

APPENDIX H

SAFETY-KLEEN CORP. ENVIRONMENTAL ASSESSMENT REPORTS

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

SEPTEMBER 9, 1988

GROUNDWATER TECHNOLOGY, INC. CONCORD, CALIFORNIA



(415) 671-2087

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 Engi

No. 33431

No. 33431

CIVIL CIVIL

R203 680 501601B.SF

TABLE OF CONTENTS

	PAGE
INTRODUCTION	
BACKGROUND	
PREVIOUS WORK	4
SITE CONDITIONS	7
GEOLOGY	7
HYDROGEOLOGY	7
WORK SCOPE	8
WORK STEPS	9
SOIL-GAS SURVEY	9
PRECISION TANK TESTING	13
MONITORING WELL INSTALLATION	13
MONITORING WELL DEVELOPMENT	14
GROUNDWATER MONITORING AND SAMPLING	
RESULTS	15
SOIL SAMPLES	
GROUNDWATER SAMPLES	
GROUNDWATER MONITORING	
INTERIM PRODUCT RECOVERY SYSTEM	
REFERENCES	24
LIST OF FIGURES	
FIGURE	PAGE
1 - SITE LOCATION MAP	
2 - UNDERGROUND TANK LOCATION	. 3
3 - SITE PLAN	. 4
4 - VAPOR CHROMATOGRAM	. 10
5 - MINERAL SPIRITS VAPOR PLUME MAP	. 12
6 - DISSOLVED TRICHLOROETHENE PLUME	. 19
7 - GROUNDWATER GRADIENT MAP	
8 - PRODUCT THICKNESS MAP	
9 - INTERIM PRODUCT RECOVERY SYSTEM	. 25
i i	

LIST OF TABLES

TABLE	31	PAGE
1 - ANALYTICAL LABORATORY RESULTS		. 16
2 - SOIL SAMPLES	• • • • • • • • • • • • • • • • • • • •	. 17
3 - GROUNDWATER ANALYTICAL LABORATORY RESULTS.		. 18
4 - MONITORING DATA		. 22
Vi.		
LIST OF APPENDICES		
APPENDIX		
I - DRILL LOGS		
II - SOIL-GAS SAMPLE AND SIEVE ANALYSIS		
III - LABORATORY RESULTS - SOIL		
IV - LABORATORY RESULTS - WATER		

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

INTRODUCTION

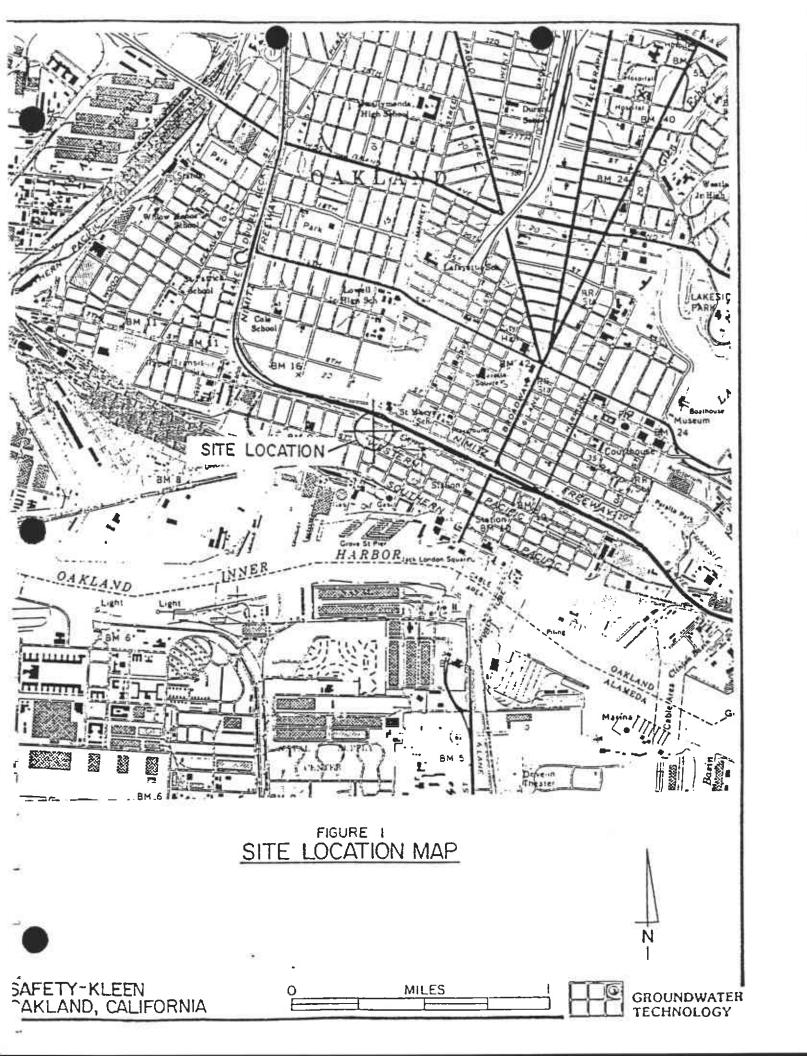
This report presents an update of the assessment work and interim remedial action steps which have been conducted to date by Groundwater Technology, Inc. (GTI) at the Safety-Kleen Corporation's (Safety-Kleen) facility located at 404 Market Street in Oakland, California (Figure 1). The work performed 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.

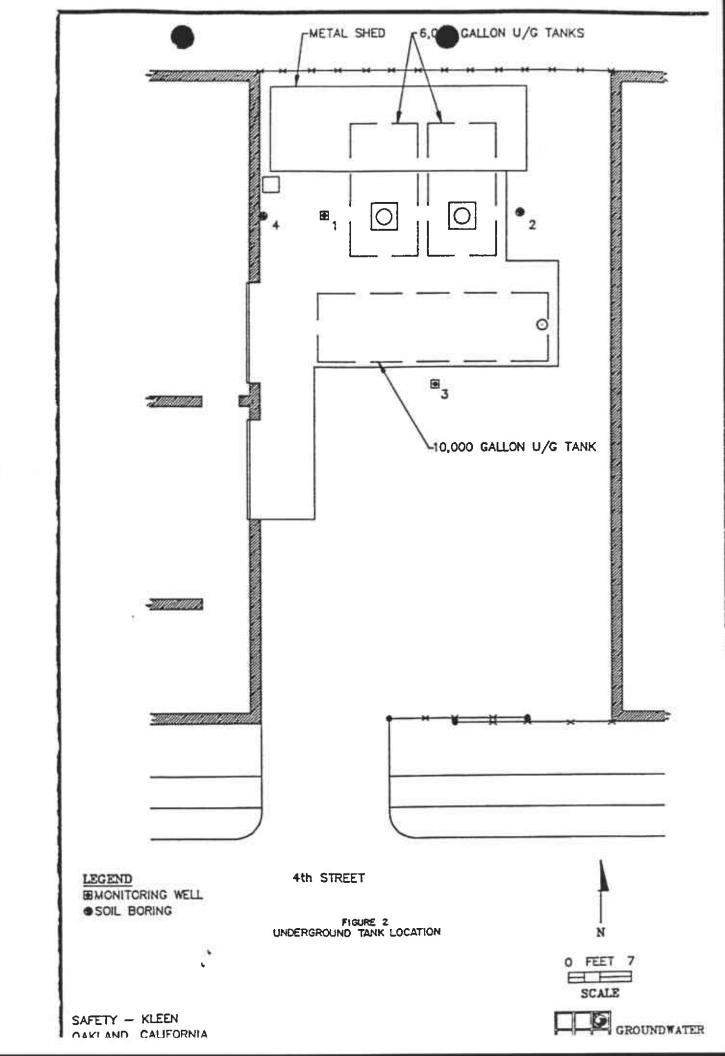
BACKGROUND

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).





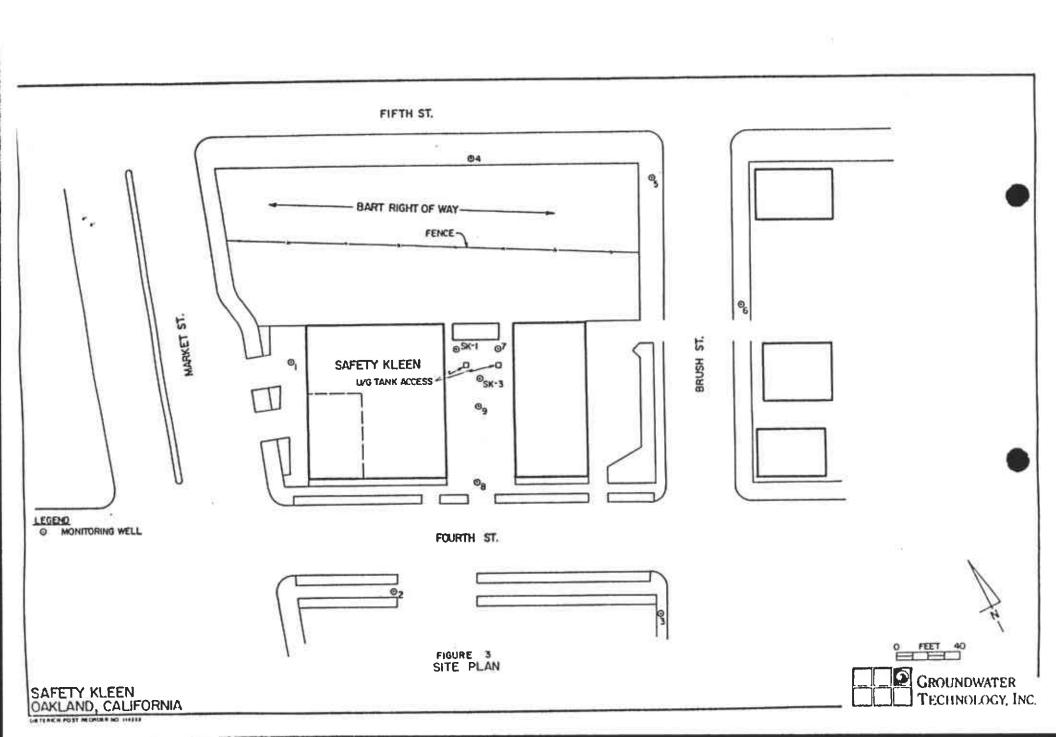


The tanks were installed at the site in February 1970 (CWC-HDR, 1986). The site is visited on a regular basis by a tanker truck, coming from the Reedley facility, which dispensed clean, recycled product to the 10,000-gallon UST and loads spent solvent from the 6,000-gallon USTs. Clean product is then 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. 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, flameionization 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).





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.

- o Conducted soil-gas survey to define lateral extent of subsurface vapor plume.
- o 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.
- o Precision tested all underground tanks and lines at the site using the Petro-TiteTM tank-testing method.
- o 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.
- O Collected 32 soil samples for analysis by EPA Methods 8010 for chlorinated hydrocarbons and 8015 for Total Petroleum Hydrocarbons (TPH)-as-mineral spirits.
- o Surveyed well-head elevations and obtained depth-towater (DTW) and depth-to-product (DTP) measurements to produce groundwater gradient and product-thickness maps.



- o Developed monitoring wells and collected water samples for analysis using EPA Methods 8010 for chlorinated hydrocarbons and 8015 for TPH-as-mineral-spirits.
- o 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).
- o Prepared this Interim Update Assessment Report.

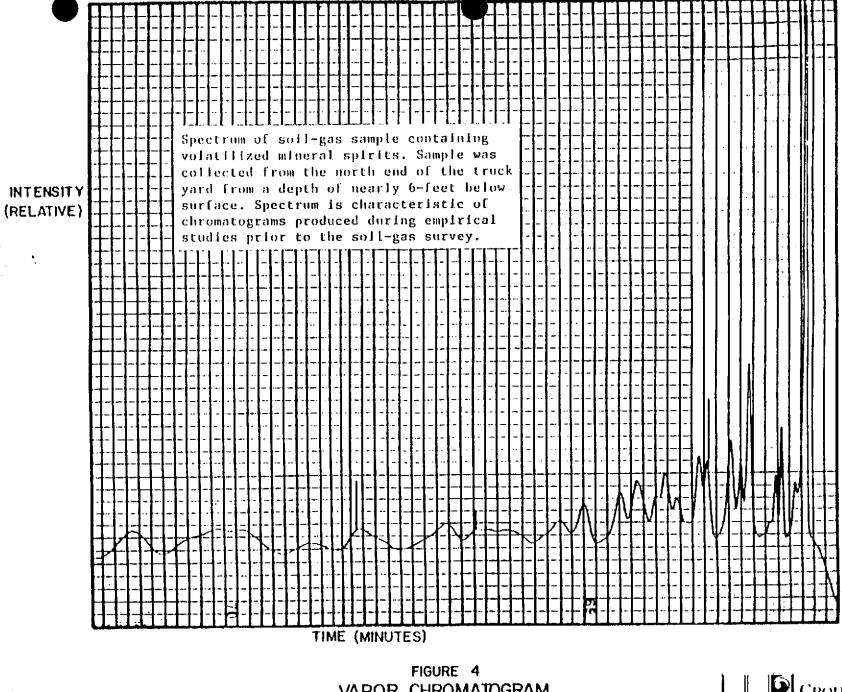
WORK STEPS

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





SAFETY KLEEN OAKLAND, CALIFORNIA VAPOR CHROMATOGRAM

1

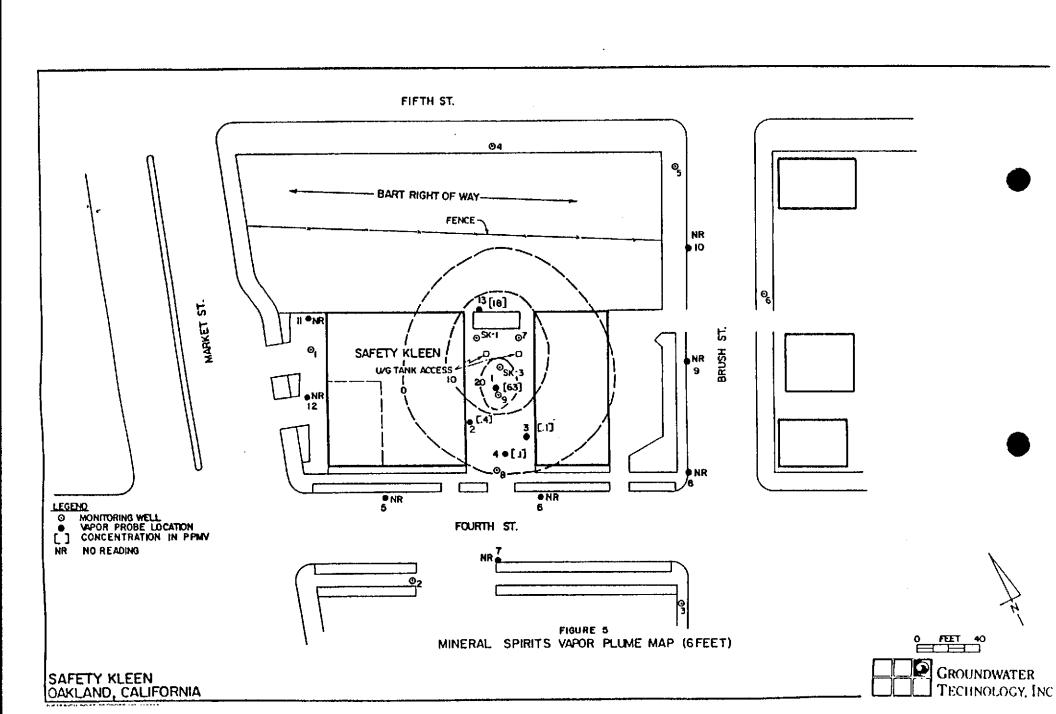


determined by the field geologist and geochemist that the best vapor samples were those collected within inches of the capillary fringe due to the relatively low vapor pressure of mineral spirits. The resultant vapor samples collected were analyzed and contoured to produce a subsurface vapor-plume map (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-asmineral 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.





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-asmineral 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 on the next page. 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
7 B	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.

Safety-Kleen/Oakland September 9, 1988

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	ממ	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

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.

^{**} B = 10 feet

ND = Not Detectable

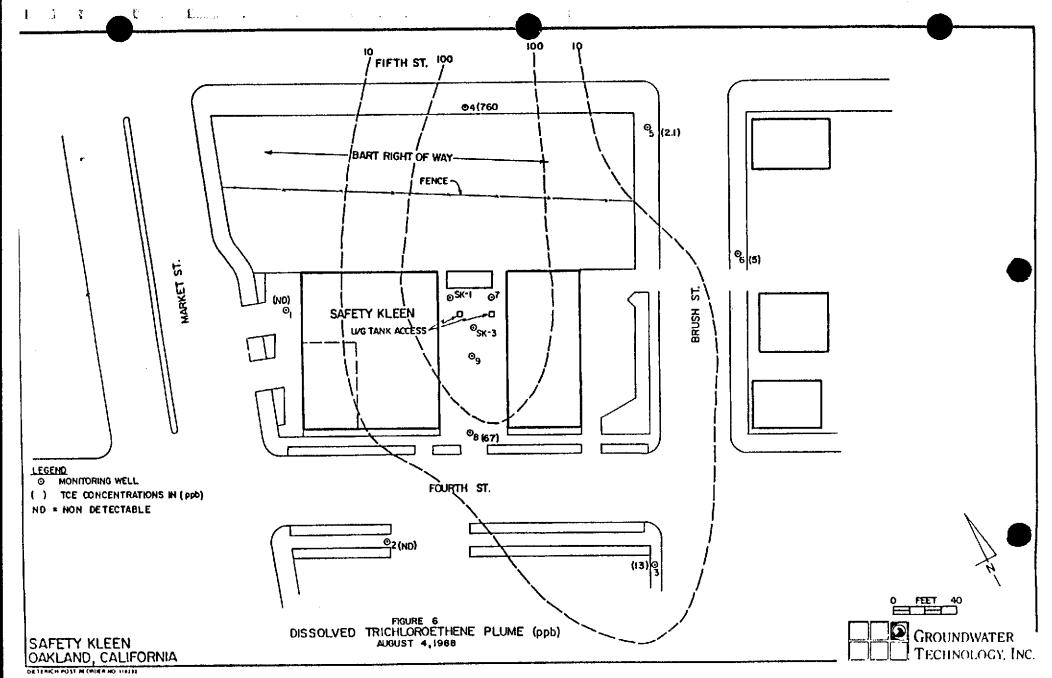
Safety-Kleen/Oakland September 9, 1988

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

COMPOUND	MW-1	MW-2	MM-3	MW4	MW-5	MW-6	8-WM
Chlorobenzene	ND	ND	ND	ND	ND	מא	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	ИD	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.



Safety-Kleen/Oakland September 9, 1988

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

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.



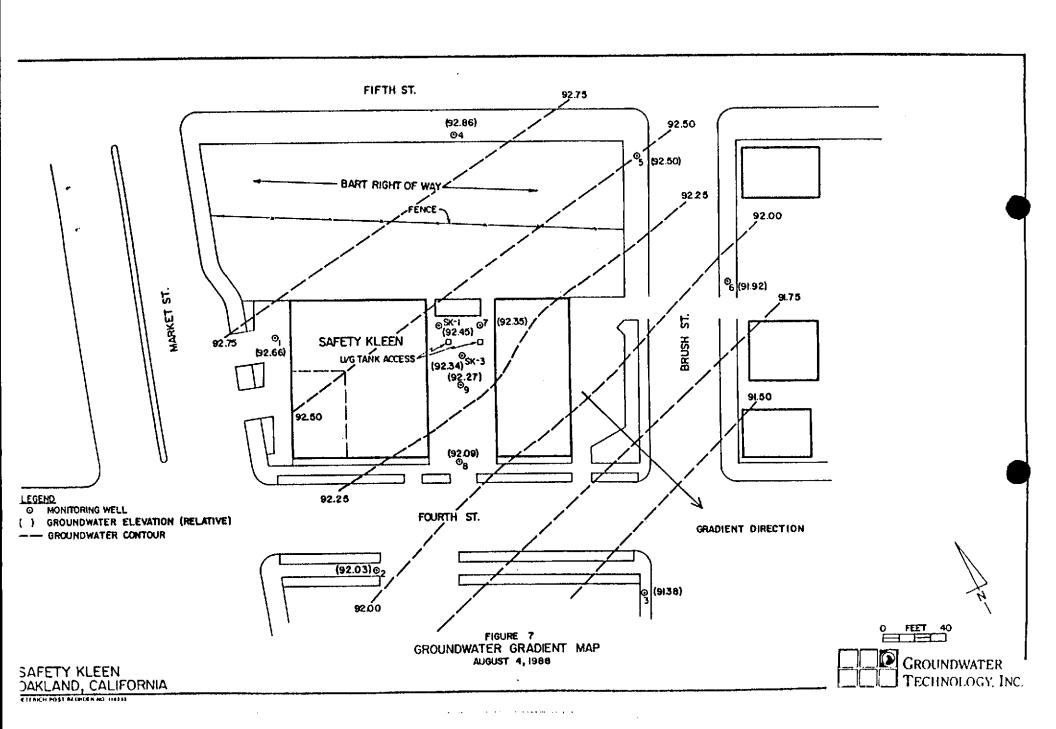


TABLE 4

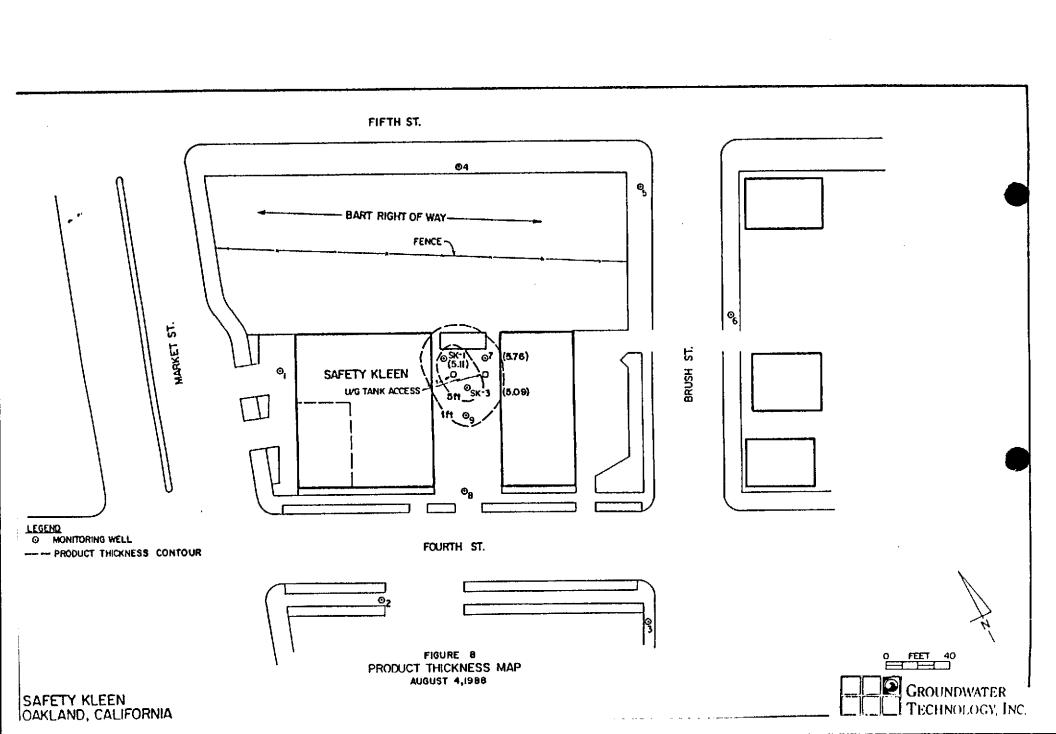
MONITORING DATA

			MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	8-WM	MW-9	SK-1	sk-3
DATE	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 DTP PT		7.47 - -	-	-	-		-	7.87	-	9.26 7.86 1.40*	7.17	7.28

All Measurements in feet

* Before Development of Well

MD5016A.01



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

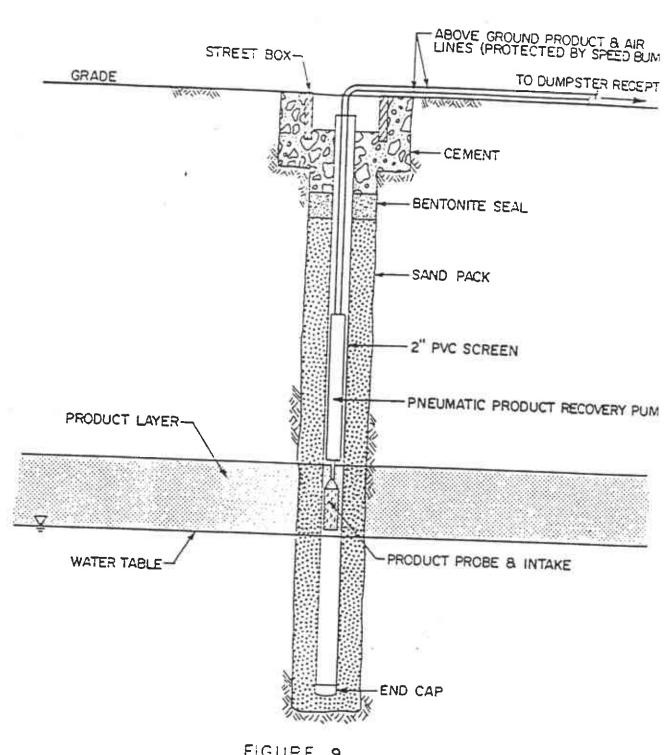


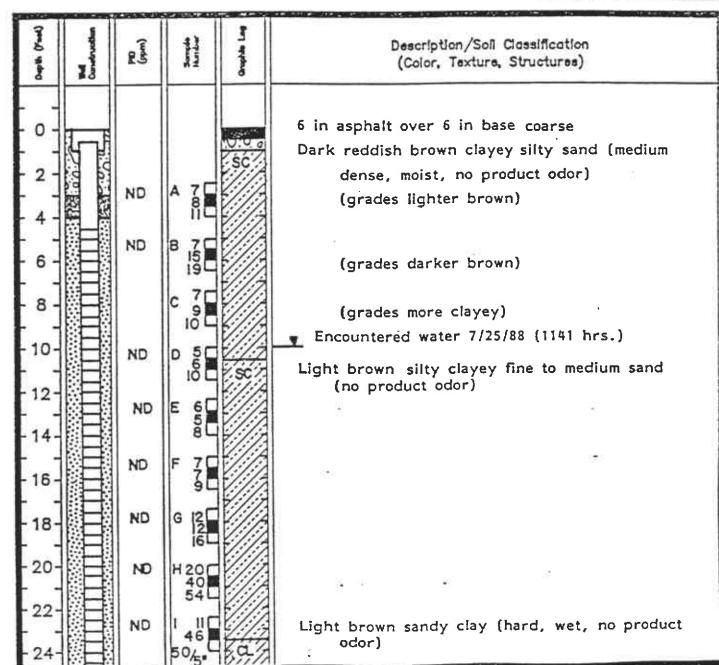
FIGURE 9
INTERIM PRODUCT RECOVERY SYSTEM

NO SCALE

GROUNDWATER
TECHNOLOGY, I

SAFETY KLEEN OAKLAND, CALIFORNIA DIETERICH POST RECROER NO. 118233

GROUNDWATER _	
TECHNOLOGY, INC. Monitoring Well	Drilling Log
Project Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
Location Oakland, CA Project Number 203 680 5016.01 Date Drilled 7/25/88 Total Depth of Hole 45 ft Diameter 10.5 in	See Site Plan
Surface Elevation Water Level Initial 10 ft 24-hour Screen: Dia. 2 in Length 25 ft Slot Size .010 in	
Cosing: 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	Notes: Hole colapsed to 30 ft after drilling



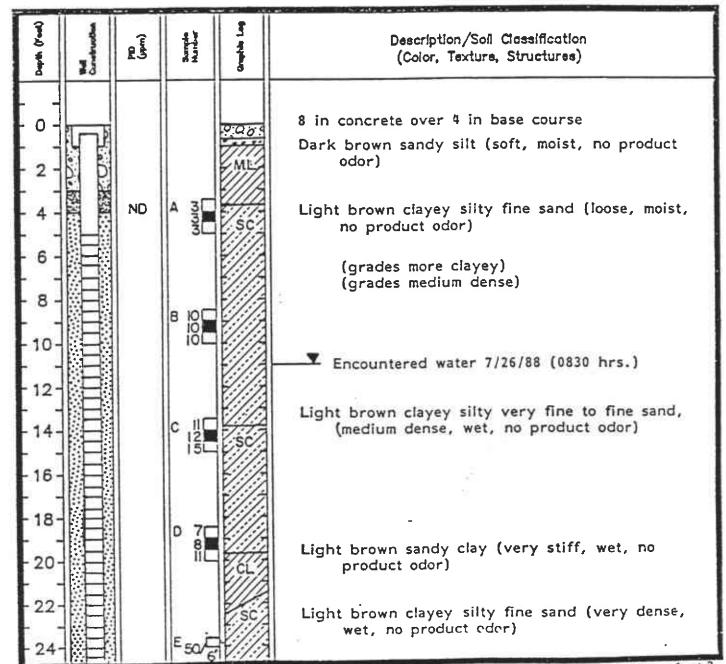
GROUNDWATER	
TECHNOLOGY,	INC.

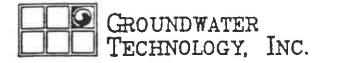
Monitoring Well ____

Drilling Log

					Drilling Log
Days (Year)	Cornelmodes	25	Sample Remarks	Orașilia Leg	Description/Soil Classification (Color, Texture, Structures)
-26-		DN	1985 1985 1985	sc/	Light brown clayey sand (very dense, wet, no product odor)
-28		ĸ	50, C		(grades find sand)
-30 - -32 -			150g 150g 150g 150g 150g 150g 150g 150g	SC	Grey clayey sand (very dense, wet, no product odor)
-34- -36-					
- 38-					
-40-					J#
-42- -44-					
46-					End of boring. Installed monitoring well (hole colapsed to 30 ft).
-48-					
-50- -52-					
- 54-					
- 56-					
- 58-				F. 7	34

GROUNDWATER	
LLL TECHNOLOGY, INC. Monitoring Well 2	Drilling Log
Project Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
Location Oakland, CA Project Number 203 680 5016.01 Date Drilled 7/26/88 Total Depth of Hole 31 ft Diameter 10.5 in	See Site Plan
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	
Drilling Company Sierra Pacific Drilling Method hollow stem augers Driller William Coleman Log by Kelly A. Kline	Notes:
Geologist / Engineer License No	





Monitoring Well 2

Drilling Loc

Daptit (Year)	(mar)	Ħ	Oraphie Leg	- Description/Soli Classification (Color, Texture, Structures)
-26 -28		i) h) do a	sc	Light brown clayey silty sand (cont'd)
-30 -32		F25 504		End of boring. Installed monitoring well.
-34- -36-				· 10
-38- -40-				
-42- 44- 46-				
- 48- - 50-				
- 52- - 54-				
 -56- -58-				25

_		9	
			1

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 3

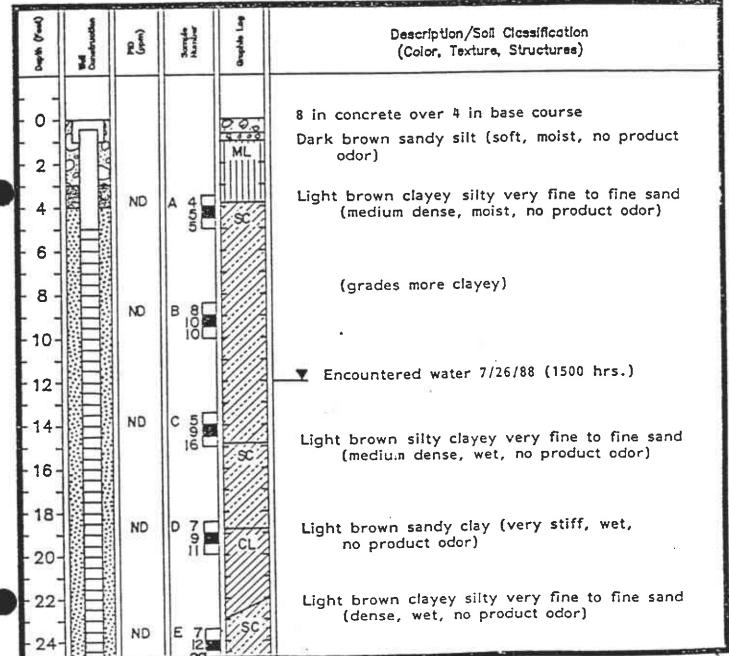
Drilling Log

Brotect Safety Kleen/Oakland	Owner Safety Kleen
Location Oakland, CA	Project Number 203 680 5016.01
Data Drilled 7/26/88 Total Depth	of Hole 30.5 ft Diameter 10.5 in
Surface Flevation Water Level	Initial 12 ft 24—hour
Screen: Dig. 2 in Length	25 ft Slot Size .010 in
Contract Otal 2 III. I abouth	5 ft Type FVC
Drilling Company Sierra Pacific	Drilling Method hollow stem augers
	Log by Kelly A. Kline
Geologist / Engineer	License No.

See Site Plan

Sketch Map

Notes:

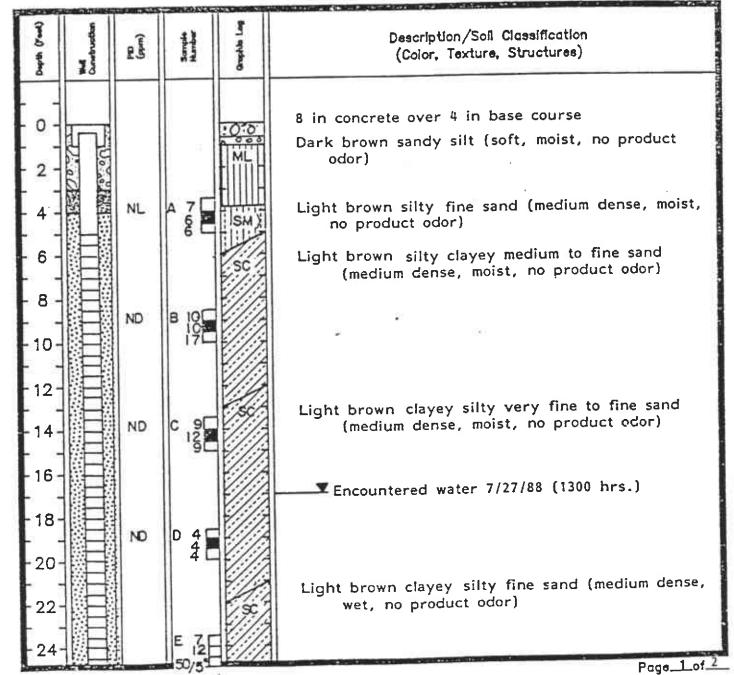




Monitoring Well 3

					Drilling Log
Day B (Feel)	Wall Construction	23	11	Orașilia Lag	Description/Soli Classification (Color, Texture, Structures)
-26-				sc	Light brown clayey silty sand (cont'd)
-28-					
-30-	D		F 15		End of boring. Monitoring well installed.
-32-			50/1 ²	- 1	and or sorming. Monitoring wen instance.
-34-				F]	
-36-				- 1	
-38-				F 4	**
40-				[]	
-42-					
44-					
46-					
48-					
50-					
-52-					
1					
-54-					
- 56-				1	
-58-					*
	11 1	1	11	H	

GROUNDWATER	
TECHNOLOGY, INC. Monitoring Well 4	Drilling Log
Project Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
Location Oakland, CA Project Number 203 680 5016,01 Data Drilled 7/27/88 Total Death of Hole 31 ft Diameter 10.5 in	See Site Plan
Surface Elevation Water Level Initial 17 ft 24 hour Screen: Dla. 2 in Length 5 ft Slot Size 010 in	
Cooley Die 2 in Length 25 ft Type PVC	
Drilling Company Sierra Pacific Drilling Method hollow stem augers Driller William Coleman Log by Kelly A. Kline	Notes:
Geologist / Engineer License No.	

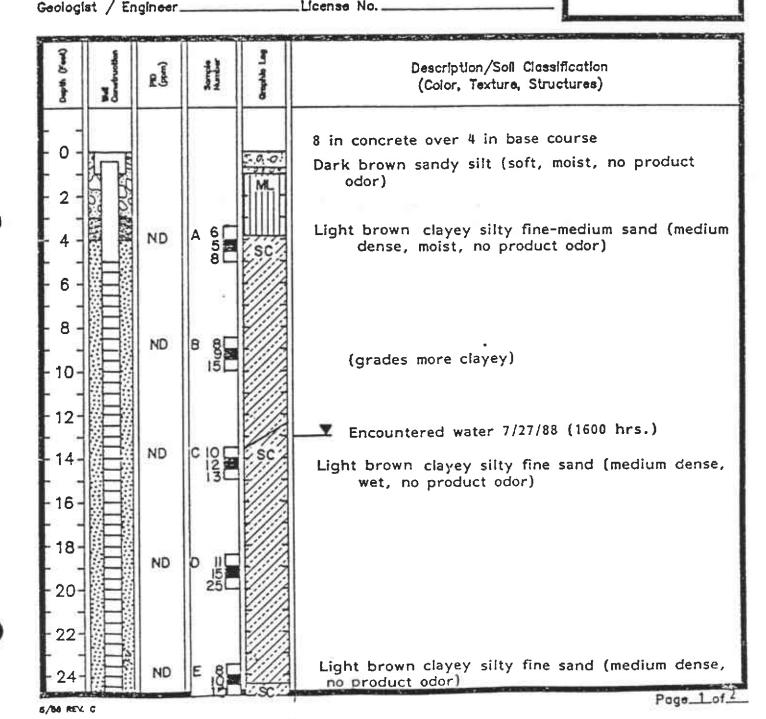




Monitoring Well 4

Despite (Frank	Construction	25	Somple Number	Orași de La	Description/Soll Classification (Color, Texture, Structures)
26-				sc	Light brown clayey silty sand (cont'd)
28-					
30-			F - E	250	Crey clayey sand (dense, wet, no product odor)
32-			-4	2,00,	End of boring. Installed monitoring well.
-					
34-				1	
36-					
+					
38-			-		
40-				- 4	*
42-					
- 4				- 4	'A
44-					
46-				- 1	
				- 4	
48-					
50-				- 4	
52-				: :	
-				- 4	
54-					
56-				.]	
-					
58-		- 11		٠	

GROUNDWATER	
TECHNOLOGY, INC. Monitoring Well 5	Drilling Log
Project Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
Location Oakland, CA Project Number 203 680 5016.01	Can Cita Diam
Date Drilled 7/27/88 Total Depth of Hale 30.5 ft Dlameter 10.5 in	See Site Plan
Surface Elevation Water Level Initial 13 ft 24-hour 010 in	
Screen: Dla, 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	Notes:
Driller	





Monitoring Well <u>5</u>

Drilling Log

Day (Yeal)	To the second	2 E	11	3	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-				<u> </u>	
-38-					
-40-					
-42-					
-44-				t d	
46-					
48-					
50-					
52-					
-54-					
-56-					
58-					

GROUNDWATER
TECHNOLOGY.

