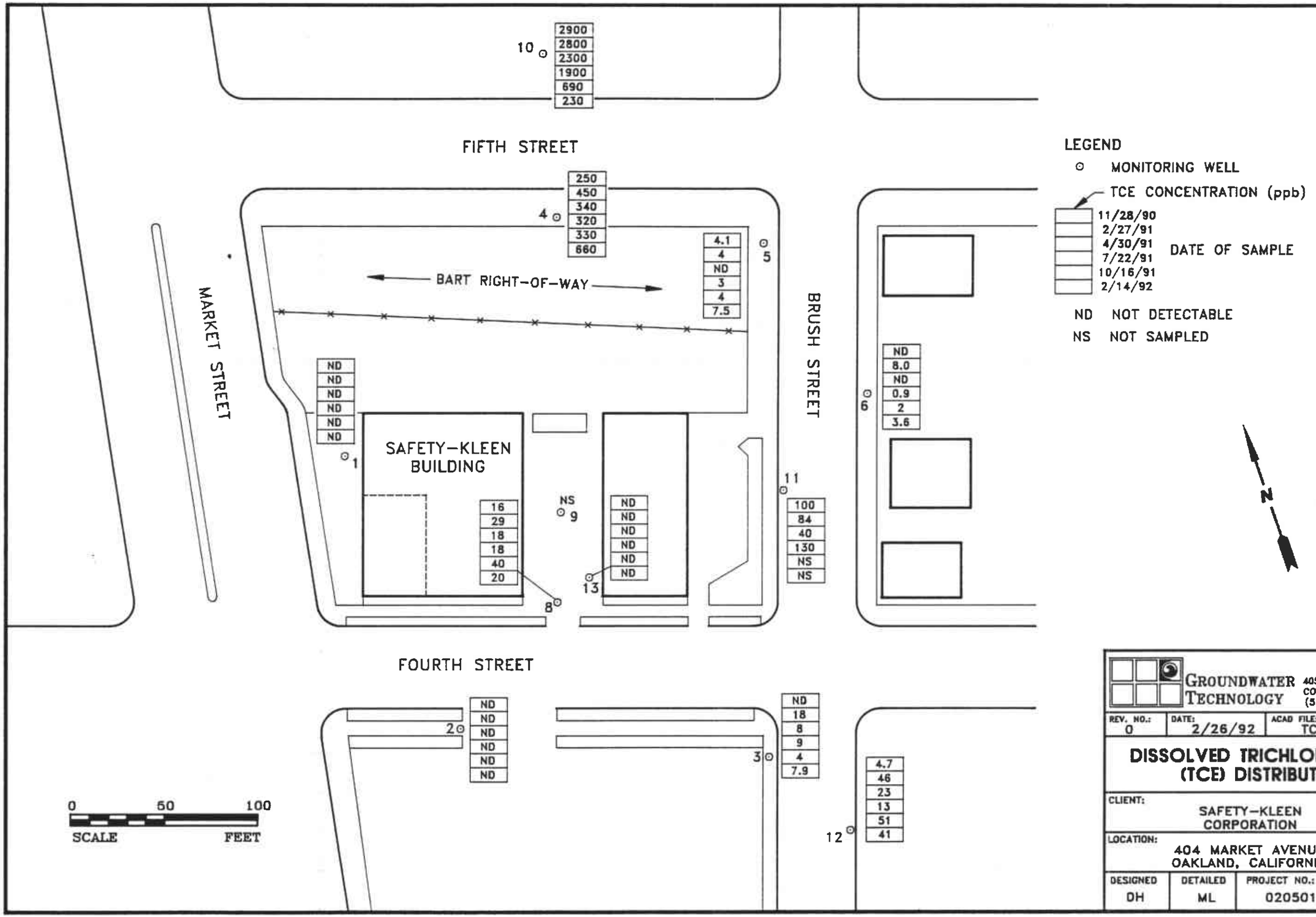
GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387

REV. NO.:	DATE:	ACAD FILE:
0	2/26/92	PSM21492/SP991

POTENTIOMETRIC SURFACE MAP (2/14/92)

