GROUNDWATER TECHNOLOGY, INC.

4080-D Pike Lane, Concord, CA 94520
(415) 671-2387

September 21, 1988

Job No. 203 680 5016.01

Mr. Dennis Byrne
Alameda County Department of
Environmental Health
80 Swan Way
Room 200
Oakland, CA 94621

Dear Mr. Byrne,

Please find enclosed a copy of the Interim Update Assessment Report for the Safety-Kleen facility located at 404 Market Street in Oakland, California.

If you have any questions, please call me at our Concord office (415) 671-2387.

Sincerely,
GROUNDWATER TECHNOLOGY, INC.

Steven A. Fischbein
Industrial Group Manager/
Hydrogeologist

SAF:lbm

Enclosure

L501601F.SF

INTERIM UPDATE REPORT
SAFETY-KLEEN FACILITY
404 MARKET STREET
OAKLAND, CALIFORNIA

9-9-88

SEPTEMBER 9, 1988

GROUNDWATER TECHNOLOGY, INC.
CONCORD, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

4080-D Pike Lane, Concord, CA 94520
(415) 671-2387

INTERIM UPDATE REPORT
SAFETY-KLEEN FACILITY
404 MARKET STREET
OAKLAND, CALIFORNIA
SEPTEMBER 1988

Prepared for:

Safety-Kleen Corporation
777 Big Timber Road
Elgin, Illinois

Prepared by:

Groundwater Technology, Inc.
4080 Pike Lane, Suite D
Concord, California 94520

Kelly A. Kline
Geologist

Steven A. Fischbein
Industrial Group Manager
Hydrogeologist

Lynn E. Pera
Registered Engineer
No. 33431

REGISTERED PROFESSIONAL ENGINEER
LYNN E. PERA
No. 33431
CIVIL
STATE OF CALIFORNIA

R203 680 501601B.SF

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

INTERIM UPDATE REPORT
SAFETY-KLEEN FACILITY
404 MARKET STREET
OAKLAND, CALIFORNIA
SEPTEMBER 1988

INTRODUCTION

This report presents an update of the assessment work and interim remedial action steps which have been conducted to date by Groundwater Technology, Inc. (GTI) at the Safety-Kleen Corporation's (Safety-Kleen) facility located at 404 Market Street in Oakland, California (Figure 1). The work performed at this site was conducted in response to a request by Safety-Kleen for a pre-tank closure assessment to ascertain the extent of subsurface soil and groundwater contamination.

BACKGROUND

The Safety-Kleen Corporation's commercial-cleaning products distribution facility is located in a mixed residential and industrial setting. The facility is used to distribute and store clean and spent mineral spirits solvent, various chlorinated solvents and other products used in the automotive and food-service industries.

Of primary importance at this site are the locations and use of three underground storage tanks (USTs). Two 6,000-gallon steel USTs are used to store spent-mineral spirits solvent which is sent for recycling at the Safety-Kleen recycling center in Reedley, California, and one 10,000-gallon UST is used to store clean, recycled mineral spirits solvent for distribution to customers (Figure 2).

FIGURE 1
SITE LOCATION MAP

SAFETY-KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY

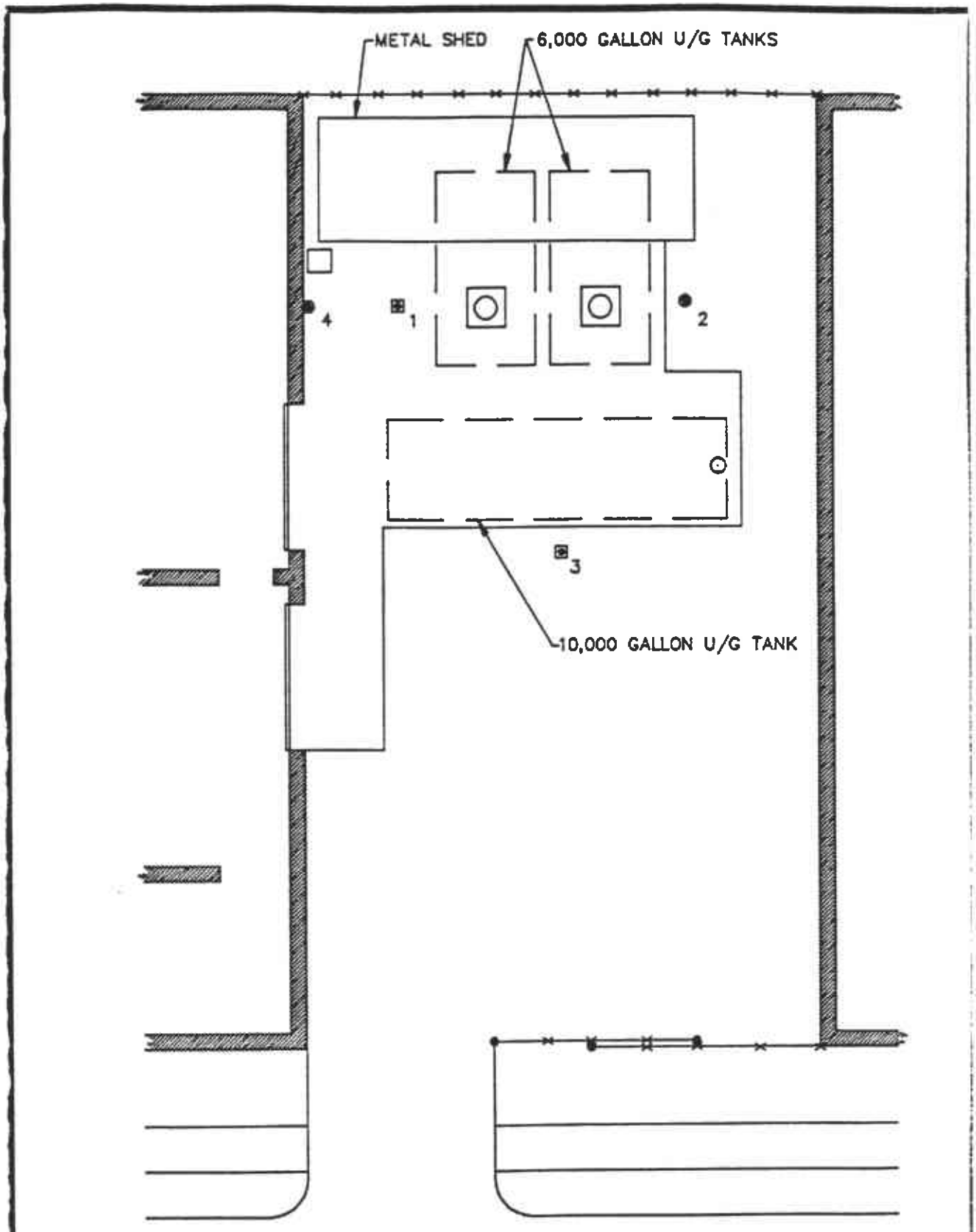


FIGURE 2
UNDERGROUND TANK LOCATION

SAFETY – KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER

The tanks were installed at the site in February 1970 (CWC-HDR, 1986). The site is visited on a regular basis by a tanker truck, coming from the Reedley facility, which dispensed clean, recycled product to the 10,000-gallon UST and loads spent solvent from the 6,000-gallon USTs. Clean product is then loaded from the storage tank into 16 or 30-gallon drums for subsequent delivery to customers. A clean product drum is exchanged for a spent product drum at the customer facility which is then delivered back to the storage facility for storage in one of the 6,000-gallon USTs. At the storage facility, the drums filled with spent product are unloaded into a dumpster receptacle which gravity feeds via a fill pipe and associated underground piping to the USTs.

PREVIOUS WORK

CWC-HDR Consulting Engineers were contracted to perform preliminary assessment work in May, 1986 at the Oakland Safety-Kleen facility. Three 8-inch diameter by 20-feet deep soil borings were drilled on site between May 28 and 30, 1986. Two of the three soil borings were converted into 2-inch diameter PVC monitoring wells (and are designated as SK-1 and SK-3 (Figure 3). Soil samples were collected at ground surface and from 5-feet and 10-feet below grade in each of the borings. Groundwater samples were also collected from the two monitoring wells and one unconverted boring at the site. Analytical laboratory analyses of the water and soil samples were performed by modified U.S. Environmental Protection Agency (EPA) Method 8270, flame-ionization detector (FID), for Total Petroleum Hydrocarbons (TPH)-as-mineral spirits which was the incorrect method and yielded erroneous results (See previous Safety-Kleen Santa Clara reports for a detailed explanation).

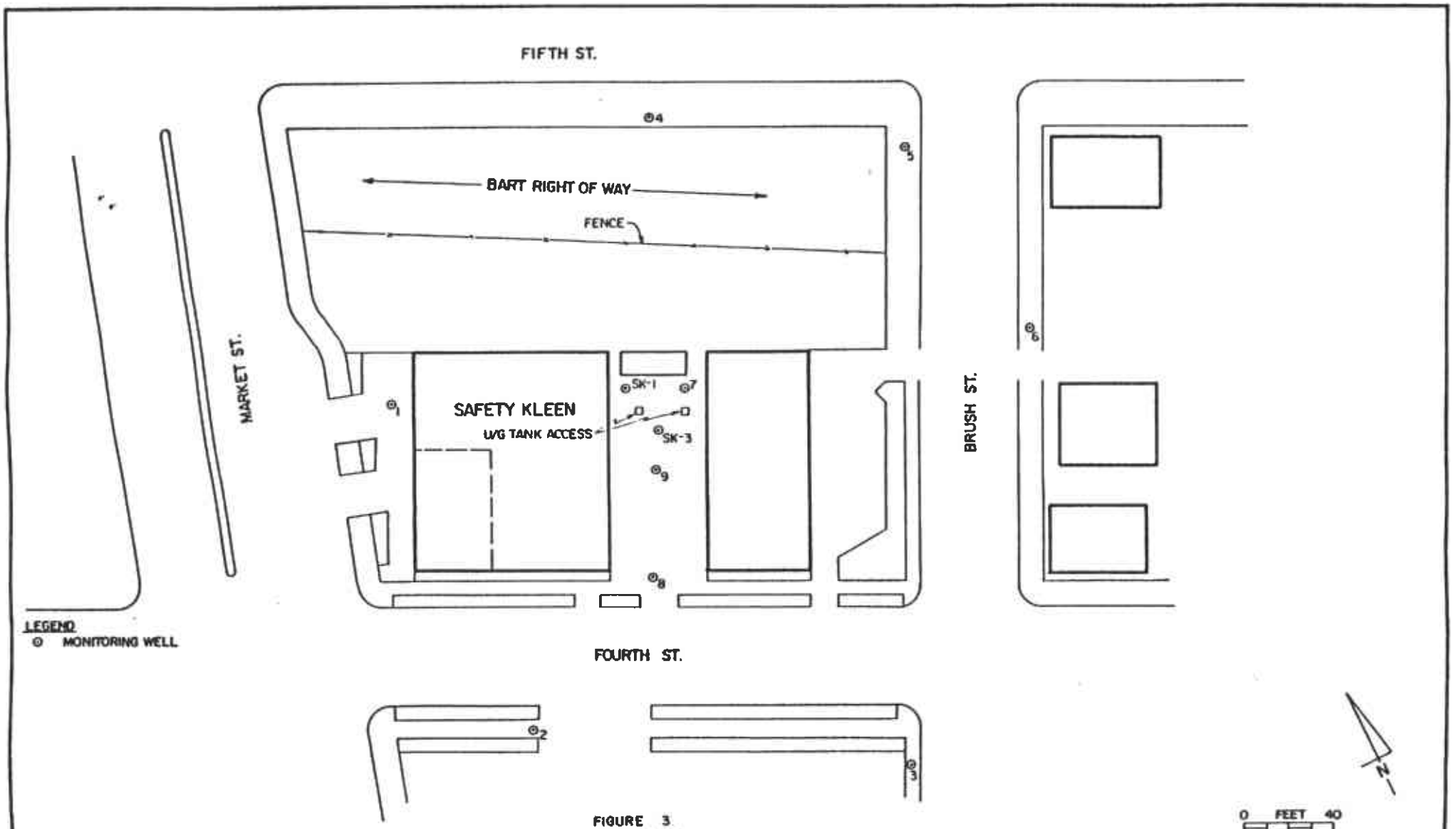


FIGURE 3
SITE PLAN

SAFETY KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

SITE CONDITIONS

GEOLOGY

The geologic formations underlying San Francisco Bay are divided into two distinct units that differ greatly in age and rock type. The bedrock underlying most of the San Francisco Bay is composed of Jurassic and Cretaceous sandstone, siltstone, chert, melange, and ultra-mafic rocks of the Franciscan Complex (Fisher, Brown, and Warner, 1963). The total thickness of the Franciscan Complex is unknown. Late Cenozoic continental and marine sediments of the Alameda Formation uncomformably overly the Franciscan Bedrock and are composed of gravel, sand, silt, and clay which is locally organic-rich and fossiliferous (Redbruch, 1957). Consolidation of the Alameda Formation increases with depth and the maximum known thickness is approximately 1,050 feet.