Monitoring Well 6

Drilling Log

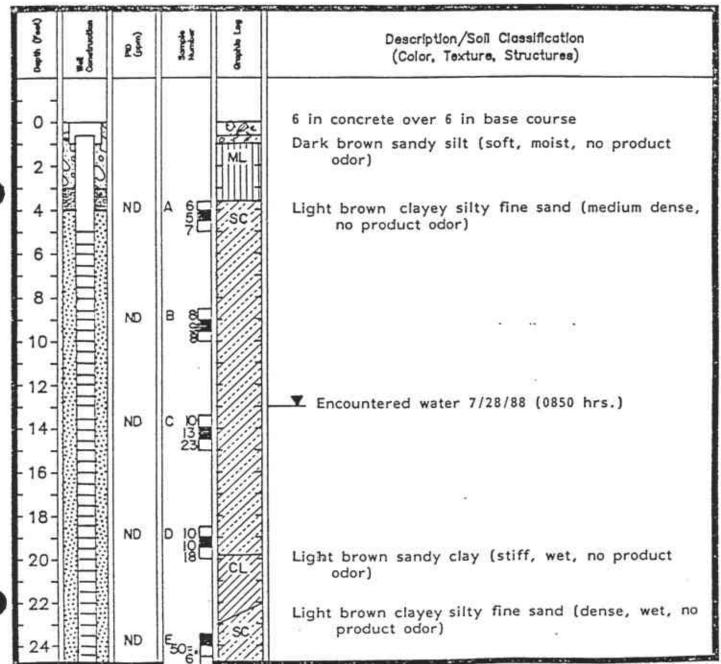
Project Safety Kleen/Oaki Location Oakland, CA	and Owner	Safety Kleen
Date Drilled 7/28/88 Total	Depth of Hole 30.	5 ft Dlameter 10.5 in
Surface ElevationWater		
Screen: Dia. 2 in Lengt	h 25 ft	Slot Size .010 in
Casing: Dia. 2 in Long	th5 ft	Type PVC
Drilling Company Sierra Pacif	icDrilling Met	hod Hollow stem augers
Driller William Coleman	Log by K	elly A. Kline
Geologist / Engineer		

INC.

Sketch Map

See Site Plan

Notes:





Monitoring Well 6

Drilling Log

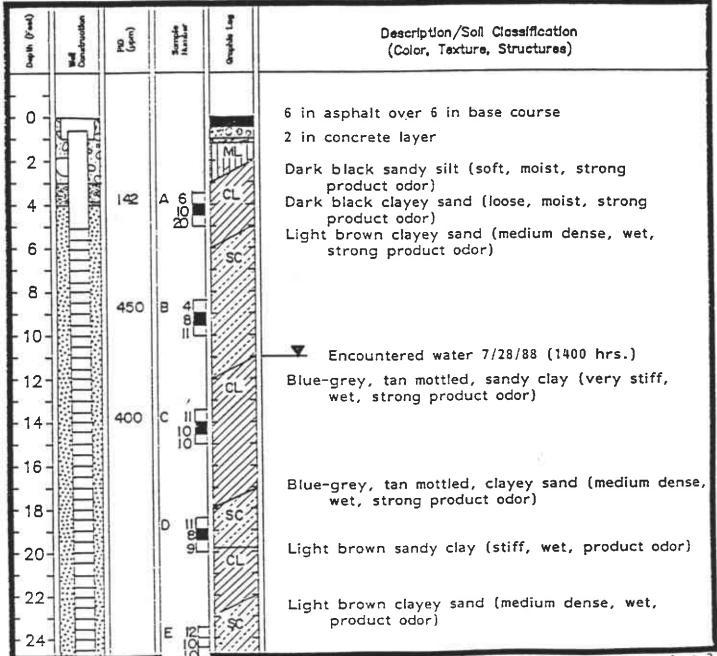
	personal section				Drilling Lo
9 6 4	Construction	23	H	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
-26-	\Box			sc/	Light brown clayey silty fine sand (cont'd)
F					
28					
-30-		DN	F - 🔳	SC	Grey clayey sand (loose, wet, no product odor)
-32-			100	- 1	End of boring. Installed monitoring well.
[32]				[]	
-34-				+ +	
-36-				1	
-38-				t il	
-40-	1			F 31	
				- 1	
-42-				1 1	
-44-				- 1	
L					
46-				[]	
-48-				- 1	
50-				[]	^
F -					
-52-				[]	
54-				-]	
1					
-56-				[]	
- 58-				-,	
-					

GROUNDWATER	
TECHNOLOGY, INC. Monitoring Well 7	Drilling Log
Project Safety Kleen/Oakland Owner Safety Kleen ocation Oakland, CA Project Number 203 680 5016.01	Sketch Map
Oate Drilled 7/28/88 Total Depth of Hole30.5 ft Diameter 10.5 in Surface Elevation Water Level Initial 11 ft 24-hour	See Site Plan
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	
Orilling Company Sterra Factic Drilling Method Notion Stell adders Oriller William Coleman Log by Kelly A. Kline	Notes:

_Ucansa No. _

Geologist / Engineer_____

Driller -



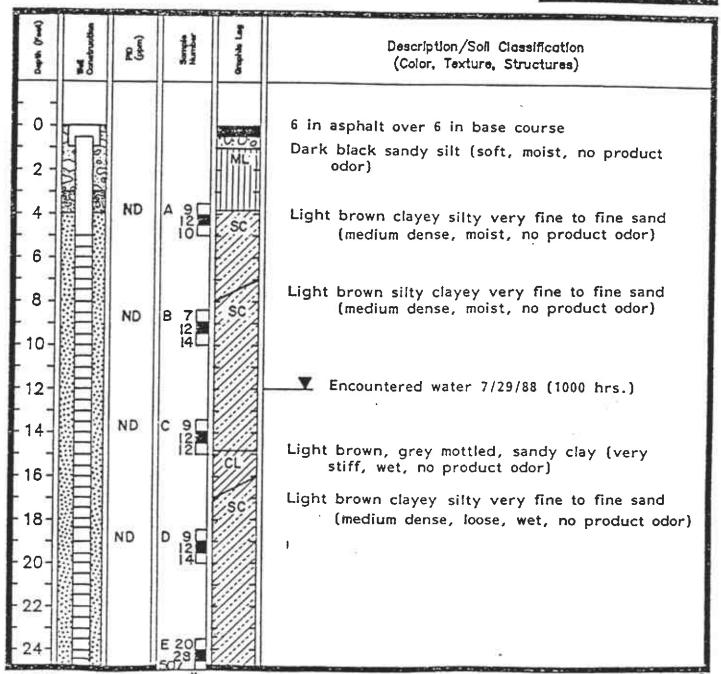


Monitoring Well __7_

Drilling Log

			,	a de Sap	Drilling Log
Comp.	Cerebrottes	ę Š	H	Orașila Lag	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-				[]	Seattle County
-34-				[]	
-36-				[
-38-					
40-				F]	
-42-				F	
-44-					
- 46-					
-48-					
-50-					
-52-					
- 54-					
-56-					
- 58-				.]	

GROUNDWATER	
TECHNOLOGY, INC.	
Monitoring Well 8	Drilling Lo
Project Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
Location Oakland, CA Protect Number 203 680 5016 01	
Date Drilled 7/29/88 Total Depth of Hole 30.5 ft Diameter 10.5 in	s s: s:
Surface Elevation Water Level Initial 12 ft 24-hour	See Site Plan
Screen: Dig. Zin length 25 ft state of the Old in	1
Casing: Dia. 2 in Length 5 ft Top PVC	1
Drilling Company Sterra Pacific Drilling Method hollow stem auger	
Driller William Coleman Log by Kelly A. Kline	Notes:
Geologist / Engineer License No.	



GROUNDWATER	
TECHNOLOGY.	INC

Monitoring Well 9

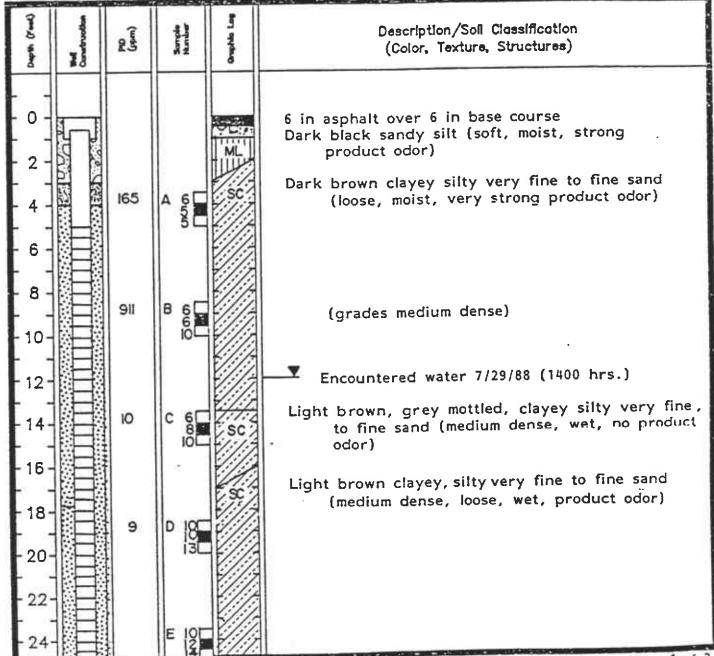
Drilling Log

Project Safety Kleen/Oakland Safety Kleen _ Owner ___ Project Number 203 680 5016.01 Oakland, CA Location_ 7/29/88 Total Depth of Hole 30.5 ft Dlameter. Data Drilled_ Water Level Initial 12 ft 24-hour-Surface Elevation... Slot Size .010 in 4 in Length_ 25 ft Screen: Dla.__ **PVC** 5 ft 4 in Length_ Type_ Cosing: Dia.__ Drilling Method hollow stem auger Drilling Company Sierra Pacific Kelly A. Kline William Coleman Log by_ License No. . Geologist / Engineer_

Sketch Map

See Site Plan

Notes:





Monitoring Well <u>9</u>

Drilling Log

_	-		W-		Drilling Log
(Tan 1)	30	(tree)	11	Organia Ca	Description/Soil Classification (Color, Texture, Structures)
-26-				SC	Light brown clayey silty sand (cont'd)
-		9		///	
-28-	$ \mathbf{H} $				
-30-	H		FC		Grey clayey sand (dense, wet, no product odor)
170			50/4"	- 1	End of boring. Installed monitoring well.
-32-				[]	
-34-				- 4	
36-					
- 30				- 4	
-38-				- 1	
40-					
				- 4	
-42-				- 1	
44-				[]	
F -					
46-					5
48-					
L .					
50-					
-52-				- 4	
				t	
[54-]					
-56-					
- 58-				[]	
- 35				F. 4	
Parent de					

APPENDIX II

SOIL-GAS SAMPLE AND SIEVE ANALYSIS



Western Region

(415) 685-7852

4080-C Pike Lane

Concord, CA 94520

06/28/88 JP

Page 1 of 2

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

I'M I TAA S

TEST RESULTS

(800) 544-3422 from inside California (800) 423-7143 from outside California

UNITS: mg/kg (ppm)

	1	MDL	ILAB #	ı	25557A	I 25558A	1	25559A	ŧ	25560
COMPOUND	 		11.D.#	ı	#13	1 #12	<u> </u>	#11	1	#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	(6. 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		4	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		⟨∅. 1		0.66

MDL = Method Detection Limit.
METHOD:

EPA Method 8010/8020



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

TEST RESULTS

Page 2 of 2

CLIENT: Steve Fischbein

PROJECT#: 203-680-5016.01-288

LOCATION: Oakland, CA

MATRIX:

Soil

UNITS:

mg/kg (ppm)

				n, c., c			
COMPOUND	1 1	MDL	ILAB # II.D.#	1 25561A 1 #6	l 25562A I #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



Western Region

(415) 685-7852

4080-C Pike Lane

Concord, CA 94520

06/28/88 Jp

Page 1 of 2

CLIENT:

Steve Fischbein

Groundwater Technology, Inc.

4080 Pike Lane

Concord, CA 94520

PROJECT#: 203-680-5016.01-1

Soil

LOCATION: 4048 Market Street

Dakland, CA

SAMPLED: 06/16/88

BY: W. Schaal

RECEIVED: 06/17/88

BY: K. Biava

ANALYZED: 06/24/88

BY: E. Popek

MATRIX:

UNITS:

mg/kg (ppm)

TEST !	RESULT	S
--------	--------	---

(800) 544-3422 from inside California

(800) 423-7143 from outside California

1 OFFF7 1 OFFFD 1 OFFFD 1 OFFAD 1 OFF

•	l Mi	DL ILAB #	Į	25557	- 1	25558	1	25559		52266	1	52261	1
COMPOUNDS	1	II.D.#	1	13	1	12	1	11	F	9	1	6	ł

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:



A division of Groundwater Technology, Inc.

Page 2 of 2

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

Oakland, CA

LOCATION: 4048 Market Street

MATRIX:

Soil

TEST RESULTS

UNITS: mg/kg (ppm)

	ı	MDL	ILAB	#	l	25562	1	25563	1
COMPOUNDS	1		II.D.	.#	ı	8	1	3	l

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:

SIEVE ANALYSIS

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

SAMPLE NO: 1 DESCRIPTION: Dank grayish brown silty

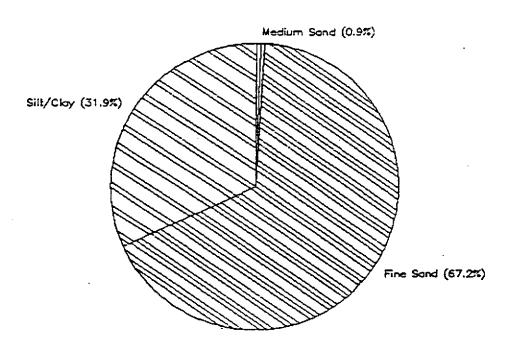
fine Sand with clay

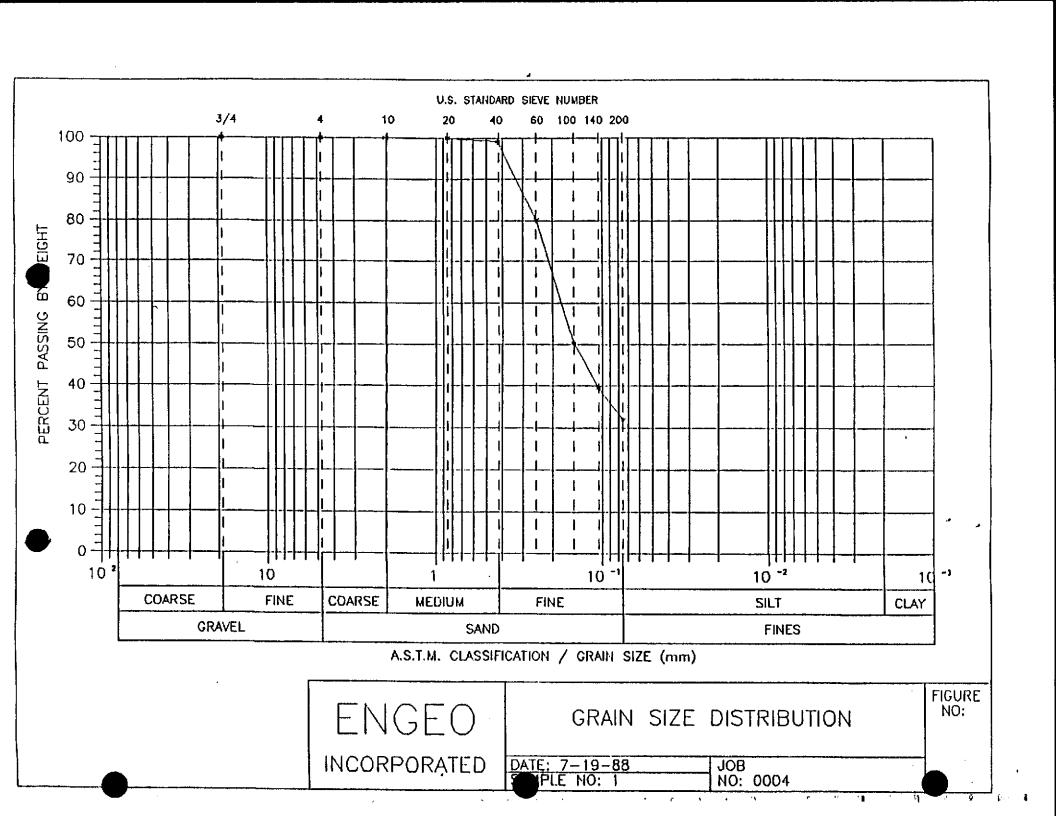
DATE: 7/19/88 PREWASH NET WT 34.09 g

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

SIEVE ANALYSIS

(% Retained ASTM Designation)





APPENDIX III

LABORATORY RESULTS - SOIL

Western Region

(415) 685-7852

4080-C Pike Lane

Concord, CA 94520

(800) 544-3422 from inside California

(800) 423-7143 from outside California

TEST RESULTS

Page 1 of 8

CLIENT: Steve Fischbein

Groundwater Technology, Inc.

4080-D Pike Lane Concord, CA 94520

PROJECT#: 203-680-5016.01-9

LOCATION: 404 Market

Dakland, 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)

				•	3, WB . IP	P,					
COMPOUND	 	MDL	ILAB # II.D.#	 	28550A MW-2A	 	28551A MW-2B	 	28552A MW-2C	 	28553A MW-3A
Bromodichloromethane			5		0.5		0. 5		(0.5	{	0.5
Bromoform		0.			0.5		0. 5		(0.5	(0.5
Bromomethane			. 5		0.5		0.5		(0.5		0.5
Carbon tetrachloride		Ø.			0.5		0.5		(0.5	(0. 5
Chlorobenzene			. 5		0.5		0. 5		(0.5		0.5
Chloroethane			. 5		0.5		0.5		(0.5	(0.5
2-Chloroethylvinyl ether			. 0		(1.0		1.0		(1.0	(1.0
Chloroform			. 5		0.5		0. 5		(0.5	(0.5
Chloromethane			.5	•	0.5	(0.5	•	(0.5	(0.5
Dibromochloromethane		0.	. 5	•	0.5	(0.5	•	(0.5	(0.5
1,2-Dichlorobenzene		Ø.	. 5		0.5	(0.5		(0.5	(0.5
1,3-Dichlorobenzene		Ø.	. 5		(0.5	(0.5		(0.5	(0.5
1,4-Dichlorobenzene		0.	. 5	1	(0.5	(0.5		(0.5	(0.5
Dichlorodifluoromethane		Ø.	.5		(Ø.5	(0.5		(0.5		0.7
1,1-Dichloroethane		Ø.	. 5		(0.5	4	0.5		(0.5	(0.5
1,2-Dichloroethane		Ø.	.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	4	0.5		(0.5	+	(0.5
1,2-Dichloropropane		Ø.	. 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		Ø.	. 5		(0.5	4	0.5		(0.5		1.0
1,1,2,2-Tetrachloroethane		0.	.5 ,		(0.5	(0.5		(0.5		(0.5
Tetrachloroethene			. 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:



Page 2 of 8

Western Region

4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

TEST RESULTS

PROJECT MGR: Steve Fischbein

PROJECT #: 203-680-5016.01-9

LOCATION: 404 Market

Dakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	1	MDL	ILAB # II.D.#	. 1	28554A MW-3B	1 28555 1 MW-3C		I 28557A I MW-1D
Bromodichloromethane		Ø	 . 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		2	. 5	(0.5	(0.5	(0. 5	(0.5
1,4-Dichlorobenzene		6	.5	•	(0.5	(0.5	(0.5	(0.5
Dichlorodifluoromethane		6	.5	•	0.5	(0.5	(0.5	(0.5
1,1-Dichloroethane		Q	.5	•	(0.5	(0.5	(0.5	(0.5
1,2-Dichloroethane		9	• 5	•	(0.5	(0.5	(0.5	(0.5
1.1-Dichloroethene		Q	. 2		(0.2	(0.2	(0.2	(0.2
trans-1,2-Dichloroethene		e	. 5		(0.5	(0.5	(0.5	(0.5
1,2-Dichloropropane		e	1.5		(0.5	(0.5	(0.5	(0.5
cis-1,3-Dichloropropene		Q	.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		Q	.5		(0.5	(0.5	(0.5	(0.5
1, 1, 2, 2-Tetrachloroethane			.5		(0.5	(0.5	(0.5	(0.5
Tetrachloroethene		(5.5		⟨0.5	(0.5	(0.5	(0.5
1, 1, 1-Trichloroethane			a.5		(0.5	(0.5	(0.5	(0.5
1, 1, 2-Trichloroethane			0.5 -		(0.5	(0.5	(0.5	(0.5
Trichloroethene			3.5		(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:



Page 3 of 8

Western Region 4080-C Pike Lane

Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

TEST RESULTS

PROJECT MGR: Steve Fischbein PROJECT #: 203-680-5016.01-9

LOCATION: 404 Market Oakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	 	MDL	ILAB # II.D.#	! 	28558A MW-1F	 	28559A MW-4B	 	28560A MW-4C	 	28561A MW-4D
Bromodichloromethane		Ø.	5		Ø. 5	((7.5	(0.5		0. 5
Bromoform		0.	5	(0.5	((7. 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		ø.	. 5	(0.5	((0. 5	<	0.5		0.5
Chloroethane		Ø.	. 5	(0.5	((0.5		0.5		0.5
2-Chloroethylvinyl ether		1.	. Ø	<	1.0	- (1.0	<	1.0		1.0
Chloroform		Ø.	. 5	(0.5	(1	0.5	(0.5		0.5
Chloromethane		0.	. 5	(0.5	(1	0.5	<	0. 5	{	0.5
Dibromochloromethane		Ø.	. 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	(1	0.5	(0.5		0.5
1,4-Dichlorobenzene		Ø.	.5	(0. 5	(1	0.5	(0.5		0.5
Dichlorodifluoromethane		Ø.	. 5	(0.5	(1	0.5		0.5		0.5
1,1-Dichloroethane		Q.	.5	(0.5	(0.5		0.5		0.5
1,2-Dichloroethane		0.	.5	(0.5	(1	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			. 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	(Ø.5	<	0.5	(0.5	((0.5
1, 1, 2, 2-Tetrachloroethane		0	.5	(0.5	(0.5		0.5		(0.5
Tetrachloroethene			.5		0.5		0.5		0.5		(0.5
1,1,1-Trichloroethane			.5		0.5		0. 5		0.5		(0.5
1, 1, 2-Trichloroethane			.5 -		0.5		0.5		0.5		(0.5
Trichloroethene			. 5		0.5		0.5		0.5		(0.5
Vinyl Chloride			. 0		1.0		1.0		1.0		(1.0

MDL = Method Detection Limit.

METHOD:



Page 4 of 8

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

Dakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

TEST RESULTS

СОМРОИИD	1	MDL	ILAB # II.D.#	! 1	28562A MW-5A	! 1	28563A MW-5B	1	28564A MW-5C	1	28565A MW-6A
Bromodichloromethane		0.	5	(0.5	 }	 0.5			 \	 0.5
Bromoform		ø.	. 5	(0.5	(0.5		0.5		0.5
Bromomethane		Ø.	. 5	(0.5	(0.5	(0.5		0.5
Carbon tetrachloride		ø.	.5	(0.5	{	0.5	(0.5		Ø.5
Chlorobenzene		Ø.	. 5	(0.5	(0.5	(0.5		0.5
Chloroethane		Ø.	. 5	(0.5	(0.5	(0.5		0.5
2-Chloroethylvinyl ether		1.	. @	(1.0	(1.0	•	(1.0		1.0
Chloroform		0.	. 5	(0.5	(0.5	•	(0.5	(0.5
Chloromethane		Ø.	. 5	(0.5	(0.5	-	(0.5	4	0.5
Dibromochloromethane		0.	.5	(0.5	(0.5	1	(0.5	(0.5
1,2-Dichlorobenzene		Ø.	.5	(Ø.5	(0.5		(0.5	4	0.5
1,3-Dichlorobenzene		0.	. 5	(0.5	(0.5		(0.5	•	0.5
1,4-Dichlorobenzene		Ø.	.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		Ø.	. 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	(Ø.5		(0.5		(0.5		(0.5
1,2-Dichloropropane		Ø	.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		Ø	.5	,	(0.5		(0.5		(0.5		(0.5
Methylene chloride		Q	.5	4	(0.5		(0.5		(0.5		(0.5
1, 1, 2, 2-Tetrachloroethane		Ø	.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:



Page 5 of 8

Western Region 4080-C Pike Lane

Concord, CA 94520

(415) 685-7852 (800) 544-3422 from inside California (800) 423-7143 from outside California

MATI

TEST RESULTS

PROJECT MGR: Steve Fischbein

PROJECT #: 203-680-5016.01-9

LOCATION: 404 Market Oakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	1	MDL	ILAB # II.D.#	ł 1	28566A MW-6B	l i	28567A MW-6C	1	28568A MW-7A	† 	28569A MW-7B
Bromodichloromethane	 -	0.	5	{	 0.5	(1	 0.5		0.5		0.5
Bromoform		0.	5	(0.5		Ø. 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		Ø.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.	Ø		1.0		1.0		1.0		1.0
Chloroform		0.	5		0.5		0.5		0.5		0.5
Chloromethane		ø.	5		0.5		0.5		0.5		0.5
Dibromochloromethane		0.	5		Ø . 5		0.5		0.5		0.5
1,2-Dichlorobenzene		0.	5		0.5		0.5		0.5		0.5
1,3-Dichlorobenzene		0.			0.5		0.5		0.5		0.5
1,4-Dichlorobenzene		Ø.	.5		0.5		0.5		0.5		0.5
Dichlorodifluoromethane		Ø.	5	(0.5	(1	0.5		0.5		0.5
1,1-Dichloroethane		0.	.5	(0.5		0.5		0.5		0.5
1,2-Dichloroethane		ø.	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		ø.	.5	(0.5	(0.5		0.5		0.5
cis-1,3-Dichloropropene			.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		Ø.	.5	(0.5	(0.5	(0.5		0.5
1, 1, 2, 2-Tetrachloroethane			. 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		18. 5
Vinyl Chloride		1.	. 0	(1.0	(1.0	((1.0	(1.0

MDL = Method Detection Limit.

METHOD:



Page 6 of 8

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

Dakland, CA

MATRIX: Soil

TEST RESULTS			UNITS:		ozz g/kg (p _i) (mc					
COMPOUND	 	MDL	ILAE # II.D.#	I 1	28570A MW-7C	1	28571A MW-7D	1	28572A MW-8A	1	28573 MW-88
Bromodichloromethane		ø.	5		9.5	(Ø. 5		0.5	((ð.5
Bromoform		0.	.5	<	0.5	(0.5	(0.5	₹6	ð.5
Bromomethane		Ø.	.5	(0.5	(0.5	(0.5	((ð.5
Carbon tetrachloride		0.	5	(0.5	(0.5	<	0.5	((ð. 5
Chlorobenzene		Ø.	. 5	(0.5	(0.5	(0.5		ð.5
Chloroethane		0.	. 5	(0.5	(0.5	(0.5	((ð.5
2-Chloroethylvinyl ether		1.	. Ø	(1.0	((1.0	(1.0	(1.0
Chloroform		0.	. 5	(0.5	(0.5	(0.5	((0. 5
Chloromethane		Ø.	. 5	(0.5	- (0.5	(0.5	(1	0. 5
Dibromochloromethane		Ø.	. 5	(0.5	(0.5	(0.5	((ð. 5
1,2-Dichlorobenzene		0.	.5		0.5		0.5	•	(0.5	₹(0. 5 .
1,3-Dichlorobenzene		Ø.	.5	•	0.5	(0.5	- 4	0.5	{ (0.5 Ì
1,4-Dichlorobenzene		0.	. 5		0.5	•	(0.5	•	(0.5	(1	0.5
Dichlorodifluoromethane		0	. 5	(0.5	(0.5	•	(0.5	(1	0.5
1,1-Dichloroethane		0	.5	4	0.5		(0.5	,	(0.5	(0.5
1,2-Dichloroethane		0.	• 5	,	(0.5	•	(0.5	,	(0.5	<	0. 5
1,1-Dichloroethene		Ø	. 2		(0.2	1	(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	1	(0.5		(0.5	(0. 5
trans-1,3-Dichloropropene		0	•5		(0.5		(0.5		(0.5	(0.5
Methylene chloride		Ø	. 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			.5		(0.5		(0.5		(0.5	(0.5
1,1,2-Trichloroethane			.5 -		(0.5		(0.5		(0.5	(0.5
Trichloroethene			.5		(0.5		(0.5		(0.5	<	0.5
Vinyl Chloride			.0		(1.0		(1.0		(1.0	(1.0

MDL = Method Detection Limit.

METHOD:



Page 7 of 8

Western Region 4080-C Pike Lane

Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

TEST RESULTS

PROJECT MGR: Steve Fischbein

PROJECT #: 203-680-5016.01-9

LOCATION: 404 Market

Oakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	1	MDL	LAB #	1	28574A MW-8C	i I	28575A MW-8D	1	28576A MW-8E	I I	28577A MW-9A
Bromodichloromethane		0.	. 5		 0.5		0.5	 {	 0.5	{	0.5
Bromoform		Ø.	.5	(0.5	(1	0.5	(0.5	(0. 5
Bromomethane		Ø.	. 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		Ø.	. 5	(0.5	(0.5	(0.5	<	0.5
Chloromethane		0	. 5	(0.5	(0.5	<	0.5	(0.5
Dibromochloromethane		0.	.5	(Ø.5	(0.5	(0.5	(0. 5
1,2-Dichlorobenzene		0	.5	(0.5	(0.5	<	0.5	(0.5
1.3-Dichlorobenzene	•	ହ	. 5	(0.5	(0.5	- (0.5	(0. 5
1,4-Dichlorobenzene		Ø	.5	• (Ø. 5	(0. 5	(0.5	(0.5
Dichlorodifluoromethane		0	.5	(0.5	(0.5	(0.5		0.5
1,1-Dichloroethane		Ø	.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		Ø	.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	1	(0.5
Methylene chloride		0	.5	4	0.5	(0.5		(0.5	ı	(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		9	.5		(0.5		0.5		(0.5		(0.5
1,1,2-Trichloroethane		0	.5 ,	•	(0.5		(0.5		(0.5		(0.5
Trichloroethene		Q	.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:



Page 8 of 8

Western Region 4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

TEST RESULTS

PROJECT MGR: Steve Fischbein PROJECT #: 203-680-5016.01-9

LOCATION: 404 Market

Dakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

					kb							
COMPOUND		MDL	LAB # I.D.#	! 	28578A MW-9B	 	28579A MW-9C	 	28580A MW-9D	 	28581 MW-98	
Bromodich1oromethane		0.	5	 (0.5	(9.5		 (0,5	 {	 0.5	
Bromoform		ø.	5	(0.5		0.5		(0.5		0.5	
Bromomethane		Ø.	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		Ø.	5	(0.5		0.5		(0.5		0.5	
Dibromochloromethane		0.	5	(0.5		0.5		(0.5		0.5	
1,2-Dichlorobenzene		Ø.	. 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.			0.5		0.5		(0.5		0.5	
1,1-Dichloroethane			. 5		0.5		0.5		(0.5		0.5	
1,2-Dichloroethane			.5		0.5		0.5		(0.5		0. 5	
1,1-Dichloroethene			. 2		0.2		0.2		(0.2		0.2	
trans-1,2-Dichloroethene			. 5		1.3		0.5		(0.5		0.5	
1,2-Dichloropropane		Ø.	. 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		Ø.	. 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		Ø.	. 5		1.7		0.5		(0.5		0.5	
1,1,1-Trichloroethane			. 5		3.7		0.5		(0.5		0.5	
1,1,2-Trichloroethane			5 -		0.5		0.5		(0.5		0.5	
Trichloroethene			.5		0.5		0.5		(0.5		0.5	
Vinyl Chloride			.0		1.0		1.0		(1.0		1.0	

MDL = Method Detection Limit.

METHOD: EPA Method 8010

SAFY KHALIFA. Ph.D. Director



(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

TEST RESULTS

Page 1 of 7

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

Dakland, CA

SAMPLED: 07/25, 26, 27, 28, 29/88

BY: K. Kline BY: K. Filling

RECEIVED: 08/03/88 ANALYZED: 08/11/88

BY: E. Popek

MATRIX:

Soil

UNITS:

mg/kg (ppm)

	!	MDL	ILAB #	1	28550B	1	285518	I	28552B	1	28553B	ī	28554B
COMPOUNDS	1		I.D.#	1	MN-58	!	MM-SB	ł	WM-SC	I	AE-WM	ı	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:



(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 2 of 7

CLIENT:

Steve Fischbein PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX:

Soil

TEST RESULTS

UNITS: mg/kg (ppm)

COMPOUNDS	I	MDL	LAB # I.D.#	1	28555B MW-3C	1	28556B MW-18	1	28557B MW-1D	1	28558B MW-1F	1	28559B MW-4B	1
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:



(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 3 of 7

CLIENT: Steve Fischbein

PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX:

Soil

TEST RESULTS

UNITS:

mg/kg (ppm)

COMPOUNDS	; 	MDL	ILAB # I.D.#	i	285608 MW-4C	1	28561B MW-4D	i 1	28562B MW-5A	l I	28563B MW-5B	1	28564B MW-5C	
Total Petroleum Hydrocarbons as Mineral Spirits		10			(10		<10		(10		(10		⟨1∅	

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

METHOD:



Western Region 4080-C Pike Lane

Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 4 of 7

CLIENT:

Steve Fischbein

PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Oakland, CA

MATRIX:

Soil

TEST RESULTS

mo/ko (ppm) UNITS:

			_		74	id, fa shi	D-161 7					
COMPOUNDS	I MDI I		1	28565B MW-6A	1	28566B MW-6B	i I	28567B MW-6C	1	28568B MW-7A	1	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:



(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 5 of 7

CLIENT:

Steve Fischbein PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

TEST RESULTS

MATRIX:

Soil

UNITS:

mg/kg (ppm)

COMPOUNDS	1	MDL	ILAB # II.D.#	1	28570B MW-7C	i I	28571B MW-7D	J I	28572B MW-8A	ł	28573B MW-8B	l i	28574B MW-8C	i
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:



Western Region

4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 6 of 7

CLIENT: Steve Fischbein

PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX: UNITS: Soil

TEST RESULTS

mg/kg (ppm)

COMPOUNDS	1	MDL	ILAB #	Ĭ I	28575B MW-8D	J E	28576B MW-8E	1	285778 MW-9A	1	28578B MW-9B	1	28579B MW-9C	I
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:



(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 7 of 7

CLIENT:

Steve Fischbein PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX:

Soil

TEST RESULTS

UNITS: mg/kg (ppm)

				_					
	l	MDL	ILAB	#	1	28580B	1	28581B	ī
COMPOUNDS	I		II.D.	#	1	MW-9D	i	MW-9E	1

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:

APPENDIX IV

LABORATORY RESULTS - WATER



Western Region

(415) 685-7852

4080-C Pike Lane

Concord, CA 94520

(800) 544-3422 from inside California (800) 423-7143 from outside California 08/11/88 mh

Page 1 of 2

CLIENT:

Kelly Kline/Steve Fischbein

GROUNDWATER TECHNOLOGY, INC.

4080-D Pike Lane Concord, CA 94520

PROJECT#: 203-680-5016.01-11

LOCATION: Dakland, CA

SAMPLED: 08/04/88 BY: M. Czipka RECEIVED: 08/04/88 BY: E. Foley ANALYZED: 08/09/88 BY: P. Sra

MATRIX: Water

TEST RESULTS UNITS: ug/L (ppb)

1531 ((5305)4			0141101	•	A, C , L						
COMPOUND	1	MDL	1LAB #	: !	28718 MW-4	l I	28719 MW-5	; ;	28720 MW-6	 	2872 MW-3
Bromodichloromethane			. 5		0.5		 (0.5		0.5		(0.5
Bromoform			. 5		0.5		(0.5		0.5		0.5
Bromomethane			. 5		0.5		(0.5		0.5		0.5
Carbon tetrachloride			. 5		0.5		(0. 5		0.5		(0.5
Chlorobenzene			. 5		0.5		(0.5		0.5		(0.5
Chloroethane			.5		0.5		(0.5		(0.5		(0.5
2-Chloroethylvinyl ether			. 0		(1.0		(1.0		(1.0		(1.0
Chloroform			. 5		(0.5		(0.5		(0.5		(0.5
Chloromethane			. 5		(0.5		(0.5		(0.5		(0.5
Dibromochloromethane			.5		(0.5		(0.5		(0.5		(0.5
1,2-Dichlorobenzene			.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			.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		Q	. 2		(0.2		(0.2		(0.2		(0.2
trans-1,2-Dichloroethene		Q	.5		32		(0.5		⟨∅.5		8. 59
1.2-Dichloropropane		Q	.5		(0.5		(0.5		(0.5		(0.5
cis-1,3-Dichloropropene			.5		(0.5		(0.5		(0.5		(0.5
trans-1,3-Dichloropropene		9	.5		(0.5		(0. 5		(0.5		(0.5
Methylene chloride		Q	5.5		(0.5		(0.5		1.1		5.0
1,1,2,2-Tetrachloroethane		Q).5		(0.5		(0.5		(0.5		(0.5
Tetrachloroethene		(0.5		(0.5		(0.5		(0.5		(0.5
1,1,1-Trichloroethane		(ð.5		(0.5		(0.5		(0.5		(0.5
1, 1, 2-Trichloroethane		(7. 5		(0.5		(0.5		(0.5		(0.5
Trichloroethene			ð.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.



(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 2 of 2

CLIENT:

Kelly Kline/Steve Fischbein

PROJECT#: 203-680-5016.01-11

LOCATION: Oakland, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

TEST RESULTS

COMPOUND	1 MDL LAB #	i 28722 i MW-1	1 28723 1 MW-2	28724 MW-8
Bromodichloromethane Bromoform Bromomethane Carbon tetrachloride Chlorobenzene Chloroethane 2-Chloroethylvinyl ether Chloroform Chloromethane Dibromochloromethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethane 1,2-Dichloropropane 1,3-Dichloropropane 1,3-Dichloropropane 1,3-Dichloropropene 1,1,3-Dichloropropene 1,1,2-Tetrachloroethane 1,1,2-Tetrachloroethane 1,1,2-Trichloroethane 1,2-Trichloroethane 1,2-Trichloroethane 1,2-Trichloroethane 1,2-Trichloroethane 1,1-Trichloroethane 1,1-Trichloroethane 1,1-Trichloroethane 1,1-Trichloroethane 1,1-Trichloroethane 1,1-Trichloroethane	0.555555555555555555555555555555555555	0.555555555555555555555555555555555555	1 MW - 2	MW-8 (0.5

MDL = Method Detection Limit.

METHODS: EPA 8010.



08/08/88 Jp

Page 2 of 2

Western Region

4080-C Pike Lane Concord, CA 94520 CLIENT: Kelly Kline/Steve Fischbein

Groundwater Technology, Inc.

Concord, EA 94520 203-680-5016.01-12

LOCATION: Dakland, CA

(415) 685-7852

(800) 544-3422 from Inside California (800) 423-7143 from outside California

MATRIX:

Water

UNITS:

mg/L (ppm)

TEST RESULTS

COMPOUNDS	1	MDL	ILAB # II.D.#	I	28730 MW2-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. Ph. D. Director

Sec. 15.