CLIENT:	PM
SAFETY-KLEEN CORPORATION	MJ
LOCATION: 404 MARKET STREET OAKLAND, CALIFORNIA	PE/RG DRK

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
DH	ML	020501659	2



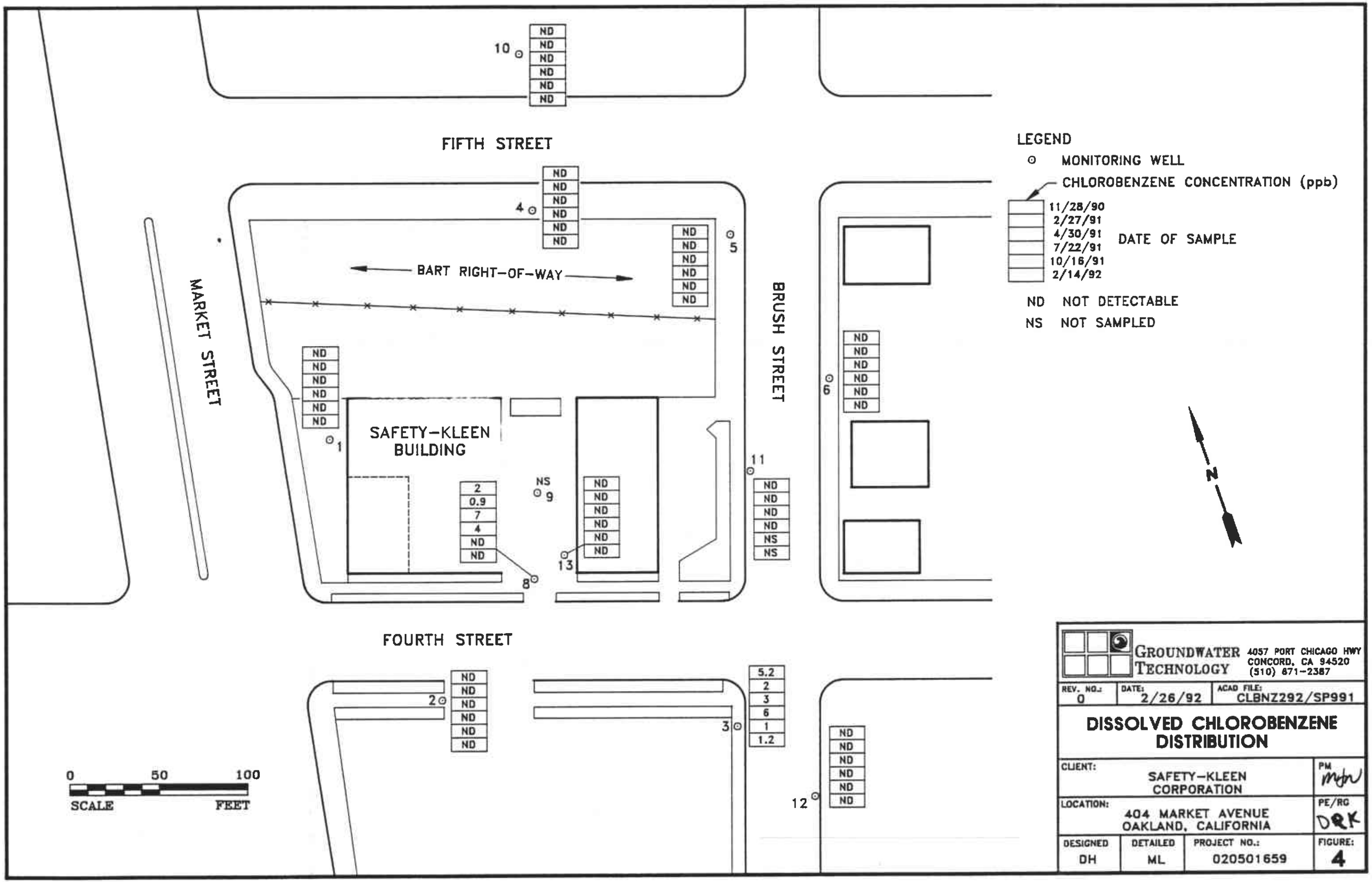
GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2367