The Pleistocene-Quaternary Age Merritt sand overlies the Alameda Formation and consists of fine-grained sand and firm, clayey sand that contains bands and stringers of sandy clay and clay. One to two feet of loose sandy silt covers the surface of the sand (Redbruch, 1957). The Merritt sands were deposited by wind and water from beach and nearshore deposits. The maximum known thickness of the Merritt Sand is approximately 65 feet. Beneath the site, the Merritt Sand was encountered in the on-site soil borings and consists of interbedded silty sand and silty, clayey sand to the depths (approximately 45 feet) explored (Appendix I).

HYDROGEOLOGY

The Franciscan Complex basement rocks are the oldest beneath the study area and are considered non-water bearing. The Merritt

sand present beneath the site consists of silty sand and silty, clayey sand and are the major water yielding units in the area. Groundwater in these sediments is mainly unconfined.

Groundwater was found in the borings beneath the site at depths ranging from 10- to 17-feet below grade. Based on recent monitoring data, the groundwater gradient direction is to the south-southwest.

WORK SCOPE

To date, the following scope of work was conducted at the site to delineate the areal extent of subsurface contamination and to mitigate source areas for contamination.

- Conducted soil-gas survey to define lateral extent of subsurface vapor plume.
- Collected soil samples from selected soil-gas probe holes for analysis using U.S. Environmental Protection Agency (EPA) Methods 8010, 8015 and 8020 and for analysis of aquifer grain size distribution by sieve analysis.
- Precision tested all underground tanks and lines at the site using the Petro-Tite™ tank-testing method.
- Installed eight 2-inch diameter PVC monitoring wells and one 4-inch diameter PVC monitoring well based on the results from the soil-gas survey.
- Collected 32 soil samples for analysis by EPA Methods 8010 for chlorinated hydrocarbons and 8015 for Total Petroleum Hydrocarbons (TPH)-as-mineral spirits.
- Surveyed well-head elevations and obtained depth-to-water (DTW) and depth-to-product (DTP) measurements to produce groundwater gradient and product-thickness maps.

- Developed monitoring wells and collected water samples for analysis using EPA Methods 8010 for chlorinated hydrocarbons and 8015 for TPH-as-mineral-spirits.
- Developed and assembled interim product recovery system using probe-activated bladder pumps for use in 2-inch and 4-inch wells (to be implemented September 1988).
- Prepared this Interim Update Assessment Report.

WORK STEPS

SOIL-GAS SURVEY

A soil-gas survey was conducted at the site on June 14, 15 and 16, 1988 to begin preliminary delineation of the areal extent of subsurface contamination and to assist in the placement of monitoring wells. Upon arrival at the site on June 14, 1988, the existing wells were gauged to ascertain depth to groundwater for the resultant soil-gas survey. During the gauging event, the field geologist discovered the presence of approximately 6-feet of phase-separated product resting on top of the water table in the two existing monitoring wells on site. At this point, Safety-Kleen Corporation, as well as local agencies, were notified as to the presence of product in the subsurface.

Thirteen soil-gas probe holes were located on and around the site to a depth of 6 to 10 feet. Vapor samples were extracted from the 6-foot level in all the probe holes and analyzed by a gas chromatograph/flame ionization detector (GC/FID) for total volatilized mineral spirits in parts per million by volume (ppmv). Empirical studies conducted prior to the initiation of the soil-gas survey indicated that this would be a viable field assessment technique for mineral spirits contamination. A representative chromatogram from a sample obtained during the survey can be seen in Figure 4. During the survey it was

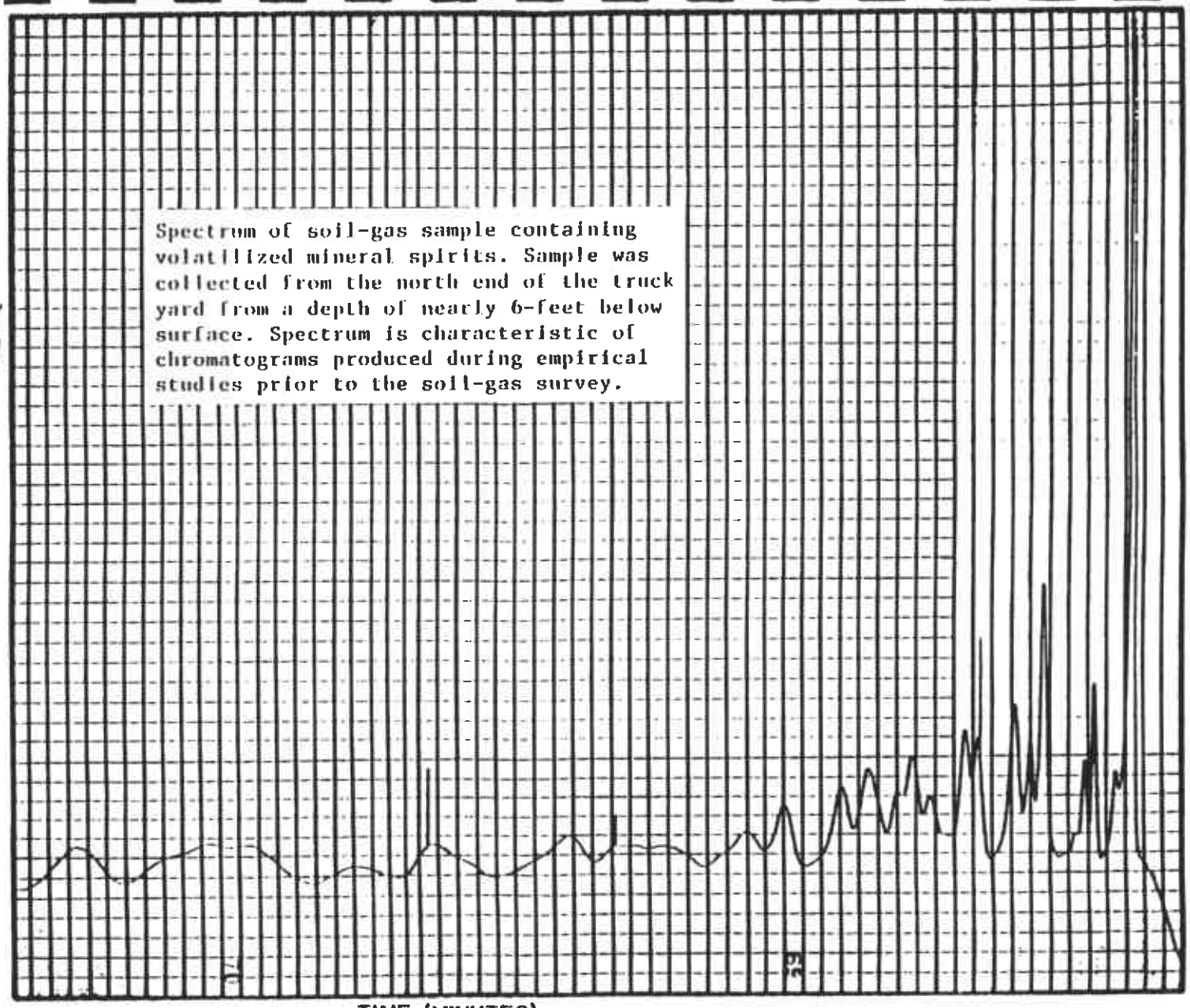


FIGURE 4
VAPOR CHROMATOGRAM

SAFETY KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

determined by the field geologist and geochemist that the best vapor samples were those collected within inches of the capillary fringe due to the relatively low vapor pressure of mineral spirits. The resultant vapor samples collected were analyzed and contoured to produce a subsurface vapor-plume map (Figure 5). The vapor-plume contours indicated that the subsurface plume was restricted to below the parking lot and loading dock areas at the site, and was inferred to be extending beneath both adjacent buildings and the vacant lot directly behind the site.

Seven soil samples were extracted from the capillary fringe from peripheral probe holes to verify the results obtained during the soil-gas survey. The soil samples were analyzed by EPA Methods 8010 and 8015 for chlorinated compounds and TPH-as-mineral spirits, respectively. Analyses of soil samples by EPA Method 8010 indicated levels of chlorinated compounds slightly above the method detection limits in all of the probe holes. Tetrachloroethene was the predominant compound detected with values ranging from 0.79 to 1.6 parts per million (ppm). Analyses of soil samples by Method 8015 indicated that no mineral spirits contamination was present in any of the peripheral probe holes. The analytical laboratory reports are included as part of Appendix II.

Four soil samples were extracted from the aquifer (beneath the water table) from selected probe holes for sieve analyses to determine the proper well screen slot size for monitoring well construction. Sieve analyses data indicated that the proper screen slot size would be 0.010 inch with a #30 Lonestar Sand filter pack. The sieve analyses data is included as part of Appendix II.

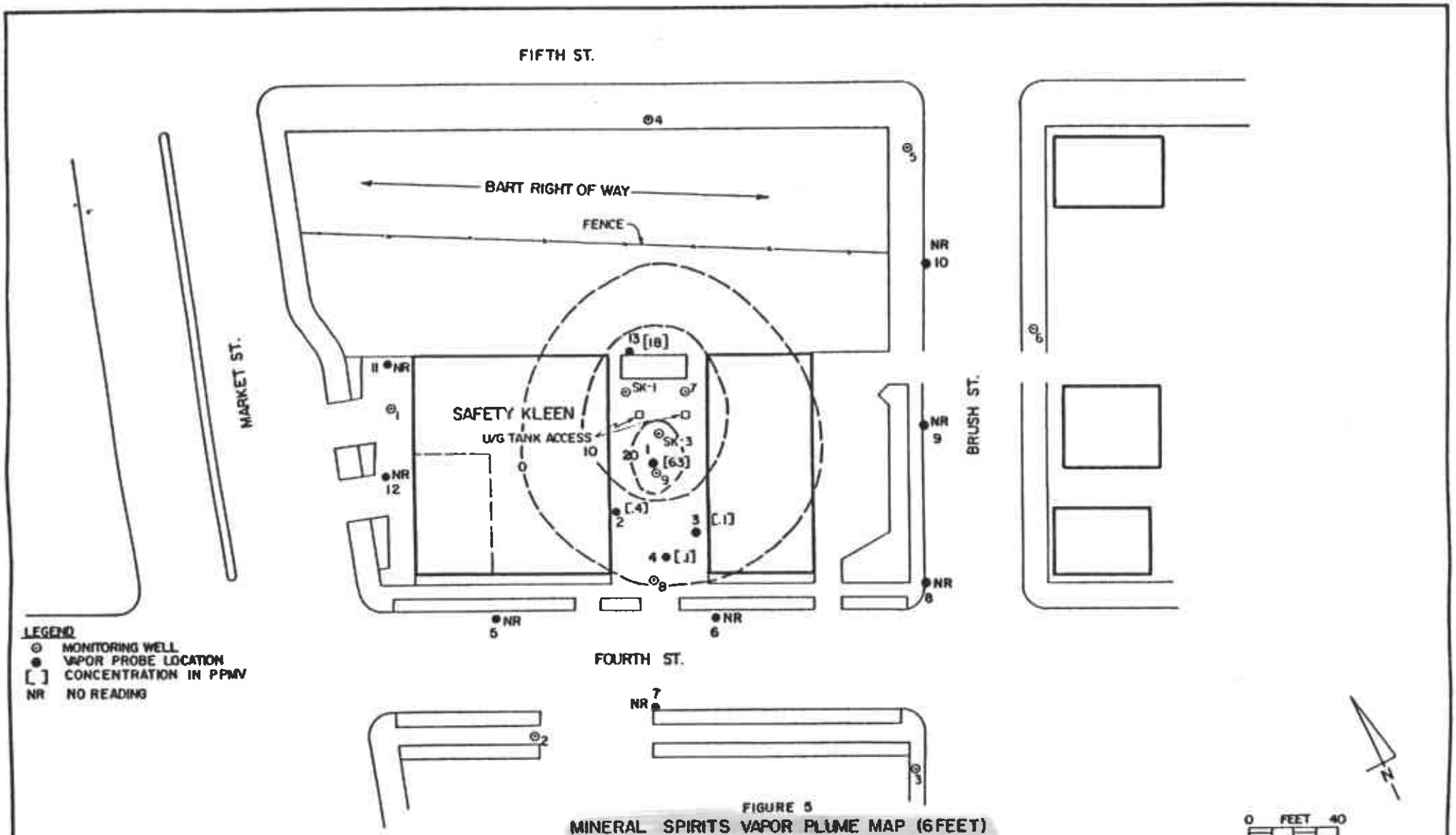


FIGURE 5
MINERAL SPIRITS VAPOR PLUME MAP (6 FEET)

SAFETY KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

PRECISION TANK TESTING

Due to the large volume of free product in the pre-existing monitoring wells, GTI concluded that the best course of action following the soil-gas survey would be to precision test the USTs and make repairs and recommendations to Safety-Kleen Corporation as necessary. On June 16, 1988, GTI Precision Tank Testing Group arrived on site to ascertain UST locations and to schedule UST top-off for testing. Preliminary tests on the tanks indicated that a variety of piping and fitting leaks were present in the underground piping. During the period from June 16 to July 13, 1988, the USTs were subjected to repeated full-system testing and repair of lines and fittings until they tested "tight". A chronological assessment update was issued on July 12, 1988 by GTI to Safety-Kleen Corporation and to the respective regulatory agencies which outlined in detail the events that transpired between June 16 and July 12, 1988.