95

j Se



Western Region 4080-C Pike Lane

(415) 685-7852

Concord, CA 94520

08/18/88 mh

Page 1 of 1

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

(800) 544-3422 from Inside California

(800) 423-7143 from outside California

COMPOUND	 	MDL	ILAB #	I 28732 I RB-4	1 28739 I RB MW-8	! !	
Bromodichloromethane Bromoform Bromomethane Carbon tetrachloride Chlorobenzene Chloroethane 2-Chloroethylvinyl ether Chloroform Chloromethane Dibromochloromethane 1,2-Dichlorobenzene 1,3-Dichlorobenzene 1,4-Dichlorobenzene Dichlorodifluoromethane 1,1-Dichloroethane 1,2-Dichloroethane 1,2-Dichloroethene trans-1,2-Dichloroethene 1,2-Dichloropropene trans-1,3-Dichloropropene trans-1,3-Dichloropropene Methylene chloride 1,1,2,2-Tetrachloroethane Tetrachloroethene 1,1,1-Trichloroethane 1,1,2-Trichloroethane Trichloroethene Vinyl Chloride		0.00.00.00.00.00.00.00.00.00.00.00.00.0		(0.555505555555555555555555555555555555	(0.555555555555555555555555555555555555		

MDL = Method Detection Limit.

METHOD: EPA 8010.

SAFY KHALIFA, Ph.D. Director

UPDATE REPORT

ADDITIONAL ASSESSMENT

404 MARKET STREET

OAKLAND, CALIFORNIA

JUNE, 1990



UPDATE REPORT

ADDITIONAL ASSESSMENT

404 MARKET STREET

OAKLAND, CALIFORNIA

JUNE 1990

Prepared for:

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

No. 4394
Exp. 6-30

Prepared by:

GROUNDWATER TECHNOLOGY, INC. 4080 Pike Lane, Suite D Concord, CA 94520

Paul D. Horton Project Manager

Allen B. Storm

Registered Geologist

No. 4394

R5016D.PDH

TABLE OF CONTENTS

	PAGE
INTRODUCTION	. 1
BACKGROUND	. 1
PREVIOUS WORK	. 3
SITE CONDITIONS	. 5
SCOPE OF WORK	. 6
MONITORING WELL INSTALLATION AND DEVELOPMENT	. 7
CONE PENETROMETER TESTING AND HYDRO-PUNCH SAMPLING	. 9
GROUNDWATER MONITORING AND SAMPLING	. 10
PRODUCT RECOVERY	. 11
SOIL-VENTING FEASIBILITY TEST	. 11
WELL SEARCH	. 11
RESULTS	. 11
SOIL SAMPLING	. 11
GROUNDWATER MONITORING	. 12
GROUNDWATER SAMPLING	. 21
SITE HYDROGEOLOGY	. 29
SOIL-VENTING FEASIBILITY	
WELL SEARCH	
SUMMARY AND CONCLUSIONS	. 31
REFERENCES	. 34
LIST OF APPENDICES	
APPENDIX	
A - DRILL LOGS	
B - LABORATORY REPORTS - SOIL	
C - LABORATORY REPORTS - WATER	
D - MONITORING DATA	
E - SOIL VENT TESTING	
F - MINERAL SPIRITS REPORT	

TABLE OF CONTENTS (continued)

LIST OF FIGURES

	PAGE
FIGURE	
1 - SITE LOCATION	2
2 - SITE PLAN	4
3 - POTENTIOMETRIC SURFACE MAP (10/13/88)	14
4 - POTENTIOMETRIC SURFACE MAP (2/22/89	15
5 - POTENTIOMETRIC SURFACE MAP (5/23/89)	16
6 - POTENTIOMETRIC SURFACE MAP (9/28/89)	17
7 - POTENTIOMETRIC SURFACE MAP (1/3/90)	18
8 - POTENTIOMETRIC SURFACE MAP (4/11/90)	19
9 - DISSOLVED TCE DISTRIBUTION	25
10 - DISSOLVED CHLOROBENZENE DISTRIBUTION	28
11 - DISSOLVED CHLOROFORM DISTRIBUTION	3.0
LIST OF TABLES	
TABLE	
1 - SOIL SAMPLE DEPTHS	
2 - SOIL SAMPLE ANALYSES RESULTS - MW-7 AND MW-9	
3 - GROUNDWATER GRADIENT (dh/dl in feet/foot)	
4 - DETECTED CHLORINATED HYDROCARBON COMPOUNDS	
5 - SUMMARY OF LABORATORY RESULTS - TCE	24
6 - SUMMARY OF LABORATORY RESULTS - CHLOROBENZENE	26
7 - SUMMARY OF LABORATORY RESULTS - CHLOROFORM	27
8 - WELL LOCATIONS	32

UPDATE REPORT

ADDITIONAL ASSESSMENT

404 MARKET STREET

OAKLAND, CALIFORNIA

JUNE, 1990

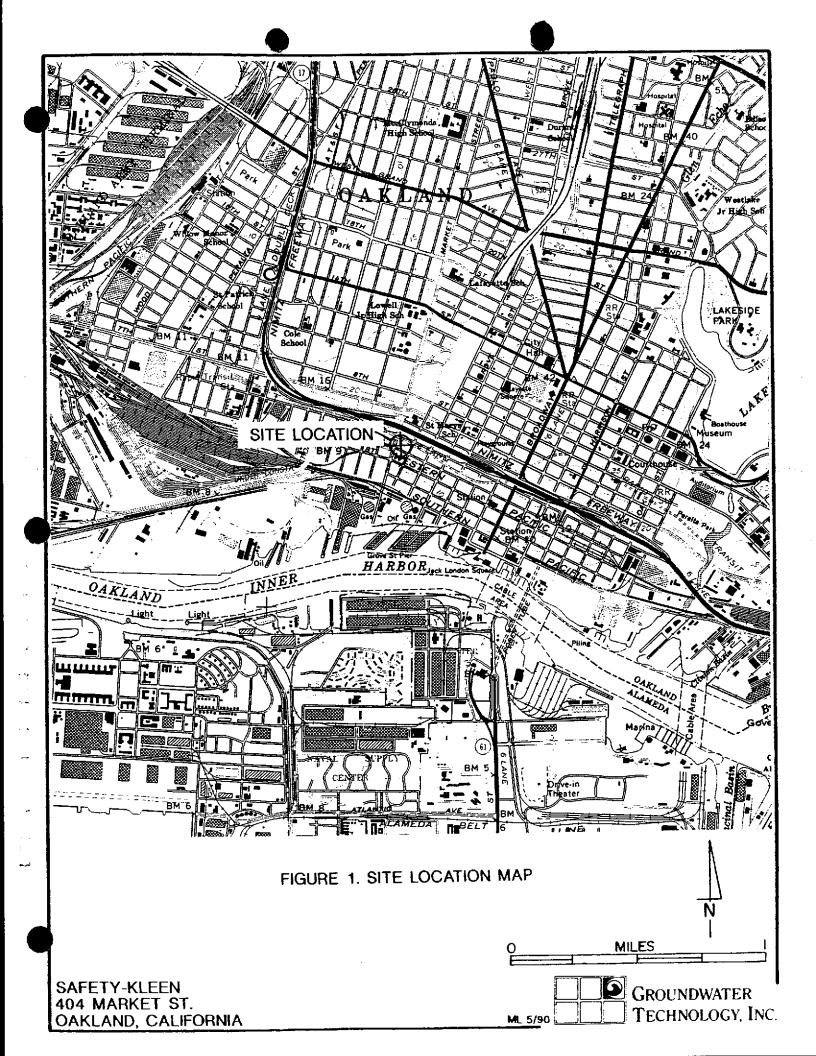
INTRODUCTION

This report presents the results of additional assessment, monitoring and separate-phase hydrocarbon (product) recovery activities conducted by Groundwater Technology, Inc. at the Safety-Kleen facility located at 404 Market Street in Oakland, California (Figure 1). The report covers activities conducted from September, 1988 through April, 1990.

BACKGROUND

The Safety-Kleen facility is located in the highly industrialized area of Oakland, California and serves as the local distribution center for Safety-Kleen products. These products include mineral spirits solvents, various chlorinated solvents, and other products used in the automotive and food services industries. Approximately 97 percent of these solvents consist of mineral spirits, and the remainder is a blend of chlorinated and water-phase solvents known as immersion cleaner. All of these materials are stored on the site in clean and spent condition. The major storage volume involves the location and





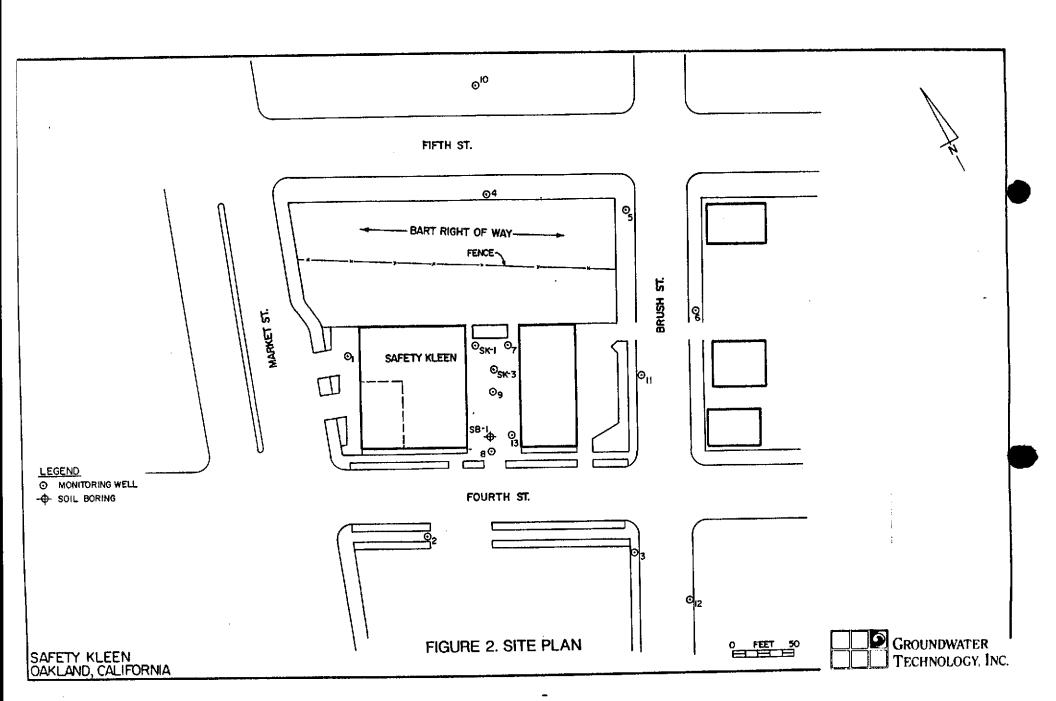
use of three underground storage tanks (UST). Two 6,000-gallon steel USTs are used to store spent mineral spirits solvent prior to shipping to Safety-Kleen's recycling center in Reedly, California. A third 10,000-gallon UST holds clean mineral spirits solvent for distribution. The solvent cycle is essentially a closed loop going from the service center to the customer, from the customer to the service center, from the service center to the recycle center back to the service center.

PREVIOUS WORK

The initial site investigation was conducted by CWC-HDR Consulting Engineers in May, 1986. Three 20-foot deep soil borings were drilled in the vicinity of the underground tanks. Two of the three borings were converted into 2-inch-diameter monitoring wells. These wells are designated as SK-1 and SK-3 on Figure 2. Separate-phase mineral spirits free product was present in each boring. Additional site assessment to define the lateral extent of groundwater contamination was conducted by Groundwater Technology beginning in June, 1988. A soil-vapor survey was conducted to define the extent of the subsurface vapor plume. Based on soil-gas survey results, eight monitoring wells were installed on and off site in July, 1988. Groundwater samples from the monitoring wells were analyzed for total petroleum hydrocarbons (TPH) -as mineral spirits and for chlorinated hydrocarbons. Additionally, the wellhead elevations were surveyed in relation to established benchmarks near the site.

Concurrent with further site assessment, the underground tanks and lines were precision tested for leaks. Leaks detected in lines and fittings were repaired, and the tanks re-certified





Safety-Kleen/Oakland June 1990

as tight. The details of the work conducted by Groundwater Technology are contained in the report titled "Interim Update Report, Safety-Kleen Facility, 404 Market Street, Oakland, California", dated September 9, 1988.

SITE CONDITIONS

The site is located to the north of the Oakland Inner Harbor in a topographically flat-lying industrial area. The site is immediately underlain by fine-grained sand and silty, clayey sand, called Merritt sands to a depth of approximately 65 feet. These sands are believed to be nearshore deposits from the historic San Francisco Bay (Redbruch, 1957). Unconfined groundwater exists in the Merritt sands at a shallow depth of approximately 8-feet at the site. The Merritt sands overlie the Alameda Formation which consists of gravel, sand, silt, and organically rich clay. These deposits are also known as the Older Alluvium and are present beneath all of the east bay plain. These deposits are continental and marine in origin, and become increasingly consolidated with depth to the maximum-knownthickness of approximately 1,050 feet. The Older Alluvium of the Alameda Formation is the major groundwater reservoir in the East Bay plain area. Below the Alameda Formation lies the Franciscan Basement Complex which consists of sandstone, siltstone, chert, melange and ultra-mafic rocks and is considered to be non-water bearing (Fisher, Brown, and Warner, 1963).



TECHNOLOGY, INC.

SCOPE OF WORK

Since September, 1988, the following work steps have been conducted at the site to further delineate the lateral and vertical extent of subsurface contamination, and to provide a data base for planning and design of remedial actions.

- o Installed three off-site monitoring wells, and one deep monitoring well on site, downgradient of the mineral spirits free-product plume.
- o Developed the gravel pack of the monitoring wells using surge-and-bail techniques.
- o Collected eight soil samples for laboratory analyses using U.S. Environmental Protection Agency (EPA) Method 8010 to analyze for the presence of chlorinated hydrocarbons, and modified EPA Method 8015, to analyze for the presence of TPH-as-mineral spirits.
- o Conducted Cone Penetrometer Testing (CPT) at two locations on the site, and attempted to collect groundwater samples using the Hydro-Punch sampling method.
- o Conducted monthly groundwater-level monitoring and sampling.
- o Maintained a limited product-recovery operation.
- o Conducted a soil-vent feasibility test of the vadosezone soils at the site.
- o Conducted a search of available records for groundwater wells located near the site.

Safety-Kleen/Oakland June 1990

MONITORING WELL INSTALLATION AND DEVELOPMENT

Four additional monitoring wells (MW-10, MW-11, MW-12 and MW-13) were installed on and around the site from August 18, 1989 to September 12, 1989 (see Figure 2, Site Plan). Monitoring wells MW-10, MW-11, and MW-12 were installed to further assess the upgradient, cross-gradient, and downgradient extent of the dissolved chlorinated hydrocarbon plume. Monitoring well MW-13 was installed downgradient of the mineral spirits free-product plume to assess the vertical extent of the dissolved chlorinated hydrocarbon plume beneath the site.

Borings for monitoring wells MW-10, MW-11 and MW-12 were drilled using 7.5-inch outside-diameter (O.D.), hollow stem augers on a mobile truck-mounted drill rig. Borings for monitoring wells MW-10 through MW-12 were advanced to 30-feet below grade and wells installed. These three wells are constructed with 25 feet of 2-inch-diameter .010-inch machine-slotted polyvinyl (PVC) well screen and 5 feet of 2-inch-diameter PVC blank pipe. A sand pack of No.30 Lonestar sand was extended from 4- to 30-feet-deep in each well and capped with a 1-foot-thick layer of hydrated bentonite pellets followed by 3 feet of cement grout to surface grade where a traffic-rated street box was installed.

The boring for monitoring well MW-13 was drilled using 12-inch O.D., hollow stem augers. The boring for monitoring well MW-13 was advanced to a 74-feet below grade. The bottom 4 feet was grouted up and a monitoring well installed. The well was constructed with 5 feet of 4-inch-diameter .010-inch continuous wire-wrapped stainless steel screen and 65 feet of 4-inch-diameter stainless steel pipe. A sand pack of No. 30 Lonestar sand was extended from 63- to 70-feet below grade, capped by a 1.5-foot-thick layer of hydrated bentonite pellets, followed by

Safety-Kleen/Oakland June 1990

cement grout to the surface where a traffic-rated street box was installed. Details of well construction are specified in the drill logs included in Appendix A.

During drilling of the borings for monitoring wells MW-10 through MW-12, soil samples were collected at 5-foot intervals using a split spoon sampler with three 2-inch-diameter by 6-inch-long brass sampling tubes. Selected samples were sealed with aluminum foil, capped, taped, labeled, and stored on ice for subsequent delivery to GTEL Environmental Laboratories, Inc. (GTEL) observing Chain-of-Custody protocols. Soil samples were analyzed for the presence of chlorinated-hydrocarbon compounds using EPA Method 8010 and for TPH-as-mineral spirits by modified EPA Method 8015. One of the three samples collected from each sampling interval was used for field headspace analysis using a portable organic-vapor meter.

The boring for monitoring well MW-13 was continuously cored to a depth of 45-feet below grade at which time flowing sands made coring unsuccessful. During coring, samples were selected from the core for headspace analysis using a portable organic vapor meter. No soil samples were collected below a depth of 45 feet. Two soil samples collected from the core at depths of 5and 10-feet below grade were packed in air-tight glass jars, labeled, stored on ice, and transported to GTEL under Chain-of-These samples were analyzed using EPA Methods Custody Manifest. 8010 for chlorinated hydrocarbons and modified EPA Method 8015 for TPH-as-mineral spirits concentrations. Field screening results for organic vapors are contained in the drill logs in Laboratory results of soil sample analyses are Appendix A. included in Appendix B.



The new monitoring wells were developed using a surge-andbail technique until development water became clear of sediment or the well was dry.

CONE PENETROMETER TESTING (CPT) AND HYDRO-PUNCHTM SAMPLING

Cone penetrometer testing (CPT) in combination with the Hydro-Punch groundwater sampling system was planned to be used for collecting depth-specific groundwater samples for defining the vertical distribution of dissolved chlorinated hydrocarbons. Plans called for driving the Hydro-PunchTM sampler to a depth of 75-feet at the location where monitoring well MW-13 was eventually installed. Cone penetrometer testing was conducted on August 29, 1989. During advancement of the cone penetrometer, CPT refusal was encountered at a depth of 24-feet below grade due to a densely compacted sand unit. A copy of the cone penetrometer resistance and friction log is included in Appendix A. Due to a refusal of the unit, a deep groundwater sample could not be collected causing installation of MW-13 as a depth-specific groundwater monitoring point.

Additional use of the Hydro-PunchTM groundwater sampling system was planned to allow further delineation of the dissolved plume in the near-surface groundwater off site and upgradient. On November 30, 1989, the cone penetrometer was advanced to a depth of 25 feet where refusal was encountered due to the densely compacted sand unit. This initial sampling location was northwest of MW-7.

Following the cone penetrometer testing, a $Hydro-Punch^{TM}$ groundwater sampler was driven to a depth of 20 feet and opened for collection of a groundwater sample. Three attempts were made



Safety-Kleen/Oakland June 1990

at collecting a groundwater sample which was not laden with sediment. Due to the silty nature of the sands in the near surface, collection of an adequate groundwater sample was not possible, and the plans for further Hydro-PunchTM sampling were abandoned.

GROUNDWATER MONITORING AND SAMPLING

All wellhead elevations were surveyed to mean sea level to allow determination of groundwater elevations relative to a known datum. Monitoring wells were monitored for depth-to-water and depth-to-product on a monthly basis using an electronic Interface Probe. The monitoring data are tabulated in Appendix D.

Groundwater sampling was also conducted on a monthly basis by first purging at least four well volumes from each well and then allowing the water levels in the wells to recover to at least 80 percent of their original static level. Representative groundwater samples were then collected using a clean Teflon^R sampler. The samples were stored in 40 milliliter glass vials, labeled, placed on ice, and delivered to GTEL with a Chain-of-Custody. The samples were then analyzed for the presence of chlorinated hydrocarbons using EPA Method 601 and for TPH-asmineral spirits using modified EPA Method 8015. Laboratory analyses reports are included in Appendix C.

PRODUCT RECOVERY

Limited recovery of separate-phase mineral spirits (product) has been conducted along with monitoring and sampling on a monthly basis. Separate-phase mineral spirits present in on-site monitoring wells are recovered using a pump or a dedicated bailer



and discharged into the spent mineral spirits waste tanks at the site. Product recovery averages from 15- to 20-gallons of waste mineral spirits per month.

SOIL-VENT FEASIBILITY TEST

A soil-venting feasibility test was conducted on January 18, 1990, to evaluate the applicability of using soil venting as a soil remediation method. Details of the test are included in the soil-vent test feasibility report included in Appendix E.

WELL SEARCH

A search of records available at the California Department of Water Resources (DWR) was conducted to locate wells within a one-half-mile radius of the site.

RESULTS

SOIL SAMPLING

A total of eight soil samples collected from four new borings MW-10, MW-11, MW-12, and MW-13 were submitted for laboratory analyses. Table 1 lists the soil samples analyzed and the depth of collection.



TABLE 1
SOIL SAMPLE DEPTHS

SAMPLE DESIGNATION	DEPTH COLLECTED (feet)	
MW-10A	4	
MW-10B	9.5	
MW-10C	14.5	
MW-11A	4.5	
MW-12A	4.5	
MW-12B	10	
MW-13A	4.5	
MW-13B	10	

Chlorinated hydrocarbons or mineral spirits were not detected in any of these soil samples. This fact may be due to the location of all these borings outside the source area. Laboratory reports are included in Appendix B.

Chlorinated hydrocarbons and mineral spirits were detected in soil samples collected from the borings for monitoring wells MW-7 and MW-9. The results of these analyses were reported in the Interim Update Report dated September 9, 1989. Table 2 contains a summary of these results. Mineral spirits in concentrations up to 52,000 parts per million (ppm) were detected in soil samples from a depth of 10-feet below grade. The maximum chlorinated hydrocarbon compound detected in the soils was 3.7 ppm of 1,1,1-Trichloroethane. Laboratory reports are included in Appendix B.

GROUNDWATER MONITORING

Water level monitoring has been conducted monthly for nineteen months. Tabulated monitoring data are included in Appendix D. Figures 3 through 8 present quarterly groundwater

GROUNDWATER
TECHNOLOGY, INC.

TABLE 2
SUMMARY OF SOIL SAMPLE ANALYSES RESULTS
MW-7 AND MW-9
ppm

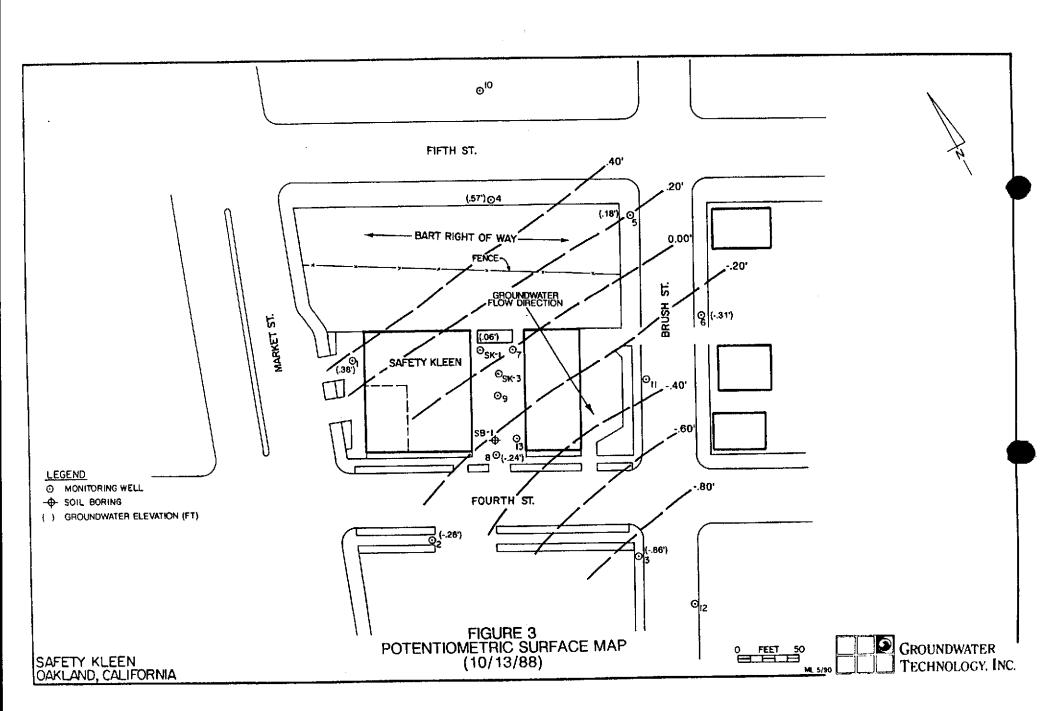
SOIL SAMPLE NUMBER & DEPTH (ft)

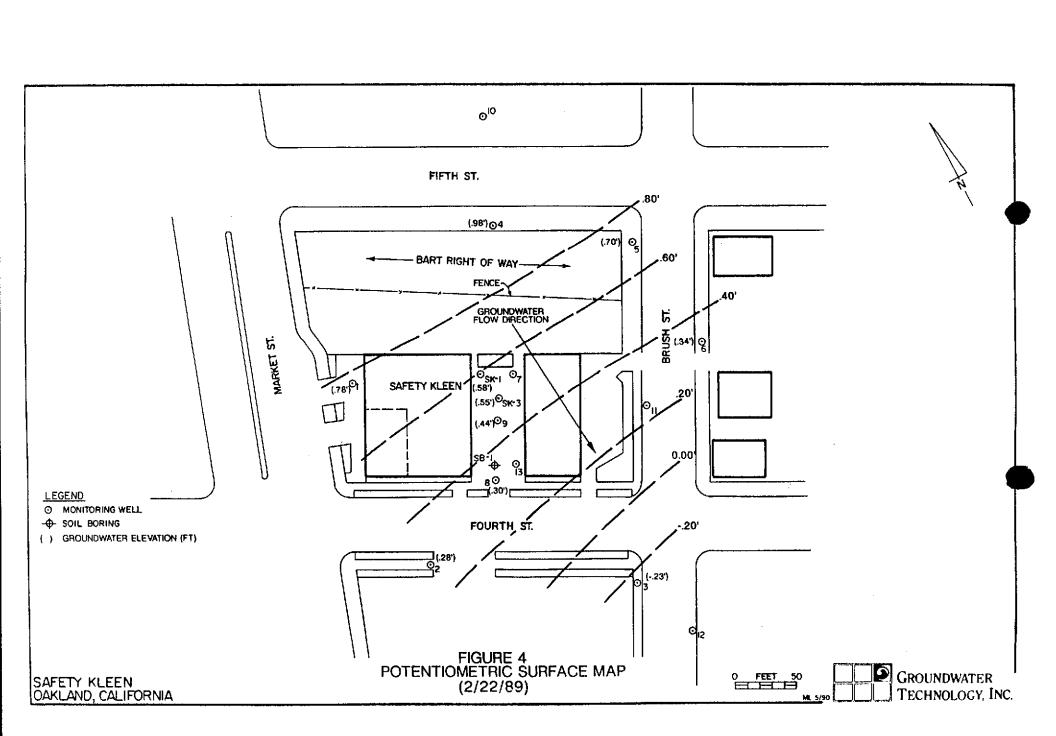
COMPOUND	MW-3A	MW-7A	MW-7B	MW-7C	MW-7D	MW-9A	MW-9B	MW-9E
TPH-AS-MINERAL SPIRITS	_	520	2,400	18	15	240	52,000	25
METHYLENE CHLORIDE	1.0	ND	1.6	-	-	ND	1.7	
TETRACHLOROETHENE	ND	0.6	2.3	-	-	ND	3.7	. -
1,1,1-TCA	ND	ND	ND	-	-	ND	1.3	-
CHLOROBENZENE	ND	ND	ND	-	-	1.2	3.1	•

ND = Not Detectable

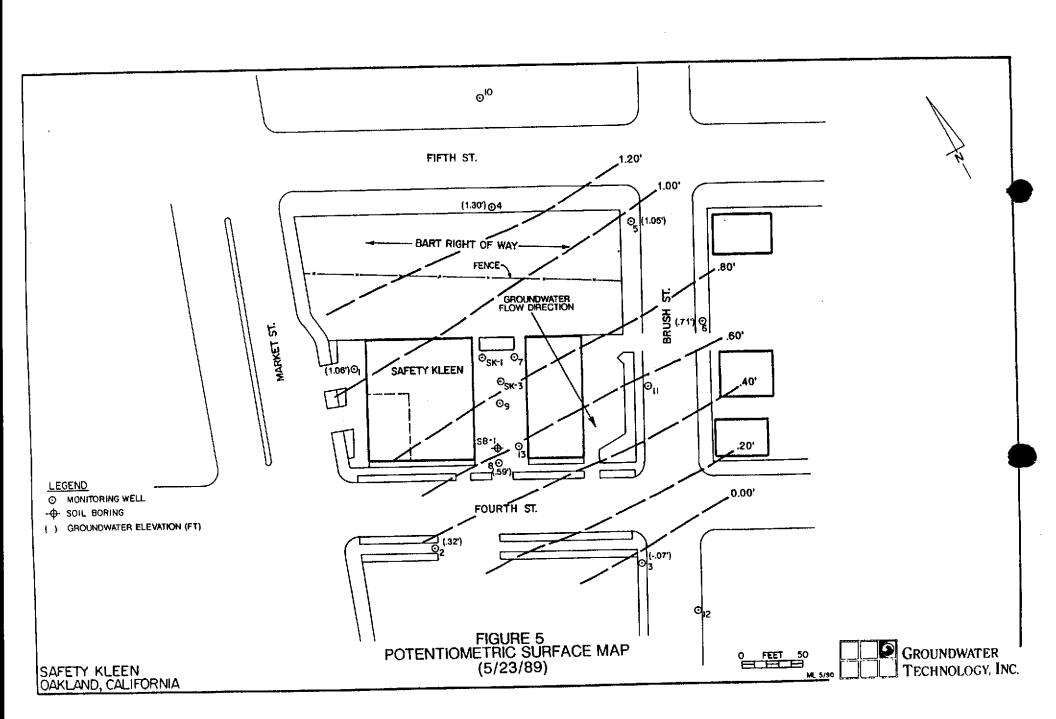
EMMS 4 2 C. M. L.M. CONT. C. J.

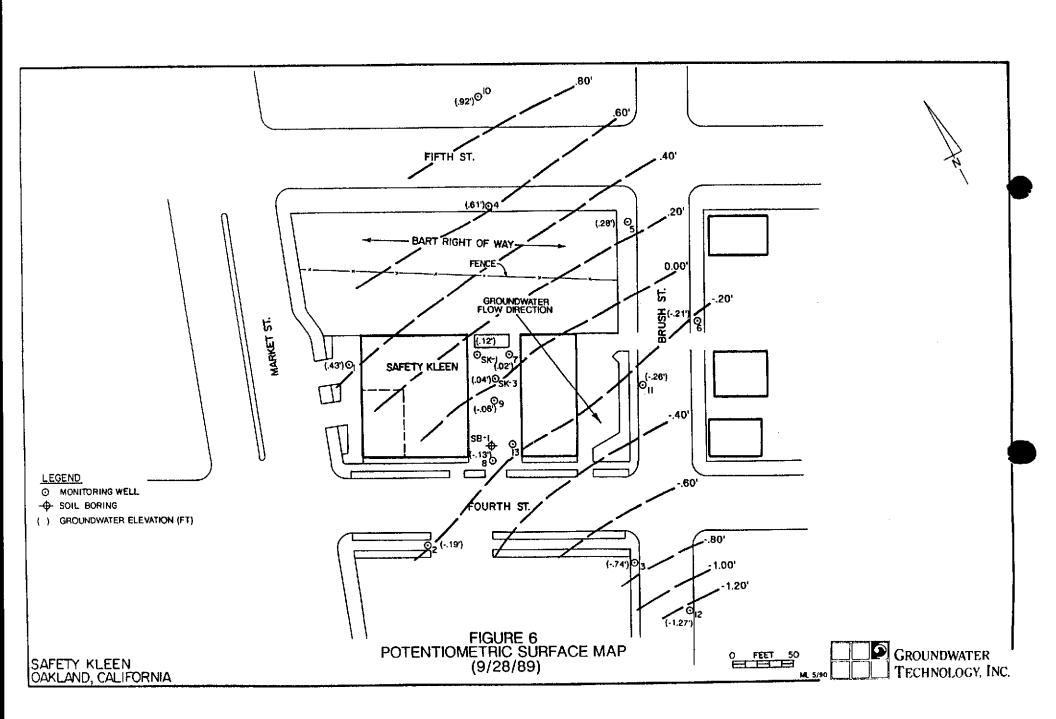
T5016B



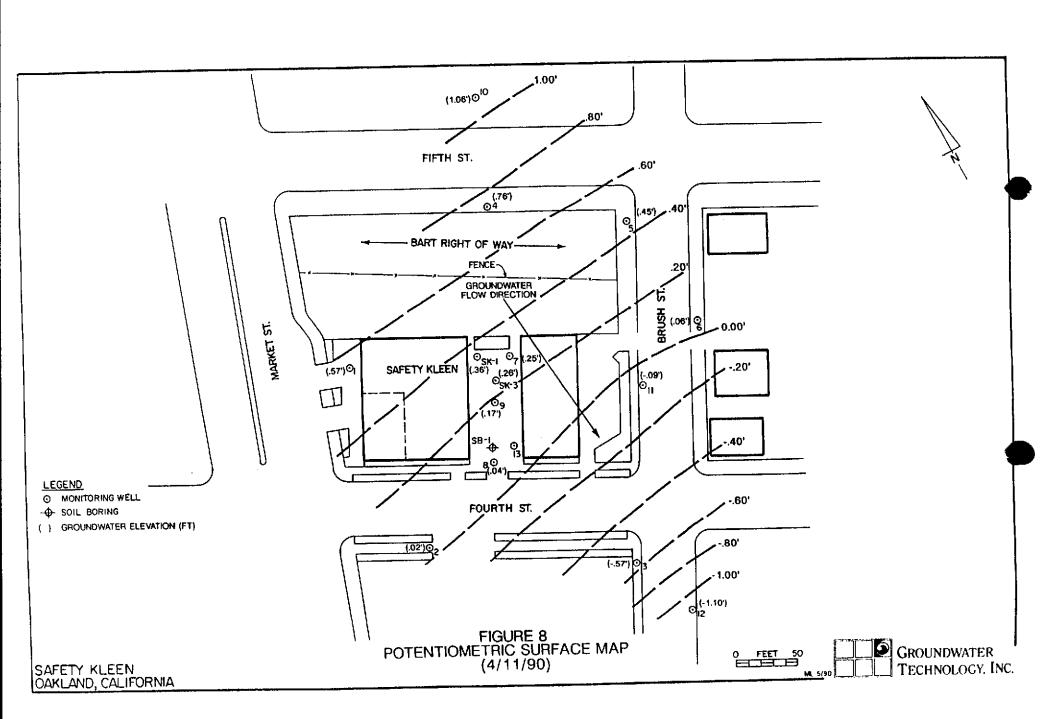


a line of the second of the se





British Commission of the Comm



potentiometric surface maps. Groundwater elevation fluctuated a total of 1.5 feet during this reporting period. The overall groundwater level has fallen 0.8 feet in response to continued drought conditions in California. The lowest groundwater levels were measured in late September and early October as is typical in the San Francisco Bay area. Groundwater was at its highest in late February, March and April which is also typical. direction of the groundwater gradient (flow direction) has remained consistently to the south throughout the seasonal variations in water level. The magnitude of the groundwater gradient (dh/dl) has also remained consistent, and does not appear to be affected by seasonal variation. The average horizontal gradient on the water table is calculated as .0041 Table 3 presents the calculated gradient as measured from monitoring wells MW-8 to MW-3 and MW-5 to MW-6 which line up in the direction of the gradient.

TABLE 3
GROUNDWATER GRADIENT
(dh/dl in feet/foot)

DATE	MW-8 to MW-3	MW-5 to MW-6
04/11/90	.0043	.0040
03/14/90	.0038	.0037
01/30/90	.0029	.0032
01/03/90	.0036	.0031
11/29/89	.0054	.0044
11/01/89	.0025	NA
09/28/89	.0043	.0051
07/27/89	.0034	.0042
06/30/89	.0052	.0056
05/22/89	.0046	.0035
04/20/89	.0039	.0049
03/23/89	.0043	.0039
02/22/89	.0037	.0045
10/13/88	.0043	.0051
09/07/88	.0038	.0043
,,	1	

GROUNDWATER
TECHNOLOGY, INC.

Safety-Kleen/Oakland June 1990

Monitoring data from monitoring well MW-13, which is screened 5 feet at the base of the Merritt sand aquifer, indicate that a downward vertical groundwater gradient exists at the site at an average of .028 feet/foot.

Separate-phase spent mineral spirits solvent (free product) have been present in monitoring wells MW-7, MW-9, SK-1, and SK-3 throughout this reporting period. Free-product thickness measured in these wells is consistently 4- to 6-feet thick despite product recovery operations.

GROUNDWATER SAMPLING

A spent mineral spirits characterization study was conducted by Groundwater Technology and the results reported in a report titled "Mineral Spirits: Detection and Remedial Alternatives in Soil and Groundwater", dated May 1988. A copy of this report is included in Appendix F. The study indicated that the following chlorinated hydrocarbons (Table 4) are typically present in the spent mineral spirits temporarily stored on-site in the underground tanks at Safety-Kleen facilities.

TABLE 4

DETECTED CHLORINATED HYDROCARBON COMPOUNDS (EPA 601)

Trans-1,2-Dichloroethene
1,1-Dichloroethane
1,2-Dichloroethane
1,1,1-Trichloroethane
Trichloroethene
Tetrachloroethene
Chlorobenzene
Chloroform
Chloroethane *
Chloromethane *
Methylene Chloride *
Vinyl Chloride *



To investigate the solubility of these compounds in the site groundwater, groundwater samples were collected from directly beneath the separate-phase mineral spirits (free product) present in monitoring wells MW-7 and MW-9 on September 15, 1989. These samples were collected with a stainless steel discrete zone sampler. The results of this one time sampling are included in Appendix B. These samples were collected to characterize the chlorinated compounds which dissolve into the groundwater from contact with the spent mineral spirits source. All of the compounds listed in Table 4, except those delineated with an asterisk, were detected.

Groundwater samples were collected monthly from all wells without free product and laboratory analyzed for the presence of TPH-as-mineral spirits using modified EPA Method 8015 and for chlorinated hydrocarbons using EPA Method 601. Laboratory reports are included in Appendix B. The results of these analyses indicate that no dissolved mineral spirits were present above the detection limit of 1 ppm in the groundwater samples. All of the chlorinated hydrocarbon compounds, except those designated with an asterisk in Table 4, have been detected in the site area groundwater. All of these compounds except trichloroethene are detected at low concentrations not exceeding 100 parts per billion (ppb) and averaging less than 10 ppb. No dissolved chlorinated compounds have been detected in groundwater samples from monitoring well MW-13 which is discretely screened at the base of the impacted water-table aquifer.