REV. NO.:	DATE:	ACAD FILE:
0	2/26/92	TCE292/SP991

DISSOLVED TRICHLOROETHENE (TCE) DISTRIBUTION

CLIENT:	PM
SAFETY-KLEEN CORPORATION	MJM
LOCATION: 404 MARKET AVENUE OAKLAND, CALIFORNIA	PE/RG DRK

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
DH	ML	020501659	3



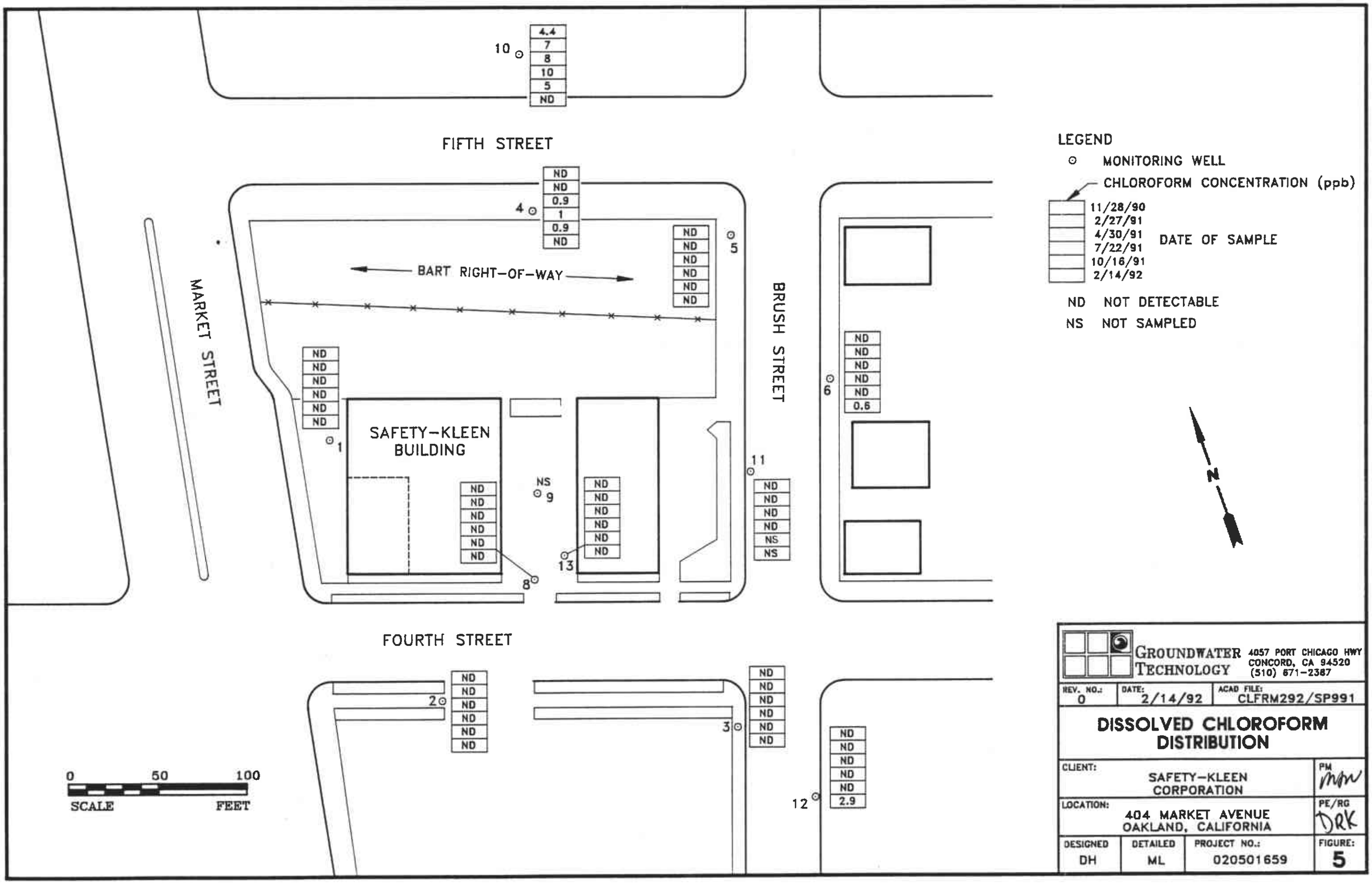
GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387