MONITORING WELL INSTALLATION

Nine monitoring wells were installed on and around the site from July 25 to July 29, 1988 (Figure 3). The placement of the wells was determined from data derived during the soil-gas survey. The borings for the monitoring wells were drilled using 10.5-inch diameter hollow-stem augers on a truck-mounted drill rig. In eight of the borings, 25 feet of 2-inch diameter 0.010-inch machine-slotted PVC well screen and 5 feet of 2-inch diameter blank PVC casing was installed. In one of the borings, located in the middle of the Safety-Kleen lot, 25 feet of 4-inch 0.010 machine-slotted PVC well screen and 5 feet of 4-inch blank casing was installed. The wells were completed with a No. 30 Lonestar sand filter pack to approximately one foot above the screened interval. In each well, the filter pack was overlain by

one-foot of bentonite and 4-feet of cement grout to surface grade where a traffic-rated street box was installed (Appendix I).

Soil samples were collected from the borings for the monitoring wells at 5-foot intervals in 2-inch diameter by 6-inch-long brass sample tubes beginning at 3.5-feet below grade and continuing to the depths explored (maximum depth approximately 45 feet). All soil samples were sealed with aluminum foil, plastic caps and duct tape, labeled with the appropriate borehole information and type of analysis, and placed on ice for subsequent delivery to GTEL Environmental Laboratories (GTEL), a state-certified laboratory. All of the samples were accompanied by a chain-of-custody manifest. The samples were analyzed by EPA Methods 8010 for chlorinated hydrocarbons and 8015 for TPH-as-mineral spirits.

MONITORING WELL DEVELOPMENT

The monitoring wells on and around the site were developed on August 1 and 2, 1988. The wells were developed by using a 40-inch acrylic bailer to purge five to ten well volumes out of the well bore, or until the water in the well bore became clear and sediment free. Water generated during the development was stored in labeled drums on site. The groundwater was allowed two days to re-equilibrate before sampling.

GROUNDWATER MONITORING AND SAMPLING

The tops of the well casings were surveyed prior to monitoring so that a reference datum could be obtained from which a groundwater gradient map could be produced. Groundwater monitoring and sampling was conducted on August 4, 1988. Prior

to sampling, depth-to-water and depth-to-product measurements were taken from the top of the well casing.

Groundwater sampling was conducted by first purging approximately five well volumes from each well bore and then allowing the wells to recover to at least eighty percent of their original static level. Groundwater samples were then obtained using an EPA-approved Teflon^{R} sampler where water from the sampler was subsequently decanted into 40 milliliter glass vials with plastic caps and Teflon^{R} septums such that no air was trapped inside. The groundwater samples were then labelled, placed on ice and delivered to GTEL under a chain-of-custody manifest for subsequent analyses by EPA Methods 8010 for chlorinated hydrocarbons and 8015 for TPH-as-mineral spirits.

RESULTS

SOIL SAMPLES

Of the thirty-two soil samples analyzed by EPA Method 8015 for TPH-as-mineral spirits, only seven showed results above method-detection limits (10 ppm). Soil collected from five, ten, fifteen, and twenty feet in the boring for MW-7 showed 520, 2400, 18, and 15 parts per million of mineral spirits contamination, respectively. Soil collected from five, ten and twenty-five feet in the boring for MW-9 showed 240, 52,000 and 25 ppm of mineral spirits contamination, respectively. These results are shown in Table 1 ~~below~~. The laboratory reports are presented in Appendix III.

TABLE 1
SOIL SAMPLES
ANALYTICAL LABORATORY RESULTS
TPH-AS-MINERAL SPIRITS DETECTED

SAMPLE NUMBER	DEPTH (ft)	DETECTABLE MINERAL SPIRITS CONCENTRATION (ppm)
7A	5	520
7B	10	2400
7C	15	18
7D	20	15
9A	5	240
9B	10	52,000
9E	25	25

Of the same thirty-two soil samples, analyzed by EPA Method 8010 for chlorinated hydrocarbons showed only five results above method detection limits (0.5 ppm). Soil collected from 5 feet in MW-3, five and ten feet in MW-7, and five and ten feet in MW-9 showed only slightly elevated levels of contamination. The levels of contamination detected are displayed in Table 1. The laboratory reports are included in Appendix III.

TABLE 2
SOIL SAMPLES
CHLORINATED COMPOUNDS DETECTED
(PPM)

	SOIL SAMPLE NUMBER				
COMPOUND	MW-3A*	MW-7A	MW-7B**	MW-9A	MW-9B
Methylene Chloride	1.0	ND	ND	ND	ND
Tetrachloroethene	ND	ND	1.6	ND	1.7
1,1,1-TCA	ND	0.6	2.3	ND	3.7
Trans 1,2-DCE	ND	ND	ND	ND	1.3
Chlorobenzene	ND	ND	ND	1.2	3.1

* A = 5 feet
** B = 10 feet
ND = Not Detectable

GROUNDWATER SAMPLES

Seven groundwater samples were collected on August 4, 1988 for laboratory analyses by EPA Methods 8010 for chlorinated hydrocarbons and 8015 for TPH-as-mineral spirits. Wells containing free product were not sampled as per state regulations. Detectable levels of chlorinated hydrocarbons were found in all water samples collected. However, detectable levels of mineral spirits contamination were not found in any of the samples. A summary of the analytical laboratory results are displayed in Table 2. The laboratory results are included in Appendix IV.

TABLE 3
GROUNDWATER ANALYTICAL LABORATORY RESULTS
CHLORINATED COMPOUNDS DETECTED
(PPB)

COMPOUND	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-8
Chlorobenzene	ND	ND	ND	ND	ND	ND	1.5
Chloroform	1.6	ND	ND	ND	ND	ND	ND
1, 1-DCA	ND	ND	1.9	ND	ND	ND	ND
1, 2-DCA	ND	ND	2.2	ND	ND	ND	6.8
Trans 1,2-DCA	ND	ND	0.59	32.0	ND	ND	3.7
Methylene Chloride	4.2	4.3	5.0	ND	ND	1.1	4.6
TCE	ND	ND	13.0	760	2.1	5.0	67.0

DCA = Dichloroethane
TCE = Trichloroethene
ND = Not Detected

As evidenced from the sampling data, chlorinated compound concentrations in the wells are not consistent, and are therefore not mappable, with the exception of trichloroethene (TCE). It is feasible that more consistent data will be presented in future sampling rounds. A plume map of dissolved TCE concentrations in groundwater based on the first round of water samples collected is presented in Figure 6. The item of most interest on this map is that the highest concentrations of TCE are in the present upgradient direction.

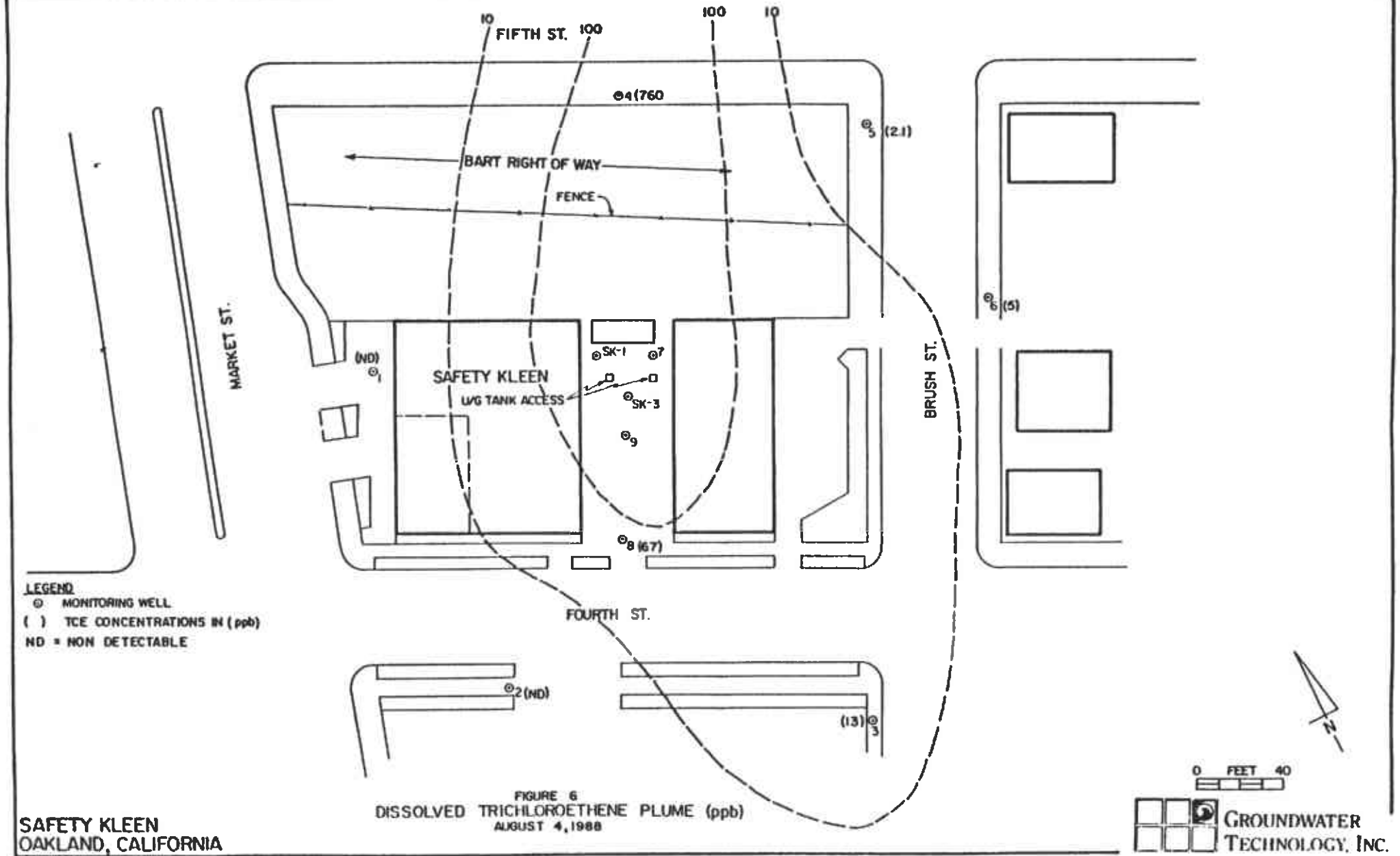


FIGURE 6
DISSOLVED TRICHLOROETHENE PLUME (ppb)
AUGUST 4, 1988

SAFETY KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

GROUNDWATER MONITORING

Groundwater monitoring conducted on August 4, 1988 showed that groundwater exists beneath the site at depth ranging from 7 to 12 feet below surface grade. Groundwater monitoring data (Table 4) was plotted and contoured to produce a groundwater gradient map (Figure 7). The groundwater gradient direction depicted is to the southwest.

Phase-separated product was found in four on-site wells located around the tank-pit area (Figure 2). Phase-separated product thickness data (Table 4) were collected along with groundwater monitoring data and are contoured on a separate map (Figure 8). Based on the data collected, phase-separated product accumulation appears to be restricted to within 30 feet of the tank pit area and probably extends under both buildings adjacent to the tank pit as well as beneath the vacant lot behind the property. Estimates as to the quantity of product accumulated in the subsurface may reach as high as 25,000 to 50,000 gallons based on product thickness, areal extent, and average porosity of the sediments (estimated to be 20 to 30 percent).

INTERIM PRODUCT RECOVERY SYSTEM

GTI has designed an interim product recovery system for the Oakland site. The recovery system is designed to extract only phase-separated product from the subsurface and is not designed to recover and treat contaminated water. This system will remain in use until the final remedial system is installed which will be designed to recover phase-separated product as well as to extract and treat contaminated groundwater.