Of the compounds in Table 4 detected in the site area groundwater, trichloroethene (TCE) exhibits significantly higher concentrations (up to 1300 ppb) and has the greatest lateral



distribution in regularly sampled groundwater. Due to this fact, and the relative solubility and stability of TCE, it has been chosen as the primary indicator parameter for dissolved chlorinated hydrocarbons in the groundwater. Table 5 presents a summary of the TCE concentrations detected in sampled groundwater for this reporting period. Figure 9 presents the distribution of TCE in the groundwater based on quarterly sampling results. is consistently detected in upgradient monitoring wells MW-4 and MW-10 at higher concentrations then in monitoring well MW-8 which is located just downgradient of the Safety-Kleen underground storage tank system. Concentrations of TCE detected in monitoring well MW-10 have shown a steady increase since its installation, which indicates that a contaminant front may be moving through the area. These facts, combined with the consistent groundwater gradient direction and magnitude, indicate that an upgradient off-site source of chlorinated hydrocarbon compounds may be creating an additional plume that is mixing with the plume originating from the Safety-Kleen site. Analytical results showing TCE detected in the other monitoring wells have shown consistent results with neither a rising or decreasing concentrations.

Further chemical data review was conducted to delineate the interpreted mixed plumes of chlorinated hydrocarbons. Tables 6 and 7 present summaries of the chlorobenzene and chloroform concentrations detected in sampled groundwater. Figure 10 presents the dissolved chlorobenzene distribution. Chlorobenzene is regularly detected in monitoring wells MW-8 and MW-3. Chlorobenzene is not regularly detected in any other monitoring wells. Since chlorobenzene is present in the spent mineral spirits product, it may be considered an indicator parameter of the chlorinated hydrocarbon plume originating from the Safety-Kleen site.

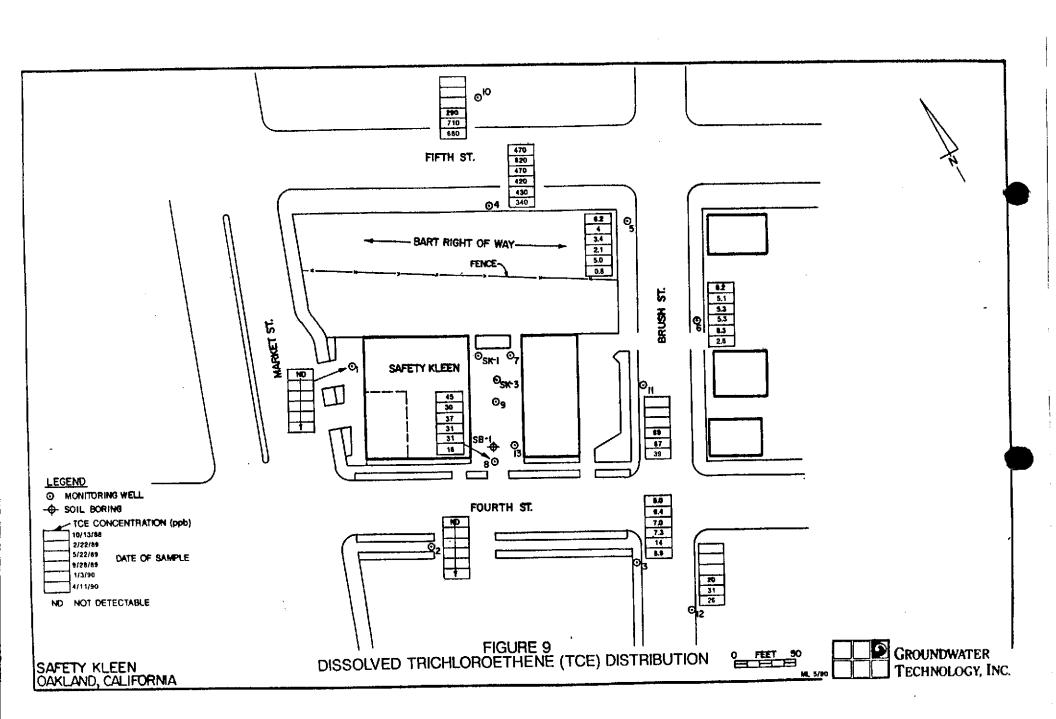


SAFETY-KLEEN/OAKLAND 203 680 5016.05 MAY 10,1990

TABLE 5
SUMMARY OF LABORATORY DATA
TCE CONCENTRATIONS (ppb)

WELL	9/06/88	10/13/88	3 2/22/89	3/22/89	4/20/89	5/22/89	6/30/89	7/27/89	8/30/89	9/29/89	11/02/89	11/29/89	1/03/90	2/05/90	3/14/90	4/11/90	4
						-0 F	-0 E	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1
MW-1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5										
MW-2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	
MM-3	6.5	8	6.4	8.5	0.5	7	7.4	6.9	9.8	7.3	8.5	8.6	14	9.4	8.9	8.0	
MW-4	540	470	620	440	410	470	380	390	490	420	600	410	430	470	490	340	
MW-5	3.7	6.2	4.0	3.1	2.5	3.4	2.9	2.9	4.6	2.1	4.4	2.5	5	2.8	1.5	8.0	
MW-6	5.3	8.2	5.1	2.6	5.3	5.3	6.6	4.7	6.2	5.3		2	8.3	4.6	1.7	2.8	
8-wm	52	45	30	31	37	37	41	42	46	31	39	25	31	15	14	16.0	
MW-10									130	290	470	610	710	820	1300	600	1
MW-11									28	69	74	55	67	41	44	39	•
MW-12									11	20	40	22	31	13	21	26.0	

T5016A



SAFETY-KLEEN/OAKLAND 203 680 5016.05 MAY 10,1990

TABLE 6
SUMMARY OF LABORATORY DATA
CHLOROBENZENE (ppb)

WELL	9/06/88	10/13/88	2/22/89	3/22/89	4/20/89	5/22/89	6/30/89	7/27/89	8/30/89	9/29/89	11/02/89	11/29/89	1/03/90	2/05/90	3/14/90	4/11/90
							.0.5	.O. E	.0 F	40 E	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
MW-1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	VU. 5	0.5	ν.,	\0. 5	٧٠.5	٧٠.٦
MW-2	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.5	<0.5	<0.5	<0.5	<0.5
MW-3	0	0.73	0.51	0.82	0.89	0	1.4	1.4	3.4	1.9	0.69	0.73	1.5	0.7	0	1.4
MW-4	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MM-6	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5
MW-8	0.5	1.4	0.84	1.1	1.3	1.3	0.69	<0.5	<0.5	<0.5	<0.5	0.6	0.7	1	0.6	0.9
MW-10												<0.5		<0.5	<0.5	<0.5
MW-11												<0.5	<0.5	<0.5	<0.5	<0.5
MV-12	,											<0.5	<0.5	<0.5	<0.5	<0.5

T5016A-1

SAFETY-KLEEN/OAKLAND 203 680 5016.05 MAY 10,1990

TABLE 7
SUMMARY OF LABORATORY DATA
CHLOROFORM (ppb)

WELL	9/06/88	10/13/88	2/22/89	3/22/89	4/20/89	5/22/89	6/30/89	7/27/89	8/30/89	9/29/89	11/02/89	11/29/89	1/03/90	2/05/90	3/14/90	4/11/90
		*******								-0 F	-A E	-0 E	<0.5	<0.5	<0.5	<0.5
KW-1	0.66	0.51	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	٠٠.5	νο.σ	۷۵.5	\0.J
MW-2	<0.5	<0.5	<0.5	1.3	1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	<0.5	<0.5	<0.5	<0.5	3.3	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-4	<0.5	0.68	<0.5	<0.5	<0.5	50	0.62	1.1	0.75	<0.5	1.6	1.4	1.6	1.6	1.0	1.4
MH-5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-6	<0.5	0.74	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5		<0.5	<0.5	<0.5	<0.5	<0.5
MW-8	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-10									0.93	1.5	3.6	3.7	5.1	5.5	3	2.8
MW-11									<0.5	<0.5	0.62	<0.5	<0.5	<0.5	<0.5	<0.5
MW-12									<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

T5016A-2

o¹⁰ FIFTH ST. ⊕4 NO BART RIGHT OF WAY FENCE-BRUSH MARKET ST. O_{SK-I} O SAFETY KLEEN ND OSK-3 0.84 1.3 ND 9.7 SB-I HD 90 LEGEND 0.73 0.51 NO 1.9 FOURTH ST. - SOIL BORING CHLOROBENZENE CONCENTRATION (ppb) 10/13/88 1.5 2/22/89 1.4 5/22/89 DATE OF SAMPLE 9/28/89 1/3/90 4/11/90 NO NOT DETECTED ABOVE 0.5 ppb DISSOLVED CHLOROBENZENE DISTRIBUTION GROUNDWATER FEET SAFETY KLEEN OAKLAND, CALIFORNIA TECHNOLOGY, INC. ML 5/90

A STATE OF BUILDING A BUILDING STATE OF THE STATE OF THE

Safety-Kleen/Oakland June 1990

Figure 11 presents the dissolved chloroform distribution. Chloroform is only regularly detected in monitoring well MW-10 and in MW-4, downgradient of MW-10. Chloroform was not detected in the groundwater sampled from beneath the mineral spirits free product in monitoring wells MW-7 and MW-9. Chloroform presence in the groundwater is apparently uniquely associated with an upgradient source of dissolved chlorinated hydrocarbon compounds.

SITE HYDROGEOLOGY

Groundwater at the site exists under unconfined conditions within silty and clayey fine sand of the Merritt Sands. Merritt Sands generally yield only small quantities of water to wells, and decrease in permeability with depth. Within the groundwater zone, these deposits appear to be relatively uniform and laterally continuous (See Appendix A, Drill logs). Sieve analysis of one sample from the Merritt Sands indicated an approximate distribution of 70 percent fine sand and 30 percent silt and clay. A clay layer at least 5-feet-thick was encountered at a depth of 68-feet below grade in the boring for monitoring well MW-13. This clay layer is interpreted at the base of the Merritt Sand deposits, and corresponds to the known thickness of the Merritt Sand in the area.

Groundwater elevation monitoring data indicate that the groundwater gradient is consistently due south with a consistent average magnitude of .0041. A consistent downward vertical gradient has also been documented at the site. The presence of a downward vertical gradient may indicate that the clay layer at the base of the Merritt Sand is allowing leakage into the older alluvium of the Alameda Formation below.



ο^{IO} 1.5 5.1 2.8 0.68 ND 50 FIFTH ST. ND 1.6 04 1.4 BART RIGHT OF WAY FENCE-냚 BRUSH MARKET ST. OSK-I O7 SAFETY KLEEN O_{SK-3} 09 SB-I ND LEGEND O MONITORING WELL ND ND 0.5 NO FOURTH ST. -- SOIL BORING CHLOROFORM CONCENTRATION (ppb) 10/13/88 2/22/89 5/22/89 DATE OF SAMPLE 9/28/89 1/3/90 4/11/90 NO NOT DETECTABLE TIGURE 11 DISSOLVED CHLOROFORM DISTRIBUTION GROUNDWATER O FEET 50 SAFETY KLEEN OAKLAND, CALIFORNIA TECHNOLOGY, INC.

SOIL-VENTING FEASIBILITY

The results of soil-vent testing indicate that application of soil-vent technology for the remediation of vadose zone soils contaminated with spent mineral spirits solvents would be feasible at this site. The test indicated that a vertical venting point could achieve a horizontal radius of influence of approximately 35 feet. The test also indicated that mineral spirits vapors could be withdrawn from the vadose-zone soils using standard vacuum-extraction techniques. The results of the soil-venting test are detailed in the report included in Appendix E.

WELL SEARCH

The results of the Department of Water Resources (DWR) well records research indicates that no private, municipal or industrial production water wells are present within a one-half-mile radius of the site. Some groundwater monitoring wells and three industrial supply wells are located outside of the one-half-mile radius. Table 8 lists the known locations of these wells as recorded by the DWR.

SUMMARY AND CONCLUSIONS

Groundwater in the site area experiences relatively little fluctuation in elevation and in gradient direction and magnitude through the seasonal hydrologic cycle. Dissolved mineral spirits are not detectable in the groundwater at the site. Dissolved chlorinated compounds present in the groundwater remained at consistent levels throughout the reporting period except near monitoring well MW-10, upgradient of the site. The extent of the



TABLE 8

INVENTORY OF WELLS LOCATED IN TOWNSHIP 15 RANGE 4W

OWNER	OWNER'S ADDRESS	WELL LOCATION	YEAR DRILLED	USE
Port of Oakland		10 NW of Brush Street at 4th	6/30/88	Test Bore
Port of Oakland	Grove St. Pier, Oakland	Calo Dog Food Plant 3rd Street Pier	1955	Industrial
Chevron Station	GTI No. 20-3235	7th and Cypress 25.5' deep	4/19/85	
Southern Pac. RR	6825 Mission, Daly City	3rd and Kirkham	1939	Industrial
Universal Foods	Oakland	1384 5th Street	8/8/69	Industrial
R.S. Eagan & Co.	333 Market St., Oakland	3rd & Market	10/13/87	Industrial
Marine Treminal Warehouse	(same as above)	(same as above)	2/88	Monitoring
Texaco	Martin Luther King	203 150 4314	1987	Monitoring
Port of Oakland	Jack London Square	10' from 1st and 20' from Washington	1987	
Port of Oakland	(same as above)	(same as above)		
Port of Oakland	(same as above)	(same as above)		
PE O'Hair	339 3rd Street, Oakland	3 total wells		

dissolved chlorinated compounds in the downgradient direction is not fully defined. However, the fact that consistent concentrations have been measured in the wells suggests that the dissolved plume may be static and at equilibrium with current conditions of the groundwater system, so that the processes of dispersion, adsorption, and biodegradation are in equilibrium with the source input rate. Data from upgradient wells suggest that an upgradient source for much greater concentrations of chlorinated hydrocarbons may also exist, and may be mixing with chlorinated compounds originating from the Safety-Kleen site. Additionally, steadily increasing levels of chlorinated hydrocarbons in the upgradient wells may indicate that the suspected upgradient source is significant in magnitude. compounds chlorobenzene and chloroform may be indicator parameters of the impacted-groundwater contamination as a result of the interpreted different source areas.

The vertical distribution of dissolved chlorinated hydrocarbons was investigated through installation of a deep screened monitoring well on site. Results indicate that dissolved contamination has not reached the base of the water table aquifer. However, a downward vertical groundwater gradient has been found to exist at the site.

Soil venting was confirmed to be a feasible option for treating the vadose-zone contamination in the source area.

Well research indicates that no water wells are located within a one-half-mile radius of the site.



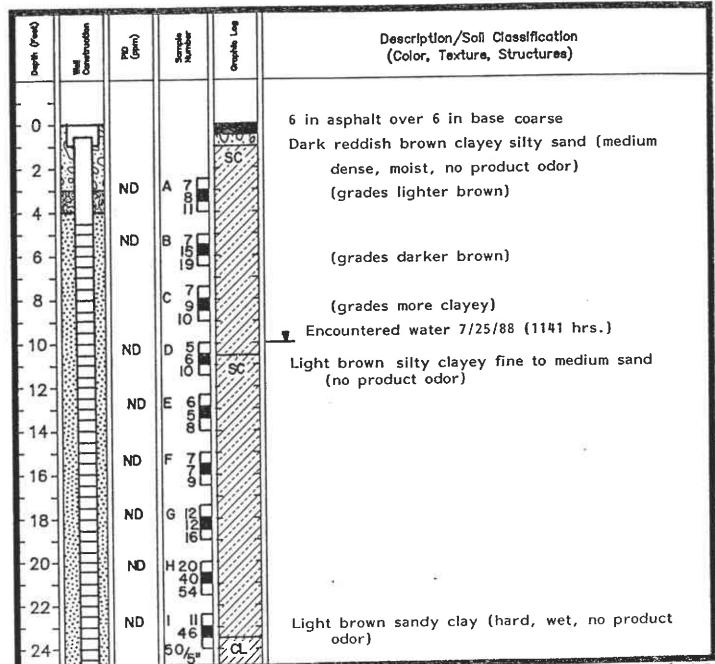
REFERENCES

- 1. Alameda County Flood Control District, Geohydrology and Groundwater-Quality Overview, East Bay Plain Area, Alameda County, California, June 1988.
- 2. Alameda County Flood Control District, Groundwater in the San Leandro and San Lorenzo Alluvial Cones of the East Bay Plain of Alameda County, 1984.
- CWC-HDR, Subsurface Investigation and Leak Monitoring Installation at the Oakland Safety-Kleen Facility, 1986.
- 4. Fisher, Hugo, Brown, Edmund, G. and Warner, William E., 1963, Alameda County Investigation, The Resources Agency of California, DWR, Bulletin No. 13.
- Groundwater Technology, Inc., Interim Update Report, September 9, 1988.
- 6. Redbruch, Dorothy, H., 1957, Areal and Engineering Geology of Oakland West Quadrangle, California; U.S.G.S., Miscellaneous Map Investigations, Map I-239.

2.75	
GROUNDWATER TECHNOLOGY,	Inc.

Drilling Log Monitoring Well = Sketch Map _Owner __ Safety Kleen Safety Kleen/Oakland Project_ -Project Number 203 680 5016.01 Oakland, CA Location_ Date Drilled 7/25/88 Total Depth of Hale 45 ft Dlameter 10.5 in See Site Plan Water Level Initial 10 ft 24-hour__ Surface Elevation. Slot Size .010 in Screen: Dia. 2 in 25 ft Length_ _Type___PVC Cosing: Dio. 2 in 5 ft Length_ Drilling Company <u>Sierra Pacific</u>

Driller Chris DeSocio ___Drilling Method hollow stem augers Notes: Log by Kelly A. Kline Hole colapsed to License No. . 30 ft after drilling Geologist / Engineer.





Name and Address of	7	VART SEED	-		Diming Local
Days (Year)	Year Construction	Quedes	Surreite	Orașeles Leg	Description/Soil Classification (Color, Texture, Structures)
-26-		ND	30	SC	Light brown clayey sand (very dense, wet, no product odor)
28-		к	50, C		(grades find sand)
30-			<u>L</u> 50,⊟	SC	Grey clayey sand (very dense, wet, no product
-32-			3		odor)
-34-					
- 36 -					
-38-					
-40-					
-42-					
-44-					
- 46					End of boring. Installed monitoring well (hole colapsed to 30 ft).
-48-					
-50					
-52-					
- 54-					
-56-					
- 58-					
			11		CONTRACTOR OF THE PARTY OF THE

GROUNDWATER	
TECHNOLOGY,	

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 Tt Diameter 10.5 In
Surface Flevation Water Level	Initial 11 ft 24-hour
Canada Dia 2 ID Langth 4	25 ft Slot Size .010 iii.
Casing: Dia. 2 in Longth	5 ft Type PVC Drilling Method hollow stem augers
Drilling Company Sierra Pacific	Drilling Method norlow stem augers
Driller William Coleman	Log by Kelly A. Killle
Geologist / Engineer	"License No

Sketch Map

See Site Plan

Notes:

Dapth (Free!)	Construction	(mdd)	44 44 44 44 44 44 44 44 44 44 44 44 44	Graphic Leg	Description/Soil Classification (Color, Texture, Structures)
- 0 - - 0 - - 2 -				O O S	8 in concrete over 4 in base course Dark brown sandy silt (soft, moist, no product odor)
- 4 -		ND	A 35	sc	Light brown clayey silty fine sand (loose, moist, no product odor)
6 -					(grades more clayey) (grades medium dense)
- 10-			B 10		▼ Encountered water 7/26/88 (0830 hrs.)
- 12- 14-			C 11	sc	Light brown clayey silty very fine to fine sand, (medium dense, wet, no product odor)
- 16 -			1822		
- 18 - - 20 -			D 7	CL	Light brown sandy clay (very stiff, wet, no product odor)
- 22-			E 50/5	SC	Light brown clayey silty fine sand (very dense, wet, no product odor)



Dageth (Yeard)	Currethuction	e§	Somple Manbe	Oraphie Lag	Description/Soil Classification (Color, Texture, Structures)		
-26-	H			sc	Light brown clayey silty sand (cont'd)		
-28-	H						
-30-			F25				
-32	SI IS		F25 504	27.23	End of boring. Installed monitoring well.		
-34-							
36				- 4			
70							
-38- 						H	
-40-		24		t il			
42							
				t d			
-44-							
- 46-							
-48-				[]			
- 50-				[]			
-52-							
- 54-				[]			
83.77				-			
-56- 				[]			
-58-				-	g:		
		Marie Control	CAL COLORS	-		Day 2	

١	GROUNDWATER	
Į	TECHNOLOGY,	INC.

Date Drilled 7/26/88

Surface Elevation.....

Screen: Dia. 2 in

Casing: Dia. 2 in

Monito	ring	W	ell	
Safet				
ect Number	203	680	5016	.01
30.5 ft	Diam	eter	10.5	in

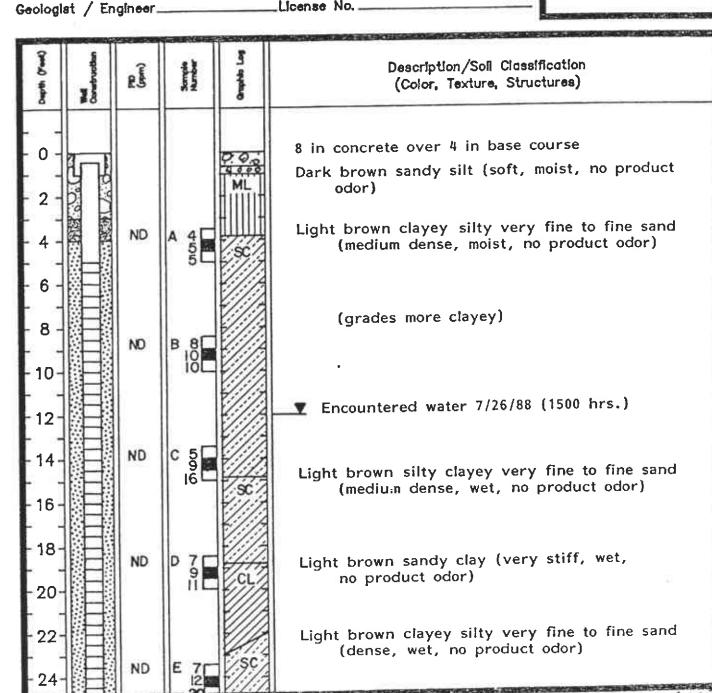
マ

Drilling Log

Sketch Map Project Safety Kleen/Oakland Own-Location Oakland, CA - Prok See Site Plan _Total Depth of Hole: _Water Level Initial 12 ft Slot Size .010 in 25 ft _Length_ 5 ft _Type_ __Length_ _Drilling Method hollow stem augers Drilling Company Sierra Pacific Log by Kelly A. Kline Driller William Coleman

License No.

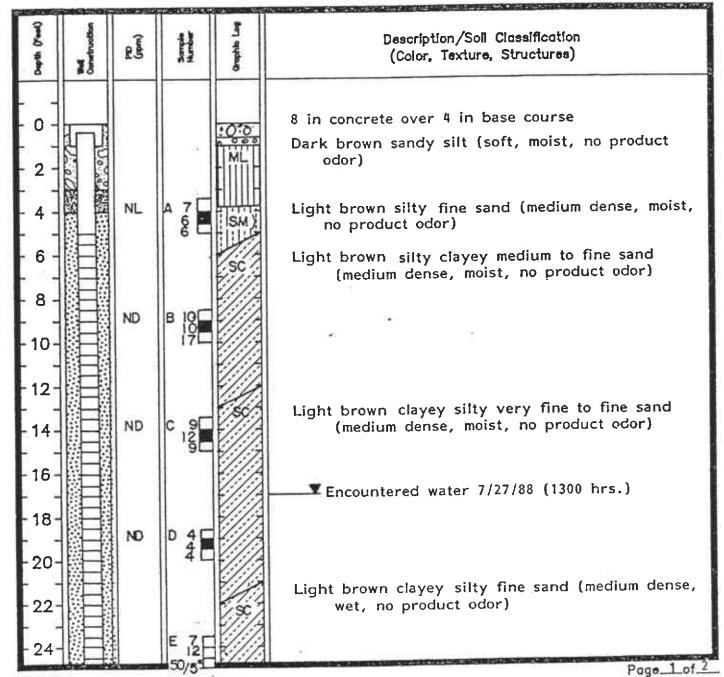
Notes:





70 - 70			-	A-1000	Drining Log
	Carabudge	(web)	11	Orașilo Leg	Description/Soil Classification (Color, Texture, Structures)
26				sc	Light brown clayey silty sand (cont'd)
-26-					
-28-					
-30-			 F 5∏		
			20/1 F		End of boring. Monitoring well installed.
-32-				- +	
1				- 1	
-34-					
-36-					
_ 50					
-38-					34
1				+ +	
40-				r 1	
Lat					
-42-				[]	
-44-					
				+ +	u u
- 46-				l	
				lt 1	
-48-					
130				-	
-52-					
4					
- 54-				lt +	
56					
-58-					
				H. 1	

GROUNDWATER _	
TECHNOLOGY, INC. Monitoring Well 4	Drilling Log
Project Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
Location Oakland, CA Project Number 203 680 5016,01	
Date Drilled 7/27/88 Total Depth of Hole 31 ft Diameter 10.5 in	See Site Plan
Surface Elevation Water Level Initial 17 ft 24-hour 010 in	
Screen: Dla. 2 in length 5 ft Slot Size 010 in	- 1
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	Notes:
Geologist / Engineer License No.	
Goologiat / Lingingon Liberia ita	

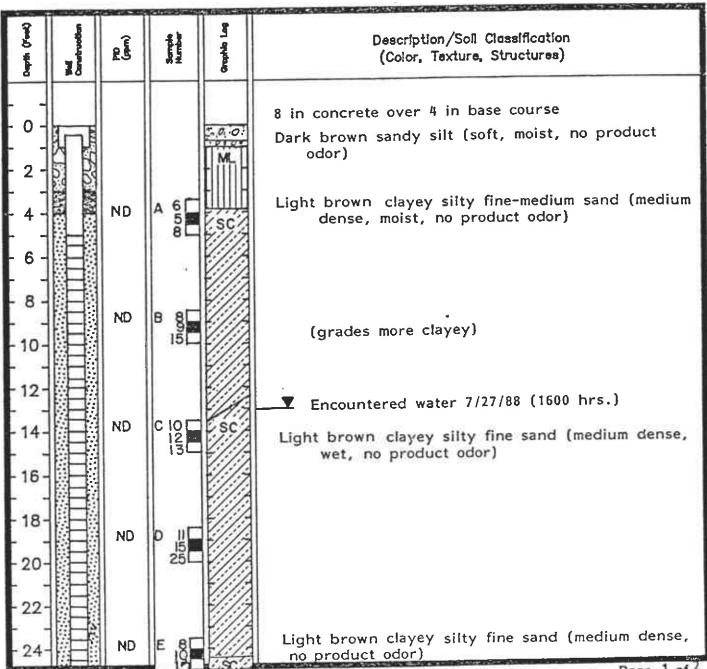


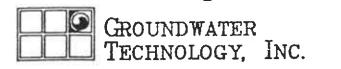


200	2 TO 1 TO 1	10.75			Drilling Log
Dapth (Feet)	Well Censtruction	(made)	Somple Number	Graphio Leg	Description/Soil Classification (Color, Texture, Structures)
-26-				SC	Light brown clayey silty sand (cont'd)
	\Box				
-28-					
-30-			F -i	///	Grey clayey sand (dense, wet, no product odor)
			-C	: SC:	End of boring. Installed monitoring well.
-32-				[]	
-34-				- 4	
- 36-					
-30					
-38-					
40-					
	1				
-42-					
-44-				- 4	
t	1 1				
46	1			F 7	
- 48-					
50				F 1	
- "	1 1			H 4	
-52	1		1		
- 54	1 1				
	1 1				
-56	1			[]	
-58	1 1				
-	1				

GROUNDWATER	
TECHNOLOGY,	INC.

Drilling Log Monitoring Well_ Sketch Map Project Safety Kleen/Oakland Owner Safety Kleen -Project Number 203 680 5016.01 Location Oakland, CA Date Drilled 7/27/88 Total Depth of Hole 30.5 ft Diameter 10.5 in See Site Plan _24-hour__ Slot Size . 010 in 25 ft Screen: Dia. 2 in _Length_.... PVC Casing: Dia. 2 in Length_ 5 ft _Type_ Drilling Method hollow stem auger Drilling Company Sierra Pacific Notes: Log by Kelly A. Kline Driller William Coleman License No. Geologist / Engineer_





Dayth (Year)	Carachustion	e j	H	Graphic Log	Description/Soll Classification (Color, Texture, Structures)
-26-	H			sc	Light brown clayey silty sand (cont'd)
-28-					
-30-	H		F 🗆	SC	Grey clayey sand (loose, wet, no product odor)
-32-				[]	End of boring. Installed monitoring well.
				h 1	
-34					
-36-				+ +	
70				t i	
-38-				[]	
-40-				+	
12				lt j	
				-	
-44-				╟┤	
46-					
-48-				-	
-50-				F 1	
-52-					
- 54-				- 1	
-					
-56-					
-58-					

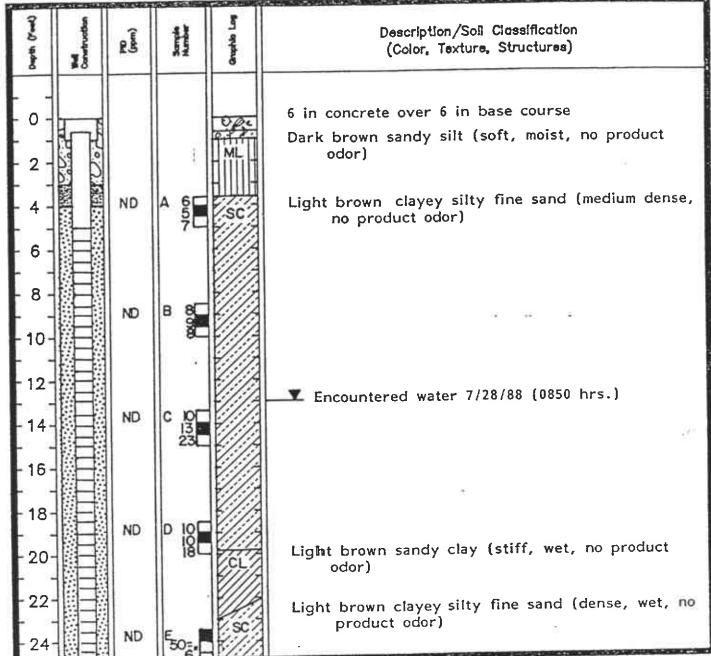
	GROUNDWATER	
	TECHNOLOGY,	INC.

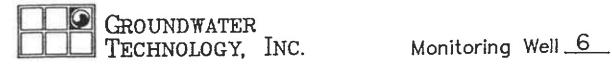
Drilling Log

Project Safety Kleen/Oakland Owner Safety Kleen Project Number 203 5016.01 Oakland, CA Location.... Date Drilled 7/28/88 Total Depth of Hole 30.5 ft Diameter 10.5 in Water Level Initial 13 ft __24-hour__ Surface Elevation. Slot Size 010 in 25 ft 2 in Length... Screen: Dla.__ Type PVC 5 ft 2 in Length__ Cosing: Dia.___ Drilling Company Sierra Pacific Drilling Method Hollow stem augers Log by Kelly A. Kline Driller William Coleman License No. -Geologist / Engineer_

See Site Plan

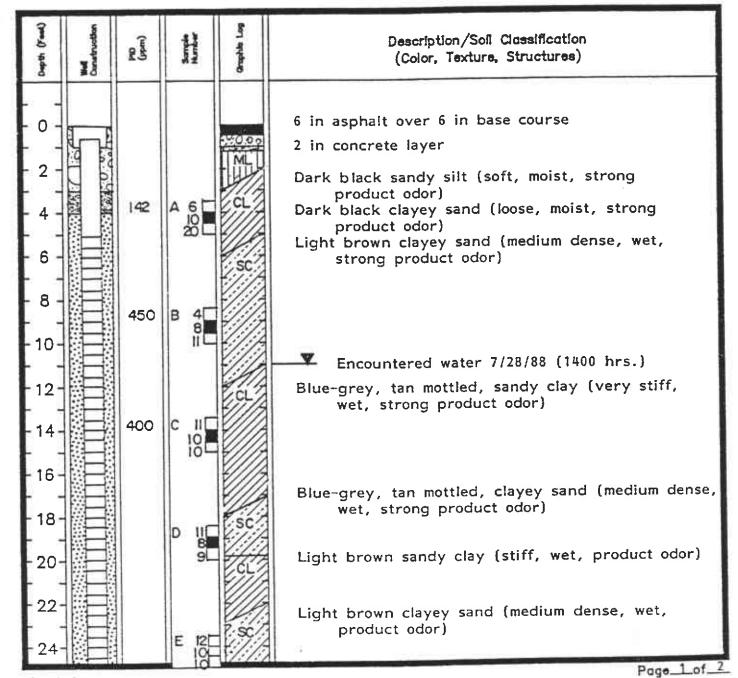
Sketch Map





W-10-350	Q-141		-	na Dany	Drilling Log
Days (Feel)	Yauf Cerustruction	(meter)	Eomple Number	Graphic Lag	Description/Soil Classification (Color, Texture, Structures)
-26-				SC /	Light brown clayey silty fine sand (cont'd)
too					
-28-					
-30-	H	ND	F - 🔳	SC	Grey clayey sand (loose, wet, no product odor)
-32-				+ +	End of boring. Installed monitoring well.
-34-				1	
-36-				- 1	
-38-					:4
40-				[]	
- -42-					
-44-					
- 46-					
-48-				1	
F				-	
-50-				F 7	
-52-					
- 54-					
- 56	1			1	
- 30	1			 	
- 58	1			F. 1	24
the second	11	III.	41	Harris	The second secon

GROUNDWATER	
TECHNOLOGY, INC. Monitoring Well 7	Drilling Log
Project Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
Location Oakland, CA Project Number 203 680 5016.01	
Date Drilled 7/28/88 Total Depth of Hole 30.5 ft Dlameter 10.5 in	See Site Plan
Surface Elevation Water Level Initial 11 ft 24-hour 010 in	
Screen: Dla. 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	Notes:
Driller William Coleman Log by Kelly A. Kline	110.00.
Geologist / Engineer License No.	

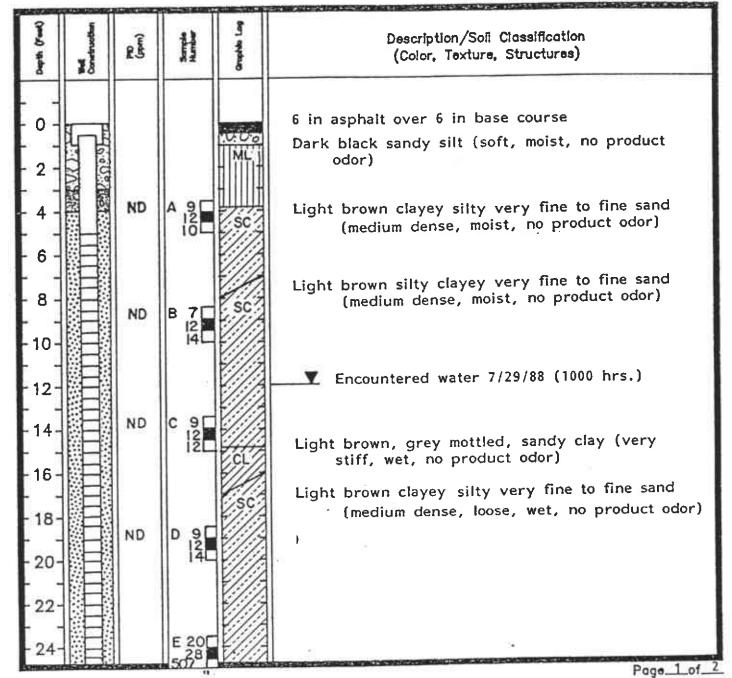




Monitoring Well _________

-	-		-	Drilling Log
Day 51 (Year)	25	H	orate la	Description/Soil Classification (Color, Texture, Structures)
-26-			sc	Light brown clayey silty fine sand (cont'd)
-28-				* *9
-30-			SC.	Grey clayey sand (loose, wet, product odor) End of boring. Installed monitoring well.
-32-				
-34-				
-36-				
-38-			1 1	
-40-				
-42-			1	
-44-				
- 46-				
- 48-			1 1	
-50-				
-52-			1 1	
- 54-			1 1	
- 56-			1 1	
- 58-			1. 1	

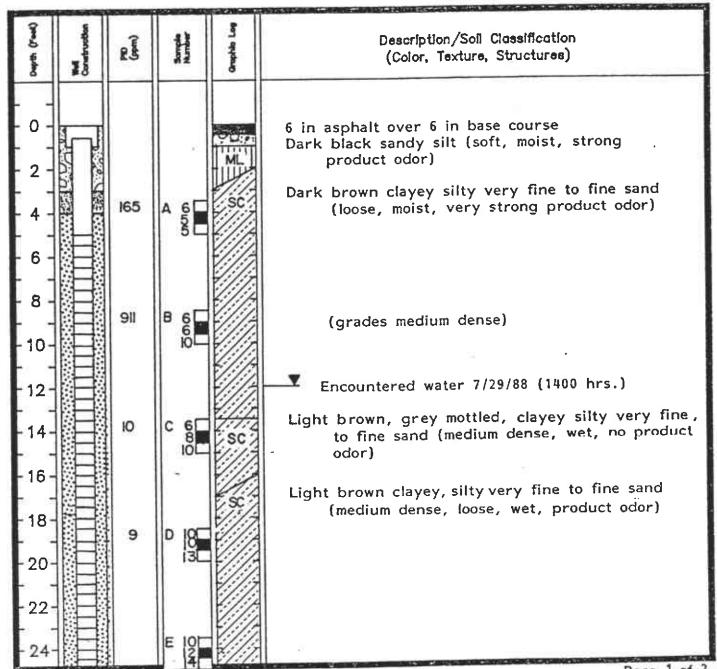
GROUNDWATER	
TECHNOLOGY, INC. Monitoring Well 8	Drilling Log
Broket Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
Location Oakland, CA Project Number 203 680 5016.01 Date Drilled 7/29/88 Total Depth of Hole 30.5 ft Diameter 10.5 in	Con City Dis
Surface Flevation Water Level Initial 12 ft 24-hour	See Site Plan
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	Notes:
Driller William Coleman Log by Kelly A. Kline	140.00.
Geologist / EngineerLicense No	





Dupth (Peed)	Servel Constitution	(meta)	11	Oruptio Leg	Description/Soil Classification (Color, Texture, Structures)
-26-				sc	Light brown silty sand (cont'd)
- 28- -30- -32- -34- -36- -38- -40- -42- -44- -46- -48-	######################################		F 50 C	Sc	Grey clayey sand (dense, wet, no product odor) End of boring. Installed monitoring well.
- -50-					
-52-					
- 54-					
-56- 					
- 33					

GROUNDWATER	
TECHNOLOGY, INC. Monitoring Well 9	Drilling Log
Project Safety Kleen/Oakland Owner Safety Kleen	Sketch Map
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 5 ft Type PVC	See Site Plan
Drilling Company Sierra Pacific Drilling Method hollow stem auger Driller William Coleman Log by Kelly A. Kline	Notes:
Geologist / Engineer License No.	