REV. NO.:	DATE:	ACAD FILE:
0	2/26/92	CLBNZ292/SP991

DISSOLVED CHLOROBENZENE DISTRIBUTION

CLIENT:	PM
SAFETY-KLEEN CORPORATION	MJW
LOCATION: 404 MARKET AVENUE OAKLAND, CALIFORNIA	PE/RG DRK

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
DH	ML	020501659	4



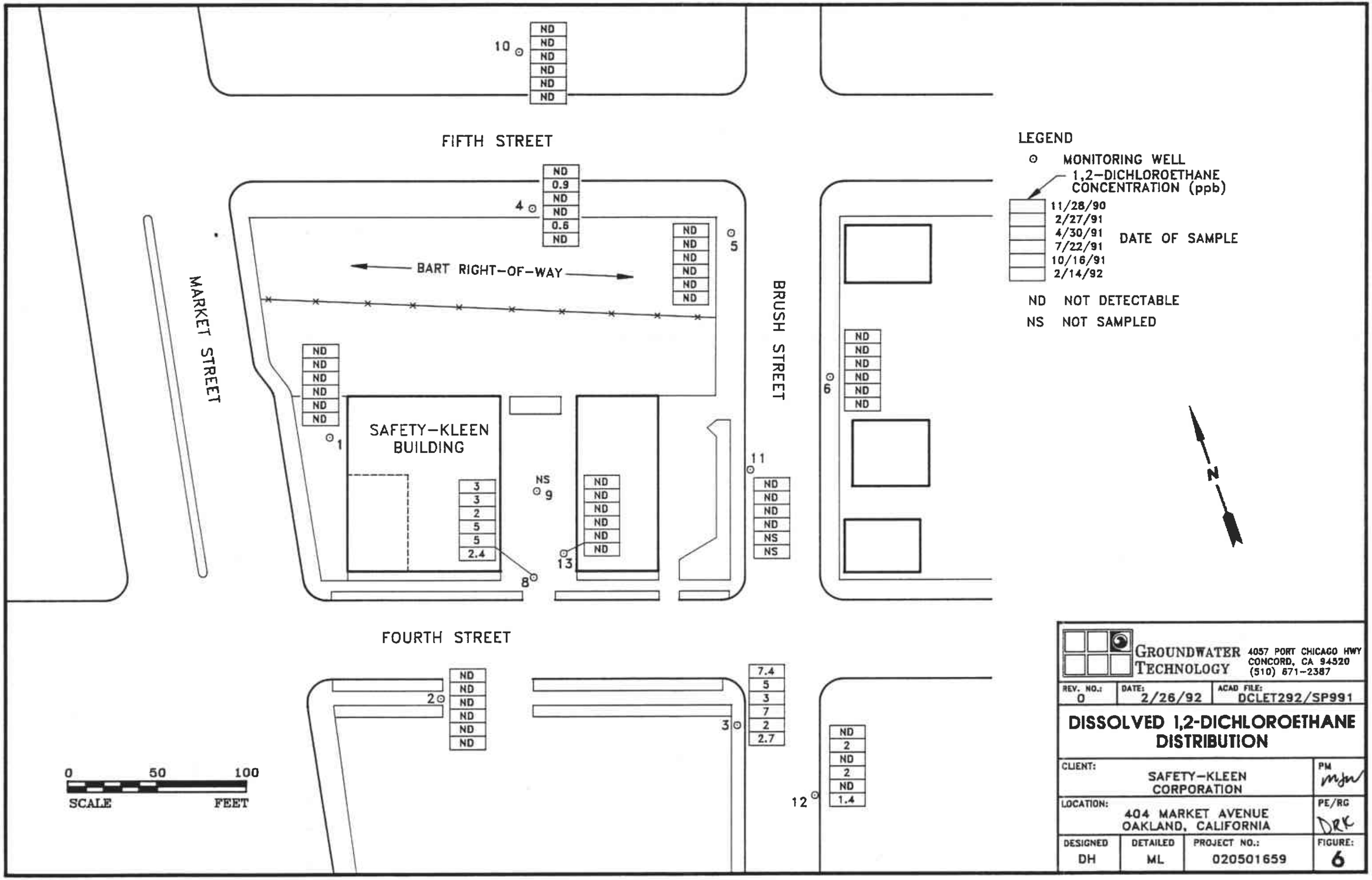
GROUNDWATER TECHNOLOGY
4057 PORT CHICAGO HWY
CONCORD, CA 94520
(510) 671-2387

REV. NO.:	DATE:	ACAD FILE:
0	2/14/92	CLFRM292/SP991

DISSOLVED CHLOROFORM DISTRIBUTION

CLIENT:	PM
SAFETY-KLEEN CORPORATION	MPW
LOCATION: 404 MARKET AVENUE OAKLAND, CALIFORNIA	PE/RG DRK

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
DH	ML	020501659	5



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

REV. NO.:	DATE:	ACAD FILE:
0	2/26/92	DCLET292/SP991

DISSOLVED 1,2-DICHLOROETHANE DISTRIBUTION

CLIENT:	PM
SAFETY-KLEEN CORPORATION	mjw
LOCATION:	**PE/RG**
404 MARKET AVENUE OAKLAND, CALIFORNIA	DRK

DESIGNED	DETAILED	PROJECT NO.:	FIGURE:
DH	ML	020501659	6

LIST OF TABLES

TABLE 1
GROUNDWATER MONITORING DATA
FEBRUARY 14, 1992

WELL ID	TOC ELEVATION (ft msl)	DTW (ft)	DTP (ft)	PT (ft)	ADJ ELEVATION (ft msl)
MW-1	7.99	7.77	-	-	0.22
MW-2	8.20	8.12	-	-	0.08
MW-3	6.66	6.69	-	-	-0.03
MW-4	10.32	9.90	-	-	0.42
MW-5	10.28	9.91	-	-	0.37
MW-6	8.97	8.74	-	-	0.23
MW-8	7.80	7.68	-	-	0.12
MW-9	8.21	9.30	7.77	1.53	0.13
MW-10	10.43	9.89	-	-	0.54
MW-11	7.91	7.76	-	-	0.15
MW-12	6.74	7.16	-	-	-0.42
MW-13	8.08	8.48	-	-	-0.40

$\overline{\text{TOC}}$	=	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.

TABLE 2
ANALYTICAL RESULTS OF GROUNDWATER SAMPLES
EPA METHOD 601
FEBRUARY 14, 1992
(Results in parts per billion)