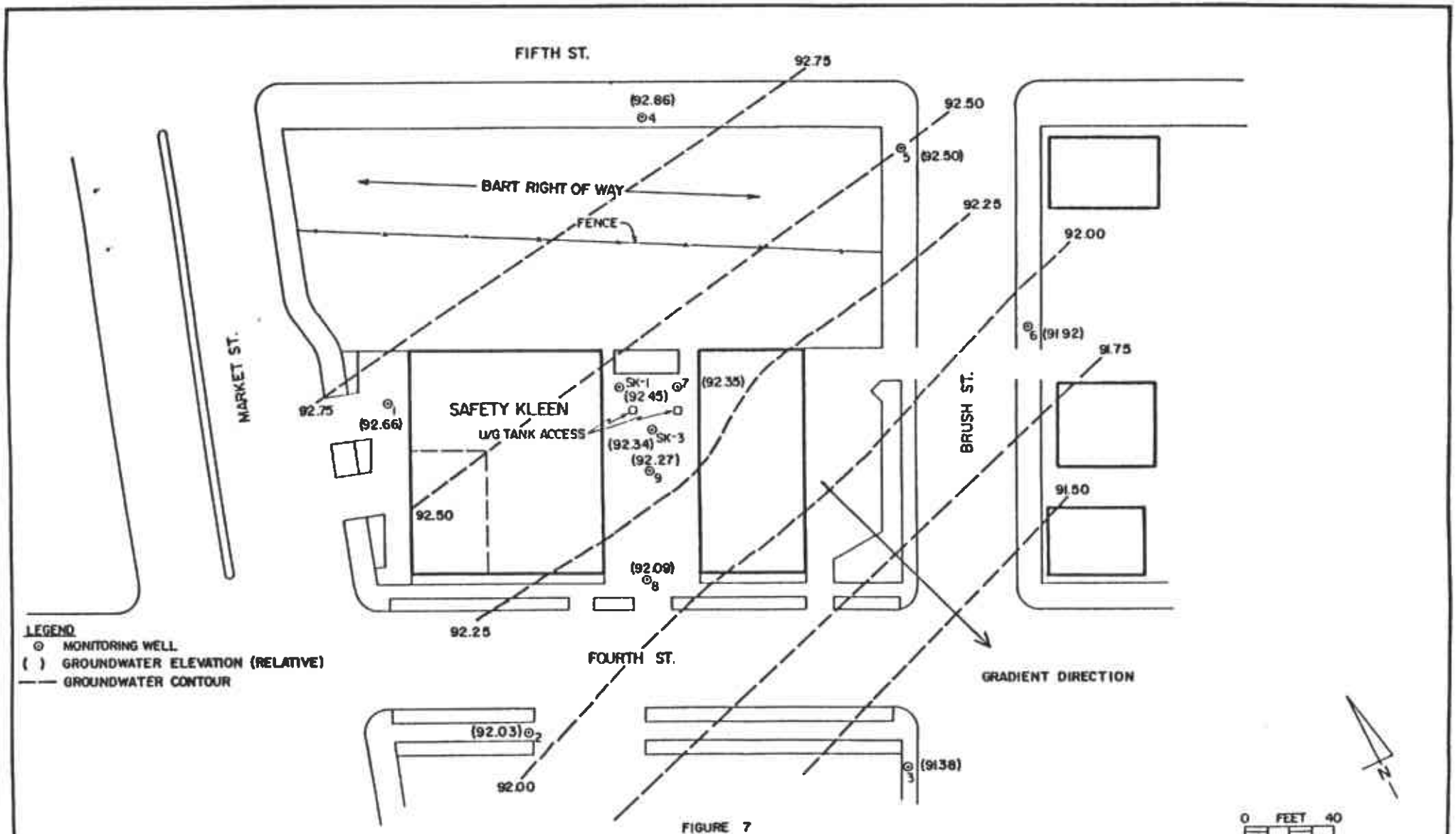


FIGURE 7
GROUNDWATER GRADIENT MAP
AUGUST 4, 1988

SAFETY KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

TABLE 4

MONITORING DATA

DATE		MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	MW-9	SK-1	SK-3
	ELEV. (ft.)	100.13	100.40	98.84	102.47	102.48	101.12	100.77	100.00	100.41	100.64	100.64
8/04/88	DTW	7.47	8.37	7.46	9.61	9.98	9.20	10.63	7.91	9.26	12.28	12.37
	DTP	-	-	-	-	-	-	7.87	-	7.86	7.17	7.28
	PT	-	-	-	-	-	-	2.76*	-	1.40*	5.11	5.09

All Measurements in feet

* Before Development of Well

MD5016A.01

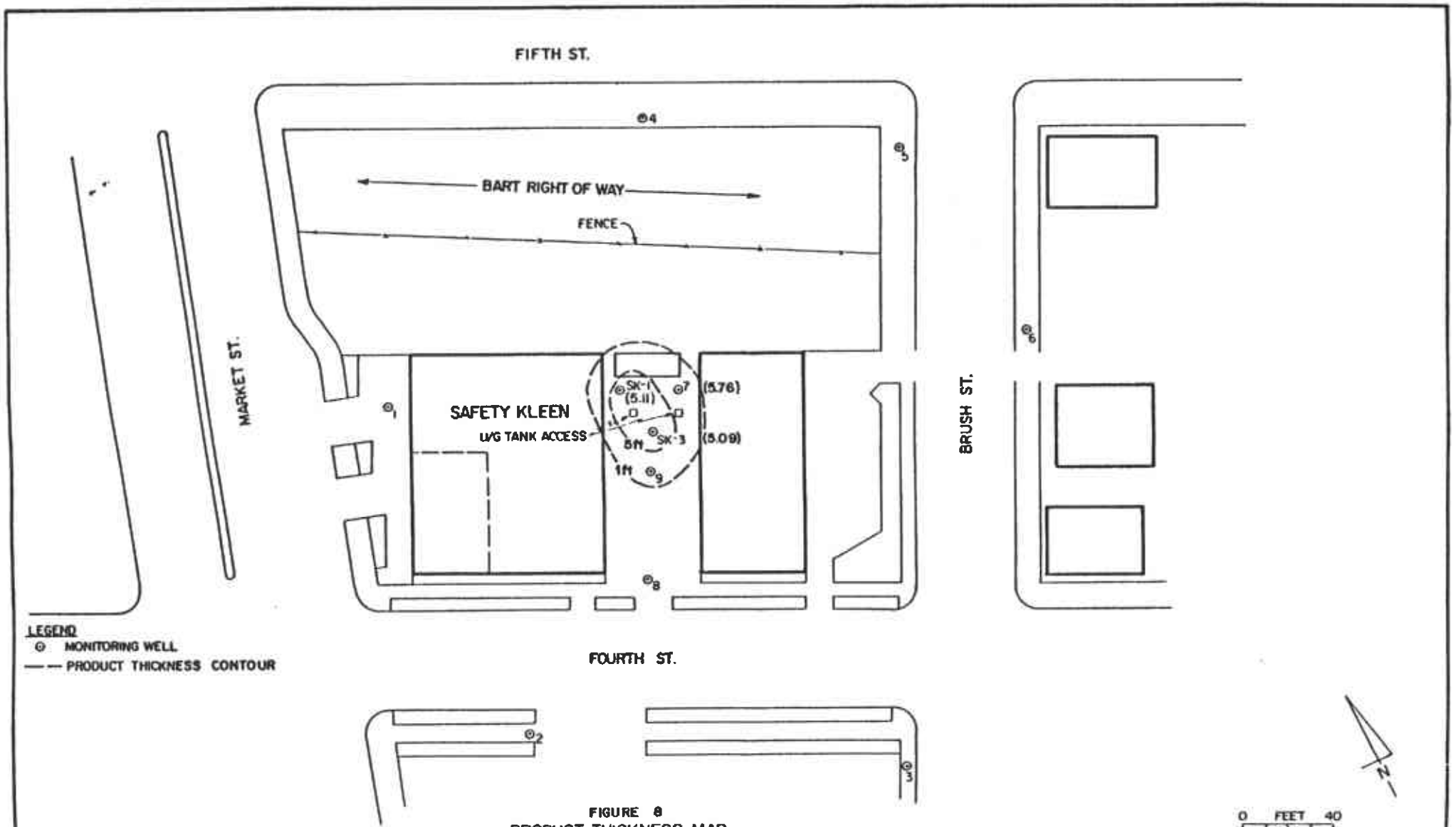


FIGURE 8
PRODUCT THICKNESS MAP
AUGUST 4,1988

SAFETY KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

The interim product recovery system consists of hydrocarbon sensitive, probe-activated, air bladder pumps. The probe and pump assembly are designed for use in wells as small as two inches in diameter. The product recovery pumps will be installed in the wells located in the phase-separated product plume and will recover product at a rate of 1- to 3-gallons per minute (gpm). The product lines from the pumps will be run above grade under portable speed bumps so that no damage will result to the lines from normal traffic usage in the area. The discharge of the product lines will be directed through a flow totalizer and then into the dumpster receptacles on the loading dock which subsequently feed the spent product underground storage tanks at the site (Figure 9). Directing product recovery to the UST will allow recycling of the recovered product rather than forcing implementation of waste hauling or disposal. It is anticipated that the interim product recovery system will be in operation by the end of the third week of September.

REFERENCES

Redbruch, Dorothy, H., 1957, Areal and Engineering Geology of Oakland West Quadrangle, California; U.S.G.S. Miscellaneous Map Investigations, Map I-239.

Fisher, Hugo, Brown, Edmund, G. and Warner, William E., 1963, Alameda County Investigation; The Resources Agency of California; Department of Water Resources, Bulletin No. 13.

CWL-HDR, 1986, Subsurface Investigation and Leak Monitoring Installation at the Oakland Safety-Kleen service facility.