Part Grad	Ommelvedden	2.5	41	Prophib Lag	Description/Soil Classification (Color, Texture, Structures)
- 26 -				sc	Light brown clayey silty sand (cont'd)
-28-					
-30-	H		F C 50/4"	2500	Grey clayey sand (dense, wet, no product odor)
-32-			30/4"	- 1	End of boring. Installed monitoring well.
 -34-					
-36-				[]	
-38-				- 1	9
- -40-				- 1	
-42-				F]	
-44-				- 1	
- 46-					
-48-				- 1	
50-					
-52-					
- 54-					
-56-					
- 58-				[-]	
				[T	

Page_1_of_2



ļ.,					Drilling Log
Dapth (Feat)	tiel Construction	(mage)	Semple	Oraphic Log	Description/Soil Classification (Color, Texture, Structures)
	3 - B	ND	E 38		Dark yellow-brown, sand with silt (cont'd)
- 26 - - 28 - - 30 -		ND	F IBF 347	-SP	Light olive-gray, fine sand with silt (very dense, saturated, no product odor). End of boring at 30'. Installed monitoring well.
70					
- 32 -			1		
Γ					
-34-					
7.0					
- 36 -					
)					
- 38 -					
[40]					
- 40 -					
- 42 -			1		
[42]					
[11-					
L 44				L _	
- 46 -				_	
L 40.				_	
-48-				L -	:-
L 40.	1			L -	
- 50 -				L -	
	1			L -	
- 52				<u> </u> -	4
				-	
-54	1				
-	4			-	
	1		1		2 . 2



Monitoring	Well	
------------	------	--

		Drining Log
Construction (Feel)	Sample Mumber Amphile Log	Description/Soil Classification (Color, Texture, Structures)
26 - ND	E 21 SP	Dark yellow-brown, fine sand (dense, saturated, no product odor).
28 - ND	F 15 21 34 4	End of boring at 30'. Installed monitoring well.
32 -		
36 - 38 -		
40 - 42 -		
44 -		
48 -		
- 50 - - 52 - 		
- 54 - 		Page 2.of.

Page_1_of_



Monitoring Well 12

					Drilling Log
Dapth (Feet)	Construction	Pro (upm)	Sample	Graphic Lag	Description/Soil Classification (Color, Texture, Structures)
		ND	E 40	SM	Medium brown, fine sand (very dense, saturated, no product odor).
- 26 - - 28 -			F	SM	Medium brown, medium sand (very dense, saturated, no product odor).
-30-		ND	50		End of boring, 30'. Installed monitoring well.
- 32 -				L 1	8
- 34 -				t 1	
-36-				L	
				+ -	
- 38 -					
- 40 -	-				
42-			l		
- 42					
- 44 -	1			F -	
-46	1				
		i		-	
48	1				
-50	4			-	
	-				
- 52				F -	
- 54	-			-	
					Page 2 of 2
MARCH 2	21st, 1989 -	- REV. G			Page 2 of -

Page_1_of_3

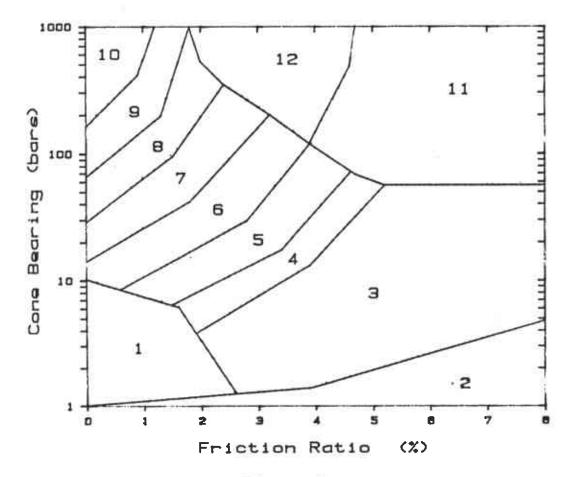


Depth (Feet)	Well Construction	(mode)	Sample	Oraphic Log	Description/Soil Classification (Color, Texture, Structures)						
- 26 - - 28 - - 30 - - 32 -		ND	А	SM SM	Dark yellow-brown, fine sand (medium dense, saturated, no product odor). Medium orange-brown, fine sand (medium dense, saturated, no product odor). Medium brown, silty, find sand (very loose, saturated, no product odor). Dark yellow-brown, fine sand (loose, saturated, no product odor). Pale yellow-brown, fine sand (loose, saturated, no product odor). Pale yellow-brown, fine sand with hematite lamella (medium dense, saturated, no product odor).						
- 34 - - 36 - - 38 - - 40 - - 42 - - 44 - - 46 - - 48 - - 50 - - 52 - - 54 -		ND	В	SP S	Medium gray, fine sand with trace silt (loose, saturated, no product odor). Pale yellow-brown, fine (loose, saturated, no product odor). Dark yellow-brown, fine (loose, saturated, no product odor). (grades denser) Dark yellow-brown, fine sand (loose, saturated, no product odor). Unable to sample below 45 feet due to flowing sands. Installed plug in lead auger to continue drilling.						



Monitoring Well 13

Depth (Feet)	Well Construction	Pith (ppm)	Sample	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
 - 58 - - 60 - - 62 -	MONTH OF THE REAL PROPERTY OF			SP	Gravelly sand (red chert, mafic pebbles 0.5 to 2 cm)
- 64 - - 66 - - 68 - - 70 - - 72 -		ND			Light olive-grey, medium, sandy clay (soft, wet, no product odor). Occurrence was based upon bit rotation speed and penetration resistance. Sample was removed from the bit of the lead auger.
- 74 - - 74 - - 76 -					End of 8" diameter pilot boring at 74 feet. Boring caved to 68 feet. Reemed to 70 feet with 12" dia. augers. Installed monitoring well.
- 78 -					
- 80 - - 82 -					
84				-	
- 86				-	



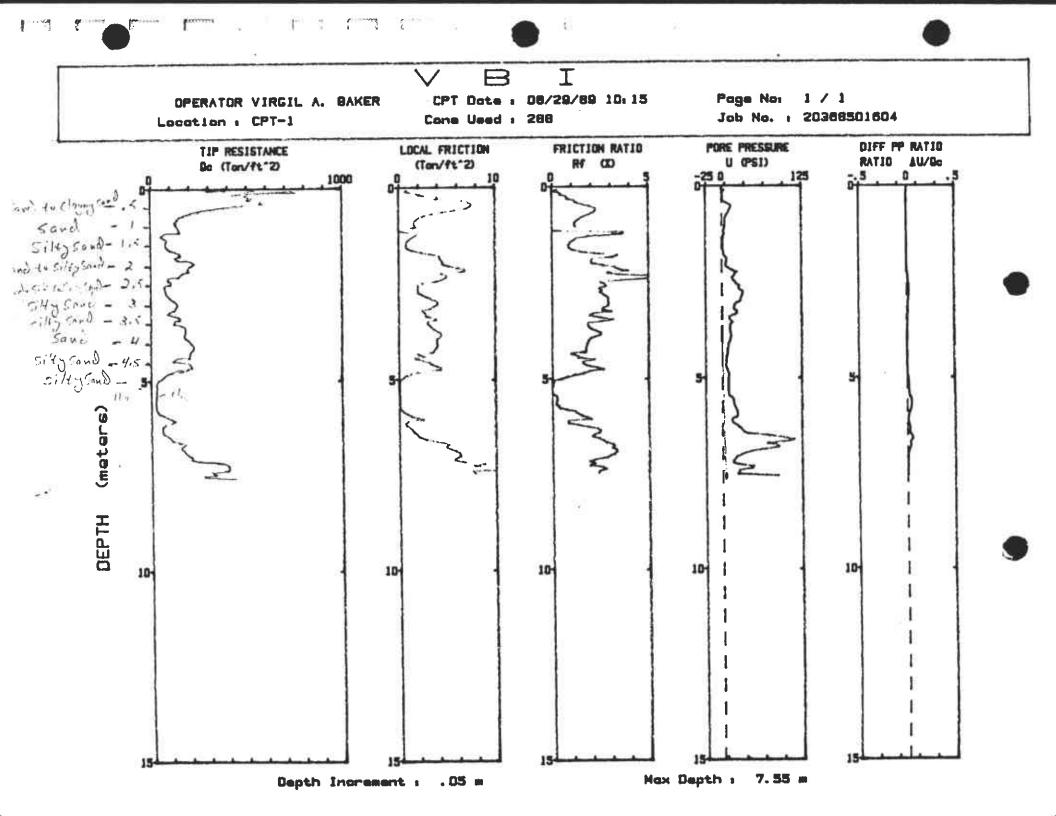
UBC CPT Classification Chart

Zone	Qc/N	Soil Dehaviour Type
1)	2	sensitive fine grained
2)	1	organic material
3)	1	olay
40	1.5	eilty clay to clay
5)	2	clayey silt to silty clay
6)	2. 5	eanely eilt to alayey silt
7)	3	eilty eand to eandy eilt
8)	4	sond to silty sond
9)	5	eand
10)	8	gravelly eand to eand
11)	1	very stiff fine grained (*)
12)	2	sond to clayey sond (+)

(*) everconsolidated or cemented

CPT Date | 11/30/89 10:07 31 Pg 1 / 1 Sounding : Operator : VIRGIL A. BAKER Job No. : 2035805016 Cone Used ii 322 Location : CPT-A INTERPRETED DIFF PP RATIO PORE PRESSURE LOCAL FRICTION TIP RESISTANCE FRICTION RATIO PROFILE AP/Qc (X) Pw (psi) F# (Ton/ft'2) Qc (Ton/ft*2) Fs/9 (X) -15 O 010 15-15-DEPTH 30-30-Max Depth : 24.61 ft Depth Increment: .05 m

Mark the first of the first of



APPENDIX B LABORATORY REPORTS - SOIL

Western Region

(415) 685-7852

4080-C Pike Lane

Concord, CA 94520

(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

Dakland, 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

TEST RESULTS UNITS: mg/kg (ppm)

COMPOUND	1	MDL	1LAB #	1	28550A MW-2A	 	28551A MW-2B	1	28552A MW-2C	1	28553A MW-3A
Bromodichloromethane		0.	. 5	(0.5	(0	.5	· (0.5	(0.5
Bromoform		0.	. 5	(0.5	(2	. 5	(1	0.5	(0.5
Bromomethane		0	.5	(0.5	(2	0.5	(1	0.5	(0.5
Carbon tetrachloride		Ø.	.5	(0.5	(8	0.5	(1	0.5	<	0.5
Chlorobenzene		0	.5	(0.5	⟨€	3.5	(0.5	(0.5
Chloroethane		0	.5	(0.5	(8	9.5	<.	0. 5	(0.5
2-Chloroethylvinyl ether		1	.0	(1.0	()	1.0	(1.0	((1.0
Chloroform		0	.5	(0.5	(8	7.5	(0.5	(0.5
Chloromethane		0	.5	(0. 5	((a. 5	(0.5	((0.5
Dibromochloromethane		0	.5	(0.5	((7.5	(0.5	((0.5
1,2-Dichlorobenzene		0	.5	(0.5	((0. 5	(0.5		(0.5
1,3-Dichlorobenzene		0	.5	(0.5	((ð. 5	₹	0.5		(0.5
1.4-Dichlorobenzene		0	.5	4	(0.5	(1	ð.5	(0.5		(0.5
Dichlorodifluoromethane			.5	4	(0.5	₹(7.5	(0.5		0.7
1,1-Dichloroethane		0	. 5		(0.5	{ 1	ð.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	(1	0.2		0.2		(0.2
trans-1,2-Dichloroethene		0	. 5		(0.5	(1	ð.5	(0.5		(0.5
1,2-Dichloropropane		Q	. 5		(0.5	(0.5	(0.5		(0.5
cis-1,3-Dichloropropene		2	.5		(0.5	(0.5	(0.5		(0.5
trans-1,3-Dichloropropene			.5		(0.5	(0.5	((0.5		(0.5
Methylene chloride		6	.5		(0.5	(0.5	•	(0.5		1.0
1, 1, 2, 2-Tetrachloroethane			.5 -		(0.5	(0. 5	•	(0.5		(0.5
Tetrachloroethene			.5		(0.5	(0. 5	4	(0.5		(0.5
1,1,1-Trichloroethane		e	5.5		(0.5	(0.5		(0.5		(0.5
1,1,2-Trichloroethane			.5		(0.5	(0.5		(0.5		(0.5
Trichloroethene			9.5		(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



Page 2 of 8

Oakland, CA

PROJECT MGR: Steve Fischbein

LOCATION: 404 Market

PROJECT #: 203-680-5016.01-9

Western Region 4080-C Pike Lane

Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

MATRIX:

Soil

TEST RESULTS UNITS: mg/kg (ppm)

COMPOUND	 	MDL		1	28554A MW-3B	1 1	28555A MW-3C	l i	28556A MW-18	} 	28557A MW-1D
Bromodichloromethane		ø.	5	· · · · · · · · · · · · · · · · · · ·	0.5		0. 5		0. 5		0.5
Bromoform		Ø.			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	(ଡ. 5	(0.5		0.5		0.5
2-Chloroethylvinyl ether		1.	Ø	(1.0	•	1.0	(1.0	(1.0
Chloroform		0.	5		0.5		0.5		0.5		0.5
Chloromethane		0.			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		Ø.5		0.5		0.5		0.5
1,4-Dichlorobenzene		Ø.			0.5		0.5		0.5		(0.5
Dichlorodifluoromethane		0.			0.5		0.5		0.5		0.5
1,1-Dichloroethane			. 5		(0.5		(0.5		(0.5		(0.5
1,2-Dichloroethane		0.			(Ø. 5		(0.5		(0.5		(0.5
1,1-Dichloroethene		Ø.	. 2		(0.2		(0.2		(0.2		(0.2
trans-1,2-Dichloroethene		Ø.	. 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		Ø.	. 5		(0.5		(0.5		(0.5		(0.5
trans-1,3-Dichloropropene		Ø.	. 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		9	. 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		(ଡ.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:



Page 3 of 8

Western Region 4080-C Pike Lane

Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

TEST RESULTS

PROJECT MGR: Steve Fischbein

PROJECT #: 203-680-5016.01-9

LOCATION: 404 Market

Dakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	; ;	MDL	ILAB # II.D.#	1	28558A MW-1F	1	28553A MW-4B	1	28560A MW-4C	† 	285616 MW-4D
Bromodichloromethane		0.	5		0.5		7.5		 0.5	·	 0.5
Bromoform		0.	.5		0.5		7. 5		0.5		0.5
Bromomethane		0.	. 5		0.5		7. 5		0.5		0. 5
Carbon tetrachloride		0.	5		0.5	(1	a.5		0.5		0.5
Chlorobenzene		Q.	5	<	0.5	(1	0. 5		0.5		0.5
Chloroethane		0.	5	(0.5		ð.5		0.5		0.5
2-Chloroethylvinyl ether		1.	. @	(1.0	(1.0	(1.0		1.0
Chloreform		0.	. 5	(0.5	(1	0.5	(0.5		0.5
Chloromethane		0.	. 5	(0.5	(1	0.5	(0.5		0.5
Dibromochloromethane		0.	. 5	(0.5	((0.5	(0.5		0.5
1,2-Dichlorobenzene		0.	. 5	(0.5	(1	0.5	(0.5		0.5
1,3-Dichlorobenzene		Ø.	. 5	(0.5	(1	0.5	(0.5		Ø.5
1,4-Dichlorobenzene		Ø.	. 5	(0.5	(1	0.5		0.5		0.5
Dichlorodifluoromethane		0.	. 5	(0.5	(1	0.5	(0.5		0.5
1,1-Dichloroethane		0.	.5		0.5		0.5		0.5		Ø.5
1,2-Dichloroethane		0.	. 5		0.5		0.5		0.5		0.5
1,1-Dichloroethene			. 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			. 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			. 5		0.5		0.5		0.5		(0.5
1,1,1-Trichloroethane			.5		0.5		0.5		0.5		(0.5
1,1,2-Trichloroethane			.5 -		0.5		0.5		0.5		(0.5
Trichloroethene			. 5		0.5		0.5		0.5		(0.5
Vinyl Chloride			. 0		1.0		1.0		11.0		(1.0

MDL = Method Detection Limit.

METHOD:



Page 4 of 8

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

LDCATION: 404 Market

Dakland, CA

MATRIX: Soil

TEST RESULTS UNITS: mg/kg (ppm)

COMPOUND	 	MDL	LAB	 	28562A MW-5A	! 2856: I MW-5!		: 28565A MW-6A
Bromodichloromethane		0.5	 5	(0. 5	(0.5	(0.5	(0.5
Bromoform		0.5	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		0.3	5	(0.5	(0.5	(0.5	(0.5
Chloroethane		0.3		(0.5	(0.5	(0.5	(0.5
2-Chloroethylvinyl ether		1.1	0	(1.0	(1.0	(1.0	(1.0
Chloroform		0.	5	(0.5	(0. 5	(0.5	(0.5
Chloromethane		0.	5	•	เข.5	(0.5	(0.5	(0.5
Dibromochloromethane		0.	5		0.5	(0.5	(0.5	(0.5
1,2-Dichlorobenzene			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	(ข.5	(0.5
1,1-Dichloroethene		0.	2		(0.2	(0.2	(0.2	(0.2
trans-1,2-Dichloroethene		ø.	5		(0.5	(0.5	(0.5	(0.5
1,2-Dichloropropane		0.	5		(ଜ. 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



Page 5 of 8

Western Region 4080-C Pike Lane

Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

TEST RESULTS

PROJECT MGR: Steve Fischbein

PROJECT #: 203-680-5016.01-3

LOCATION: 404 Market
Oakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	i i	MDL	ILAB # II.D.#	1	28566A MW-6B	{ 	28567A MW-6C	t 1	28568A MW-7A	1 1	28569F MW-7B
Bromodichloromethane		Ø. :	 5	(0.5		 10. 5	(1	 0.5		 0.5
Bromoform		0.5	5	(0.5	- (0.5	(1	Ø . 5		0.5
Bromomethane		0.3	5	(0. 5		0.5	(1	0.5		0.5
Carbon tetrachloride		0.3	5	- (0. 5	(0.5	(0.5	<	Ø.5
Chlorobenzene		0.	5	<	0.5	4	0.5	<	0.5	(0.5
Chloroethane		0.3	5	(0.5	•	0.5	(1	0.5	(0. 5
2-Chloroethylvinyl ether		1.1	2	<	1.0	-	(1.0	<	1.0	- ⟨	1.0
Chloroform		0.3	5	(0.5		0.5	<	0.5	(0. 5
Chloromethane		Ø.:	5	(0.5		Ø. 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	1	(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	4	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		Ø.	5	•	0.5		(0.5	(0.5	(0.5
Tetrachloroethene		0.	5	4	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.			(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:



Page 6 of 8

Western Region 4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

TEST RESULTS

III ODISIDE GER

PROJECT MGR: Steve Fischbein PROJECT #: 203-680-5016.01-9

LOCATION: 404 Market

Oakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	!	MDL	ILAB # II.D.#	1	28570A MW-7C	1	28571A MW-7D	1	28572A MW-8A	1	28573A MW-8B
Bromodichloromethane		0.	. 5	(·	0.5		(0.5	(0.5	<u>-</u>	 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			. 0		1.0		(1.0		(1.0		1.0
Ehloroform Characteristics and the control of the characteristics and the characteristics are characteristics and the characteristics and the characteristics and the characte			. 5		Ø.5		(0.5		(0. 5		0.5
Chloromethane			• 5		0.5		(0.5		(0.5		0. 5
Dibromochloromethane			.5		0.5		(0.5		(0.5		0.5
1,2-Dichlorobenzene			.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		9	. 5		0.5		(0.5		(0.5		(0.5
1,2-Dichloroethane			.5		0.5		(0.5		(0.5		(0.5
1,1-Dichloroethene			.2		0.2		(0.2		(0.2		(0.2
trans-1,2-Dichloroethene			. 5		0.5		(0.5		(0.5		(0.5
1,2-Dichloropropane		e	. 5		(0.5		(0.5		(0.5		(0.5
cis-1,3-Dichloropropene			.5		(0.5		(0. 5		(0.5		(0.5
trans-1,3-Dichloropropene		9	. 5		(0.5		(0.5		(0.5		(0.5
Methylene chloride		Q	. 5		(0.5		(0.5		(0.5		(0.5
1, 1, 2, 2-Tetrachloroethane		9	.5		(0.5		(0.5		(0.5		(0.5
Tetrachloroethene		e	. 5		(0.5		(0.5		(0.5		(0.5
1,1,1-Trichloroethane		Q	. 5		(0.5		(0.5		(0.5		(0.5
1, 1, 2-Trichloroethane		(.5 -		(0.5		(0.5		(0.5		(0.5
Trichloroethene		6	.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:



Page 7 of 8

Western Region 4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

TEST RESULTS

PROJECT MGR: Steve Fischbein

PROJECT #: 203-680-5016.01-9 LOCATION: 404 Market

Dakland, EA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	t 1	MDL	ILAB # II.D.#	 	28574A MW-8C	I 285756 I MW-8D	1 28576A I MW-8E	1 28577A 1 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		Ø.	.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.	. Ø	(1.0	(1.0	(1.0	(1.0
Chloroform		Ø.	. 5	(0.5	(0.5	(0.5	(0.5
Chloromethane		Ø.	. 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 č
1,4-Dichlorobenzene		Ø.	. 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	(ଡ.5	(0.5
1,1-Dichloroethene		Ø	.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		Ø	.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		9	.5		(0.5	(0.5	(0.5	(0.5
1, 1, 2-Trichloroethane		0	.5 .		(0.5	(0.5	(0.5	(0.5
Trichloroethene		6	. 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:



Page 8 of 8

Western Region 4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

TEST RESULTS

PROJECT MGR: Steve Fischbein

PROJECT #: 203-680-5016.01-9

LOCATION: 404 Market

Dakland, CA

MATRIX: Soil

UNITS: mg/kg (ppm)

COMPOUND	f l	MDL	ILAB # II.D.#	1 1	28578A MW-9B	1	28579A MW-9C	 	28580A MW-9D	!	28581A MW-9E
Bromodichloromethane		Ø.	. 5	(0.5	(0.5	 }	 0. 5		 0.5
Bromoform		0.	. 5		0.5		0.5		0.5 0.5		0.5 0.5
Bromomethane		0.	.5		0.5		0.5		0.5		0.5
Carbon tetrachloride			. 5		0.5		0.5		0.5		0.5 0.5
Chlorobenzene		0.	. 5		3. 1		0.5		0.5		0.5
Chloroethane			5		0.5		0.5		Ø. 5		0.5
2-Chloroethylvinyl ether		1.	. 0		1.0		1.0		1.0		1.0
Chloroform			. 5		0.5		0.5		0.5		0.5
Chloromethane		Ø,	. 5		0.5		0.5		0.5		0.5
Dibromochloromethane		0.	. 5		0.5		0.5		0.5		0.5
1,2-Dichlorobenzene			.5		0.5		0.5		0.5		0.5
1,3-Dichlorobenzene			.5		0.5		0.5		0.5		0.5
1,4-Dichlorobenzene			.5		0.5		0.5		0.5		0.5
Dichlorodifluoromethane			. 5		0.5		0.5		0.5		Ø. 5
1,1-Dichloroethane			.5		0.5		0.5		0.5		0.5
1,2-Dichloroethane			.5		0.5		0.5		0.5		0.5
1,1-Dichloroethene			. 2		0.2		0.2		0.2		0.2
trans-1,2-Dichloroethene			.5		1.3		0.5		0.5		0.5
1,2-Dichloropropane			.5		0.5		0.5		0.5		0.5
cis-1,3-Dichloropropene			.5		0.5		0.5		0.5		0.5
trans-1,3-Dichloropropene			. 5		0.5		0.5		0.5		0.5
Methylene chloride			.5		0.5		0.5		0.5		0.5
1, 1, 2, 2-Tetrachloroethane			.5		0.5		0.5		0.5		0.5
Tetrachloroethene			.5		1.7		0.5		0.5		0.5
1, 1, 1-Trichloroethane			.5		3.7		0.5		0.5		0.5
1,1,2-Trichloroethane			.5 -		Ø.5		0.5		0.5		0.5
Trichloroethene			.5				(0.5		0.5		(0.5
Vinyl Chloride			.0		1.0		1.0		1.0		11.0

MDL = Method Detection Limit.

METHOD:

EPA Method 8010

Safy Khalifa/EM7



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 Page 1 of 7

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

Dakland, CA

SAMPLED: 07/25, 25, 27, 28, 29/88

BY: K. Kline

RECEIVED: 08/03/88

BY: K. Filling

ANALYZED: 08/11/88

BY: E. Popek

MATRIX: Soil

TEST RESULTS UNITS:

mg/kg (ppm)

	ŀ	MDL	ILAB #	1	28550B	1	28551B	Ì	28552B	ļ	28553B	1	28554B
COMPOUNDS	1		11.D.#	l	MN-58	I	MW-2B	1	WM-5C	ŀ	AE-WM	I	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:



Western Region 4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 2 of 7

CLIENT: Steve Fischbein
PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX:

Soil

TEST RESULTS

UNITS: mg/kg (ppm)

COMPOUNDS	 	MDL	ILAB # !I.D.#	1	28555B MW-3C	} 	28556B MW-1B	i t	28557B MW-1D	1	28558B MW-1F	1	28559B MW-4B	1
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:



Western Region 4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 3 of 7

CLIENT:

Steve Fischbein

PRDJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX:

Soil

TEST RESULTS

UNITS:

mg/kg (ppm)

COMPOUNDS	1	MDL	ILAB #	1	28560B MW-4C	1	28561B MW-4D	l i	285629 MW-5A	1	28563B MW-5B	 	28564B MW-5C	Ī
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:



Western Region

4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 4 of 7

CLIENT:

Steve Fischbein PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX: UNITS:

Soi1

TEST RESULTS

mg/kg (ppm)

COMPOUNDS	! !	MDL	ILAB #	l I	28565B MW-6A	1 1	28566B MW-6B	1	28567B MW-6C	1	28568B MW-7A	i I	28569B MW-7B	1
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:



Western Region 4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California Page 5 of 7

CLIENT:

Steve Fischbein PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX:

Soil

TEST RESULTS

UNITS: mg/kg (ppm)

COMPOUNDS	} 	MDL	ILAB # 1I.D.#	 	28570B MW-7C		28571B MW-7D	1		1	28573B MW-8B	\$ 	28574B MW-8C	1
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:



Western Region 4080-C Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from Inside California (800) 423-7143 from outside California Page 6 of 7

CLIENT: Steve Fischbein

PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX:

Soil

TEST RESULTS UNITS:

mg/kg (ppm)

COMPOUNDS	1	MDL	ILAB # II.D.#	1	28575B MW-8D	i	28576B MW-8E	 	28577B MW-9A	I I	28578B MW-9B	1	28579B MW-9C	1
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:



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 Page 7 of 7

CLIENT: Steve Fischbein

PROJECT#: 203-680-5016.01-10

LOCATION: 404 Market

Dakland, CA

MATRIX:

Soil

TEST RESULTS

UNITS:

mg/kg (ppm)

								''				
· · · · · · · · · · · · · · · · · · ·	1	MDL	ILAB	#	ı	28580B	ī	28581B	ı		 	
COMPOUNDS	I		II.D.	. #	- 1	MM-3D	1	MW-9E	ŧ	•		
											 	
Total Petroleum												
Hydrocarbons as		10				(10		25				
Mineral Spirits												

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

Northwest Region

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

(800) 544-3422 from inside California (800) 423-7143 from outside California

LABORATORIES, INC.

08/28/89 Jp

Page 1 of 2

WORK DRD#: C908481

CLIENT: ED PROKOP

GROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.04-3

LOCATION: DAKLAND, CA

SAMPLED: 08/18/89

BY: C. ROBERTSON

RECEIVED: 08/21/89

ANALYZED: 08/23/89

BY: C. MANUEL

MATRIX:

SOIL

UNITS:

ug/L (ppb)

PARAMETER	I MDL	ISAMPLE # I	01 MW12A	02 MW12B	03 MW11A	04 MW10A
0.1			<0.5	(0.5	(0.5	
Chloromethane	0.5		(0.5	⟨∅.5	(0.5	(0.5
Bromomethane	0.5		(0.5	(0.5	(0.5	(0.5
Dichlorodifluoromethane	0.5		(1	(1	(1	\(\frac{1}{1}\)
Vinyl chloride	1		(0.5	(0.5	(0.5	(0.5
Chloroethane	0. 5			(0.5	(0.5	(0.5
Methylene chloride	0.5		(0.5		(0.5	(0.5
Trichlorofluoromethane	0.5		(0.5	(0.5	(0.3	(0.2
1,1-Dichloroethene	0. 2		(0.2	(0.2		\e.c ⟨0.5
1,1-Dichloroethane	0. 5		(0.5	(0.5	(0.5	(0.5
trans-1,2-Dichloroethere	0. 5		(0.5	(0.5	(0.5	
Chloroform	0. 5		(0.5	(0.5	(0.5	(0.5 (0.5
1,2-Dichloroethane	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
trans-1,3-Dichloropropene	0.5		(0. 5	(0.5	(0.5	(0.5
Trichloroethene	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	⟨∅.5	(0.5
cis-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
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
Chlorobenzene	0. 5		(0.5	(0.5	(0.5	⟨₽. 5

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



Page 1 of 2 **Continued**

Northwest Region 4080 Pike Lane Concord. CA 94520 (415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

WORK ORD#: C908481

CLIENT: ED PROKOP

PROJECT#: 203-680-5016.04-3

LOCATION: DAKLAND, CA

MATRIX:

SOIL

UNITS:

ug/L (ppb)

PARAMETER		MDL	ISAMPLE #	1	01 MW12A	1	02 MW12B	 	03 MW11A	1	04 MW10A	 -
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5		(0.5 (0.5 (0.5		(0.5 (0.5 (0.5	5	(0.5 (0.5 (0.5	

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



Page 2 of 2

Northwest Region

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

WORK DRD#: C908481

CLIENT: ED PROKOP

PROJECT#: 203-680-5016.04-3

LOCATION: OAKLAND, CA

MATRIX: SOIL

UNITS: ug/L (ppb)

	! MDL	ISAMPLE # 1	05 MW10B	1 06 1 MW10C	l i	} 1	
Parameter 	1 			1 MAIOC			
Chloromethane	0.5		(0.5	(0.5			
Bromomethane	0. 5		(0.5	(0.5	į.		
Dichlorodifluoromethane	0.5		(0.5	(0.5			
Vinyl chloride	1		₹1	{1			
Chloroethane	0.5		(0.5	(0.5			
Methylene chloride	0. 5		(0.5	(0.5			
Trichlorofluoromethane	0. 5		⟨0.5	(0.5			
1.1-Dichloroethene	0. 2		(0.2	(0.2			
1,1-Dichloroethane	0.5		(0.5	(0.5			
trans-1,2-Dichloroethene	0.5		(0.5	(0.5			
Chloroform	0.5		(0.5	(0.5			
1,2-Dichloroethane	0. 5		(0.5	(0.5			
1, 1, 1-Trichloroethane	0. 5		(0.5	(0.5			
Carbon tetrachloride	0.5		⟨Ø.5	(0.5			
Bromodichloromethane	0. 5		(0.5	(0.5			
1.2-Dichloropropane	0.5		(0.5	(0.5			
trans-1,3-Dichloropropene	0.5		(0.5	⟨∅. ;			
Trichloroethere	0.5		(0.5	(0.5			
Dibromochloromethane	0.5		(0.5				
1,1,2-Trichloroethane	0.5		(0.5				
cis-1,3-Dichloropropene	0. 5		(0.5	(0.			
2-Chloroethylvinyl ether	1		(1	()			
Promoform	0.5		(0.5				
1, 1, 2, 2-Tetrachloroethane	0.5		(0.5				
Tetrachloroethene	0.5		(0.5				
Chlorobenzene	0.5		(0.5	⟨∅.;	5		

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



Page 2 of 2 Continued

Northwest Region

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

WORK DRD#: C908481

CLIENT: ED PROKOP

PROJECT#: 203-680-5016.04-3

LOCATION: OAKLAND, CA

MATRIX:

SOIL

UNITS:

ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #		05 MW10B	1	06 MW10C	1	1	1
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5		(0.5 (0.5 (0.5			

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

METHOD: EPA 601

EMMA P. POPEK, Laboratory Director



Northwest Region

4080 Pike Lane Concord. CA 94520 (415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

10

LABORATORIES, INC.

98/88/89 Jp Page 1 of 2

MORK ORD#: C908482

CLIENT: ED PROKOP

GROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94529

PROJECT#: 203-680-5016.04-4

LOCATION: OAKLAND, CA

SAMPLED: 08/18/89

BY:

C. ROBERTSON

RECEIVED: 68/21/89

ANALYZED: 68/22/89

D. VLAHOGIANI

MATRIX:

Soil

UNITS:

mg/Kg (ppm)

 -	1	MDL	ISAMPLE #	1	61	i	8 2	ı	9 3	ŧ	9 4	1	0 5	ı
PARAMETER	1		11.D.	ı	MW12A	1	MW12B	ı	MW11A	1	MW18A	1	MN10B	

Total Petroleum Hydrocarbons as Mineral **S**pirits

(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 8015



Northwest Region 4080 Pike Lane Concord. CA 94520 (415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

10

Page 2 of 2

WORK ORD#: C908482

CLIENT:

ED PROKOP

PROJECT*:

203-680-5016.04-4

LOCATION: DAKLAND, CA

MATRIX:

Soil

UNITS:

wg/Kg (ppm)

										
	1	MDL	ISAMPLE	# 1	0 6	ł	1	1	1	į.
PARAMETER	1		II.D.	Ì	MW10C	1	1	1	i	ı

Total Petroleum Hydrocarbons as Mineral Spirits

(10

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

METHOD: Modified EPA 8015

_	_		
		O TL L	
-		ENVIRONMENTAL	
		LABORATORIES, INC.	