WELL ID	1,1-DCE	1,1-DCA	1,2-DCA	1,2-DCE	CHLR-FORM	1,1,1-TCA	TCE	CHLR-BENZ	1,2-DCP	FREON II
MW-1	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	2.1	8.8	2.7	2.1	ND	ND	7.9	1.2	0.6	ND
MW-4	ND	ND	ND	63	ND	2.4	660	ND	ND	ND
MW-5	0.4	ND	ND	ND	ND	3	7.5	ND	ND	4.5
MW-6	ND	ND	ND	ND	0.6	ND	3.6	ND	ND	3.5
MW-8	ND	ND	2.4	0.6	ND	ND	20	ND	ND	ND
MW-10	ND	ND	ND	34	ND	2.4	230	ND	ND	ND
MW-11	NS	NS	NS	NS	NS	NS	NS	NS	NS	ND
MW-12	4.3	ND	1.4	ND	2.9	ND	41	ND	ND	ND
MW-13	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
1,1,1-TCA = 1,1,1-trichloroethane
TCE = trichloroethene
CHLRBENZ = chlorobenzene
CHLRFORM = chloroform
FREON II = trichlorofluoromethane

APPENDIX A

LABORATORY REPORTS

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

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: GTI72SFK01
Consultant Project Number: 02050165961
Project ID: Oakland
Work Order Number: C2-02-454

February 24, 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 02/14/92, under chain of custody records 72-16378 through 72-16380 and 72-16383.

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.

Emma P. Popek
Laboratory Director

Table 1

ANALYTICAL RESULTS

Purgeable Halocarbons in Water

EPA Method 601[a]

GTEL Sample Number		01	02	03	04
Client Identification		RBMW-13	MW-13	MW-1	MW-2
Date Sampled		02/14/92	02/14/92	02/14/92	02/14/92
Date Analyzed		02/18/92	02/18/92	02/19/92	02/18/92
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	<0.5
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	<0.5
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	<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.

GTEL ENVIRONMENTAL LABORATORIES, INC.