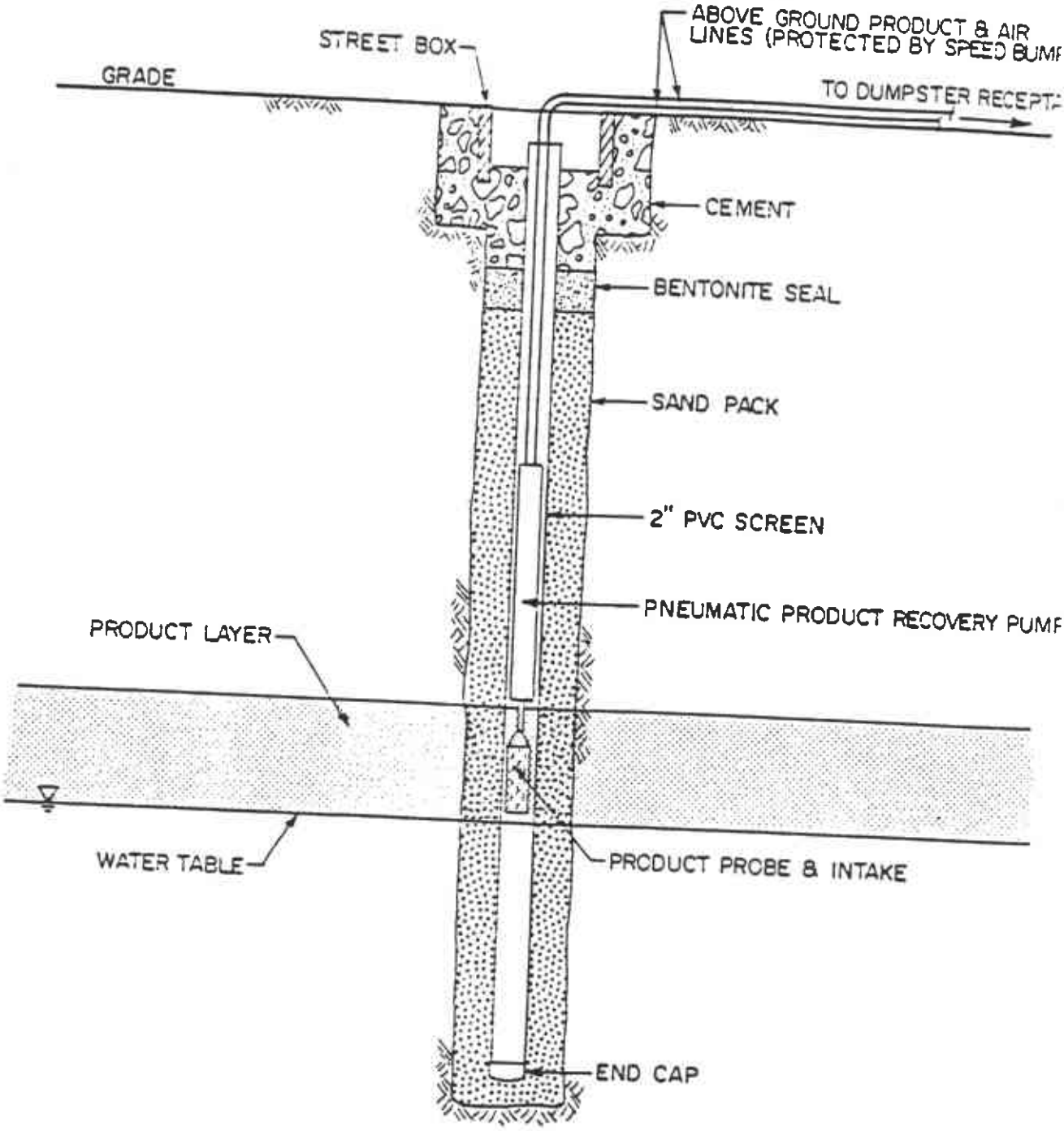


FIGURE 9

INTERIM PRODUCT RECOVERY SYSTEM

NO SCALE

SAFETY KLEEN
OAKLAND, CALIFORNIA

GROUNDWATER TECHNOLOGY, IN

DIETERICH POST RECORDER NO. 118233

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 1

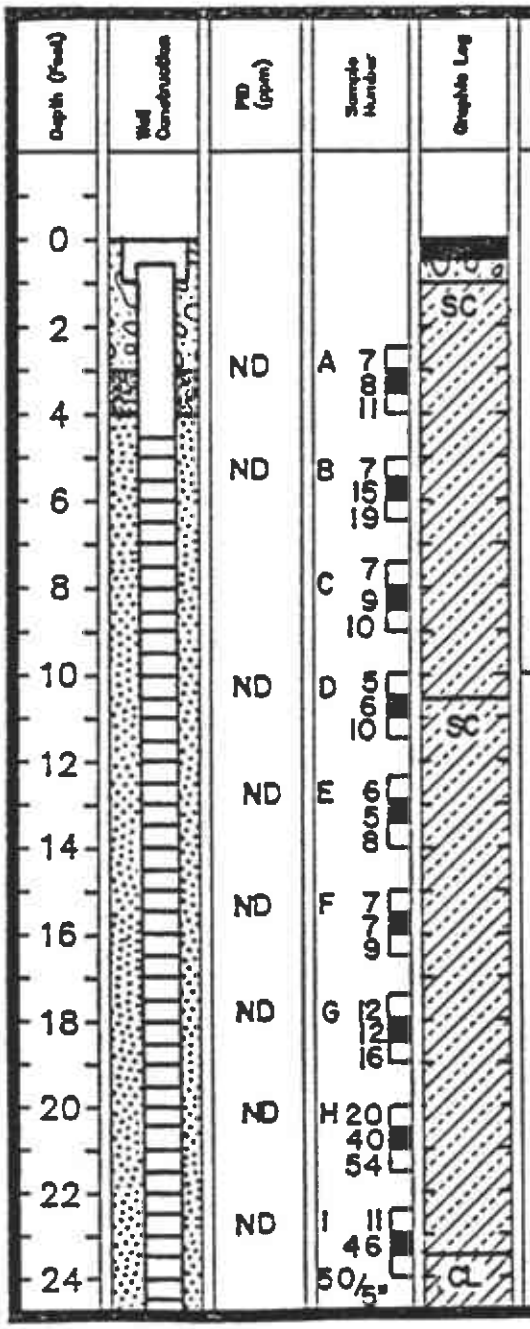
Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen
Location Oakland, CA Project Number 203 680 5016.01
Date Drilled 7/25/88 Total Depth of Hole 45 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 10 ft 24-hour ____
Screen: Dia. 2 in Length 25 ft Slot Size .010 in
Casing: Dia. 2 in Length 5 ft Type PVC
Drilling Company Sierra Pacific Drilling Method hollow stem augers
Driller Chris DeSocio Log by Kelly A. Kline
Geologist / Engineer ____ License No. ____

Sketch Map

See Site Plan

Notes:
Hole colapsed to 30 ft after drilling



Description/Soil Classification
(Color, Texture, Structures)

6 in asphalt over 6 in base coarse

Dark reddish brown clayey silty sand (medium dense, moist, no product odor)

(grades lighter brown)

(grades darker brown)

(grades more clayey)

▼ Encountered water 7/25/88 (1141 hrs.)

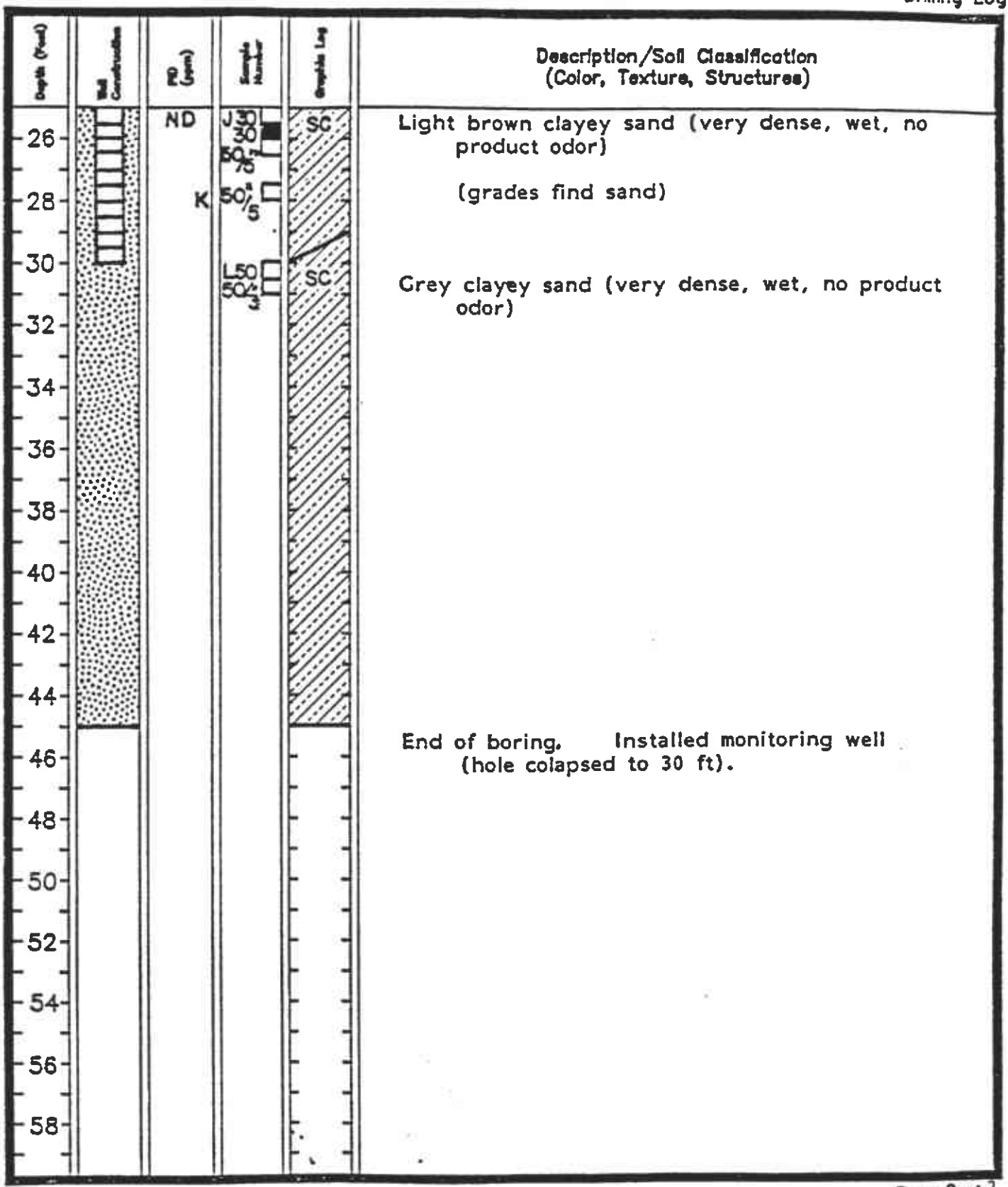
Light brown silty clayey fine to medium sand (no product odor)

Light brown sandy clay (hard, wet, no product odor)

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 1

Drilling Log



Description/Soil Classification (Color, Texture, Structures)
Light brown clayey sand (very dense, wet, no product odor)
(grades find sand)
Grey clayey sand (very dense, wet, no product odor)
End of boring. Installed monitoring well (hole colapsed to 30 ft).

6/86 REV. 8

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 2

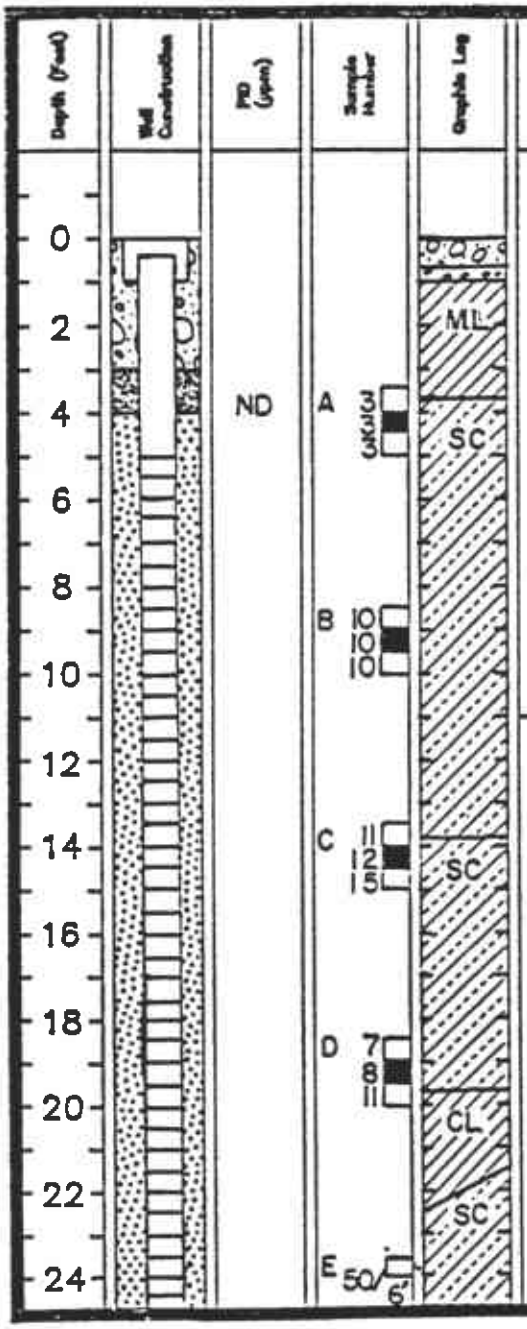
Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen
Location Oakland, CA Project Number 203 680 5016.01
Date Drilled 7/26/88 Total Depth of Hole 31 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 11 ft 24-hour ____
Screen: Dia. 2 in Length 25 ft Slot Size .010 in
Casing: Dia. 2 in Length 5 ft Type PVC
Drilling Company Sierra Pacific Drilling Method hollow stem augers
Driller William Coleman Log by Kelly A. Kline
Geologist / Engineer ____ License No. ____

Sketch Map

See Site Plan

Notes:



Description/Soil Classification
(Color, Texture, Structures)

8 in concrete over 4 in base course

Dark brown sandy silt (soft, moist, no product odor)

Light brown clayey silty fine sand (loose, moist, no product odor)

(grades more clayey)
(grades medium dense)

▼ Encountered water 7/26/88 (0830 hrs.)

Light brown clayey silty very fine to fine sand, (medium dense, wet, no product odor)

Light brown sandy clay (very stiff, wet, no product odor)

Light brown clayey silty fine sand (very dense, wet, no product odor)

8/88 REV. 0

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 2

Drilling Log

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				SC	Light brown clayey silty sand (cont'd)
28					
30			F25		
32			50/4"		End of boring. Installed monitoring well.
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 3

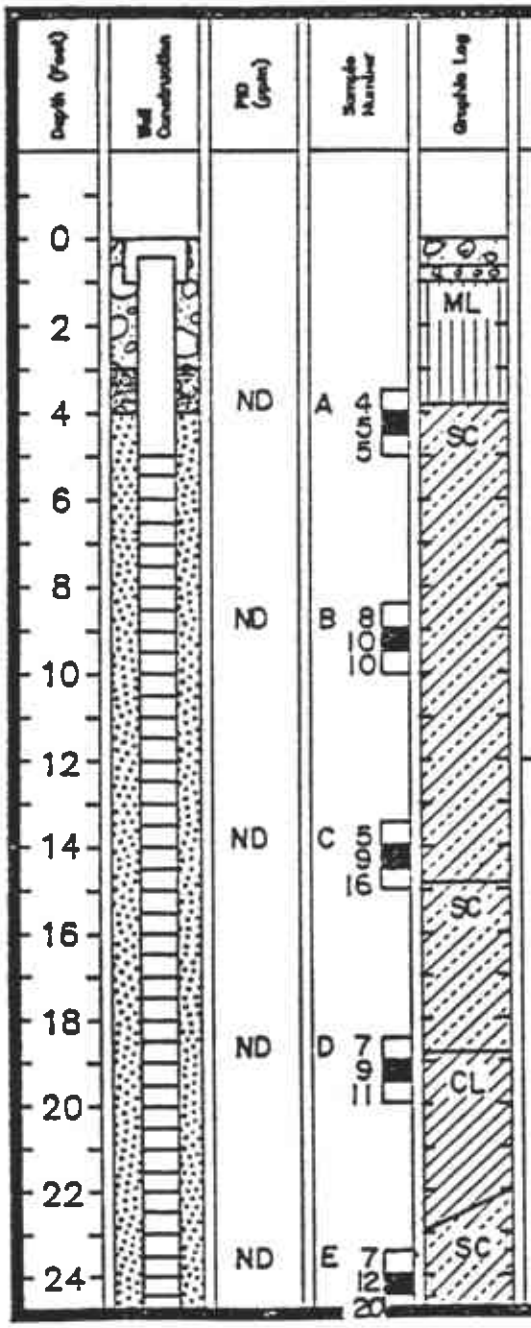
Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen
Location Oakland, CA Project Number 203 680 5016.01
Date Drilled 7/26/88 Total Depth of Hole 30.5 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 12 ft 24-hour ____
Screen: Dia. 2 in Length 25 ft Slot Size .010 in
Casing: Dia. 2 in Length 5 ft Type PVC
Drilling Company Sierra Pacific Drilling Method hollow stem augers
Driller William Coleman Log by Kelly A. Kline
Geologist / Engineer ____ License No. ____

Sketch Map

See Site Plan

Notes:



Description/Soil Classification (Color, Texture, Structures)
8 in concrete over 4 in base course
Dark brown sandy silt (soft, moist, no product odor)
Light brown clayey silty very fine to fine sand (medium dense, moist, no product odor)
(grades more clayey)
▼ Encountered water 7/26/88 (1500 hrs.)
Light brown silty clayey very fine to fine sand (mediu.n dense, wet, no product odor)
Light brown sandy clay (very stiff, wet, no product odor)
Light brown clayey silty very fine to fine sand (dense, wet, no product odor)