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

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

CHAIN-OF-CUSTODY RECORD AND ANALYSIS QUEST



Project Manager:						Р	hon	θ#:		·							AN	AL	.YS	315	RE	QU	ES	r			. }	έ\ i		ÖTHE	ĽĦ	1	48 1A1	ECI	AL ING
Address:	Nop	<u> </u>				F	AX :	#:		<u>, , , , , , , , , , , , , , , , , , , </u>					15)															2 2016					CLFY) ENTS
Project Number: 203680	15016	0	4			54	ح}	<u>.t.</u>		lee					BTEX/TPH as Gasoline (602/8020/8015)	<u>6</u>	Ŕ		ons (418.1	EPA 601/8010							tale			Mindra Spirts		2	4 days)		SPECIAL (FCTION LIMITS (SPECIFY) SPECIAL REPORTING REQUIREMENTS
Project Location:	and				6	9.5 1.0	amy	oler //	Sign	eture:		<u>ر</u> ر			soline (60	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	e (413.2)	ydrocart				EPA 608/8080-PCES UNIV			<u>.</u>	Notal Metal	738.2)		11,000		See Edition	EXPEDITED SERVICE (2-4 days)		CTION LI
Sample	Lab #	INERS	mount	N	latı				leth ese	od ved	s	Samp	ling	02/8020)	H as Ga	Diesel (80	Jethoel (8	Total Oil & Grease (413.2)	Tolera	0108/	2/8020	3/8080	8/8080-P	5/8270	CAM - 17 Metais	EPTOX - 8 Metals	EPA - Priority Polluta	LEAD(7420/7421/239.2)		र ।				VERBALS/FAX	THE TO
ID	(Lab use only	# CONTAINERS	Volume/A	S S	AIR	SLUDGE	OTHER	달	E SO	NONE		OATE	TIME	BTEX (602/8020)	втехл	TPH as (TPH 88	Total	Total Pe	EPA 60	EPA 602/8020	EPA 608/8080	EPA 608/8080	EPA 625/8270	CAM-	EPTOX	EPA - F	LEAD(7		HAT	177		FXPEC	VERB	SPECI
MWIZA				K	-				X		8	140	0853										-	\downarrow	╽-	_		_	\downarrow	+		4	-	-	
14W12B									Z		_	1	0911	<u> </u>			\perp			X	4_		_	╁-	-	L	Ш		4	4-	 	╁	+	+	
MWIZC									X		<u> </u>	-11	09Z7	1		_		-	- -	_	-		_	+	+				+	+	+K	}		╁	
MWIZD								_	X		<u> </u>		0949	1			 .	\bot	4	-\	\vdash		\dashv	+	+			-			1-6	Ł	+	+-	
MNIZE							_				1		1000	1		_	\vdash	-	+	k	╁-	\vdash	\dashv	-		╀		_	╌┝	+	+	╀	- -	╁	
MWIIA					-			\dashv	<u> </u>		\perp	1	1120	╁	-	<u> </u>		+	-	~	╄	┝┥	_	+	+	-		\vdash	+	++	+	╁	+	+-	1
MWIB				'	<u> </u>				以	- -	\downarrow	_	1133	<u> </u>	ļ	╢					╁~	$\left \cdot \right $	_		+	+	-	┝┼	+		 K	X	-	╁	
MWILL					_	\sqcup		\vdash	_X	┧- -	- -		1139	-1-	-	ļ	┞╌┼	+	+	+	-			+	╌	-	_		+		+ 1	长	_	+	
MWILD			1	4	_			$\left \cdot \right $	_ <u> X</u>	}	╀-		1145		-	-	-	╬	+	╁	+	$\left\{ \cdot \right\}$	+	+	╬	╫	_		╅	-	+5	オ	+	╁	
MWILE		_	11		.	-	_	\sqcup	_X	++			1155		╂—	╁	\vdash	╬	+		╁	H	\dashv	╁		╁	\vdash		-+		1	t	-	\dagger	
MWILF		_	\perp				L_		_ >			<u> </u>	1210	<u>'</u>		1_	<u> </u>				<u> </u>	rks	L •				ــــــــــــــــــــــــــــــــــــــ	lL	_1.			У.		L	.11
Relinquished	y :		p:	ațe		me		R	lecei	ved b	y:									ne	ma	IKS	•												
Can The		4	94	39	0	90	27												_																
Relinquished			D	ate	Ti	me	•	F	Recei	ved b	y:			-																					
Relinquishe	d by		D	ate		me	· -		lece V		y L	abora)	atory:			4	•	١			Sec.	ار_													



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

800-544-3422 (In CA) 800-423-7 143 (Outside CA)

CHAIN-OF-CUSTODY RECORD	AND	ANALYSIS	F	UEST
-------------------------	-----	----------	---	------

Project Manager:		5		.— .			Pho	ne i	¥:									Al	A	LYS	SIS	RE	EQI	JE:	ST				:	İ		i Ö	TH	EĦ		H	3PI	CI DL	AL	
Address:	•						FAX									15)															- 1	T Sake							ECIFY)	25
Project Number: こりう (180 50	16	,	0	94		Proj	ect 7 <i>0</i>	Nan	10;	1	1	e ei	7		BTEX/TPH as Gasoline (602/8020/8015)	,O	Ŕ		Total Oil & Grease (413.2) Total Petroleum Hydrocarbons (418.1)									4			Mineral Spirits				(24 hg)	4 days)	• .	TECTION LIMITS (SPECIFY)	1
Project Location:		,	, , ,				San	nple	r Sk	natí	Jre:					soline (60	TPH as Diesel (8015 or 8270)	TPH as Jettuel (8015 or 8270)	Total Off & Grease (413.1)	(413.2) Hwdacarb				EPA 608/8080-PCBs Only				\$	EPA - Priority Pollutant Metals	1/239.2)		INECA			!	PRIORITY ONE SERVICE (24 hr)	HVICE (2	VERBALS/FAX	CTION L	2
Sample	Lab #	INERS	mount		Ma			F	Me			s	amp	ling	BTEX (602/8020)	7Hass Ge	Diesel (8	Jetfuel (8	S Crea	S Greek	0108/1	8088	3/8080	8/8080-P	4/8240	5/8270	CAM - 17 Metals	EPTOX - 8 Metals	norty Po	LEAD(7420/7421/239.2)	IIC LEA	A S. P.				E E	TED S			
ID	(Lab use) only	# CONTAINERS	Volume/Amount	WATER	2 B	SLUDGE	OTHER	도	R S R		OTHER		DATE	TIME	BTEX (6	втехля	TPH as I	TPH as	To E	Total F	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 60	EPA 624/8240	EPA 625/8270	CAM-	EPTOX	EPA - P	LEAD(7	8 €	10H as M.			17.0	POG.	EXPED	VER8	SPECIAL D	ያ አ
MW ID A				,	1							8	,,	1335						1	$\langle \rangle$				<u> </u>		-					X			+		-			-
MW TO A MWTO B MWTO E MWTO E		\perp		_	\coprod	-	_	-	\square	_	+	-		<u> </u>		_	_	╌╂	-+	+	K	-	+	-	-	-	-	$\left \cdot \right $		+	-	त्री	\dashv	+	\downarrow	オ╌				1
nuloc		-			\vdash	+	 -	╀	╁╌┧	+	-	-	$\left\{ -\right\}$	<u> 1355</u> 14100	1	 -	┢		\dashv		4	+	+		\vdash	 	 					``	十	1	X	1				
MWIOD		-	+	\dashv	╁┼	╫	┼-	╁	$\left \cdot \right $	\dashv	-	╁	┨	1410	,	-	-	H	7	\top	\dagger	+-	1				T					\dashv			X	1				
MW10 =		+	╁╌╁	-	1	十	╁	╁		十	+	↸		1425	1-	T	T		7	1	1																			_
MWIOF		+	+			+	╁	†	$\dagger \exists$	\dashv		T	¥	<u> </u>	1				1																	_	<u> </u>	_	Ц	_
MWHF		上			_		士				1	丰		12:16									<u> </u>	_	_		-	_					_	_	+	1	\vdash	-	•	L
72 44 1		十				+	T	T															_	<u> </u>	<u> </u>	L	<u> </u>	_					_	-	-	1	╁	<u> </u>		_
	<u> </u>																			_	_	4	_	$oldsymbol{\perp}$	1	-	╽-		_				-	-	-	╀	1	 	\dashv	
												L	<u> </u>	<u> </u>	上	_	<u> </u>			4				Щ,		_	<u> </u>	<u> </u>							\perp		Ь.	<u> </u>		
Relinquished	94/			1	T	ime	,,,,	,	Rec	eive	ed by	/ :									Re	ma	arks	s:																
May Per	(h.)		8/2	49	1	09	\mathcal{O}_I	4												_																				
Refinquished	by		D	ate	 	ime	•		Red	eive	ed by	y: 				•																								
Relinquished	l by	1	D	ate	1	ime		T						atory:								_																		
		1		1	Ì		٠,	1	1	ij		(ر"	ز (_	į				∤	,																	-		



Northwest Region

4080 Pike Lane Concord. CA 94520 (415) 685-7852 (800) 544-3422 from inside

(800) 544-3422 from inside California (800) 423-7143 from outside California

09/25/89 jp Page 1 of 1

WORK DRD#: C909481

CLIENT: ED PROKOP

GROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.04-11 LOCATION: 404 MARKET STREET

SAMPLED: 09/11/89

BY: C. ROBERTSON

RECEIVED: 09/20/89

ANALYZED: 89/21/89

BY: R. CONDIT

MATRIX:

Soil

UNITS: mg/Kg (ppm)

	I MDL	ISAMPLE # 01	1 02	1	
PARAMETER	<u> </u>	I.D.	9 MW 13-B	<u> </u>	
Chloromethane	0. 5	⟨७. ;			
Bromomethane	0.5	(0.			
Dichlorodifluoromethane	0. 5	(0.			
Vinyl chloride	1	(
Chloroethane	6. 5	⟨∅₋;			
Methylene chloride	0. 5	⟨∅. ⅓			
Trichlorofluoromethane	0. 5	⟨∅. 9			
1, 1-Dichloroethene	0. 2	⟨∅.			
1,1-Dichloroethane	8.5	(0.			
trans-1,2-Dichloroethene	6. 5	(0.			
Chloroform	0. 5	⟨₽.			
1,2-Dichloroethane	0.5	⟨0.	5 (8. 5		
1, 1, 1-Trichloroethane	6. 5	(0.	5 (0.5		
Carbon tetrachloride	6. 5	⟨€.	5 (0.5		
Bromodichloromethane	0.5	⟨0.	5 (0.5		
1,2-Dichloropropane	0.5	(0.	5 (0.5	i	
trans-1,3-Dichloropropene	0. 5	⟨∅。	5 (8.5		
Trichloroethene	0.5	⟨७.	5 (0.5		
Dibromochloromethane	0.5	(0.	5 (0.5	i	
1,1,2-Trichloroethane	0.5	⟨७.	5 (0.5	i	
cis-1,3-Dichloropropene	0.5	⟨७.	5 (0.5	i	
2-Chloroethylvinyl ether	1	•	(1 (1		
Bromoform	8. 5	(0.	5 (0.5	5	
1,1,2,2-Tetrachloroethane	0. 5	⟨∅.	5 (0.5	5	
Tetrachloroethene	6. 5	(0.	5 (0.5	5	
Chlorobenzene	0. 5	⟨₺.	5 (0.5	5	

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



Page 1 of 1 Continued

Northwest Region

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

MORK DRD#: C909481

CLIENT: ED PROKOP

PROJECT#: 203-680-5016.04-11 LOCATION: 404 MARKET STREET

MATRIX: Soil

UNITS: mg/Kg (ppm)

ISAMPLE # 1 **0**1 82 MDL 1 | MW 13-A | MW 13-B | HI.D. PARAMETER Į (0.5 (0.5 1,3-Dichlorobenzene 0.5 (0.5 (0.5 1,2-Dichlorobenzene 0.5 (0.5 (0.5 8.5 1,4-Dichlorobenzene

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

METHOD: EPA 8010

EMMA P. POPEK, Laboratory Director



Northwest Region

4080 Pike Lane Concord. CA 94520 (415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

99/25/89 Jp Page 1 of 1

WORK ORD#: C909482

CLIENT: ED PROKOP

BROUNDWATER TECHNOLOGY, INC

4886-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.04-12 LOCATION: 404 MARKET STREET

SAMPLED: 89/11/89

BY: C. ROBERTSON

RECEIVED: 09/20/89

ANALYZED: 09/21/89

BY: C. Manuel

MATRIX:

Soil

UNITS:

mg/Kg (ppm)

								•)	1
	- 1	MIDL	ISAMPLE #	ł	8 1	ı	0 2	Į.	•			
PARAMETER	i				MW 13-A	IM	₩ 13-B	1		ı	i	1
, , ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	•											

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 8015

EMMA P. POPEK, Laboratory Director



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

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

	•				1
	CHAIN OF CURTODY	RECORD AND	ANALY	SIS REMU	EST
20					

Project Manager:	<u></u>				•	P	hon	e #	:								A	ΗA	LY	SIS	R	EQ	UE	ST			<u>_</u>	>	\		0	TH	ER		H	AN	DL	AL INC	3
Ed (70) Address:	<i>Φρ</i>				٠	F	AX	#;	_				-		15)																77		7					ECIFY	ENTS
Project Number: 203 62 Project Location: 4041	30501	6	C	94			Fe Sam	y P	Van K	ee matt	o - (2. KL	nal		BTEX/TPH as Gasoline (602/8020/8015)	8270)	r 8270)	3.1)	Total Oil & Grease (413.2)	Carbons (+10.			Chris					it Metals	2)	,	MINERALLOT	•			PRIORITY ONE SERVICE (24 hd)	EXPEDITED SERVICE (2-4 days)	•	SPECIAL DETECTION LIMITS (SPECIFY)	RTING REQUIREMENTS
404N	lar Ket	2	<u> </u>			<u></u>	1			12		<u>> </u>			soline	715 or	0150	8 (41	4	5			8					Mutan	1/239.	إ	¥ Y				S. S.	HVIC		욁	E
Sample	Lab #	NERS	mount	N	лан	fix	0		IAIC	tho erv	•	Sam	pling	32/8020)	Has Ga	iesel (80	ettuel (8	& Greas	& Greas	TOPOUT AD10		78080	EPA 608/8080-PCBs Only	1/8240	5/8270	7 Metals	- 8 Meta	riority Po	LEAD(7420/7421/239.2)	5 E	95				TY ONE	TTED SE	VERBALS/FAX	L DETE	H H
ID	(Lab use only	# CONTAINERS	Volume/Amount	SOL EN	AIR	SLUDGE	OTHER		HNOs		OTHER	OATE	TIME	BTEX (602/8020)	втехть	TPH as Diesel (8015 or 8270)	TPH as Jetfuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Q	EDA 601/2010	EPA 602/8020	EPA 608/8080	EPA 60	EPA 624/8240	EPA 625/8270	JCAM-1	FPTOX - 8 Metals	d-Vd⊉ ∤	(EAD(7		TPH				PRIOR	EXPED	VERBA	SPECI	SPECIAL R
MW13A MW13B	01	1		X	/ }					X		9/1/8°		-				_	+	5	<u>{</u>	-	-		-		7			{	X	+	+	+	-				_
WM13R	02	1	-	\ <u>\</u>	4	-				Χ -	+-			+	 				\dashv	f	3				E		7	Ś			1			1					_
	<u> </u>	-	-	\dagger	+																			<u> </u>	1	1	7	_		_	_	\dashv	_		-		-		
												ļ	ļ	<u> </u>	ļ	<u> </u>			\dashv	_	\downarrow		-	-	-				-	_	_	+	+	-	╁┈	-	-		
				_	_	-				\dashv		ļ		+	-	├-			\dashv	\dashv	+	+	┼-	├	├	-		-		\dashv		+	+	+	╁	-	-		
		_	1		+	-	_				+		-	-	-	╀╌				-	╁		+	\vdash	-	╁	-	┢	\Box		\vdash	+	+		1	 	T		
		+	+-+	-	+	╀	 -	┝	-	\vdash	+	 -	 	╁	╁╌	┼	\vdash			_	+	+	+	-	┪														_
			+	\dashv	╁		 	╁	-			1	 	1		T																			_	1	_		_
		\dashv			+	+-	╁	T	\top		1														_	L											<u>L</u> .		L
Relinquished	by:	+	D	ate		me			Rec	eive	ed by	/ :								Re	em	ark	s:																
Thate	<u></u>		9/2	49	1/:	5:19	5												-																				
Relinquished			D	ate	Ti 	me			Red	ceiv	ed by	y: 																											
Relinquished	by		o 	ate	_	ime 3:1		1	Red	1	ed b	y Labo	ratory:	Qi	1/	۲ (<u> </u>)					<u></u>						اجسبني								



LETTER OF TRANSMITTAL

DATE: July 20,	1988	ENGEO E	PROJECT	. NO	L0004
					
TO:	Ground-Water Te	chnology			•
	4080 Pike Lane				-
	Concord, CA 945	20			•
					•
ATTENTION:	Mr. Steve Fisch	bein		_	-
SUBJECT:	Laboratory Test	ing			•
TRANSMITTED HE	REWITH: Grain si	ze analy	sis fo	r you	sample.
	<u> </u>				
REMARKS: It wa	as a pleasure pro	oviding l	aborat	ory to	esting services
	is project. If v		of fu	rtner	assistance,
please feel f	ree to contact us	3		<u></u>	
		<u>. </u>			
					
ENGEO INCORPOR	ATED				
	1 1				
BY: Eric Harre	11 751		-		THEODIATION
COPIES:			[X]	FOR Y	YOUR INFORMATION
				FOR 3	YOUR REVIEW
				RETU	RNING
		•			ES AT YOUR REQUEST
				COPI	ES AT TOOK KEEPER

SIEVE ANALYSIS

NB-2564-M2

JDB NAME: Saftey Kleen

SAMPLE ND: 1

DESCRIPTION: Dark grayish brown fine Sand with clay

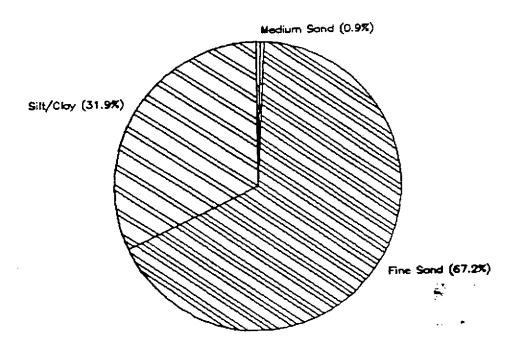
PREWASH NET WT 34.09

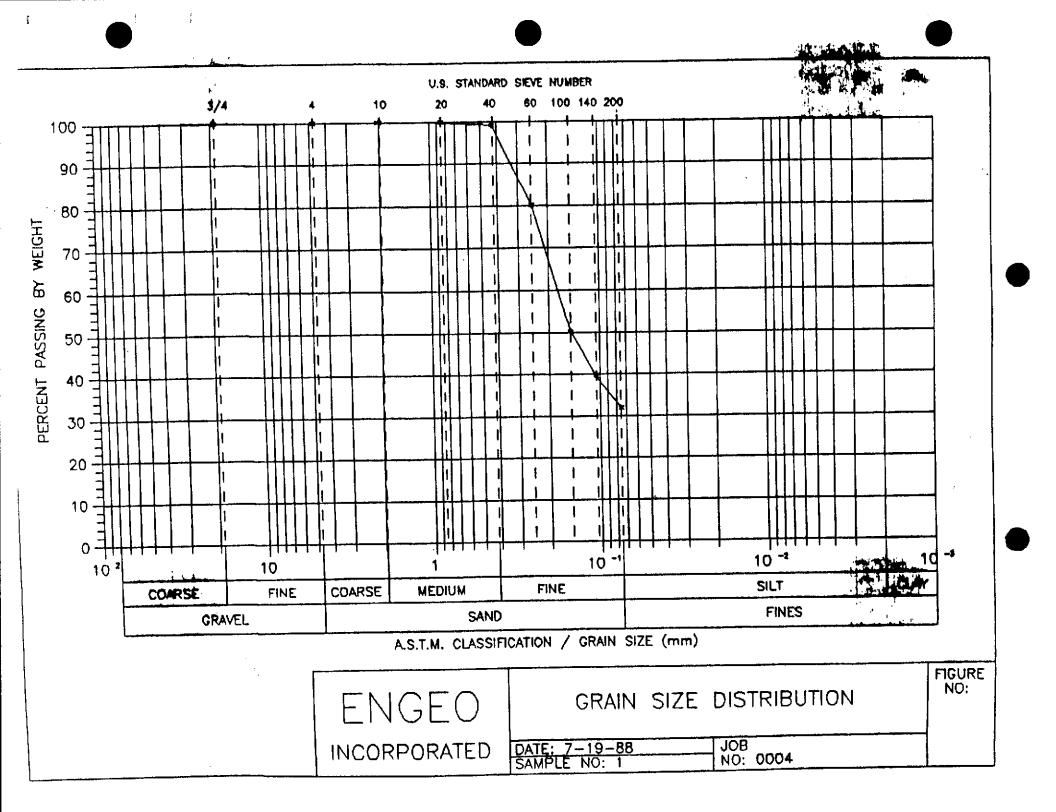
7/19/88 PREWASH NET WT

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

SIEVE ANALYSIS

(* Retained ASTM Designation)





APPENDIX C LABORATORY REPORTS - WATER MONTHLY SAMPLING RESULTS



Northwest Region

Concord, CA 94520 (415) 685-7852

4080 Pike Lane

LABORATORIES, INC.

(800) 544-3422 from inside California (800) 423-7143 from outside California

09/**25/8**9 LS

Page 1 of 1

WORK ORD#: C909365

CHIP PROKOP CLIENT:

GROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE CONCORD, CA 94520

PROJECT#: 203-680-5016-7 LOCATION: DAKLAND, CA

SAMPLED: 69/15/89

BY: 6. MASON

RECEIVED: 69/15/89

ANALYZED: 09/1889

BY: R. CONDIT

MATRIX:

WATER

UNITS: ug/L (ppb)

	1 MDL	ISAMPLE # 1	01 *	ŀ	6 2*	ı	į.	
PARAMETER	 	11.D. 1	M W7	<u> </u>	MW9	1	l	
Chloromethane	8. 5		(13		(13			
Browomethane	8.5		(13		(13			
Dichlorodifluoromethane	0.5		(13		(13			
Vinyl chloride	1		₹25		⟨2			
Chloroethane	0.5		(13		(1:			
Methylene chloride	0. 5		(13		(1)			
Trichlorofluoromethane	0.5		(13		(1)			
1.1-Dichloroethene	0.2		54		3	€		
1,1-Dichloroethane	8. 5		240		160	ð		
trans-1,2-Dichloroethene	0.5		958		130	20		
Chloroform	0.5		(13		(1)	3		
1,2-Dichloroethane	8. 5		45		7			
1, 1, 1-Trichloroethane	0.5		740		39	8		
Carbon tetrachloride	0.5		(13		(1	3		
Bromodichloromethane	0.5		(13		(1	3		
1,2-Dichloropropane	8. 5		(13	ı	(1	3		
trans-1,3-Dichloropropene	9.5		(13		(1	3		
Trichloroethene	8.5		130		3	9		
Dibromochloromethane	8. 5		(13		(1	3		
	0.5		(13	;	₹1	3		
1,1,2-Trichloroethane	0.5		(13	;	{1	3		
cis-1,3-Dichloropropene	1		(13	;	(2	:5		
2-Chloroethylvinyl ether	0. 5		(13	;	₹1	3		
Bromoform	9. 5		(13	3	(1	.3		
1, 1, 2, 2-Tetrachloroethane	0. 5		31		₹1	3		
Tetrachloroethene Chlorobenzene	0. 5		26		5	52		

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

^{*} Samples were run at dilution factor of 25.



Page 1 of 1 Continued

Northwest Region 4080 Pike Lane Concord. CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California WORK ORD#: 0909365

CLIENT: CHIP PROKOP PROJECT#: 203-680-5016-7

LOCATION: DAKLAND, CA

MATRIX: WATER

UNITS: ug/L (ppb)

PARAMETER	l i	MDL	ISAMPLE #	1	81* MW7	1	82* MH9	l I	l I	i I
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0. 5 0. 5 8. 5			(1) 410 (1)	2	(13 340 (13	1		

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

METHOD: EPA 601

* Samples were run at dilution factor of 25.

EMMO D. PRIPER, Laboratory Director

	TE	4080- Conco					Ė	nn-	544	.343	22 ((In (CAI		3	CH/ AND	AM C	FO NA	F-(CU. SI:	ST(S R	DD EQ	Y R UE	EC ST	O!	7D	٠	72	2-	1	1	79	9	cus	BTC	YDC	RECO
E H Y	VIRONMENT ORATORIES, II	445.0	85-78	352	452	.0	ξ	100-	423	-714	43 ((Ou	ıtsic	de CA)							AN	AL'	YSI	SF	₹E	QU	ES	3T									B
roject Ma	nager.						Pho	ne	#:						T				0	503E 🗆						o			0					ļ			15
hip	Pro	KOP_					FA)								-	Ę			503A 🗆	23						cides		0	Lead		ş						1-3
ddress:	N/ 60.	λ					Site	100	atio	n: -⁄~√	٦	3			i i	1 2	<u>.</u>		1	_ -	밋	1	1	50	5.0	ę	P	HSt	φO		Reactivity []					4	= 3
roject Nu	VLOT	7	ケ				Pro	jeci	Na	me:					MTRF O	20/80	et F.		413.2 🗆	418	DCA only [C Mac and Co	3	NBS +15 [NBS +25 [اوا	Semi VOA	0	10.0	ည							C
-036	mber. -805	016	<u>へ</u>			>F	*	<u>হা</u>	Y	Le:	<u>.lc</u>	20	<u>_</u> \$	4	_ -	;	□ Diesel □ Jet Fuel	S S		စို	입	8	?	ž	ž	Pesticides ☐ Herbicides ☐	l	etals	8	отпо	Flashpoint [لتزا
ttest that	the proper	field sampli during the c	ng ollec	tion	. ,					ame					c	고 6 5	iesel	SIM	13.1	roca						Pesti	N C	2	239.7	၂ဌ	Shp	ل	Q				by Laboratoo
these sa	nples.						6	_		16				mpling	1 0000	3020 802/8		ပ္ဖ	ase 4	H Hy	5	2 2	8 5	8	200		Σ,	officta	421	D ST	ű	Δ					(A)
Field ample	Source	GTEL Lab#	L K	11	lat	rıx	_			tho: erv			J		7	7 8	Ses	6	Gre	oleur	욁	8 8 0 0		0 82	0 82	detak	tats [Ę.	80	tals		70		À		Š	S
ID	Sample	(Lab use only)	CONTAINERS	WATER	<u> </u>	SLUDGE	HER		S CS H	ICE	JNE	OTHER	.nATE	TIME	100	BTEX 602 U 8020 U WITH MIDE U RIEX/TPH Gas, 602/8015 CI 8020/8015 CI MTBE CI	TPH as C Gas	Product I.D. by GC (SIMDIS) a	Total Oil & Grease: 413.1 □	Total Petroleum Hydrocarbons: 418.1	EPA 601 X 8010 🗆	EPA 602 (1 8020 (1	EPA 608 C 8080 C	EPA 624 🗆 8240 🗖	EPA 625 🗆 8270 🗇	EPTOX: Metals C	TCLP Metals D VOA D	EPA Priority Pollutant Metals C	LEAD 7420 07421 0 239.2 0 6010 0 0rg Lead 0	CAM Metals STLC	Corrosivity	H		Received by:		Received by:	
			*	3	3 E	ळ	[]	호 기		K	ž	임	9/	F	+	<u> </u>	F	ā	12	1=	X	W I	<u> </u>	ı w	 "	<u> </u>	-	100		۲		-			_	œ .	2
WZ		200	1-7	H	+	\mathbb{H}	- .	什	+	/ }	1	+	<u>'/</u> .	13	十	+	+	+-	T	-	K		+	1											30,00	Time	Tige O
MA		6	-	1	+	╁╌		1	-	1	1	$ \cdot $	T	-1-	7																	_] =	7	Ë	Ĕ
W7			4	X	+			X		У						ightharpoons	<u> </u>					_	_		_	_	_	↓_	_	-	 	X	-	┦ -			┨ -
PWI	1		14	X				X	_ _	X	1	1_	1	7 -		_	+	-	╁-	 		_		+	+	\downarrow	-	-	_	+-	╀╌	X	-	ا م	5	Ð	
					_	1		_	-		+	╁-	 			+		-	+-	+		-+	+	-	+	╁	-	+	+	+	┤	-		oate	~	Date	Date
			-}	+	+	+	1-1	-}	+		╫	+-	-		╢	+	+	+	╁	+-	-		+	+	\vdash	╁	+	+	#	1,	+	 		1	1		-
					-	╁╴	H	\dashv	+	+	十	+	┼┈	_	-		1	+-	+	\dagger			+	1	<u> </u>	1	T		Λ	6	1			DI	\$		
			+	+		+-	\dagger		+	+	\top	1	1		\Box													$\sqrt{3}$	4)	\perp	_	N	K		~	
	<u> </u>		1	1-							\perp									\perp							U,	Ý	Ļ			Ļ	M.	16	3	9	
									CD			n _F 1	TEC	TION L	IM	ITS#	(Špe	eclf	v)		REN	IARI	KS:		1	\	Ú	,				/	Ά,	ħ	C		
24 H	SPECI/ Durs ()	AL HANDL	.ING						37		76 l	<u></u>	,			🕶 (,	,	.,					_	` ^	K	/		,			V	\ \	Sampler			
	DITED 48	Hours																		'	V	6	Y \	\bigcirc	Ĵ	1	ر ا		C	P	Y	-		þ S		益	ž
	N DAY 🗆	(#) 51161	INIES	e r	ን ለ ነ	/C																			Υ	7	X	٦,	•		•			Relinquished by		Relinquished by:	Relinquished by
	R IC CLPL	(#) BUS! .evel □	Blue					-	SP	ECI/	AL I	REI	PO	RTING F	3E(ווטכ	REM	1EN	TS		Lab	Us	On	ily		S	tor	age	Lo	Ca	tior	1	5	Jauis		nduis	nquis
FAX									(Sp	ecif	y)										Lot	#:				W	/or	k O	rde	т#	:		_	e e		E E	3elji

APPENDIX C LABORATORY REPORTS - WATER MONTHLY SAMPLING RESULTS



Project Number: 203-680-5016.05 Work Order Number: D0-04-274 Location: 404 Market Street Date Sampled: 11-Apr-90

Western Region 4080-C Pike Ln., Concord, CA 94520 [415] 685-7852 In CA: [800] 544-3422 Outside CA: [800] 423-7143

May 1, 1990

Paul Horton Groundwater Technology, Inc. 4080-D Pike Lane Concord, CA 94520

Enclosed please find the analytical results report prepared by GTEL for samples received on 04/12/90, under chain of custody numbers 72-5834 and 72-5837.

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.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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

Sincerely,

GTEL Environmental Laboratories, Inc.

Ginenco P. Poper

Emma P. Popek

Laboratory Director

Project Number: 203-680-5016.05 Work Erder Number: D0-04-274 Location: 404 Market Street Date Sampled: 11-Apr-90

Table 1a

ANALYTICAL RESULTS

Purgeable Halocarbons in Water EPA Method 601^a

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

GTEL Sample Number		01	02	03	04
Client Identification		MW1	MW2	MW13	MW5
Date Analyzed		04/19/90	04/19/90	04/19/90	04/19/90
Analyte	Detection Limit, ug/L		Concentratio	n, 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
trans-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	0.6	< 0.5	< 0.5	< 0.5
1.1.1-Trichloroethane	0.5	0.7	< 0.5	< 0.5	1.6
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
cia-1,3-Dichloropropene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	< 0.5	< 0.5	< 0.5	0.8
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-Tetrachioroethane	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	< D.5
1,4-Dichlorobenzene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichiorofluoromethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Detection Limit Multiplier		1	11	1	11



Project Number: 203-680-5016.05 Work Order Number: D0-04-274 Location: 404 Market Street Date Sampled: 11-Apr-90

Table 15

ANALYTICAL RESULTS

Purgeable Halocarbons in Water EPA Method 501⁸

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

GTEL Sample Number		05	06	07	06
Client Identification		MW6	MW3	MW8	MW12
Date Analyzed		04/19/90	04/19/90	04/19/90	04/19/90
Analyte	Detection Limit, ug/L		Concentratio	n, ug/L	
Chloromethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromomethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Vinyi chloride	1	< 1	< 1	< 1	< 1
Chioroethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Mathylene chloride	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1-Dichloroethene	0.2	< 0.2	0.9	< 0.2	< 0.2
1,1-Dichloroethane	0.5	< 0.5	8. 5	< 0.5	0.8
trans-1.2-Dichloroethene	0.5	< 0.5	2.6	0.5	1.4
Chloroform	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	0.5	< 0.5	3.7	2.3	0.8
1,1,1-Trichioroethane	0.5	< 0.5	1.1	< 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	0.7	< 0.5	< 0.5
cis-1,3-Dichloropropene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichloroethene	0.5	2.8	8	16	26
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-Tetrachioroethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	< 0.5	1,4	0.9	< 0.5
1,2-Dichlorobenzene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,3-Dichiorobenzene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,4-Dichlorobenzene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Trichiorofiuoromethane	0.5	7.2	< 0.5	< 0.5	< 0.5
Detection Limit Multiplier		1	1	1	<u> </u>



Project Number: 203-880-5016.05 Work Erder Number: D0-04-274 Location: 404 Market Street Date Sampled: 11-Apr-90

Table 1c

ANALYTICAL RESULTS

Purgeable Halocarbons in Water EPA Method 601^a

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

GTEL Sample Number		09	10	11	
Client Identification		MW11	MW4	MW10	
Date Analyzed		04/19/90	04/19/90	04/19/90	
Analyte	Detection Limit, ug/L		Concentratio	n, 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	
trans-1,2-Dichloroethene	0.5	2.5	52	33	
Chloroform	0.5	< 0.5	1.4	2.8	
1,2-Dichloroethane	0.5	< 0.5	< 0.5	< 0.5	
1,1,1-Trichloroethane	0.5	< 0.5	< 0.5	< 0.5	
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	
Trichioroethene	0.5	39	340	600	
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	<u> </u>
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	
Tetrachioroethene	0.5	< 0.5	< 0.5	< 0.5	ļ
1,1,2,2-Tetrachloroethane	0.5	< 0.5	< 0.5	< 0.5	
Chiorobenzene	0.5	< 0.5	< 0.5	< 0.5	<u> </u>
1,2-Dichiorobenzene	0.5	< 0.5	< 0.5	< 0.5	ļ
1,3-Dichlorobenzene	0.5	< 0.5	< 0.5	< 0.5	
1,4-Dichlorobenzene	0.5	< 0.5	< 0.5	< 0.5	4
Trichlorofluoromethane	0.5	< 0.5	< 0.5	< 0.5	
Detection Limit Multiplier		1	11	11_	<u> </u>



γ.



LABORATORIES, INC.

Northwest Region

4080 Pike Lane
Concord, CA 94520

Concord, CA 94520 (415) 685-7852 (800) 544-3422 from inside California (800) 423-7143 from outside California Page 1 of 3

WORK DRD#: D004273

CLIENT: Paul Horton

Groundwater Technology, Inc.

4080-D Pike Lane

Concord, Ca 94520 ~

PROJECT#: 203-680-5016.05 LOCATION: 404 Market Street

SAMPLED: 04/11/90

BY: M. Czipka

RECEIVED: 04/12/90

ANALYZED: 04/17/90

BY: R. Gonzalez

MATRIX:

Water

UNITS: mg/L (ppm)

	1	MDL	ISAMPLE #	1	0 1	1	0 2	- 1	Ø 3	1	0 4	1	0 5	ı
PARAMETER	1		11.D.	I	MW1	1	MW2	1	MW13	I	MW5	ı	MWE	1

Total Petroleum Hydrocarbons as Mineral Spirits (1)

{1

(1

(1

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

METHOD: Modified EPA 8015



Northwest Region 4080 Pike Lane Concord, CA 94520 (415) 685-7852 4800) 544-3422 from Inside California (800) 423-7143 from outside California Page 2 of 3

WORK DRD#: D004273

Paul Horton CLIENT: PROJECT#: 203-680-5016.05 404 Market Street LOCATION:

MATRIX: Water UNITS:

mg/L (ppm)

89 09 ı 10 **0**7 **9**6 ı MDL ISAMPLE # 1 MW4 MW11 | MW12 1 **EWM** I MW8 1 II.D. 1 PARAMETER

{1

Total Petroleum 1 Hydrocarbons as Mineral Spirits

{1 (1 **(1** (1

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

METHOD: Modified EPA 8015



Northwest Region 4080 Pike Lane Concord, CA 94520 (415) 685-7852 (800) 544-3422 from inside California (800) 423-7143 from outside California Page 3 of 3

WORK DRD#: D004273

Paul Horton CLIENT: PROJECT#: 203-680-5016.05 LOCATION: 404 Market Street

MATRIX:

Water

UNITS:

mg/L (ppm)

	1	MDL	ISAMPLE #	1	11	1	ı	1	ı	ī
PARAMETER	1	,	II.D.	1	MW10	1	ţ	I	ı	I

Total Petroleum Hydrocarbons as Mineral Spirits **(1**

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

METHOD: Modified EPA 8015

	TEI	4080-	Pike	Land	6		800	-544	-342	2 (in	CA) >	. "	CA	VD.	N-C)F-(CUS 'SIS	STC BRI	DD1 EQ	/ RI UE:	EC ST	OR	D	72	<u>}_</u>	58	<u>33</u>	4	CUST	700	ECO
	IRONMENTA	Conco	85-78	д 94 352	1520		800	-423	3-714	3 (O	utside C	A)					-	/N/	ALY	'S 1	3 R	EC	ΝE	ST		ان	<u>/</u> -	i des			ļ ļ,
Project Num 202 I attest that procedures of these san Field Sample	Horing Ho	5016 field sampli during the c	NERS Collect	tion	atri	Sit You	olec olec impl br	catio	me:	<u>d</u>	Bamp	ling	12 C 8020 C with MTBE C	M 802/8015	TPH as Gas O Dieset a Jet Fuel M Myral	13.2 0	drocarb	EPA 601 🗆 801078 DCA only 🗆	EPA 602 II 8020 II PCBs only II			D NBS +25 C	EPTOX Metals CI Pesticides CI Herbordes CI	Stutant Me	3	etate a state a trace	Pigodoga C	HOLD	od byc	od by	ed by Laboratory: Way tyll &
ID	Semple	(Lab use only)	# CONTAINERS	WATER	AIR	OTHER	至	SNH H	<u> </u>	NONE	1	TIME	┪	втехтр	TPH as C Gas	Total Oil	Total Pe	EPA 601	EPA 602	EPA 610	EPA 624	EPA 82:	EPTOX	EPA PH	LEAD 7	CAM Metal	Corrotanty	X 160	Received by:	Received by:	Received by L
SB RB-mui MWI			1						1		'kυ \	404			X	- 								-				X	## F	Time	Time
MWI MWI MWI			1 2						 		1	40'	8		X													X	\$ 0	Dada	12
MW2 Rs-mw13 MW13 MW13			2 1 2 2	У								14011	0		X			A X										X			4
24 HC EXPEI SEVEI	DURS II DITED 48 N DAY II R C CLP I	(#) BUS		SS C				SP		L RE	ETECTIO						- -			(S:		<u>ا</u> ر		4 1996 rk O	Lo		on.		Relanguished by Sample	Relinquished 5%	Refinquished by:

	TE	4080-							E A A :	242	2 (le	CA) 1	. */	A	ND	IN-	OF IAL	·C	US IS	roi RE() Y (7E(591	:01	RD	7	<u>2</u> .	- 5	8	35	CUS		RECOR
ENV	IRONMENTA	Condo 415-61	rd, C/ 85-78	A 94	452	.O	8	100-	423·	714	3 (0	utside	CA)			•			Al	IAN	LYS	18	RE	שני	ES	T		بذالت	H. Hale			
Project Ma Paul Address: GII Project Nu	Hoston	oncord 5016	05		<u> </u>	۲۰(۱۳۵	Site Pro	lar ject	atlor Nan	ς: 18: Μ). a	ak lo	urd_	with MTBE CI	BTEX/TPH GAS 802/8015 8020/8015 MTBE	I □ Jet Fuei Ømin£Mk		413.2 0	םונ		PCBs only []	N89 +15 C	NBS +25 C	esticides 🗆 Herbicides 🗆	Q D	Antonio Ora Leed II		oint 🛭 Reactivity 🖸				Way bill #
procedures of these sai	the proper were used imples. Source of Sample	GTEL Lab # (Lab use	AINERS	A	Aat	rix	m	ar P	Met rest	hoc erve	d,	Sam	pling	102 G 8020 G	PH Gas. 802/8015	TPH as Class Diesel	Product LD. by GC (SIMDIS) CI	Total Oil & Greaser 413.1	FOR ANY CONTROL OF THE STATE OF	EPA 602 🗆 8020 🗅	EPA 606 🏻 8090 🖺	EPA 610 🗆 8310 🗇	EPA 625 🗆 8270 🗆	ובו	TCLP Metals U VOA []	EPA Priority Polititant Metais U	CAN Metale STLC		HOLD	ad lag.	Received by:	wed by Laboratory
		only)	# CON	WATER	NO E	SLUDGE	OTHER	Ξ	S S E	3 2 3	NONE	DATE	TWE	-	PTEXT	TPH &	Pode A	Total	TOTAL T	EPA 6	EPA 6	EPA 8	EPAG	EPTO	걸	EPA	3 3	Corrosivity	7	Received by	Pece	
16-mws			1	1	+			-		K	-	1/1	143	<u>}</u> -		X		_		+		$\frac{1}{2}$									Time	
MWS_			2		1			_		#		117	143	3_	+					4			-	_		_	+	+		- F	F	1 G
RG-MWG MWG MWG			1 2 2			-							143 143 143	8	-	X			\ \ \ \								+	-		Date	Date	26m
RB-11W3			12			-	- -		_	 			144	1	+	X	-		_				+	-			+	1		_	+	13
mu3			12	1			+		 -			<u> </u>	1144	1	+	+-				1	-		+				7	+				(
EXPE SEVE OTH	OURS ID EDITED 48 EN DAY ID ER IDC CLP	(#) BUS		SS	DA eve	YS	1	-	SPI		AL RE	ETECT			·		•••		ū		RKS		5		tore			stici		Relinquish of Sandi	Relinquished by:	Relinquished by:

!