Table 1 (Continued)

ANALYTICAL RESULTS

Purgeable Halocarbons in Water

EPA Method 601[a]

GTEL Sample Number		05	06	07	08
Client Identification		MW-6	MW-5	MW-3	MW-12
Date Sampled		02/14/92	02/14/92	02/14/92	02/14/92
Date Analyzed		02/18/92	02/18/92	02/19/92	02/19/92
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	0.4	<0.2	4.3
1,1-Dichloroethane	0.5	<0.5	<0.5	8.8	<0.5
1,2-Dichloroethene	0.5	<0.5	<0.5	2.1	<0.5
Chloroform	0.5	0.6	<0.5	<0.5	2.9
1,2-Dichloroethane	0.5	<0.5	<0.5	2.7	1.4
1,1,1-Trichloroethane	0.5	<0.5	3	<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	0.6	<0.5
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5	3.6	7.5	7.9	41
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	<0.5	1.2	<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	3.5	4.5	<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	11	
Client Identification		MW-8	MW-4	MW-10	
Date Sampled		02/14/92	02/14/92	02/14/92	
Date Analyzed		02/19/92	02/19/92	02/19/92	
Analyte	Quantitation Limit, ug/L	Concentration, ug/L			
Chloromethane	0.5	<0.5	<0.5	<0.5	
Bromomethane	0.5	<0.5	<0.5	<0.5	
Vinyl chloride	1	<1	<1	<1	
Chloroethane	0.5	<0.5	<0.5	<0.5	
Methylene chloride	0.5	<0.5	<0.5	<0.5	
1,1-Dichloroethene	0.2	<0.2	<0.2	<0.2	
1,1-Dichloroethane	0.5	<0.5	<0.5	<0.5	
1,2-Dichloroethene	0.5	0.6	63	34	
Chloroform	0.5	<0.5	<0.5	<0.5	
1,2-Dichloroethane	0.5	2.4	<0.5	<0.5	
1,1,1-Trichloroethane	0.5	<0.5	2.4	2.4	
Carbon tetrachloride	0.5	<0.5	<0.5	<0.5	
Bromodichloromethane	0.5	<0.5	<0.5	<0.5	
1,2-Dichloropropane	0.5	<0.5	<0.5	<0.5	
cis-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	
Trichloroethene	0.5	20	660	230	
Dichlorodifluoromethane	0.5	<0.5	<0.5	<0.5	
Dibromochloromethane	0.5	<0.5	<0.5	<0.5	
1,1,2-Trichloroethane	0.5	<0.5	<0.5	<0.5	
trans-1,3-Dichloropropene	0.5	<0.5	<0.5	<0.5	
2-Chloroethylvinyl ether	1	<1	<1	<1	
Bromoform	0.5	<0.5	<0.5	<0.5	
Tetrachloroethene	0.5	<0.5	<0.5	<0.5	
1,1,2,2-Tetrachloroethane	0.5	<0.5	<0.5	<0.5	
Chlorobenzene	0.5	<0.5	<0.5	<0.5	
1,2-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	
1,3-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	
1,4-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	
Trichlorofluoromethane	0.5	<0.5	<0.5	<0.5	
Quantitation Limit Multiplier		1	1	1	

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

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

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: GTI72SFK01
Consultant Project Number: 02050165961
Project ID: Oakland
Work Order Number: C2-02-455

February 24, 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 02/14/92, under chain of custody records 72-16378 through 72-16380 and 72-16383.

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.

Emma P. Popek

Emma P. Popek
Laboratory Director

Client Number: GTI72SFK01
Consultant Project Number: 02050165961
Project ID: Oakland
Work Order Number: C2-02-455

Table 1

ANALYTICAL RESULTS

Aromatic Volatile Hydrocarbons and Total Petroleum Hydrocarbons as Mineral Spirits in Water

EPA Methods 5030, 8020, and 8015[a]

GTEL Sample Number		01	02	03	04
Client Identification		MW-13	MW-1	MW-2	MW-6
Date Sampled		02/14/92	02/14/92	02/14/92	02/14/92
Date Analyzed		02/20/92	02/20/92	02/20/92	02/20/92
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3	<0.3	<0.3
Toluene	0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene	0.3	<0.3	<0.3	<0.3	<0.3
Xylene, total	0.5	<0.5	<0.5	<0.5	<0.5
BTEX, total	--	--	--	--	--
Mineral spirits	1000	<1000	<1000	<1000	<1000
Detection Limit Multiplier		1	1	1	1

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

Table 1 (Continued)

ANALYTICAL RESULTS

Aromatic Volatile Hydrocarbons and
Total Petroleum Hydrocarbons as Mineral Spirits in Water