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 3

Drilling Log

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				SC	Light brown clayey silty sand (cont'd)
28					
30			F 15		End of boring. Monitoring well installed.
32			50/1"		
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 4

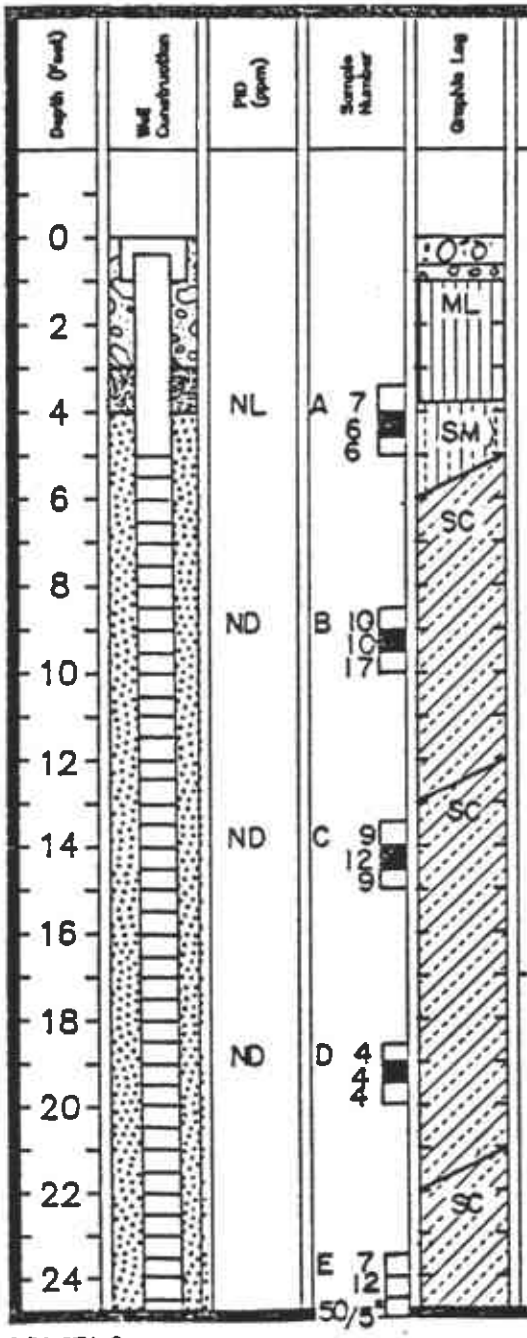
Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen
Location Oakland, CA Project Number 203 680 5016.01
Date Drilled 7/27/88 Total Depth of Hole 31 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 17 ft 24-hour ____
Screen: Dia. 2 in Length 5 ft Slot Size .010 in
Casing: Dia. 2 in Length 25 ft Type PVC
Drilling Company Sierra Pacific Drilling Method hollow stem augers
Driller William Coleman Log by Kelly A. Kline
Geologist / Engineer ____ License No. ____

Sketch Map

See Site Plan

Notes:



Description/Soil Classification
(Color, Texture, Structures)

8 in concrete over 4 in base course

Dark brown sandy silt (soft, moist, no product odor)

Light brown silty fine sand (medium dense, moist, no product odor)

Light brown silty clayey medium to fine sand (medium dense, moist, no product odor)

Light brown clayey silty very fine to fine sand (medium dense, moist, no product odor)

▼ Encountered water 7/27/88 (1300 hrs.)

Light brown clayey silty fine sand (medium dense, wet, no product odor)

8/88 REV. 0

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 4

Drilling Log

Depth (feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				SC	Light brown clayey silty sand (cont'd)
28					
30			F	SC	Grey clayey sand (dense, wet, no product odor)
					End of boring. Installed monitoring well.
32					
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 5

Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen
Location Oakland, CA Project Number 203 680 5016.01
Date Drilled 7/27/88 Total Depth of Hole 30.5 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 13 ft 24-hour ____
Screen: Dia. 2 in Length 25 ft Slot Size .010 in
Casing: Dia. 2 in Length 5 ft Type PVC
Drilling Company Sierra Pacific Drilling Method hollow stem augers
Driller William Coleman Log by Kelly A. Kline
Geologist / Engineer ____ License No. ____

Sketch Map

See Site Plan

Notes:

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					8 in concrete over 4 in base course
2				ML	Dark brown sandy silt (soft, moist, no product odor)
4		ND	A 6, 5, 8	SC	Light brown clayey silty fine-medium sand (medium dense, moist, no product odor)
6					
8		ND	B 9, 11, 15		(grades more clayey)
10					
12					▼ Encountered water 7/27/88 (1600 hrs.)
14		ND	C 10, 12, 13	SC	Light brown clayey silty fine sand (medium dense, wet, no product odor)
16					
18		ND	D 11, 15, 25		
20					
22					
24		ND	E 8, 10, 12	SC	Light brown clayey silty fine sand (medium dense, no product odor)

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 5

Drilling Log

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				SC	Light brown clayey silty sand (cont'd)
28					
30			F	SC	Grey clayey sand (loose, wet, no product odor)
32					End of boring. Installed monitoring well.
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

6/86 REV. B

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 6

Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen
Location Oakland, CA Project Number 203 5016.01
Date Drilled 7/28/88 Total Depth of Hole 30.5 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 13 ft 24-hour ____
Screen: Dia. 2 in Length 25 ft Slot Size .010 in
Casing: Dia. 2 in Length 5 ft Type PVC
Drilling Company Sierra Pacific Drilling Method Hollow stem augers
Driller William Coleman Log by Kelly A. Kline
Geologist / Engineer ____ License No. ____

Sketch Map

See Site Plan

Notes:

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					6 in concrete over 6 in base course
2				ML	Dark brown sandy silt (soft, moist, no product odor)
4		ND	A 6 5 7	SC	Light brown clayey silty fine sand (medium dense, no product odor)
6					
8		ND	B 8 8 10		
10					
12					▼ Encountered water 7/28/88 (0850 hrs.)
14		ND	C 10 13 23		
16					
18		ND	D 10 10 18		
20				CL	Light brown sandy clay (stiff, wet, no product odor)
22				SC	Light brown clayey silty fine sand (dense, wet, no product odor)
24		ND	E 50=.6		

6/88 REV. 0

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 6

Drilling Log

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				SC	Light brown clayey silty fine sand (cont'd)
28					
30		ND	F - ■	SC	Grey clayey sand (loose, wet, no product odor)
					End of boring. Installed monitoring well.
32					
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

6/86 REV. 8

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 7

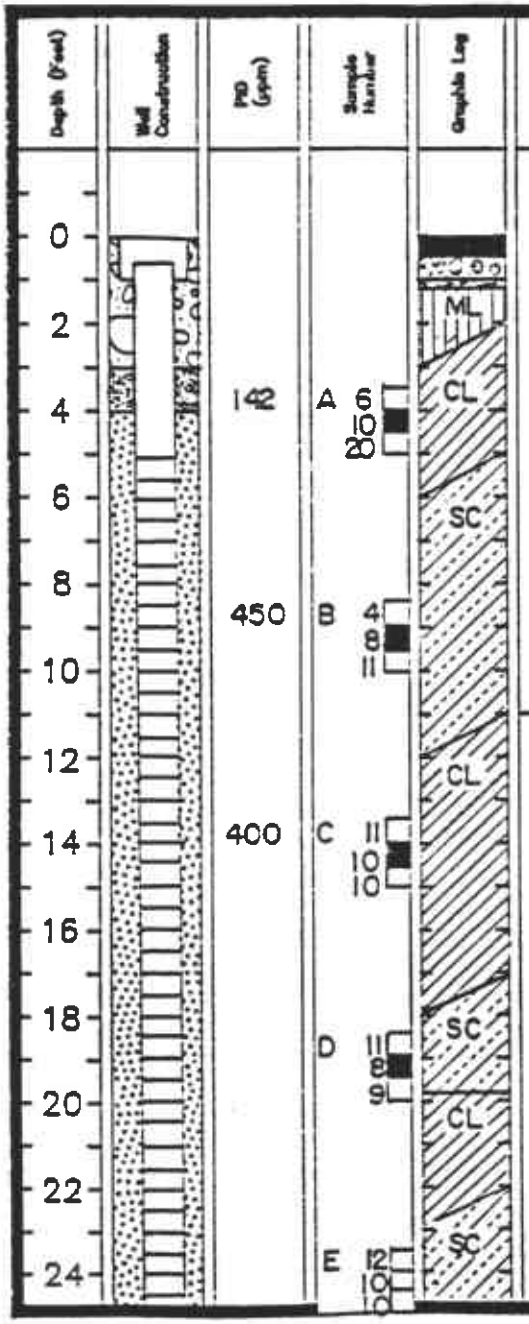
Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen
Location Oakland, CA Project Number 203 680 5016.01
Date Drilled 7/28/88 Total Depth of Hole 30.5 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 11 ft 24-hour ____
Screen: Dia. 2 in Length 25 ft Slot Size .010 in
Casing: Dia. 2 in Length 5 ft Type PVC
Drilling Company Sierra Pacific Drilling Method hollow stem augers
Driller William Coleman Log by Kelly A. Kline
Geologist / Engineer ____ License No. ____

Sketch Map

See Site Plan

Notes:



Description/Soil Classification
(Color, Texture, Structures)

6 in asphalt over 6 in base course

2 in concrete layer

Dark black sandy silt (soft, moist, strong product odor)

Dark black clayey sand (loose, moist, strong product odor)

Light brown clayey sand (medium dense, wet, strong product odor)

▼ Encountered water 7/28/88 (1400 hrs.)

Blue-grey, tan mottled, sandy clay (very stiff, wet, strong product odor)

Blue-grey, tan mottled, clayey sand (medium dense, wet, strong product odor)

Light brown sandy clay (stiff, wet, product odor)

Light brown clayey sand (medium dense, wet, product odor)

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 7

Drilling Log

Depth (feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				SC	Light brown clayey silty fine sand (cont'd)
28					
30				SC	Grey clayey sand (loose, wet, product odor) End of boring. Installed monitoring well.
32					
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 8

Drilling Log

Project Safety Kleen/Oakland | Owner Safety Kleen
Location Oakland, CA | Project Number 203 680 5016.01
Date Drilled 7/29/88 | Total Depth of Hole 30.5 ft | Diameter 10.5 in
Surface Elevation | Water Level Initial 12 ft | 24-hour
Screen: Dia. 2 in | Length 25 ft | Slot Size .010 in
Casing: Dia. 2 in | Length 5 ft | Type PVC
Drilling Company Sierra Pacific | Drilling Method hollow stem auger
Driller William Coleman | Log by Kelly A. Kline
Geologist / Engineer | License No.

Sketch Map

See Site Plan

Notes:

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					6 in asphalt over 6 in base course
2				ML	Dark black sandy silt (soft, moist, no product odor)
4		ND	A 9 12 10	SC	Light brown clayey silty very fine to fine sand (medium dense, moist, no product odor)
6					
8		ND	B 7 12 14	SC	Light brown silty clayey very fine to fine sand (medium dense, moist, no product odor)
10					
12					▼ Encountered water 7/29/88 (1000 hrs.)
14		ND	C 9 12 12	CL	Light brown, grey mottled, sandy clay (very stiff, wet, no product odor)
16				SC	Light brown clayey silty very fine to fine sand (medium dense, loose, wet, no product odor)
18		ND	D 9 12 14		
20					
22					
24			E 20 28 50/7"		

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 8

Drilling Log

Depth (feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				SC	Light brown silty sand (cont'd)
28					
30			F 50 C	SC	Grey clayey sand (dense, wet, no product odor)
32					End of boring. Installed monitoring well.
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 9

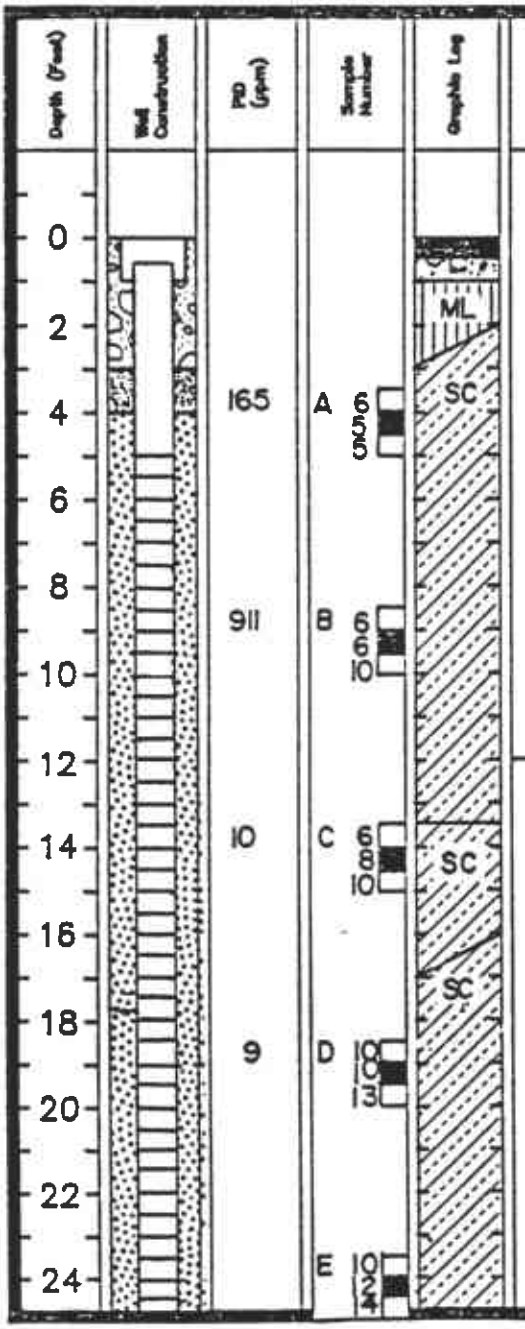
Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen
Location Oakland, CA Project Number 203 680 5016.01
Date Drilled 7/29/88 Total Depth of Hole 30.5 ft Diameter 10 in
Surface Elevation ____ Water Level Initial 12 ft 24-hour ____
Screen: Dia. 4 in Length 25 ft Slot Size .010 in
Casing: Dia. 4 in Length 5 ft Type PVC
Drilling Company Sierra Pacific Drilling Method hollow stem auger
Driller William Coleman Log by Kelly A. Kline
Geologist / Engineer ____ License No. ____

Sketch Map

See Site Plan

Notes:



Description/Soil Classification
(Color, Texture, Structures)

6 in asphalt over 6 in base course
Dark black sandy silt (soft, moist, strong product odor)

Dark brown clayey silty very fine to fine sand (loose, moist, very strong product odor)

(grades medium dense)

Encountered water 7/29/88 (1400 hrs.)