602/8015 8020/8015 1 1 1 1 1 1 1 1 1	413.2 D ACA only D ACA
Gas 602/8015 G8020/8015 GMTBE G Gas G Diesel G Jet Fuel B MMEGAL 3. by GC (SIMDIS) G Greeset 413.1 G 413.2 G 503 A G	NBS +15 COMP COMP COMP COMP COMP COMP COMP COMP
주시를 하당하다	Gress Gres
BTEXTPHGAS TPH as Cl Gas Product I.D. by Total Oil & Gre	Total Oil & Greese 4 Total Petroleum Hyd EPA 601 8010-89 EPA 602 8020
	
X	
	4
	
	┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇┇
S (Specify)	REMARKS: Pg 30F 4 S Lab Use Only Storage Location Lot #: Work Order #:
S (S)	pecify)

Project M	VINONMENT	4080- Conco 415-88		A 94	1520)	800)-54	14-3	422	(In	CA)	•	AA	MI ID /	1N/	ALY	31	R	EQI	JES	T			10		J	00	17 _{at}	-		RECORI
		HC.	85-78	352	,020	•	800)-4;	23-7	143	i (O	utside	CA)			PI V			AN/	ALY	'818	R	EQ	JE	ST			نېد				
faul	anager.	,	·				hone								T36.0	L Jer Tuel BiminEAN	503A 🗆	503E □					10 860		0	Org Leed D		0		;	<u>}</u>	
Address:	1,00,100,					S	ite lo	cal	ion:						SON	E	ļ	ll	.	0		<u>.</u>	25 🗆 Herbicides	0	팔	5		Ctivity				7 .
	.I. (o	niord			104	_[]. _p	roje	eŁ.	<u>51</u>	9:		-	 -	with MTBE O	08/0		413.2	418	DCA only []	PCBs only []		NBS +15 🗆				0	ပ္ခ	æ				4
Project N	umber.	soll o	5		SI	ſι	4	/ 	Y .	 (٦.	Joh	l	ŧ	802	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	1 4	N P	8	ន្ត		ğ	NBS +	8	9	9	E	0 E				ج "ا
attest the	t the proper	field sampling	ng		~~/U\	S	amp	ler	Nan	ne (I	Prin	t):]_	215		2 2	250	Ì			Ì	į		×	238.2	U	Flashpoi		1		attory
orocedure of these se	s were used	during the c	ollec	tion		r	Mar	ŀ	n	_(' عز	77(4		8020	8/8	DESCRIPTION OF	2 4	Η	9	מוכ	o o			, Š	. 5	20 2	STL	Œ.			·	log 3
Fleid	Source	GTEL	ERS	N	latr	lx.		M Pre	eth	od	ď	San	pling		9 19		5	E S	200	808	1831	1824	1827		2	7.0	4	0	3	*	ž	12 V
Sample ID	of Sample	Lab # (Lab use only)	CONTAINERS	WATER	AIR	SLUDGE	-	රි			OTHER	DATE	TIME	BTEX 602 □	BTEX/TPH Gas 602/8015 © 8020/8015 © MTBE ©	TPH as III Gas III Dieser III Je	Total Oil & Grease: 413.1	Total Petroleum Hydrocarbons 418.1	EPA 601 🗆 6010 🗷	EPA 602 II 8020 II	EPA 610 C 8310 C	EPA 624 🗆 8240 🗅	EPA 625 8270	TC: P Metals D VOA D	EPA Priority Pollutant Metals C	LEAD 7426 ET 7421 ET 238.2 ET 8010 ET	CAM Meta	Corroeivity	HOLD	Received by:	Received by	Recoling
74.101.1			1	7	7 2			1		7	1	4																	_X_	<u> </u>	ļ	
<u> 18:19W4</u> 19w4	\ 		12	Π								14				XL	_	<u> </u>			_			+	-	-	-	\vdash		Ě	E L	THE CONTRACTOR
MWY			2				\prod			\coprod	\perp	79)	-		-	_	-	X	+	-		+	+	-	╁	├	\vdash	₩	-		7
35-muk				Ш	\perp		1_			11	_	1-1		-	\vdash	7	+	╂		+	+-	\vdash	+	+	+	-	┢	\vdash	-17	┨ ~~	1 -	7
MWIO			1	Ш	_		_	<u> </u>	-	\mathbf{H}	-	╁╂	_	-\-	╁	4	+	+-	W	+	┪	Н		+	+	+	-			┪•	Date	1 7
mwlo		ļ	-	14	+	┞╾┼		├-	-1	7	+	1	-	- -	+	+	╁	+	1	+				+	+	-	-	П		- ag	å	4
<u></u>			+-	+	+	H	+	-		H	+	-		┪	+ +	_	\dagger	+	П	1	+			\top								
			+-	+	+	\vdash	╁	+	-		\dashv	 	1		1			1												_		
		<u> </u>	+-	+	+	H	-	+	1															\perp	_	<u> </u>	1			-		
	- 		 	1			1											_				<u> </u>					<u>L</u> ,			$-1/\Gamma$		
	<u>,,,, </u>	<u></u>												18.41 T	ė (e,	اممدا	6A		REM	ARK	(S)	X	, 3	4	٠,	f	L	}	:	No.		
		AL HANDL	ING	1				S	PEC	JIAL	. UE	HEGI	ION L	TIMIT I	S (S)	poci	'77		16.141	711 11		1	J	•		•	•	•		1	Y	
_	IOURS 🖸 EDITED 48	Hours D															_													2	1/2	*
1	EN DAY																													12	Nã P	\vec{\vec{\vec{\vec{v}}}{\vec{\vec{v}}}}
	IER										-	DOD.	TING F	PEO!	IIPE	ME	NTS	-	Lab	Use	Onl			Sto	rage	Lo	cat	ion	-		1 2 2	3
QA/ FAX	QC CLPI	Level 🗆	Blue	Le	vel	u			Spe			HUH:	IIIVO F	1200	/11 TG			- 1	Lot :			-			rk O					Relinqui	Relinquish	Relinquished



Project Number: 203-880-5016.05 Work Order Number: 200-03-371 Location: 404 Market Street Date Sampled: 14-Mar-90

Western Region 4080-C Pike In., Concord, CA 94520 (415) 685-7852 In CA: (800) 544-3422 Outside CA: (800) 423-7143

April 2, 1990

Paul Horton Groundwater Technology, Inc. 4080-D Pike Lane Concord, CA 94520

Enclosed please find the analytical results report prepared by GTEL for samples received on 03/14/90, under chain of custody numbers 72-3306 through 72-3309.

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.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project was performed in strict adherence to our QA/QC program to ensure sample integrity and to meet quality control criteria.

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

Sincerely,

GTEL Environmental Laboratories, Inc.

mma P. Kopen

Emma P. Popek

Laboratory Director

Project Number: 203-680-5016.05 Work Order Number: D0-03-371 Location: 404 Market Street Date Sampled: 14-Mar-90

Table 1a

ANALYTICAL RESULTS

Purgeable Halocarbons in Water EPA Method 801th

a Federal Register, Vol. 49, October 25, 1984.

GTEL Sample Number		01	02	03	.04
Client Identification		MW1	MW2	MW12	MW3
Date Analyzed		03/30/90	03/28/90	03/29/90	03/30/90
Analyte	Detection Limit, ug/L		Concentratio	n, 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	1.1
1,1-Dichloroethane	0.5	< 0.5	< 0.5	0.7	7.8
trans-1,2-Dichloroethene	0.5	< 0.5	< 0.5	1.5	2.9
Chloroform	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichloroethane	0.5	< 0.5	< 0.5	1.4	4.8
1,1,1-Trichloroethane	0.5	< 0.5	< 0.5	< 0.5	0.6
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	21	8.9
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
Tetrachioroethene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachioroethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chiorobenzene	0.5	< 0.5	< 0.5	< 0.5	0.9
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
Detection Limit Multiplier		1	11	11	11



Project Number: 203-680-5016.05 World Order Number: D0-03-371 Location: 404 Market Street Date Sampled: 14-Mar-90

Table 1b

ANALYTICAL RESULTS

Purgeable Halocarbons in Water EPA Method 601⁸

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

GTEL Sample Number		05	06	07	08
Client Identification		MW6	MW13	MW5	MW11
Date Analyzed		03/30/90	03/28/90	03/29/90	03/29/90
Analyte	Detection Limit, ug/L		Concentratio	n, ug/L	
Chioromethane	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	0.5	< 0.2
1,1-Dichloroethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethene	0.5	< 0.5	< 0.5	< 0.5	4.5
Chioroform	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-Trichioroethane	0.5	< 0.5	< 0.5	1.6	< 0.5
Carbon tetrachloride	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Bromodichioromethane	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
Trichioroethene	0.5	1.7	< 0.5	1.5	44_
Dichiorodifiuoromethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Dibromochioromethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2-Trichioroethane	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-Tetrachioroethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chlorobenzene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,2-Dichiorobenzene	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	12	< 0.5	1	< 0.5
Detection Limit Multiplier		1	1	11	1



Project Number: 203-680-6016.05 Worb Order Number: D0-03-371 Location: 404 Market Street Date Sampled: 14-Mar-90

Table 1c

ANALYTICAL RESULTS

Purgeable Halocarbons in Water EPA Method 601⁸

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

GTEL Sample Number		œ	10	11	12
Client Identification		MW4	RS-MW10	MW10	MW8
Date Analyzed		03/29/90	03/29/90	03/30/90	03/29/90
Analyte	Detection Limit, ug/L		Concentratio	n, ug/L	
Chioromethane	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	0.9	< 0.2
1,1-Dichloroethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
trans-1,2-Dichloroethene	0.5	43	< 0.5	46	0.7
Chioroform	0.5	1	< 0.5	3	< 0.5
1,2-Dichloroethane	0.5	0.8	< 0.5	< 0.5	3.7
1,1,1-Trichlorgethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Carbon tetrachioride	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	490	< 0.5	1300	14
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
Tetrachioroethene	0.5	< 0.5	< 0.5	< 0.5	< 0.5
1,1,2,2-Tetrachioroethane	0.5	< 0.5	< 0.5	< 0.5	< 0.5
Chiorobenzene	0.5	< 0.5	< 0.5	< 0.5	0.6
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
Detection Limit Multiplier		1	1	1	<u> 1 </u>





Morthwest Region

-4080 Pike Lane

Concord. CA 94520

-(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

TEST RESULTS

83/28/98 sp

Page 1 of 3

WORK ORD#: D003370

CLIENT:

Paul Horton

Groundwater Technology, Inc.

4080-D Pike Lane

Concord, CA 94520

PROJECT#: 203-680-5016.05

LOCATION: 404 Market Street

SAMPLED: 03/14/90

BY: M. Czipka

RECEIVED: 03/14/90

ANALYZED: 03/24/90

BY: R. Sonzalez

MATRIX:

Water

UNITS:

mg/L (ppm)

PARAMETER	1	MDL	SAMPLE #	l l	01 MW1	1	MM5 8 5	l l	0 3 MW12	i	04 MW3	1	05 MW6	I
Total Petroleum Hydrocarbons as Mineral Spirits	5	1			(1		(1		(1		(1		(1	

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

METHOD: Modified EPA 5030/8015



Page 2 of 3

Morthwest Region

4080 Pike Lane
Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California WORK DRD#: D003370

CLIENT: Paul Horton
PROJECT#: 203-680-5016.05
LOCATION: 404 Market Street

MATRIX: UNITS: Water

TEST RESULTS

mg/L (ppm)

PARAMETER	1	MDL	ISAMPLE II.D.	# i	0 6 MW13		07 MW5	1	08 MW11	1	0 9 MW4	1	10 MW10	1
Total Petroleum Hydrocarbons as Mineral Spirits	E	1			₹1		(1		(1		(1		(1	

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

METHOD: Modified EPA Method 5030/8015



Page 3 of 3

**Horthwest Region 4080 Pike Lane

Concord. CA 94520

·(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

WORK ORD#: D003370

CLIENT: Paul Horton

PROJECT#: 203-680-5016.05

LOCATION: 404 Market Street

MATRIX: UNITS: Water

TEST RESULTS

1

mg/L (ppm)

	ı	MDL ISAMPLE	#1	11	1	1	1	I	1
PARAMETER	1	II.D.	ı	HM8	1	l	 	· 1	!

Total Petroleum Hydrocarbons as Mineral Spirits (1

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

METHOD: Modified EPA Method 5030/8015

	TE	4080- Concc	Pike	Lan A 94	ie 452	0	800	-544	-342	2 (In	CA		4	IND	N-	OF VAL	-Cl YS	_		_		_				3	13	06		cust	00	MECO
ENV	THONMENT	415-6	85-78	852			800	-423	-714	13 (0	utsi	de CA)			Ž			AN	IAL	ėY.	S F	ŒC	U	S	<u> </u>		. 133	-11	41.		15.	
Project Ma Address: G.T. Project Nu 203 attest that procedures of these sar	Hor: T (mber: 680 the proper were used	on (or o	OS	tion		5 40 5 5 M	hone AX #: Ite lo rolec ampl	catio	me: ler ame	(Prin	in:	bad	COCCO	2015	□ Diesei □ Jet Fuel Ø Marfal	GC (SIMDIS) CI	18.418.1 G			O CI PCBs only CI	10 CI NBS +15 CI	+ SBN	Pestic	VOA CI Sem VOA CI	LEAD 7420 G 7421 G 230.2 G 6010 G Out Lead G		18					abonatonys – Way bill 9
Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS	Œ	AIR	i GE		Men Sour	erv (Į į		2000	BIEX BUZ U 9	TPH as Gas	Product LD. by GC (SIMDIS)	Total Oil & Grease 413.1 U	EPA 601 [8010]	EPA 602 🏻 8020 🗗	EPA 608 🗆 8080 🗓	EPA 624 🗆 8240 🗇	EPA 625 🗆 8270 🗅	EPTOX: Metale	TCLP Metals []	LEAD 7420 0 74	CAM Metals			1 1000	Received by:	Received by:	Receive to Le
1			1	K		-			\mathbf{A}	-	3	1/1/123	의_		-	\rightarrow	-	_	-	_	+	╁┤	\dashv	+		+	+-		\bigcirc			. 1
3B-MWI			广	\mathbb{H}	-		-	+	#	\vdash	\mathbb{H}	124	}		X	-	╁	+-		+	┪	Н	-	+	+	\dagger	\dagger			41me	Time	TIME
<u>MW1</u>			1	╁╂┼	+	╂┼	+		+		\top		7		1			X		_	+]	 	
MUL			十个		╁	††	╂╾╂	_	††	† †	+	125	5																X_{\perp}]		2
1,2 mm. 3			17	† ‡†	+										X						\perp	_		_	_	_		$\downarrow \downarrow$.	O,	3.3
MW]			1		_				\prod				1		_			X				-	\sqcup	_	+	$oldsymbol{\downarrow}$	+-			-	ļ_,_	10
R6-pw1	2								\coprod		\perp	130	9	-			_	+	 	\vdash	+	-	-		`- -	+	+-	\vdash	Х.	-		
MULL			2						$\perp \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$	\coprod		_			X	 	\dashv	_	_	\sqcup	- -	\vdash	\sqcup	-	+	+	+-	\vdash		-		1
MWIZ			1	<u>.</u>				igsqcup	4	11	1	<u>ر ۲</u>	\triangleleft	-	1-	$\left \cdot \right $		12	4	\vdash	+	+-		\dashv		+	+	┼╌┤	+	1		' .
24 HC EXPE SEVE	DURS 🗆 DITED 48 N DAY 🗆	AL HANDI Hours (#) BUS			DAY	<u> </u>		SPI	ECIA	L DE	TEC	CTION L	IMI) ST	Spe	cify)		80 	10	,7		P P	S 1	mı	VEA				i	Consideration of the second	ished by:	ished by:
l .	C CLP		Blue					_	ECIA ecify		PO	RTING F	REC	QUIR	EMI	ENT	s		b Us t #:	e Oi	ily				ge Li Ordi		tion :	l		Relinqui	Retingui	Relinquish

	TEI	4080-	Pike L	an-	e 1520	· · ·	BOC	-544-	342	2 (In	CA)		CA	ΫD	N-C)F-(SIS	STC RE	D) EQ	(RI UES	EC(ORI)	7	2-	3	30)7 _{.i.}	CUST	•	ECOM
	AL ON MENT	Conce 415-8	95-78	52	1520		800	-423	714	3 (0	ıtside	CA)			SPR		1	\N/	\L\	191	3 F	EQ	UE	8 T			لنبط	4		i	
attest that procedures of these sai	Hort. I. (pmber. 680 ! the proper were used mples.	OY) (DY CO) 6016 C field samplified the co	ng collect			Si HO Pi Ce S	rojec	Cation	ne:	Oc (Print (つご): oka	ind ipling	8020 CI with MTBE CI		TPH as G Gas G Diesel G Las Fuel G MILLE FAM.	13.2 0	Total Petroleum Hydrocarbons 418,1 □ 503E□	HONE DCA only D	DOB BUSINESS			270 O NBS +25 O	VOA CI Semi VOA CI	futant Me	LEAD 7420 CI7421 CI 2382 CI 6010 CIG. Lead CI	OSEC OTEC	Flashpoint □ Reactivity □				Laboratorik Way pill &
Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	# CONTAINERS		AIR		+	Prese	erve			TIME	BTEX 602 G	BTEXTPHG88	TPH as C Gas	Total Oil & Gre	Total Petroleu	EPA 601 [] 80103	EPA 602 (1 8020 (1	EPA 610 @ 8310 @	EPA 624 🏻 8240 🖪	EPA 625 🗆 8270 🔾	TC: D Metale	EPA Priority Pollutant	LEAD 7420 CI	CAM Metale	Corrosivity 🗆	HOLD	Received by	Received by	To Carlo
RB-MU3 MW3			1 2	1					1			1309			X			X	+			-	-	-	-				- EEL	Time	E X
MW3 RG-111W6			2	#		+	-		 		 	1310		-	X	_	-		+									X] -	-	1-2
mw6	12		12	- 1 -1		+	-		#	 		135	<u>1</u>					X										X	- ag	Det	
MWI3 MWI3	1.5		12								1		1		X	+		X		<u> </u>			_	-	-	-		-		11.1	
11110													1								1			1	<u> </u> -	1					
EXPE SEVE OTHI	OURS DEDITED 48 EN DAY DER	(#) BUS						SP		AL RE		ION L					8		Uni) a	S	Mid	iger	u l	ocal	lon	its 	Relinquished by Ref	Hinduished by:	Relinquished by:

	TE VIR ON MENT	4080- Concc 415-8	ord, C	A 9	452	0	80 80	0-5 0-4	44-3 23-7	3 42 2 714:	2 (In 3 (O	CA) utside C	CA)	A!	VD	AN ES	AL') PE		EO.	UE			<u> </u>		08 Na		1	
l attest that procedures of these sa	Hurton T. Comber. 80 50 The proper were used mples.	on ford 16 05 field sample during the c	collec	tlor	ک ۱۳'	5 4 [1 2(d 3(d)	roje	vict N	tion:	<u>S†.</u> e: ne (Prin	land i):	llac	8020 U with MTBE CI	302/8015	Dieset D	GC (SIMDIS) CI	Total Petroleum Hydrocarbone 418.1 C 503E C	10 DCA only []	SOUT PCBs only C			H	⊽Ι	D VOALD Semi VOALD	B 2 🗆 6010 🗆	OTTC	Flashpoint C Reactivity C				Laboratoryc
Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	* CONTAINERS		SOIL AIR	SLUDGE	+	Pro ප	3	rve	NONE OTHER	ļ	TIME	BTEX 602 □	BTEXTPHG88.	TPH as C Gas	Product LO. by GC (SIMDIS) Total Oil & Green #13.1 C	Total Petroleur	EPA 601 🗆 8010	EPA 602 U 8020 U	EPA 610 🗆 6310 🗇	EPA 624 🗆 8240 🗅	EPA 625 🗆 8270 🗇	EPTOX: Metala	TCLP Metare IJ VOA II	LEAD 7420 07421 0 23	CAM Metals	Corrosivity	HOLD	Received by:	Received by:	Received by
AB-MUS MWS MWS			122	N	-					1		3)4/10	1	上		X			X										×	Time	Time	I, Time
RB-MU] MU] MU]			122				-						טומ בינו	1		X		+-	X	+									X	o to	Date	188
	OURS 🗆	AL HANDI	2 2						SPEC	CIAI	DE	TECTIC		1	\$ (5	Зрес	elfy)	8	REM	ARI	(S:	Pe) -	30	f of the second			. ρτ	AJT.	7		
SEVE	EDITED 48 EN DAY ID ER DC CLP1	(#) BUS	iNE: Blue						SPE(PORTII	NG F	REQU	JIRI	EME	NTS			Use	Onl			Sto		e Lo	oca:	tion	-	Relinguish by	Helinquished by	Refinquished by:

	♣ F	4080- Conce				0	80	0-54	14-3	422	(In C	A)		C	TO.	N-C	OF.	CU 'SI	ST(S R	DD EQ	Y A UE	EC ST	OR.	D	72	2-	3	30	19	CUBI	rot	RECORD
	VIPONMENT ORATORIES, I	AL 415-8			702	•						side (CA)	-		Š			AN						8 T		12	بالألك	Mail	Sud	1	
attest that	Horto I. Co umber: 680 ! the proper swere used	oncord	ollec	tion	S	S 104 ald s	AX i	ocat	ame Nan Y,	: <u>Oa</u> 10 (P C-	rint): 2. ol	nc{	oling	0 8020 U with MTBE CI	602/8015	TPH as Cas Coleset Clerkold Mucket	Total Oil & Greese: 413.1 □ 413.2 □ 503.4 □	ns 418.1	18010'SI DCA only □	BOZO LI POR CON LI		18240 □ NBS +1.5 □	G NBS +25 C	STREET VORTI Semi-VOA CI	Autant Med	7421 🗆 239.2	OSTIC OTTIC	y Cl. Flashpoint Cl. Reactivity Cl.	1	Š		by Laboratorys Way bill &
1D	Sample	(Lab use only)	# CONTAINERS	WATER	AIR	SLUDGE	Ξ	HNQ	H2SQ.	NONE		DATE	TIME		втехли	TPH as Cas	Total Oil &	Total Petro	EPA 801 🗆 8010'N	EPA 602 U 8020 U	EPA 610 @ 8310 @	EPA 624 🏻 8240 🗖	EPA 625 🗆 8270 🔾	TO PASSED	EPA Prior	LEAD 743	CAM Metale	Corroeivity 🗆	HOLD	Received tyc	Received by	
98-Mulo			1	1	_		-		_/	1	_ 3	luhi	15:55	-	_		-	-	X	+	-	-		+	+-			+	+	 		177
mwk			3		+		╁	-	\dashv	\vdash	+		-	┦	-	Δ.	╁	╁	V	_		┢		+	+-		\dashv	_	++-	- <u>高</u> /	E	\$ 50 mm
mwio			7	╫	+	┼	+-	\vdash	_	╂┼╌	┼┼╌	+-	<u> </u>	-		\dashv	+	╁	M	╁	+-	┢	-	+	-				V	1 (}	(4)
Rb-Mus	<u> </u>		1	╫	╁	-	+	Н	-	H	╂╁	+	13 So 1			X	+	-		+				+	-			-] द
mu?			2	y	+-	 -	+			X		1	ナ	 			+		X		-										Oate	W. T.
			$oxed{T}$																											7 - 1		, V
					1	Ц	1	ļ_		_ .	11			<u> </u>		-	-	-	-	+		-		-	+	-	\vdash					:
		ļ	 	\perp	\perp	$\downarrow \downarrow$	\perp	-	$\left - \right $	\dashv	++			-	Н	\dashv	+	+	╁╾┪	╁	_	+-	\vdash	+	-	-			╌┼╌┼╴	- i		
EXPE SEVE OTHE	DURS II DITED 48 IN DAY II ER DC CLP L	(#) BUS!		SS D				SI		IAL 1			N LII					8	REM.), ·	TP1	1	As	M) Btoi	H NE	Loc	eati	,	DATTS	Relinquipped of Santa	Relinquished by:	Relinquished bys

GTEL

NVIRONMENTAL

ENVIRONMENTAL LABORATORIES, INC.

Morthwest Region 4080 Pike Lane Concord. CA 94520 415) 685-7852

· . .

300) 544-3422 from inside California (200) 423-7143 from outside California Page 1 of 2

WORK ORD#:D001801 CLIENT: PAUL HORTON

SROUNDHATER TECHNOLOGY, INC

4000-D PIKE LANE -

CONCORD, CA 94528

PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

SAMPLED: NONE GIVEN

BY: 6. MASON

RECEIVED: 01/31/90

ANALYZED: 82/81/98

BY: M. LY

MATRIX:

Water

UNITS:

up/L (ppb)

account to	1	MDL	ISAMPLE #	I	61	1	82	1	8 3	1	8 4 I
PARAMETER	<u> </u>		I.D.		MW1		MHS	 	MH3		MH12
Chloromethane		6. 5			(0.5		(0.5		(0.5		(0.5
Bromomethane		9. 5			(0.5		(0.5		(0.5		(0. 5
Dichlorodifluoromethane		0. 5			(0.5		(0.5		(0.5		(0.5
Vinyl chloride		1			(1		(1		(1		(1
Chloroethane		0.5			⟨₽.5		(0.5		(0.5		(0.5
Methylene chloride		0.5			(0.5		(0.5		(0.5		(0.5
Trichlorofluoromethane		0.5			(0.5		(0.5		(0. 5		(0.5
1,1-Dichloroethene		0.2			(8.2		(0.2		0.57		(0.2
1,1-Dichloroethane		0.5			(0.5		(0.5		5.9		(0.5
trans-1, 2-Dichloroethene		0.5			(0.5		(0.5		2.2		8. 68
Chloroform		0.5			(0.5		(0.5		(0.5		(0.5
1,2-Dichloroethane		0.5	·		(0.5		(0. 5		4.3		(0.5
1, 1, 1-Trichloroethane		0.5			(0.5		(0.5		0. 72		(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		6.5			⟨0.5		⟨0.5		2		(0.5
trans-1,3-Dichloropropene		0.5			(0.5		(0.5		(0.5		(0.5
Trichloroethene		0.5			(0.5		(0.5		9.4		13
Dibromochloromethane		9. 5			(0.5		(0.5		(0.5		(0.5
1, 1, 2-Trichloroethane		6. 5			(0.5		(0.5		(0.5		(0.5
cis-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
1,1,2,2-Tetrachloroethane		0. 5			(0.5		(0.5		(0.5		(0.5
Tetrachloroethene		0. 5			(0.5		(0.5		(6.5		(0.5
Chlorobenzene		e. 5			(0.5		(0.5		0.7		(0.5

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



Northwest Region
4080 Pike Lane
Concord. CA 94520
2415) 685-7852
2800) 544-3422 from inside California
2800) 423-7143 from outside California

Page 1 of 2 Continued

WORK ORD#: D001801

CLIENT: PAUL HORTON PROJECT#: 203-680-5016.05 LOCATION: OAKLAND, CA

MATRIX: UNITS: Water

rs: ug/L (ppb)

PARAMETER	 	MDL	ISAMPLE #	! 	91 MW1	i	MM5 85	1	83 MH3	1	9 4 M W12	<u> </u>
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		9. 5 9. 5 9. 5			(0.5 (0.5 (6.5	5	(0.5 (0.5 (0.5	5	(0.5 (0.5 (0.5	,	(8. 5 (8. 5 (8. 5	5

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



Morthwest Region
1080 Pike Lane
1080 CA 94520
11815) 685-7852
11800) 544-3422 from inside California
11800) 423-7143 from outside California

Page 2 of 2

WORK ORD#: D001801

CLIENT: PAUL HORTON
PROJECT#: 203-680-5016.05
LOCATION: OAKLAND, CA

MATRIX: Water

UNITS: ug/L (ppb) .

PARAMETER	1 MDL I	ISAMPLE # I	0 5 M V6	1	0 6 WW11	1	97 M J5	1	88 MWB	
Chloromethane	0.5		(0.5		(0. 5	5	(0.5		(0.	
Bromomethane	8. 5		(0.5		(0. :	5	(0.5		(0.	
Dichlorodifluoromethane	9. 5		(0.5		(0.		(0.		(0.	
Vinyl chloride	1		(1		()		•		€:	
Chloroethane	0. 5		(0.5	,	(0.		(0.		(0.	
Methylene chloride	6. 5		(0.5		(0.		(0.		(0.	
Trichlorofluoromethane	0.5		6.7		⟨₽. !		(0.		⟨∅. ⅓	
1,1-Dichloroethene	9. 2		⟨0.2		(8.		(0.		(0.	
1,1-Dichloroethane	0.5		(0.5		(0.		(0.		(8.	
trans-1,2-Dichloroethene	0. 5		(0.5		2.		(0.		(8.1	
Chloroform	0. 5		(0.5		⟨₽. ;		(0.		(0.	
1,2-Dichloroethane	0.5		(0.5		(0.		(0.		3.	
1,1,1-Trichloroethane	0.5		(0.5		⟨∅. ⅓		6.9		(0.	
Carbon tetrachloride	9.5		⟨0.5		(₽.		(0.		(8.	
Bromodichloromethane	0. 5		(0.5		(0.		(0.		(0.	
1,2-Dichloropropane	8. 5		⟨0.5		(0.		(0.		(0.	
trans-1, 3-Dichloropropene	0.5		(0.5		(0.	_	⟨∅.		(8.	
Trichloroethene	0. 5		4. E		4		2.		(0.	5
Dibromochloromethane	0. 5		(0.5		(0.		⟨0.			
1,1,2-Trichloroethane	0. 5		(0.5		⟨₽.		(0.		(0.	
cis-1,3-Dichloropropene	0.5		(0.5		⟨∅.		⟨∅.		(0.	5 [1
2-Chloroethylvinyl ether	1		(1			1	-	1		
Bromoform	0.5		(0.5		(8.		(0.		(8.	
1, 1, 2, 2-Tetrachloroethane	8. 5		(0.5		⟨∅.		⟨∅.		(0.	
Tetrachloroethene	9.5		(0.5	5	⟨∅.		₩.		⟨₽.	J
Chlorobenzene	0. 5		(0.5	5	⟨∅.	5	⟨७.	5		1

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



 Page 2 of 2 Continued

MORK DRD#: D001801

CLIENT: PAUL HORTON PROJECT#: 203-680-5016.05 LOCATION: DAKLAND, CA

MATRIX: Water

UNITS: ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #	1	0 5 M N6	1	0 6 M W11	1	9 7 M W5	1	0 8 M H8	
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0. 5 0. 5 0. 5			(0.5 (0.5 (0.5		(8. 5 (8. 5 (8. 5	i	(0.5 (0.5 (0.5	i	(0.5 (0.5 (0.5	5

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

METHOD: EPA 601

lanner P. Paper



Northwest Region Concord. CA 94520 **福15) 685-785**2

2800) 544-3422 from inside California _4800) 423-7143 from outside California

PAGE 1 OF 2

NORK DRD#:D001862

PALL HORTON CLIENT:

BROUNDHATER TECHNOLOGY, INC.

4680-D PIKE LINE CONCORD, CR \$4528

PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

SAMPLED: 81/38/90

BY: 6. MASON

RECEIVED: 01/31/90

BY: K. FILLINGER

ANALYZED: 82/08/90

MATER

BY: R. BONZALEZ

TEST RESULTS

MATRIX: UNITS: mg/kg (ppm)

PARAMETER	I MDL	ISAMPLE # 1		l	1	8 3 M H3	84 MW12	0 5 MHE	1
Total Petroleum		. <u> </u>	,,,		 	(1	(1	(1	

Hydrocarbons as Mineral Spirits

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

METHOD: Modified EPA Method 5030/8015

	TFI	4080- Conco	Pike i	Lan A 94	e 1520)	80	0-54	4-34	22 (In C	A)		CH	A C	HO!	F-C LY:	319 319	RE	DY QU	RE	C(ORI) 	72	2-	4	2	8.	. (I) 	cus	rob	7	COR
ENV	I I I I I I I I I I I I I I I I I I I	41 415-61	85-78	52			80	0-42	3-71	43 (Outs	side CA)						A	NA	LY	S15	R	EQ	ŲΕ	3 T	, ,	<u> </u>			198		1.5		Į
Project Ma	nager.					P	hon	e #:						0				503E 🗆								o					1	1	İ	Sk
DAUL	_ Ho	CON	<u> </u>				AX i			<u>-</u>			-	E E			203A □	<u> </u>				ł	NBS +25 C			Ong Lead D		Cthrity (S	•				ξ
Address:	لمحيا	1	٠,					ocati K		Si	1			1 1 1 1	7					<u>ک</u>	1	50		2	H SE	g			إ		•			3
Project Nu		61						ct No		<u> </u>	۸۱		- !	WITH MI BE LE 8020/8015 [F.		413.2 🗆	418	D Aug STO	PCBs only []		NBS +15 🗆	NBS +25 D	Semi VOA			ပ္	Her.	DE.C.					,
2626	- <i>ชี</i> ปร	0160	5		4	5#	H	eī	Ŋ.	ŀ	$\langle l_{m{arrho}}$	en	_ 1	WITH	6	9	-	8	3	Σ		2	2 1	{ 5	100	8.2 C 6010 C	о тъс	5	4				t	, 7
attest that	the proper	field sampli	ng			S	amı	oler h	iame	(Pr	int):	\		015	3	2	핅	8						0	Ž	238.2		Fleehpoint 🗆						3
procedures of these say	were used (mples,	during the c	ollect		1	7 [S	٦_	\mathcal{V}		<u>150</u>			8020 C	ŏ	50 (8)	¥	Ž!	0 0	0	0	0	n.	12	3	20 22	O STLC	F	8	7		/	1	
Field Sample	Source of	GTEL Lab #	VERS	N	lati	x		Pre	tho		3	amplin	_	න මු □ මු	80	D. by 6	Great	Cleum		808	0 831	924	G 827	1	rty Po	≱2 D 00		_ 	#	178	ž.	2	1 2	3
ΙD	Sample	(Lab use. only)	# CONTAINERS	WATER	AIR	SLUGGE	Ş	HNOS	5 22 22 23 24 25 25 25 25 25 25 25 25 25 25 25 25 25	NONE	OTHER	DATE		BTEX 602 C 8020 C WITH MISSES BEEN BEEN BEEN WITH MISSES BO208015 C MTBEC	TPH as C Gas C Diesel C Jet Fuel	Product I.D. by GC (SIMDIS) CI	Total Oil & Grease: 413.1	Total Petroleum Hydrocarbons: 418.1 ©	EPA 602 C 8020 C	EPA 608 🗆 8080 🗇	EPA 610 🗆 8310 🗅	EPA 624 🗆 8240 🔾	EPA 625 CI 8270 CI	TC: P Metals []	EPA Priority Polititant	LEAD 7420 G7421 G 23	CAM Metals	Corrothi	d.	7	Received by	Received by		\$
45.1 \			2	vi vi	\mathcal{T}		7		M	$\dagger \dagger$		3:	_														_		X		<u> </u>	+		
IWN			2	什	+		$\uparrow \uparrow$								_	\perp		`	X _	_			_	4	1	-	_			_	23	E		<u>E</u> (
18			1										\ _	_	\perp	ļ				-	┡		4	-	-	 	_	-	_	X	る語		'	֓֞֞֞֞֞֞֞֞֓֞֓֞֞֓֞֓֓֓֓֞֝֓֓֓֓֓֞֝֞֝֓֓֓֓֞֝֝֓֓֞֝֝֓֡֝֝֡֓֝֝֡֝֝֡֓֝֝֡֡֝֝֡֡
7			2				\perp		_	_	\sqcup	_	igwdapprox	\dashv		-			-	+-	-	\vdash	\dashv	+	-	┼-	╀	-	Х	-	┤罩	-		مكث
. 2			2			4		-	- -	$\!$	┨-		+		+	╀		H	X	+	-	_	-	┽	╁	╁	+-	-		×] # {			<u>.</u>
28			1	$\parallel \parallel$	-	-	┼┦	-		} -	+		H		+	+				╁	+	 			+	T	T	┼	X	-				
3			7	$\left \cdot \right $	+	\dashv		H	+	-	╁┼		\dagger	-	╅	+	-		<u>v</u>	+-	 			1	+	1	1					1.		
3		<u> </u>	1	+++	╁	-	\forall	1-	+	$\dag \vdash$	$\dagger \dagger$		1						1							$oxed{L}$				X] ,			~
12			12		\top		+		_	#		3	2								\prod			\perp				<u> </u>	X	<u> </u>	1/		- 1	
12	,		7																للإ			<u> </u>			\perp						- //			
	SPECIA	AL HANDL	ING	الحالث				SI	ECI	AL C	DETE	CTION	LIM	ITS ((Spe	ecify)	R	, EMA	.RKS	3:									•	L		•	
24 H	DURS II						Ì																							_	私			
	DITED 48	Hours 🗆																							_						ž`	\\ `		<u>አ</u>
	N DAY 🗆	(#) BUS	INES	SI	ΆΥ	S																									/ ½ <u> </u>	귀┋		Ę.
		(#) B00 .evel 🗆									REPO	RTING	RE	QUIF	REN	IEN.	rs] [ab U	lse (Onl	У ,		Sto	994	Lo	cat	lon	1	اے		¥ã		Refinquish
FAX								(S	pecif	ΥÌ								L	ot #	:		, '	,	Wor	k O	rđe	r#:	:		_	TE	썙		Ŧ

	TF	4080- Conco				20	,	800)-54	44-3	42	2 (in	CA)		A	ND	IN-	OI VA	F-C LYS	US IS	RE	DY	' Al JE:	EC ST	OR	D	72	2-	4	12	8	2		CVI	H	9	RE	COMD
ENV	IROHMENI	416-86					·	800)-4:	23-7	14	3 (0	utsl	de C	CA)						A	NA	LY	'81	B R	EC	UE	81	•		ننالا	ľ	1		; <u> </u>		!is)
Project Ma	L Ho	FTON					FA	X #		tion:	91	~/\				36.0	150 MTBEG	4	ļ	*/ j	D 3806 D 1		2		50		Herbicides []	1 0 15 E			sectivity ()	mal Spin					Ü		
Lattest that	the proper	5016 field samplir during the c	าต		n	5	√ Se	ımp	ler	lam T	e: /	1	t):	と	· · · · · · · · · · · · · · · · · · ·	O With MTBE O	150	O Diesel O Jet Fuel	Product LD. by GC (SIMDIS) []	413.1 🗆 413.2	95	DCA only L	PCBs only []			+ 88x	sticides []	3 3	LEAD 7420 07421 0 2342 0 6016 0	OSTC OTTC	18	AINE						Orations . S.	3
of these sai	Source	GTEL Lab #				trix	<u></u>	~	寸	eth	lod	<u> </u>			ling		Gen 802	See [o by GC	Greese	T Engl	9010	8080	18310	O 8240	18270	etale [Pot	0 7 421		0		2		76		*	19 Leb	3.
Sample ID	of Sample	(Lab use only)	# CONTAINERS	WATER	SOIL	SLUDGE	ОТНЕЯ	_		8	— Т	NONE	24.0	UAIE	TIME	RTFX 602 [втехлин	TPH as Gas	Product LE	Total Oil & Greeser	Total Petro	EPA 601-1 8010 [EPA 606 [] 8080 []	EPA 610 @ 8310 @	EPA 624	EPA 825 🗆 8270 🗅	EPTOX: Metale	FDA Priority Polititant	LEAD 742	CAM Metals	Corrosivity	Tak	110		Received by:		Received by	Received	3
MH 128			1	X		_		X	_		X		Y	30	32	4	-	-	_		-	4	+	╀	-	-	+	- -	-	+	╁	-	*	H		6	<u> </u>	1.	Q
6			<u>7</u> 2	\prod		+	-	-	-	-	+		H		+	-			<u> </u>			7								1		X	_			24	Time	E	ري دي ا
68			Ī			_										_ _	_					-	+	-	-	_		-	+	+	+	+	X	-				-	
11			2	1		-	+			-	-	-	+		\vdash	╂	+	+-	╀			X		十		<u> </u>		+	+	╁	1	X			1		*	1	S
118			1	-		-	\dagger	#			1			1		<u> </u>	1					\perp									$oxed{\bot}$		X		4	/\	0		
5			7	-+-			\downarrow						_	_		4	\bot	-	\vdash	-		X	-	+	╀	-	┝╌╢	-	+		╀	7	+	-			'		
5		-	1	2 //	\sqcup	\vdash	╁	lack	+	╁	$ar{H}$	╀	+	╁	3.5	$\frac{1}{1}$		+	+-	-		_	+	\dagger	+-	\vdash			+	\dagger	+	<u> </u>	X			\			4
√ 5ß		1-5-	1	7 1	\vdash	$\vdash \vdash$	+	#	\dagger	\dagger	$\dagger \dagger$	$\dagger \dagger$	+	1	سار ۱	1						X										X	Ί.,	نسا	y	1	أخنا		
24 HG EXPE SEVE OTHE	DURS II DITED 48 N DAY II		INC	ss											ON LI							EM/			ly		Sto	rag	e L	oca	ntlo	n	` <u>\</u>	7/	diffhed by Semple	700	guisshed by:	Cuished he	• \
QA/C		∟ 4441 M	יטוט	0 L'		ليها اد	•			Spe									*******		l	.ot #	t: 			<u></u>	Wo	rk (Orde	er#	t:			1	1	<u>)</u>	1	T. C.	