EPA Methods 5030, 8020, and 8015[a]

GTEL Sample Number		05	06	07	08
Client Identification		MW-5	MW-3	MW-12	MW-8
Date Sampled		02/14/92	02/14/92	02/14/92	02/14/92
Date Analyzed		02/20/92	02/20/92	02/20/92	02/20/92
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	0.7	0.7	<0.3
Toluene	0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene	0.3	<0.3	<0.3	<0.3	<0.3
Xylene, total	0.5	<0.5	<0.5	<0.5	0.8
BTEX, total	--	--	0.7	0.7	0.8
Mineral spirits	1000	<1000	<1000	<1000	<1000
Detection Limit Multiplier		1	1	1	1

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

Table 1 (Continued)

ANALYTICAL RESULTS

Aromatic Volatile Hydrocarbons and Total Petroleum Hydrocarbons as Mineral Spirits in Water

EPA Methods 5030, 8020, and 8015[a]

GTEL Sample Number		09	10		
Client Identification		MW-4	MW-10		
Date Sampled		02/14/92	02/14/92		
Date Analyzed		02/20/92	02/20/92		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3		
Toluene	0.3	<0.3	<0.3		
Ethylbenzene	0.3	<0.3	<0.3		
Xylene, total	0.5	<0.5	<0.5		
BTEX, total	--	--	--		
Mineral spirits	1000	<1000	<1000		
Detection Limit Multiplier		1	1		

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

G20501659 - Fuel Box

GTEL ENVIRONMENTAL LABORATORIES, INC.

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- 16378

CUSTODY RECORD

Project Manager: Mike Wray
Phone #: FAX #: 263
Address: GTI Concord
Site location: OAKLAND
Project Number: 020501659-61
Project Name: Safe/404 Market
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Hector Merino/Greg Mason

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: DATE	TIME
Site Blank			1v	X								X	X		2/14/92	
RBMW-13			1v										X			
MW-13			2v										X		2/14/92	
MW-13		01	2v						X							
RBMW-1			1v										X			
MW-1			2v										X			
MW-1		02	2v						X							
RBMW-2			1v										X			
MW-2			2v										X			
MW-2		03	2v						X							
RBMW-6			1v	X								X	X			

ANALYSIS REQUEST

BTEX 602 ☐ 8020 ☐ with 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 ☐	X
EPA 602 ☐ 8020 ☐	
EPA 608 ☐ 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 ☐ STLC ☐ TTLC	
Corrosivity ☐ Flashpoint ☐ Reactivity ☐	
TPH Mineral Spirits 8015	X
HOLD	X

SPECIAL HANDLING
24 HOURS ☐
EXPEDITED 48 Hours ☐
SEVEN DAY ☒ – NO Surcharge
OTHER _____ (#) BUSINESS DAYS
QA/QC CLP Level ☐ Blue Level ☐
FAX ☐

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)
need report by 2-24-92

Conformation # C908
REMARKS:

Lab Use Only
Storage Location 4.1.14
Lot #:
Work Order #:

Relinquished by Sampler: Date 2/14/92 Time 4:45
Received by: Date Time
Relinquished by: Date Time
Received by: Date Time
Relinquished by: Date Time
Received by Laboratory: Date Time
Way bill #

GTEL ENVIRONMENTAL LABORATORIES, INC.

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- 16379

CUSTODY RECORD

Project Manager: Mike Wrey
Phone #:
FAX #: 263
Address: 671 Concord
Site location: OAKLAND
Project Number: 07050165 9-61
Project Name: Site/404 Market
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): Hector Mesa / Greg Marson

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: DATE	TIME
MW-6			2v	X								X	X		2/	
MW-6		04	2v						X							
RBMW-5			1v										X		14	
MW-5			2v										X			
MW-5		05	2v						X						92	
RBMW-3			1v										X			
MW-3			2v										X			
MW-3		06	2v						X							
RBMW-12			1v										X			
MW-12			2v										X			
MW-12		07	2v	X					X			X				

ANALYSIS REQUEST

BTEX 602 ☐ 8020 ☐ with 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 608 ☐ 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 ☐ STLC ☐ TTLC	Corrosivity ☐ Flashpoint ☐ Reactivity ☐	TPH Mineral Spirits/Stoddard	HOLD
					X	X												X	
																		X	X
						X													
																		X	X
						X													
																		X	X
						X													
																		X	X
						X													
																		X	