Light brown, grey mottled, clayey silty very fine, to fine sand (medium dense, wet, no product odor)

Light brown clayey, silty very fine to fine sand (medium dense, loose, wet, product odor)

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 9

Drilling Log

Depth (Feet)	Well Construction	PID (ppm)	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26				SC	Light brown clayey silty sand (cont'd)
28					
30			F 50/4"	SC	Grey clayey sand (dense, wet, no product odor)
32					End of boring. Installed monitoring well.
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

6/86 REV. 8

APPENDIX II

SOIL-GAS SAMPLE AND SIEVE ANALYSIS

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

06/28/88 JP

CLIENT: Steve Fischbein
Groundwater Technology, Inc.
4080 Pike Ln.
Concord, CA 94520
PROJECT#: 203-680-5016-.01-2AA
LOCATION: Oakland, CA

SAMPLED: 06/16/88 BY: W. Schaal
RECEIVED: 06/17/88 BY: K. Biava
ANALYZED: 06/24/88 P. Sra
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	25557A #13	25558A #12	25559A #11	25560A #9
Benzene	0.1		<0.1	<0.1	<0.1	0.54
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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	0.2		<0.5	<0.5	<0.5	<0.5
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	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-Dichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Ethylbenzene	0.1		<0.1	<0.1	<0.1	0.54
Methylene chloride	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
Tetrachloroethene	0.5		0.89	1.3	1.2	1.3
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Trichlorofluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0
Xylenes	0.2		<0.2	<0.2	<0.2	2.0
Toulene	0.1		<0.1	<0.1	<0.1	0.66

MDL = Method Detection Limit.
METHOD:
EPA Method 8010/8020

GTEL
Environmental
Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-28B
LOCATION: Oakland, CA

MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # / I.D.#	25561A #6	25562A #8	25563A #3
Benzene	0.1		0.15	<0.1	<0.1
Bromodichloromethane	0.5		<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5		<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5		<0.5	<0.5	<0.5
1,1-Dichloroethene	0.5		<0.5	<0.5	<0.5
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5
Ethylbenzene	0.1		<0.1	<0.1	<0.1
Methylene chloride	0.5		<0.5	<0.5	<0.5
1,1,2,2-Tetrachloroethane	0.5		<0.5	<0.5	<0.5
Tetrachloroethene	0.5		0.79	1.4	1.6
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5
Trichlorofluoromethane	0.5		<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0
Xylenes	0.2		0.21	<0.2	<0.2
Toulene	0.1		0.17	<0.1	<0.1

MDL = Method Detection Limit.
METHOD:
EPA Method 8010/8020

SAFY KHALIFA, Ph.D., Director

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

06/28/88 Jp

CLIENT: Steve Fischbein
Groundwater Technology, Inc.
4080 Pike Lane
Concord, CA 94520
PROJECT#: 203-680-5016.01-1
LOCATION: 4048 Market Street
Oakland, CA
SAMPLED: 06/16/88 BY: W. Schaal
RECEIVED: 06/17/88 BY: K. Biava
ANALYZED: 06/24/88 BY: E. Popek
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB # I.D.#	25557 13	25558 12	25559 11	25560 9	25561 6
Total Petroleum Hydrocarbons as Mineral Spirits	10		<10	<10	<10	<10	<10

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-1
LOCATION: 4048 Market Street
Oakland, CA

TEST RESULTS

MATRIX: Soil
UNITS: mg/kg (ppm)

COMPOUNDS	MDL	LAB # I.D.#	25562 8	25563 3
Total Petroleum Hydrocarbons as Mineral Spirits	10		<10	<10

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

SAFY KHALIFA, Ph.D., Director

SIEVE ANALYSIS

JOB NO: N8-2564-M2 JOB NAME: Saftey Kleen

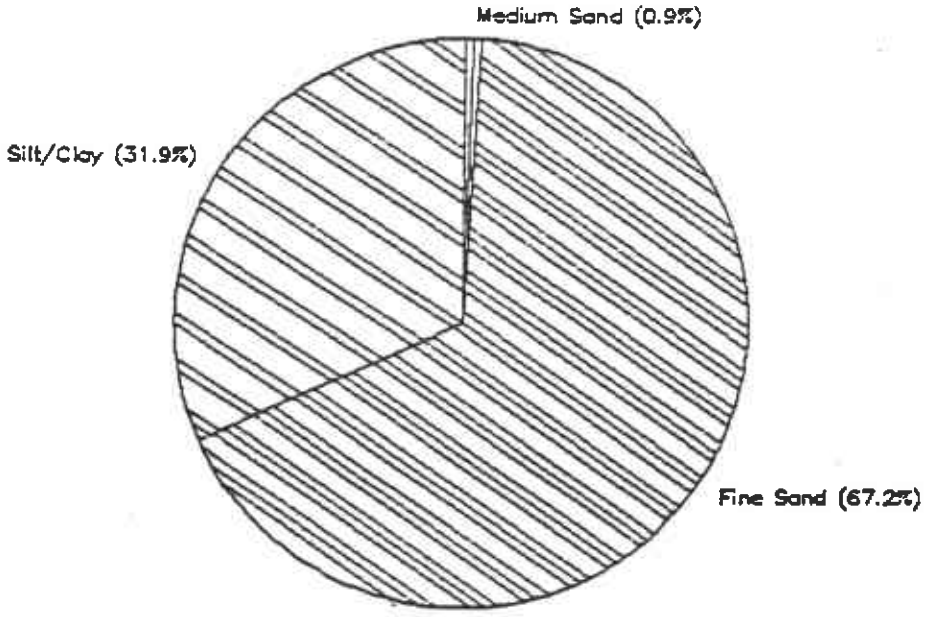
SAMPLE NO: 1 DESCRIPTION: Dark grayish brown silty fine Sand with clay

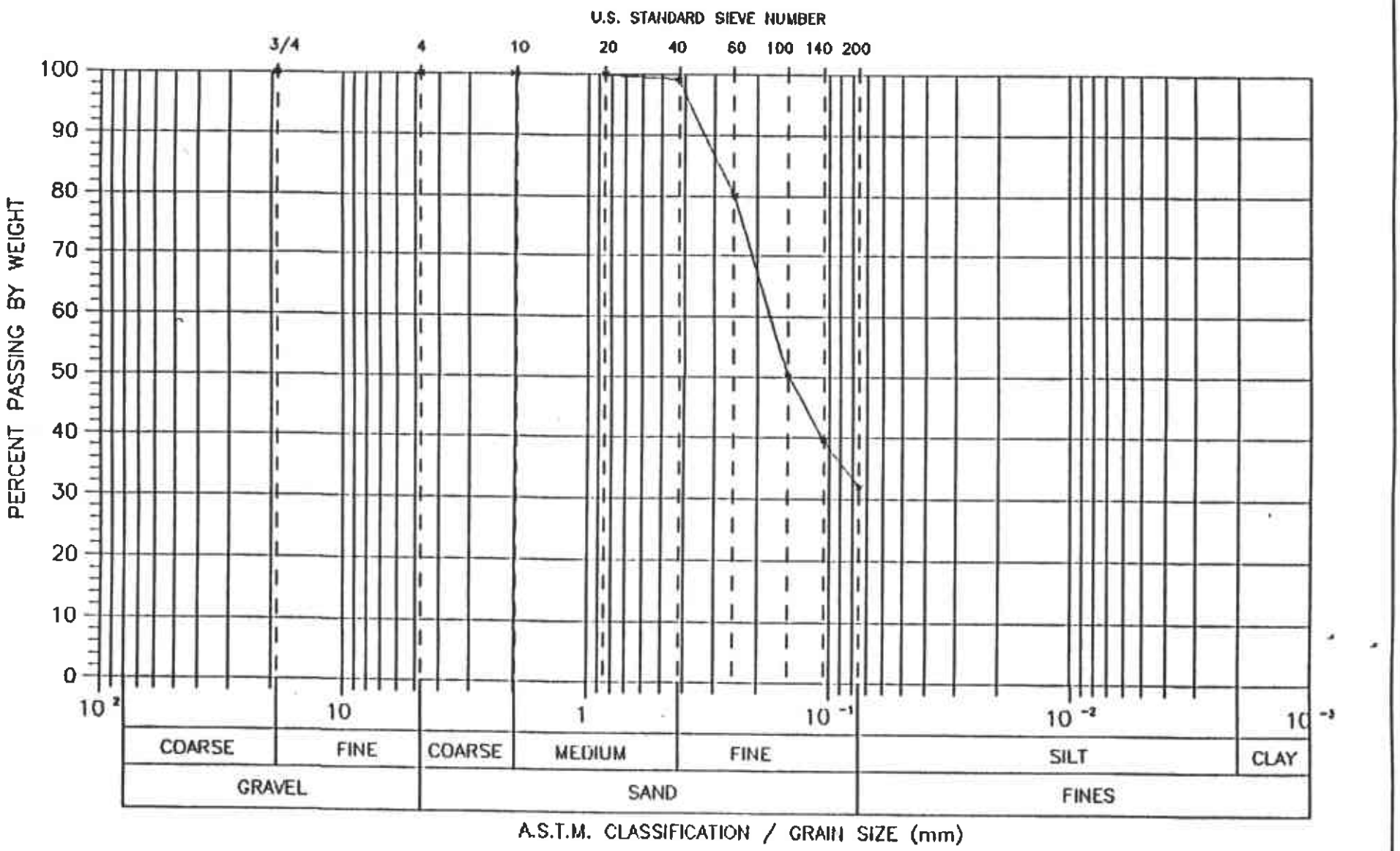
DATE: 7/19/88 PREWASH NET WT 34.09 g

SIEVE SIZE	WEIGHT RETAINED (g)	PERCENT RETAINED	CUMULATIVE PERCENT RETAINED	CUMULATIVE PERCENT PASSING
3/4 Inch	0.00	0.00%	0.00%	100.00%
No. 4	0.00	0.00%	0.00%	100.00%
No. 10	0.00	0.00%	0.00%	100.00%
No. 20	0.01	0.03%	0.03%	99.97%
No. 40	0.29	0.85%	0.88%	99.12%
No. 60	6.46	18.95%	19.83%	80.17%
No. 100	10.20	29.92%	49.75%	50.25%
No. 140	3.66	10.74%	60.49%	39.51%
No. 200	2.60	7.63%	68.11%	31.89%
PAN	10.87	31.89%	100.00%	

SIEVE ANALYSIS

(% Retained ASTM Designation)





ENGEO INCORPORATED

GRAIN SIZE DISTRIBUTION

DATE: 7-19-88
SAMPLE NO: 1

JOB NO: 0004

FIGURE NO:

APPENDIX III

LABORATORY RESULTS - SOIL

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
Groundwater Technology, Inc.
4080-D Pike Lane
Concord, CA 94520
PROJECT#: 203-680-5016.01-9
LOCATION: 404 Market
Oakland, CA
SAMPLED: 07/25,26,27,28,29/88 BY: K. Kline
RECEIVED: 08/03/88 BY: K. Fillinger
ANALYZED: 08/12/88 BY: P. Sra
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28550A MW-2A	28551A MW-2B	28552A MW-2C	28553A MW-3A
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	0.7
1,1-Dichloroethane	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-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	0.5		<0.5	<0.5	<0.5	1.0
1,1,2,2-Tetrachloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	0.5		<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.