SPECIAL HANDLING
24 HOURS ☐
EXPEDITED 48 Hours ☐
SEVEN DAY ☒ – NO Surcharge
OTHER _____ (#) BUSINESS DAYS
QA/QC CLP Level ☐ Blue Level ☐
FAX ☐

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)
need report by 2-24-92

REMARKS: Conformation #C908

Pg. 2 of 4

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

Relinquished by Sampler:	Received by:	Date / Time	Relinquished by:	Received by:	Date / Time	Relinquished by:	Received by Laboratory:	Date / Time
		2/14/92						

Way bill #

GTEL ENVIRONMENTAL LABORATORIES, INC.

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- 16380

Project Manager: Mike Wray
Phone #:
FAX #: 263
Address: GTI Concord
Site location: OAKLAND
Project Number: 07050165 9-61
Project Name: Safe/404 MARKET
Sampler Name (Print): Hector Marino Greg MASON

I attest that the proper field sampling procedures were used during the collection of these samples.

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: DATE	TIME
RBMW-8			1v	X								X	X		2/	
MW-8			2v										X		2/14/	
MW-8		08	2v						X						/92	
RBMW-11			1v										X			
MW-11			2v										X			
MW-11			2v						X							
RBMW-4			1v										X			
MW-4			2v										X			
MW-4		09	2v	X					X			X				

ANALYSIS REQUEST

BTEX 602 ☐ 8020 ☐ with 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 608 ☐ 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 ☐ 8010 ☐ Org. Lead ☐	CAM Metals ☐ STLC ☐ TTLC	Corrosivity ☐ Flashpoint ☐ Reactivity ☐	TPH Mineral Spirits BTEX	HOLD
																	X	X	
						X													
																	X	X	
																		X	
						X													
																	X	X	
						X													
																	X	X	

Conformation # C908

SPECIAL HANDLING

24 HOURS ☐
EXPEDITED 48 Hours ☐
SEVEN DAY ☒ - No Surcharge
OTHER _____ (#) BUSINESS DAYS
QA/QC CLP Level ☐ Blue Level ☐
FAX ☐

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)
need report by 2-24-92

REMARKS:

pg. 3 of 4

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

CUSTODY RECORD

Relinquished by Sampler:	Received by:	Time	Date	Received by Laboratory:	Time	Date	May bill #
		2400				2/14/92	4:45
Relinquished by:	Received by:	Time	Date	Received by:	Time	Date	
Relinquished by:	Received by:	Time	Date	Received by Laboratory:	Time	Date	

GTEL ENVIRONMENTAL LABORATORIES, INC.

4080- Pike Lane
Concord, CA 94520
415-686-7852

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

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST 72- 16383

CUSTODY RECORD

Project Manager: Mike Wray
Phone #:
FAX #: 263
Address: GTL Concord
Site location: OAKLAND
Project Number: 020901659-61
Project Name: Safe/404 Market
Sampler Name (Print): Hector + Greg

I attest that the proper field sampling procedures were used during the collection of these samples.

Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	NONE	OTHER	Sampling: DATE	TIME
RBMW-1D			1v	X								X			2/1/97	
MW-7D			2v	X								X			2/1/97	
MW-7D		10	2v	X					X			X			2/1/97	

ANALYSIS REQUEST

- BTEX 602 ☐ 8020 ☐ with 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 ☐ 503E ☐
- Total Petroleum Hydrocarbons: 418.1 ☐
- EPA 601 ☐ 8010 ☐ DCA only ☐ — X
- EPA 602 ☐ 8020 ☐
- EPA 608 ☐ 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 ☐ STLC ☐ TTLC
- Corrosivity ☐ Flashpoint ☐ Reactivity ☐
- TPH Mod Gas/BTEX — X
- HOLD — X

SPECIAL HANDLING

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

SPECIAL DETECTION LIMITS (Specify)

SPECIAL REPORTING REQUIREMENTS (Specify)

REMARKS:

Pg. 4 of 4

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

Relinquished by Sampler:	Received by:	Time	Date	Received by Laboratory:	Time	Date	Way bill #
					4:45	2/4/97	
Relinquished by:	Received by:	Time	Date				
Relinquished by:							