METHOD:
EPA Method 8010

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

PROJECT MGR: Steve Fischbein
PROJECT #: 203-680-5016.01-9
LOCATION: 404 Market
Oakland, CA
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28554A MW-3B	28555A MW-3C	28556A MW-1B	28557A MW-1D
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	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-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	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
Tetrachloroethene	0.5		<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.

METHOD:
EPA Method 8010

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

PROJECT MGR: Steve Fischbein
PROJECT #: 203-680-5016.01-9
LOCATION: 404 Market
Oakland, CA
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28558A MW-1F	28559A MW-4B	28560A MW-4C	28561A MW-4D
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	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-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	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
Tetrachloroethene	0.5		<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.

METHOD:
EPA Method 8010

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

PROJECT MGR: Steve Fischbein
PROJECT #: 203-680-5016.01-9
LOCATION: 404 Market
Oakland, CA
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # / I.D.#	28562A MW-5A	28563A MW-5B	28564A MW-5C	28565A MW-6A
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	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-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	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
Tetrachloroethene	0.5		<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.

METHOD:
EPA Method 8010

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

PROJECT MGR: Steve Fischbein
PROJECT #: 203-680-5016.01-9
LOCATION: 404 Market
Oakland, CA
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # / I.D.#	28566A MW-6B	28567A MW-6C	28568A MW-7A	28569A MW-7B
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	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-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	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
Tetrachloroethene	0.5		<0.5	<0.5	<0.5	1.6
1,1,1-Trichloroethane	0.5		<0.5	<0.5	0.6	2.3
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.

METHOD:
EPA Method 8010

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

PROJECT MGR: Steve Fischbein
PROJECT #: 203-680-5016.01-9
LOCATION: 404 Market
Oakland, CA
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28570A MW-7C	28571A MW-7D	28572A MW-8A	28573A MW-8B
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	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-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	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
Tetrachloroethene	0.5		<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.

METHOD:
EPA Method 8010

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

PROJECT MGR: Steve Fischbein
PROJECT #: 203-680-5016.01-9
LOCATION: 404 Market
Oakland, CA
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28574A MW-8C	28575A MW-8D	28576A MW-8E	28577A MW-9A
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	1.2
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	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-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	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
Tetrachloroethene	0.5		<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.

METHOD:
EPA Method 8010

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

PROJECT MGR: Steve Fischbein
PROJECT #: 203-680-5016.01-9
LOCATION: 404 Market
Oakland, CA
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28578A MW-9B	28579A MW-9C	28580A MW-9D	28581A MW-9E
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		3.1	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	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-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	0.5		1.3	<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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	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
Tetrachloroethene	0.5		1.7	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		3.7	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	<0.5	<0.5
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.

METHOD:
EPA Method 8010

Safy Khalifa 1/8/97

SAFY KHALIFA, Ph.D., Director

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

08/17/88 rw
CLIENT: Steve Fischbein
Groundwater Technology, Inc.
4080 Pike Lane
Concord, Ca 94520
PROJECT#: 203-680-5016.01-10
LOCATION: 404 Market
Oakland, CA
SAMPLED: 07/25,26,27,28,29/88 BY: K. Kline
RECEIVED: 08/03/88 BY: K. Filling
ANALYZED: 08/11/88 BY: E. Popek
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB # I.D. #	28550B MW-2A	28551B MW-2B	28552B MW-2C	28553B MW-3A	28554B MW-3B
Total Petroleum Hydrocarbons as Mineral Spirits	10		<10	<10	<10	<10	<10

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

GTEL
Environmental
Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-10
LOCATION: 404 Market
Oakland, CA

TEST RESULTS

MATRIX: Soil
UNITS: mg/kg (ppm)

COMPOUNDS	MDL	LAB # I.D.#	28555B MW-3C	28556B MW-1B	28557B MW-1D	28558B MW-1F	28559B MW-4B
Total Petroleum Hydrocarbons as Mineral Spirits	10		<10	<10	<10	<10	<10

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-10
LOCATION: 404 Market
Oakland, CA

TEST RESULTS

MATRIX: Soil
UNITS: mg/kg (ppm)

COMPOUNDS	MDL	LAB # I.D.#	28560B MW-4C	28561B MW-4D	28562B MW-5A	28563B MW-5B	28564B MW-5C
Total Petroleum Hydrocarbons as Mineral Spirits	10		<10	<10	<10	<10	<10

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

GTEL
Environmental
Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-10
LOCATION: 404 Market
Oakland, CA

TEST RESULTS

MATRIX: Soil
UNITS: mg/kg (ppm)

COMPOUNDS	MDL	LAB # I.D.#	28565B MW-6A	28566B MW-6B	28567B MW-6C	28568B MW-7A	28569B MW-7B
Total Petroleum Hydrocarbons as Mineral Spirits	10		<10	<10	<10	520	2400

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-10
LOCATION: 404 Market
Oakland, CA

TEST RESULTS

MATRIX: Soil
UNITS: mg/kg (ppm)

COMPOUNDS	MDL	LAB # I.D.#	28570B MW-7C	28571B MW-7D	28572B MW-8A	28573B MW-8B	28574B MW-8C
Total Petroleum Hydrocarbons as Mineral Spirits	10		18	15	<10	<10	<10

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

GTEL
Environmental
Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-10
LOCATION: 404 Market
Oakland, CA

TEST RESULTS

MATRIX: Soil
UNITS: mg/kg (ppm)

COMPOUNDS	MDL	LAB # I.D. #	28575B MW-8D	28576B MW-8E	28577B MW-9A	28578B MW-9B	28579B MW-9C
Total Petroleum Hydrocarbons as Mineral Spirits	10		<10	<10	240	52000	<10

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-10
LOCATION: 404 Market
Oakland, CA

MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB # I.D.#	28580B MW-9D	28581B MW-9E
Total Petroleum Hydrocarbons as Mineral Spirits	10		(10	25

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 8015

SAFY KHALIFA, Ph.D., Director

APPENDIX IV

LABORATORY RESULTS - WATER

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

08/11/88 mh

CLIENT: Kelly Kline/Steve Fischbein
GROUNDWATER TECHNOLOGY, INC.
4080-D Pike Lane
Concord, CA 94520
PROJECT#: 203-680-5016.01-11
LOCATION: Oakland, CA

SAMPLED: 08/04/88 BY: M. Czipka
RECEIVED: 08/04/88 BY: E. Foley
ANALYZED: 08/09/88 BY: P. Sra
MATRIX: Water
UNITS: ug/L (ppb)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28718 MW-4	28719 MW-5	28720 MW-6	28721 MW-3
Bromodichloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	<0.5	<0.5
Chloroethane	0.5		<0.5	<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0	<1.0
Chloroform	0.5		<0.5	<0.5	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5		<0.5	<0.5	<0.5	1.9
1,2-Dichloroethane	0.5		<0.5	<0.5	<0.5	2.2
1,1-Dichloroethene	0.2		<0.2	<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	0.5		32	<0.5	<0.5	0.59
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
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5	<0.5
Methylene chloride	0.5		<0.5	<0.5	1.1	5.0
1,1,2,2-Tetrachloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Tetrachloroethene	0.5		<0.5	<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5	<0.5
Trichloroethene	0.5		760	2.1	5.0	13
Vinyl Chloride	1.0		<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit.
METHODS: EPA 8010.

GTEL
Environmental
Laboratories
A division of Groundwater Technology, Inc.

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

CLIENT: Kelly Kline/Steve Fischbein

PROJECT#: 203-680-5016.01-11
LOCATION: Oakland, CA
MATRIX: Water
UNITS: ug/L (ppb)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28722 MW-1	28723 MW-2	28724 MW-8
Bromodichloromethane	0.5		<0.5	<0.5	<0.5
Bromoform	0.5		<0.5	<0.5	<0.5
Bromomethane	0.5		<0.5	<0.5	<0.5
Carbon tetrachloride	0.5		<0.5	<0.5	<0.5
Chlorobenzene	0.5		<0.5	<0.5	1.5
Chloroethane	0.5		<0.5	<0.5	<0.5
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	<1.0
Chloroform	0.5		1.6	<0.5	<0.5
Chloromethane	0.5		<0.5	<0.5	<0.5
Dibromochloromethane	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
Dichlorodifluoromethane	0.5		<0.5	<0.5	<0.5
1,1-Dichloroethane	0.5		<0.5	<0.5	<0.5
1,2-Dichloroethane	0.5		<0.5	<0.5	6.8
1,1-Dichloroethene	0.2		<0.2	<0.2	<0.2
trans-1,2-Dichloroethene	0.5		<0.5	<0.5	3.7
1,2-Dichloropropane	0.5		<0.5	<0.5	<0.5
cis-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	<0.5
Methylene chloride	0.5		4.2	4.3	4.6
1,1,2,2-Tetrachloroethane	0.5		<0.5	<0.5	<0.5
Tetrachloroethene	0.5		<0.5	<0.5	<0.5
1,1,1-Trichloroethane	0.5		<0.5	<0.5	<0.5
1,1,2-Trichloroethane	0.5		<0.5	<0.5	<0.5
Trichloroethene	0.5		<0.5	<0.5	67
Vinyl Chloride	1.0		<1.0	<1.0	<1.0

MDL = Method Detection Limit.
METHODS: EPA 8010.

Safy Khalifa 1EM7
SAFY KHALIFA, Ph.D., Director

GTEL Environmental Laboratories
A division of Groundwater Technology, Inc.

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

08/08/88 jp

CLIENT: Kelly Kline/Steve Fischbein
Groundwater Technology, Inc.
4080 Pike Lane
Concord, CA 94520
PROJECT#: 203-680-5016.01-12
LOCATION: Oakland, CA

SAMPLED: 08/04/88 BY: M. Czipka
RECEIVED: 08/04/88 BY: E. Foley
ANALYZED: 08/08/88 BY: C. Manuel
MATRIX: Water
UNITS: mg/L (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB # I.D.#	28725 MW4-MS	28726 MW5-MS	28727 MW6-MS	28728 MW3-MS	28729 MW1-MS
Total Petroleum Hydrocarbons as Mineral Spirits	1.0		<1.0	<1.0	<1.0	<1.0	<1.0

MDL = Method Detection Limit; compound below this level would not be detected.
Results rounded to two significant figures.

METHOD:
Modified EPA Method 5030/8015

GTEL
Environmental
Laboratories
ion of Groundwater Technology, Inc.

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

CLIENT: Kelly Kline/Steve Fischbein
Groundwater Technology, Inc.
Concord, CA 94520
203-680-5016.01-12
LOCATION: Oakland, CA

MATRIX: Water
UNITS: mg/L (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB # I.D.#	28730 MW2-MS	28731 MW8-MS
Total Petroleum Hydrocarbons as Mineral Spirits	1.0		<1.0	<1.0

MDL = Method Detection Limit; compound below this level would not be detected.

METHOD:
Modified EPA Method 5030/8015

Safy Khalifa/EMT
SAFY KHALIFA, Ph.D., Director

GTEL
Environmental
Laboratories
A division of Groundwater Technology, Inc.

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

08/18/88 mh

CLIENT: Kelly Kline/Steve Fischbein
Groundwater Technology, Inc.
4080 Pike Ln.
Concord, CA 94520
PROJECT#: 203-680-5016.01-14
LOCATION: Oakland, CA

SAMPLED: 08/04/88 BY: M. Czipka
RECEIVED: 08/04/88 BY: E. Foley
ANALYZED: 08/16/88 BY: P. Sra
MATRIX: Water
UNITS: ug/L (ppb)

TEST RESULTS

COMPOUND	MDL	LAB # I.D.#	28732 RB-4	28739 RB MW-8	
Bromodichloromethane	0.5		<0.5	<0.5	
Bromoform	0.5		<0.5	<0.5	
Bromomethane	0.5		<0.5	<0.5	
Carbon tetrachloride	0.5		<0.5	<0.5	
Chlorobenzene	0.5		<0.5	<0.5	
Chloroethane	0.5		<0.5	<0.5	
2-Chloroethylvinyl ether	1.0		<1.0	<1.0	
Chloroform	0.5		<0.5	<0.5	
Chloromethane	0.5		<0.5	<0.5	
Dibromochloromethane	0.5		<0.5	<0.5	
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	<0.5	
Dichlorodifluoromethane	0.5		<0.5	<0.5	
1,1-Dichloroethane	0.5		<0.5	<0.5	
1,2-Dichloroethane	0.5		<0.5	<0.5	
1,1-Dichloroethene	0.2		<0.2	<0.2	
trans-1,2-Dichloroethene	0.5		<0.5	<0.5	
1,2-Dichloropropane	0.5		<0.5	<0.5	
cis-1,3-Dichloropropene	0.5		<0.5	<0.5	
trans-1,3-Dichloropropene	0.5		<0.5	<0.5	
Methylene chloride	0.5		<0.5	<0.5	
1,1,2,2-Tetrachloroethane	0.5		<0.5	<0.5	
Tetrachloroethene	0.5		<0.5	<0.5	
1,1,1-Trichloroethane	0.5		<0.5	<0.5	
1,1,2-Trichloroethane	0.5		<0.5	<0.5	
Trichloroethene	0.5		<0.5	<0.5	
Vinyl Chloride	1.0		<1.0	<1.0	

MDL = Method Detection Limit.

METHOD:
EPA 8010.

SAFY KHALIFA, Ph.D. / Director