Northwest Region 4060 Pike Lane

Concord. CA 94520 4415) 685-7852

3600) 544-3422 from inside California 4800) 423-7143 from outside California

LABORATORIES, INC.

2/08/98 sp

Page 1 of 1

MORK DRD4:D002003

CLIENT: PAUL HORTON

BROUNDHATER TECHNOLOGY, INC.

4880-D PIKE LANE

CONCORD, CA 94529

PROJECT: 203-680-5016 LOCATION: DAKLAND, CA

SAMPLED: 81/31/98

BY: 6. WASON

RECEIVED: 01/31/90

ANALYZED: 62/82/90

BY: M. LY

MATRIX:

Water

UNITS:

ug/L (ppb)

	I MDL	ISAMPLE # 1	0 1	1 82	1	J	
PARAMETER	 	II.D. I	M 44	! #W10	<u> </u>		
Chloromethane	0. 5		(0.5	(8. 5			
Bromomethane	0. 5		(0.5	⟨0.5			
Dichlorodifluoromethane	8. 5		(0.5	(8. 5			
Vinyl chloride	1		₹1	(1.9			
Chloroethane	8. 5		(0.5	(0.5			
Methylene chloride	8.5		(0.5	(0.5	•		
Trichlorofluoromethane	9. 5		(0.5	(0.5			
1,1-Dichloroethene	9.2		(0.2	0.7			
1.1-Dichloroethane	6. 5		(8. 5	(Q. 5			
trans-1, 2-Dichloroethene	8.5		40	35	5		
Chloroform	9. 5		1.6	5. 5			
1,2-Dichloroethane	0. 5		0. 5	(0.			
1, 1, 1-Trichloroethane	8.5		(9.5	(0.			
Carbon tetrachloride	6. 5		(0.5	(0.			
Bromodichloromethane	9.5		(0.5	⟨₿. :			
1,2-Dichloropropane	0.5		(0.5	(0.	5		
trans-1,3-Dichloropropene	8.5		(0.5	(0.			
Trichloroethene	e. 5		470	82			
Dibromochloromethane	0.5		(0.5	(0.	5		
1,1,2-Trichloroethane	0.5		(0.5	(0.	5		
cis-1,3-Dichloropropene	0.5		(0.5	⟨8. ˈ	5		
2-Chloroethylvinyl ether	1		(1	(1		
Bromoform	9.5		⟨₽.5	(0.	5		
1, 1, 2, 2-Tetrachloroethane	0. 5		(0.5				
Tetrachloroethene	6.5		(0.5	⟨∅.	5		
Chlorobenzene	0. 5		(0.5	⟨€.	5		

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



Region
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike Lane
#080 Pike

Page 1 of 1 Continued

WORK DRD#: D002003

CLIENT: PAUL HORTON PROJECT#: 203-680-5016 LDCATION: DAKLAND, CA

MATRIX: Water

UNITS: ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #	1	01 MH4	1	8 2 M H18	ł	! !	1
1,3-Dichlorobenzene		6. 5			(0.5		(0.5	5		
1,2-Dichlorobenzene		0. 5			(0.5		(0.			
1,4-Dichlorobenzene		9. 5			(0.5		(0.	5		

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

METHOD: EPA 601



ENVIRONMENTAL LABORATORIES, INC.

Northwest Region 4080 Pike Lane Concord. CA 94520 (415) 685-7852

4800) 544-3422 from inside California (2000) 423-7143 from outside California Page 1 of 1

MORK ORD#: D002161

PAUL HORTON CLIENT:

BROUNDWATER TECHNOLOGY, INC.

4880-D PIKE LANE --

CONCORD, CA 94520

PROJECT#: 203-680-5016 LOCATION: DAKLAND, CA

SAMPLED: 01/31/90

6. MASON BY:

RECEIVED: 01/31/90

ANALYZED: 62/05/90

BY:

R. BONZALEZ

MATRIX:

Water

UNITS:

mg/L (ppm)

		_									
		MDL	ISAMPLE #	ī	01	1	92	1	ŀ	į.	
PARAMETER	i		II.D.	1	MW4	1	MW10	1	1	ı	1

Total Petroleum Hydrocarbons as Mineral Spirits (1

(1

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

METHOD: EPA 418.1

	TE	4080- Conco	Pike	Lan A 94	e 1520)	80	0-5	14-3	422	2 (In	CA)				A٨	OF IAL	-C(.YS	/S1	roi RE	DY I	RE(ES	CO	RD	,	72	2-	4	2	8	7.		CUST		HE(ONO
1	VIRONMENT	AL 415-8	85-78	52			80	0-4	23-7	143	O) E	CA) utside	CA)	, ,	#	Ŋ			Al	AP	LY8	18	RE	QL	JE	8T		1	ijk)	uti.	ł,	ı,		· ; #	ļ	
Project Mi		PRTOR	1				hon AX #	e #: #:							MTBEO		1	SOSE						10 eg		-				SPORT	1	į.				. !
Address:	icord	161	1_			Di	A.K	(L4	tion: L∆L	D				with MTBE C	/8015 CI N	Fuel					PCBs only []	0.854	NBS +25 C	Herbicides		HSL [O Org. Lead 🛭		Reactivity D.				1	1		***
Project No.	36805	016			5 /	H	e1	ſγ	lame Nam	<u> </u>	e	X		*ith	5 🗆 8020,	at a Jet Fuel		1 0 41	ă		5	902	8 8	Pesticides	II Semi	Metals D	22 (1 80%)	o mc	Flashpoint 🗆	MINHTE			!	# 17 h	×	₹ ₹
procedures of these sa		during the c	Ollec		latr	G		<u>'</u>		V,		Sam	nline	8020	602/901	□ Diesel	GC (SIN	Bar 413	0	8	8	5 5 0 5	3 2		18	othernt	7421 O 234	O STC		85					Laboratory	S. 20
Field Sample ID	Source of Sample	GTEL Lab # (Lab use only)	* CONTAINERS				_	Pre	30T	VO				BTEX 602 □	BTEX/TPH Ges. 602/8015 □ 8020/8015 □	TEH as C Gas	Product LD. by GC (SIMDIS) [Total Oil & Greese #13.1 U #13.2 U	EPA 601 30 8010	EPA 602 🗆 8020 🗆	EPA 608 🏻 8080 🖨	EPA 610 C 8310 C	EPA 624 8240	EPTOX: Metala	TCLP Metals C	EPA Priority Pollutant Metals O	LEAD 7420 0 7421 0 239.2 0 8010 0	CAM Metals	Companity []	, HG.	HOLD		Received by:	Received by:	15 DK	S.
			+	X S	AIR	SLUC	₹	HNO	ζς ¥	3	OTHER		TIME	+	a a	列	<u>\$</u>	Tota	C EPA	EPA	EPA	& (털	EP.	3	3	3			_	Œ.	R :	4	Q
WW 4			7			_				1		731	11 2	4_	-		<u> </u>	丰					1		+				_	×			Time		1178	
4			7		+	-	╫	-		$\left\{ \cdot \right\}$	+		113	1-	-	ليا	-	-	X			\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	_								*			<u></u>		
10	T		2				1	-			1		11.3	4	-				-		'-	7	_		+	-	_	-	-	×	X	\downarrow	45		Date	121/12
1 10 Travel	18	··	1			_					_		כייון	1	1			- 		1			1	•		1					X		/sate	8 "	å	
					-	$\left \cdot \right $	+	1		-	\vdash	-	 	+	+	╂			#				_							<u> </u>				ľ		,
					-		+							-	-	-		7	1	-			_		+	+	-	-		+		ì				
		<u> </u>					+	<u></u> _			<u></u>				مل	Sno.	J		DE	Mai	RKS	<u>. </u>					ا	1	<u>. </u>	.L	لينديد (ا		K			
SEVE	OURS [] EDITED 48 EN DAY []					•		S	PEC	iAL	. DE	TECTI	ON LI	WILL	3 (3	oh a (, (Y)		нс	IAIL	1113	•					٠.,				!		had by Sample	hed by:	hed byc	
L '	ER DC CLPI		Blue						PEC			PORTI	NG R	EQ	UIR	EME	NT	S		b U	se O	nly				age k O				•			Relinquia	Relinquis	Relinquia	



Page 2 of 2 Continued

Northwest Region

4080 Pike Lane

Concord. CA 94520

·(415) 685-7852

1 (800) 544-3422 from inside California

(\$00) 423-7143 from outside California

WORK ORD#: D001801

CLIENT: PAUL HORTON

PRDJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	 	MDL	ISAMPLE II.D.	# I	8 5 MN6	1 	0 6 MW11	I	07 MW5	1	0 8 MW8
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(Ø. ! (Ø. ! (Ø. !	5	(0.5 (0.5 (6.5	5	(Ø. 5 (Ø. 5 (Ø. 5	5	(0.5 (0.5 (0.5

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

METHOD: EPA 601



Morthwest Region

4080 Pike Lane

Concord. CA 94520 3415) 685-7852

2/89/90 SP

PAGE 1 OF 2

MIDRK ORD#:D001802

CLIENT:

PAUL HORTON

BROUNDWATER TECHNOLOGY, INC.

4880-D PIKE LANE

CONCORD, CA 94528

PROJECT#: 203-688-5016.05

LOCATION: DAKLAND, CA

SAMPLED: 01/30/90

BY: 6. MASON

2000) 423-7143 from outside California

RECEIVED: 01/31/90

BY: K. FILLINGER

ANALYZED: 82/88/98

BY: R. GONZALEZ

MATRIX: MATER

TEST RESULTS

4800) 544-3422 from inside California

mg/kg (ppm) UNITS:

PARAMETER	I MDL	1SAMPLE # 1	81 HW1	l I	MM5 05	i	6 3 MH3	1	0 4 M H12	i	0 5 M W6	1
Total Petroleum Hydrocarbons as Mineral Spirit	1		₹1		(1		(1		(1		{1	

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

METHOD: Modified EPA Method 5030/8015

	PFI	4080- Conco				20		100-	544	-34:	22 ((In i	CA)		C	H. ND	7	OF IAL	-CU YSI	31 S	OD REC	Y A	EC ST	OF	îD	7	<u>'2</u>	-	42	28	1	ا ذ	CUST	root	C	OND	
ENVI	IRONMENTO PRATORIES, II	415-6					ě	100-	423	-71	43 ((Ou	ıtside	CA)						AN	AL	YS	13 1	RE	QU	E8	T	سوس		٠,,	1	di.)	
Project Man	nager.	rton					Pho FA)	(#:	#;							MTBEG			503E						Herbicides 🗆				2					11		ģ.	ŀ
Address:	Lord	61	٠,) /	_		01	V	<u>d</u>			136.0	0150	3	إ	8.10	Ş		2	150	25 0	T e	# E	z	5	Beachigh							B .	
Project Nur		0160	5			5	A	$f \bar{\epsilon}$	Na	<u>Y</u> _	ŀ		ees	V	with MTBE	□ 8020/8	□ Jet Fuel	000	1 413.2 rbons 418.	DCA only []		PCBs only II	NBS +15 G	NBS +25 C	sticides 🛘	Semi VOA	Metala 🗆	200000 000 000 000 0	3	Ι.	Moko						
attest that to procedures to of these same	were used	field sampli during the c	ng :ollec	tlor	<u>'</u> (7	Sar	25	er N	abla	E	ĴΣ	01/	1	8020	302/8015	□ Diesel	SC (SIM	Hydroca	00	0.0		0 0	00	₽.	§	~ '	9 1.			8/		,		aborato	\ }	
Fleid Sample	Source of	GTEL Lab #	NERS	R	VI a	iHx		P	Mei res	tho erv	ḋ ●₫	_	Sam	pling	1	28	Ses	à	Grea	1080	1 802	808	824	0 827	Aetala		Æ,	200	15	_	H		<u>s</u> ′	<u>x</u>	7	3	
ID S	Sample :	(Lab use. only)	# CONTAINERS	WATER	ZOE PER PER PER PER PER PER PER PER PER PER	SLUDGE	OTHER	Į d	305	- SE	NONE	OTHER	DATE	TIME	BTEX 602 [BTEX/TPHGas 602/8015 8020/8015 MTBE	TPH as Gas	Product LD. by GC (SIMDIS) [3]	Total Oil & Greaser 413.1 U 413.2 U Total Petroleum Hydrocarbons 418.1 U	EPA 601/0 8010	EPA 602 🗆 8020 🗗	EPA 606 G 8080 G	EPA 624 🗆 8240 🗅	EPA 625 🗆 8270 🗅	EPTOX: Metals ()	TCLP Metals []	EPA Priority Pollutant	LEAD 7420 07421 0.2	CAM Metals	Company	7		Received by:	Received by	F. C.	}	
MW I			7	Х		1	Ĭ.	*		M				3:0	4			_					+	-		-	-	+	+	-	*	-				b	١
\			12		+	-	-	\parallel	-	4	-	\vdash			-	+				X	H	+	+	-	-	-	+	+	\dagger	╬		-	238		E	X	
18			2		+	+	╁╁	╫	+	+	╫╴				╁	 			+	T											X		ā	┨ -	4	7×	-
2			2							_										K		-	_	lacksquare	_		4	_	_			-	.5			3	l
28			1					-	4	4	₩.	\downarrow	<u> </u>	-	\downarrow	+	-		+		\vdash		+	+	╀-		+		+	٠	χ Χ	-	A A		3	-	┨
3		<u> </u>	2	\prod	ig	+	+	-}}		- -	╬	-	-	-	╁	+	-		+	¥		\dashv	+	+	\vdash		_	+	\dashv	+	7	十	 	+	┼-		1
3			1	H	H	╬	+	╫	\dashv		╂┼	+	 	+ /	╁	+	†		十	╁	1	十	_	T							<u></u>	仁] ,				1
12			12	$\dagger \dagger$	$\dagger \dagger$		\dagger	1	十	+	\parallel		ļ	32	<u>†</u>																X	<u> </u>	1 /			`	
12			7	:11								I							_	ЦX				١.									1 / (
	SPECIA	LL HANDL	ING						SPI	ECI	AL (DET	TECTIO	ON LII	MIT	rs (s	Spec	cify)		REI	MAP	KS:										7 (1) 244 244	4				
EXPEC SEVEN	DITED 48																									,	/			;		1	(A)	3 3	and bar		
L	C CLPL	(#) BUS .evel □	Blue					-		ECI/		REI	PORTI	NG RI	EQ	UIRE	EME	NT	s) Us	e Or	ıly	,		ora ork			atic)n	-	_(30 moduis	Reinquish		

	介 E	4080- Conce	ord, (ÇA 9	1452	20						n CA)		A	ND	AN	IAI	-C	13	RE	QU	RE ES	T	'HD		72	<u>-</u>	4	2	8	2	C	UBI	00	Sec.	ORD
I N	VIRONMENT ORAIORIES.	_ 415.0					80	0-4	23-7	7143	(0)utside 	CA)							A	LY	318	RE	Ql	JE	3T			ہند	Ŋ		i j	HÍ 5-)
Project M	anager.					PI	hon	e #:									ı	503A U	}					0	,		ا	1		SPIN			· 31	'		\
PAU	L HC	MON					4X 4								Ę			503A U						Herbicides	1		Ors Lead]	밁	7					1 6	J-
Address:	1	11				S	te k				. 1	ŧ		a	20		Į.	ויי				ı,	. .	Į		HSL CI	7			ڀ					1 3	Š
COM	Kord	<u>6T1</u>								ar	<u>10</u>	<u> </u>		Ē	ğ	Jet Fuel		2 2 2 2	Ě		동		2 2	: £	8	: I	- 1	Ì	#	ξ		1				3
Project N	umber	5016	-<	-		Pi	ole	ct N	lam —		ا ر	١		with MTBE	250/	\$. i	413.2 0	DCA only D		PCBs only []		D 61+ 88N		Semi VOA	0	8	뙤	_	Ž			·		'-	\$
				<u>'_</u>		<u> </u>	*	2	لحا			een		`₹	8		<u> </u>	□ {	ā		~		z z	theides [8	Metale 🗆	7421 🗆 239.2 🗆 6010 🗅	0	Flashpoint	Mineral					14	4
I attest that	t the proper	field sampli during the o	ng :olled	ction	1	\wedge			Nar	ne (F k A				0	510	Dieset	<u> </u>	준 출						F	10	Z	2	ပ	*!						\$	`\丿
of these sa	mples.	Coming the C					7				<u> </u>	SON		8020 □	977	0	ပ္က	4 3		0	Ď				ğ	£	0 2	o snc	Æ,	8					186	≺
Field Sample	Source	GTEL Lab#	É RS	N	Vlati	rlx	'	-М Pre	eth 1861	iod rved	1.	Samp	oling		9	88	<u>ر</u>		801	862	80	831	22 2	ş	모	y Po	242	- 1			9	ي ا	,	*	12.	7
ID	Sample	(Lab use only)	CONTAINERS	WATER	H.	SLUDGE OTHER	ΙĊ	HNOS	₹385±	-CE	THER	DATE	TIME	BTEX 602 C	BTEX/TPH Gas. 602/8015 □ 8020/8015 □ MTBE □	TPH as C Gas	Product I.D. by GC (SIMDIS) []	Total Detrolation Medicoschool 413.2 C	EPA 601 5 8010 G	EPA 802 🏻 8020 🔾	EPA 608 🗆 8080 🗅	EPA 610 🗆 8310 🖂	EPA 824 U 8240	EPTOX: Metals []	TCLP Metale 1	EPA Priority Pollutant	LEAD 7420 G	CAM Metals	Corrowhity	44	440	Received by	,	Received by		3
			"	ti	7		Y	-		χľ	╁	1/30				H	_		+=	Ī		\neg	+	1					┪	'	×	- <u>"</u>	- 		TE .	D-
WH 158		<u> </u>	2	††	+	\vdash	†		\dashv	什	\dagger	750	1 1	-				7	Y		П	十	1	1	1			T	T			٦.	4.40			\mathcal{Q}
6			2	$+ \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \! \!$	+	 	╫	Н	_	1	+	++-	+		\vdash		-	\top	 			+	_	1					┪	X	\dashv	- [] E		زن
ط ا			1	╂	十	╂	╫			╫	╁	 	- 			\vdash	+		╁╴	-	\vdash	_	+	T	+	H	7	┪		_	X	1	A		1 '	$^{\circ}$
68	 		1,	╫	+	\vdash	+			╁┼	╁	+	 	┞	\vdash	 	十	-	X	+		+	\top	+-	1				\dashv	\dashv		1	-	-	7 -	
111	<u> </u>		2	╁╫	+	++	╫╴		\dashv	+	+	 - 				\vdash	+	+	-∤-}	╀╴	H	-	╁	+-	╁╴		┪	┪	_	X		و ا	~	2	2	7
1-11	<u> </u>		12	╁	+	+	╫╌	-	-	╂┼	+	+-	- -	┞	-	1	_	╁	╅	┼-	\Box	_	╅	╁	+			-	\dashv	_	X	8	Ž	å	6 -	
1118			1	╁╫	-	₩-	╫╴	-		+	╁	+	\vdash	├		╂╼┼	-+	_	X	+		-		+-		H	┪		-	7	Α-	╁	<u> </u>	 	+	
1-15-	1		7	+++		╁╌╂╴	₩	-	\vdash	-}}-	+	++-	 	╁	\vdash	╁╼╁		+	╬	┰		\dashv			╁╌		\dashv	\dashv	┪	X	┪	1	N.			
15	ļ		2	#1	-	++	╢	-	Н	+	+	+-}-	200	╁╌	╁┈			+		╁╴	H	\dashv	+	+	+		-		-	7	7	1/	Λ		1	
V 5B	<u> </u>	<u> </u>	1	4124	\vdash	++	╫	 	\vdash	H	+	 	32	┨	┼	} - 		\dashv	Y	╁╴	\vdash	-+	-	+	-		\dashv		\dashv	ᅱ	4	∜	}			
8_			10	لــــــــــــــــــــــــــــــــــــــ	لل		#	<u>L</u>		41	Ц,	4	- -	1_				+	<u>, k</u>		<u> </u>				1	لبا				Ļ	_ <u></u>	┨_	N			
EXPE SEVE	DURS II DITED 48 II N DAY III	AL HANDL Hours 🗆 _(#) BUSI			DAY	S		SI	PEC	ial I	DE.	TECTIC	N LIK	AIT:	S (S	peci	ly)		REM	MAF	RKS:	•							,	•	7	The Hy Samo	1700	Med by	thed by:	\
L .	C CLP L	· · · · /	Blue						PEC		RE	PORTIN	IG RE	au	IRE	MEI	NTS	5	Let			nly			ork	-			on	_	* 	Reine/A	S	Reling	Refinquished by	

i.

the transfer of the second of the second

GTEL

ENVIRONMENTAL LABORATORIES, INC.

Morthwest Region 4080 Pike Lane

Concord. CA 94520 **2,4415) 685-7852**

(800) 544-3422 from inside California

(800) 423-7143 from outside California

82/89/98 SP Page 1 of 2

WORK ORD#:D001801

CLIENT: PAUL HORTON

BROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

SAMPLED: NONE GIVEN

BY: 6. MASON

RECEIVED: 81/31/98

ANALYZED: 02/01/90

BY: M. LY

MATRIX:

Water

UNITS: ug/L (ppb)

	I MDL	ISAMPLE # 1	01 i MW1 1	02 I	83 I	04 MW12
PARAMETER	 	11.D. 1				
Chloromethane	9. 5		(0.5	(0.5	(0.5	(0.5
Bromomethane	6.5		(0.5	(0.5	(0.5	(0. 5
Dichlorodifluoromethane	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
Trichlorofluoromethane	8.5		(0. 5	(0.5	(0. 5	(0.5
1, 1-Dichloroethene	0.2		(0. 2	(0.2	0. 57	(0.2
1,1-Dichloroethane	0.5		(0.5	⟨0.5	5.9	(0.5
trans-1,2-Dichloroethene	0. 5		(0.5	(0.5	2.2	0. 68
Chloroform	8.5		(0.5	(0.5	(0.5	(0.5
1.2-Dichloroethane	0. 5		(0.5	(0.5	4.3	(0.5
1, 1, 1-Trichloroethane	8. 5		(0.5	(0.5	0. 72	(0.5
Carbon tetrachloride	0. 5		(0.5	(0.5	(0.5	(0.5
Bromodichloromethane	0.5		(0.5	(0.5	(0. 5	⟨∅.5
- ,	8. 5		(0.5	(0.5	2	(8. 5
1,2-Dichloropropane trans-1,3-Dichloropropene	0.5		(0.5	(0.5	(0.5	(0.5
Trichloroethene	0.5		(0.5	(0.5	9. 4	13
Dibromochloromethane	0.5		(0.5	(0.5	(0.5	(0.5
	0. 5		(0.5	(0.5	(0.5	⟨0.5
1,1,2-Trichloroethane	0. 5		(0.5	(0.5	(0.5	(0.5
cis-1,3-Dichloropropene	1		(1	(1	(1	₹1
2-Chloroethylvinyl ether	0. 5		(0.5	(0.5	(0.5	(0.5
Bromoform	9. 5		(0.5	(0.5	(0.5	⟨0.5
1, 1, 2, 2-Tetrachloroethane	0. 5		(0.5	(0.5	(0.5	⟨∅.5
Tetrachloroethene Chlorobenzene	0. 5		(0.5	(0.5	0. 7	⟨∅.5

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



Northwest Region

4080 Pike Lane

Concord, CA 94520

... (415) 685-7852 (600) 544-3422 from inside California

* = 1800) 423-7143 from outside California

Page 1 of 2 Continued

WORK DRD#: D001801

PAUL HORTON CLIENT: PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	 	MDL	ISAMPLE #	 	01 MW1	1	MM 2	1	0 3 M 13	1	0 4 MW12	- 1 1 -
1,3-Dichlorobenzene		0. 5			(0.5		(0.5		(0.5		(0.5	
1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5	•		(0.5 (0.5	_	(0.5 (0.5	•	(0.5 (8.5		(0.5 (0.5	

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

Page 2 of 2

WORK DRD#: D001801

CLIENT: PAUL HORTON PROJECT#: 203-680-5016.05 LOCATION: DAKLAND, CA

MATRIX: Water UNITS: ug/L (ppb)

PARAMETER	I MDL.	ISAMPLE # II.D.	 	0 5 MW6	l I	0 6 MW11	1	07 MW5	1	68 MW8	
Chloromethane	0. 5			(0.5	i	(0.5		(0.5		(0.5	
Bromomethane	8. 5			(0. 5		(0.5		(0.5		(0.5	
Dichlorodifluoromethane	0.5			⟨€.5		(0.5		(0.3		(0.5	
Vinyl chloride	1			(1		(1		{:		(1	
Chloroethane	9. 5			(0.5		(0.5		(0.		(0.5	
Methylene chloride	0.5			(0.5		(0.5		(0.		(0.5	
Trichlorofluoromethane	0. 5			6.7		(0.5		(0.		(0.5	
1.1-Dichloroethene	0.2			(0.2		(0.2		(0.		(0.2	
1, 1-Dichloroethane	0. 5			(0.5		(0.5		(0.		(0.5	
trans-1,2-Dichloroethene	0. 5			(0.5		2.5		(0.		(0.5	
Chloroform	0.5			⟨0.5		(0.5		(0.		(0.5	
1,2-Dichloroethane	0.5			(0.5		(0.5		(0.		3. 2	
1.1.1-Trichloroethane	0. 5			(0.5		⟨∅, 5		0.9		(0.5	
Carbon tetrachloride	0.5			(0.5		(0.5		(0.		(0.5	
Bromodichloromethane	0.5			(0.5	5	(0.5		⟨₽. ⅓		(0.5	
1,2-Dichloropropane	0. 5			(0.5		(0.5		(0.		(0.5	
trans-1, 3-Dichloropropene	8. 5			(0.5		⟨0.5		(0.		(0.5	
Trichloroethene	0.5			4. E		41		2.		15	
Dibromochloromethane	0.5			(0.5	5	(0.5		⟨€.		(0.5	
1,1,2-Trichloroethane	0. 5			(0.5	5	(0.5	5	(0.		(0.5	
cis-1,3-Dichloropropene	0.5			(0.5	5	⟨∅.;		⟨∅.		(0.5	
2-Chloroethylvinyl ether	1			(1	L	(:	i	<		(1	
Bromoform	0.5			(0.5	5	(0.	5	⟨₽.		⟨₽. 5	
1, 1, 2, 2-Tetrachloroethane	0.5			(0.5	5	(0.		⟨∅.		(0.5	
Tetrachloroethene	0.5			(0.5	5	(0.	5	⟨∅.		⟨∅. 5	Ō
Chlorobenzene	0.5			(0.5	5	(0.	5	70.	5	1	1

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



: Northwest Region

≠080 Pike Lane Concord, CA 94520

(415) 685-7852

LABORATORIES, INC.

(800) 544-3422 from inside California (800) 423-7143 from outside California

Page 1 of 1

WORK ORD4:D002003

CLIENT: PAUL HORTON

BROUNDWATER TECHNOLOBY, INC

4986-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016 LOCATION: DAKLAND, CA

SAMPLED: 01/31/90

BY: 6. MASON

RECEIVED: 01/31/90

ANALYZED: 02/02/90

BY: M. LY

MATRIX:

Water

UNITS:

ug/L (ppb)

	ŧ	MDL	ISAMPLE	# 1	01	1	0 2	1	ļ.	
PARAMETER	<u> </u>		II.D.	<u> </u>	M 4	1	MW10	! 	 	
Chloromethane		0. 5			(0.5	i	(0.5	į		
Bromomethane		6. 5	•		(0.5	5	(0.5	i		
Dichlorodifluoromethane		0.5			(0. 5	5	(0.5	i		
Vinyl chloride		1			₹1		(1.0	l		
Chloroethane		0.5			(0.5	,	(0.5	i		
Methylene chloride		0.5			(0.5	5	(0.5	i		
Trichlorofluoromethane		0. 5			(0.5	5	⟨₽. 5	;		
1,1-Dichloroethene		8.2			(0.2	2	0.75	5		
1,1-Dichloroethane		8.5			(0.5	5	(0.5	i		
trans-1, 2-Dichloroethene		0.5			46	•	35	•		
Chloroform		0.5			1.6	;	5.5	j		
1,2-Dichloroethane		0.5			0.5	5	(0.5	5		
1, 1, 1-Trichloroethane		0.5			⟨0.5	5	(0.5	i		
Carbon tetrachloride		0.5			(0.5	5	(0.5	5		
Bromodichloromethane		0.5			(0.5	5	⟨∅.5	5		
1,2-Dichloropropane		6. 5			⟨₽.5	5	(0.5	5		
trans-1,3-Dichloropropene		6. 5			(0.5	5	(0.5	5		
Trichloroethene		0. 5			470	9	820)		
Dibromochloromethane		0.5			(0.5	5	(8.5	5		
1.1.2-Trichloroethane		0.5			(0.5	5	(0.	5		
cis-1,3-Dichloropropene		0.5			⟨₿.5	5	(0.	5		
2-Chloroethylvinyl ether		1			₹:	1	₹:	L		
Bromoform		0.5			(0.5	5	(0.	5		
1, 1, 2, 2-Tetrachloroethane		0.5			(0.	5	(0.	5		
Tetrachloroethene		0.5			(0.5	5	(0.	5		
Chlorobenzene		0.5			(0.	5	(0.	5		

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



Page 1 of 1 Continued

T.Northwest Region

4080 Pike Lane

*Concord. CA 94520

- **(415)** 685-7852

(800) 544-3422 from inside California

**** (800) 423-7143 from outside California

WORK DRD#: D002003

CLIENT: PA

PAUL HORTON

PROJECT#: 203-680-5016

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	 	MDL	ISAMPLE #	1	01 MH4	1	02 MW10	 	1	1 1
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		6.5 6.5 0.5			(0. 5 (0. 5 (0. 5	5	(Ø. 5 (Ø. 5 (Ø. 5	5		

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

METHOD: EPA 601

EMMA P. POPLEL

EMMA P. POPEK, Laboratory Director



ENVIRONMENTAL LABORATORIES, INC.

**Morthwest Region 4080 Pike Lane Concord, CA 94520 415) 685-7852

(200) 544-3422 from inside California (200) 423-7143 from outside California sp Page 1 of 1

MORK DRD#:D002161

CLIENT: PAUL HORTON

BROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94528

PROJECT#: 203-680-5016

LOCATION: DAKLAND, CA

SAMPLED: \$1/31/90

BY: 6. MASON

RECEIVED: 81/31/90

ANALYZED: 82/85/98

BY: R. SONZALEZ

MATRIX:

Water

UNITS:

mg/L (ppm)

{1

	1	MDL	ISAMPLE #		81	ı	8 2	<u> </u>	1	I	1
PARAMETER	ı		II.D.	1	1411 4	1	MW10	l	i	ł 	- I

(1

Total Petroleum Hydrocarbons as Mineral Spirits

1

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

METHOD: EPA 418.1

EMMA P. POPEK, Laboratory Director

it #t	E 6 1 3	λ 		ı		2	١,			i		<u>.</u>	_											.							41	M. A.	
GT	EL 4080 Gond)- Pike cord, C 685-78	Land A 94	e 1520		800- 800-	· 544 ·423	342 714	2 (In	CA) utside	CA)		ND		OF		ST SR											akide:		1		EC	ORC
Project Manager PAUL Address: CONCO Project Number: 2.03 69 I attest that the p procedures were of these samples Field Sour Sample ID Sam	HOFTO A 6T OSO 6 Oper field samp used during the Lab # (Lab use	ling collect	S tion M	5 f	Pho Sho Pro Sa	one X #: e loc b K l mple	#:	n: VD ne: K! Ime Moderve	ell (Prin	N (i): ∂√ Samı		!	18. 602/8015 □ 8020/8015 □ MTBE □	et Fuel	Product LD. by GC (SIMDIS) II	18.418.1 □ 503E □	EPA 601 15 B010 □ DCA only □	EPA 602 U 8020 U		NB3 +15 C	□ NBS +25 □	EPTOX: Metals III Pesticides III Herocopes III	flutant Metals D HSt. D	R2 0 6010 0 Org Leed 0	state DST.C DTT.O	C Flashpoint C Reactivity C	AS MINERAL SPIRIT	HOLD				od by Laboratory	Sreed K
	only)	# CONT	WATER	AIR	OTHER	ξ	H ₂ SOH	30	NONE		TIME	+	пузив	7	Pode 1	Total	EPA 60	EPA 60	EPA 61	EPA 62	EPA 62	EPTOX	EPA P	LEAD 7	CAMIN	Corrothrity	i	7	Received by	Received by:	j	Receiv	A
MW 4 4 4 8		7 7	X			1		7		Y31	11 Z	4_		,	\ - -			4									×	X	•w ₁ 1	₽ WIL	1		(141)
10		7 7				 		1			113	9			1		×	-	+		•		+				_	X X		Date	•	. 9 60	(2) Lan
Travel 18								-				-		-		1		/	+										 			1	
24 HOURS EXPEDITE SEVEN DA OTHER	48 Hours 🗆		SS D					CIA	L RE	TECTIO						_	REM	Use		<u>y</u>			rk O						felinquished by Semples	IND HADWACKETT		Relinquished by:	



Northwest Region

4080 Pike Lane Concord, CA 94520

LABORATORIES, INC.

(415) 685-7852 (800) 544-3422 from inside California

(800) 423-7143 from outside California

Page 1 of 2

MORK ORDe: Decie66

PAUL HORTON CLIENT:

GROUNDHATER TECHNOLOGY, INC

4888-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

SAMPLED: 01/03,04/90

BY: C. ROBERTSON

RECEIVED: 01/04/90

ANALYZED: 01/05/90

BY: M. LY

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	MDL	ISAMPLE # I	81 I MH1 I	02 I	93 I MH3 I	04 I MH8 I	0 5 MH6
Benzene	9.5		(0.5	(0. 5	(0.5	(0.5	⟨0.5
Toluene	0. 5		(0.5	(8.5	(0.5	(0.5	(0. 5
Ethylbenzene	8.5		(0.5	(0.5	(0.5	(0.5	(0.5
Xylenes	0. 5		(0.5	(0.5	(0.5	(0.5	(0. 5
Total BTEX	0. 5		(0.5	(0.5	(0.5	(9.5	(0. 5
Misc. Hydrocarbons (C4-C12)	1000		(100 0	(1000	(1 00 0	(1 88 8	(1000
Total Petroleum Hydrocarbons as Mineral Spirits	1900		(1000	(1000	(1000	(100 0	(196 0

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

METHOD: Modified EPA 5030/8020/8015



Morthwest Region

2080 Pike Lane
Concord. CA 94520

(415) 685-7852

(800) 544-3422 from inside California (1800) 423-7143 from outside California Page 2 of 2

WORK ORD#: D001066

CLIENT: PROJECT#: PAUL HORTON 203-680-5016.05

LOCATION:

DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	MDL	ISAMPLE # I	0 6 MH11	87 l MW18 l	88 I MW5 I	0 9 NH4	10 I MW12 I
Benzene	0.5		(0.5	(8.5	(0.5	⟨∅.5	(0.5
Toluene	0.5		(0.5	⟨ 0. 5	(8.5	(0.5	(0.5
Ethylbenzene	0. 5		(0.5	(0. 5	(0. 5	(0.5	(0.5
Xylenes	0. 5		(0.5	(0.5	(0.5	(0.5	(0.5
Total BTEX	0.5		(0.5	(0.5	(0. 5	(0. 5	(0.5
Misc. Hydrocarbons (C4-C12)	1999		(1000	(1900	(1000	(1 00 0	(1000
Total Petroleum Hydrocarbons as Mineral Spirits	1980		(1989	(1900	(1990	(1980	(1000

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

METHOD: Modified EPA 5030/8020/8015

EMMA P. POPEK, Laboratory Birector

Morthwest Region 4080 Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

81/19/98 rw

Page 1 of 3

WORK ORD#: D001065

CLIENT: PAUL HORTON

BROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94529

PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

SAMPLED: 01/3,4/90

BY: C. ROBERTSON

RECEIVED: 01/04/90

ANALYZED: 61/11/90

BY: R. CONDIT

MATRIX:

Water

UNITS:

ug/L (ppb)

	1	MDL	ISAMPLE #	i	01	1	8 2	1	8 3	1	8 4 i
PARAMETER	<u> </u>		11.D.	<u> </u>	W 1	 	SWH	!	HH3	- 	MHB
Chloromethane		6.5			(0.5	i	(0.5		(0.5		(0.5
Bromomethane		0.5			(0.5	j	(0.5		⟨Ø. 5		(0.5
Dichlorodifluoromethane		9. 5			(0.5	5	(0.5	5	(9.5		⟨∅.5
Vinyl chloride		1			{1		(1		{1		(1
Chloroethane		6. 5			(0.5	5	(0.5		(0.5		⟨0.5
Methylene chloride		6. 5			(6. 5	5	⟨Ø. 5		(0.5		(0.5
Trichlorofluoromethane		0. 5	4		(0.5		(0.5		(0.5		(0.5
1,1-Dichloroethene		0.2			(0.2	2	(0.8		1.7		(0.2
1,1-Dichloroethane		0.5			(0.5	5	(0.		8. 8		(0.5
trans-1,2-Dichloroethene		6.5			(0.5	5	(0.5		2.9		1.3
Chloroform		0.5			(0.5	5	(0.	5	(0.5		(0.5
1,2-Dichloroethane		0.5			(0.5	5	(0.5		5. 8		4.9
1, 1, 1-Trichloroethane		8.5			(0.5	5	(0.	5	1.		⟨0.5
Carbon tetrachloride		0.5			(0.5	5	(0.	5	(0.5		(0. 5
Bromodichloromethane		0.5			(0.5	5	(0.	5	⟨∅. 3		(0.5
1,2-Dichloropropane		6.5		٠,	(0.5	5	(0.	5	(0.5		(0.5
trans-1, 3-Dichloropropene		0.5			(0.5	5	(0.	5	(0.		(0. 5
Trichloroethene		0. 5			(0.5	5	⟨∅. ;	5	14		31
Dibromochloromethane		0.5			(0.5	5	(0.	5	⟨∅.		(0.5
1, 1, 2-Trichloroethane		0.5			(0.5	5	(0.	5	⟨Ø. ;		(0.5
cis-1,3-Dichloropropene		0.5			(0.	5	(0.	5	⟨₽. 1		(0.5
2-Chloroethylvinyl ether		1			()	1	<		<		(1
Bromoform		9. 5			(0.	5	⟨∅.	5	(0.		(0.5
1, 1, 2, 2-Tetrachloroethane		8. 5			(0.5	5	(0.	5	(0.		(0.5
Tetrachloroethene		0. 5			0.5	1	⟨Ø.	5	0.		(0.5
Chlorobenzene		0. 5			(0.3	5	⟨∅.	5	1.	5	0.7

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



Northwest Region

4080 Pike Lane

Concord. CA 94520

.___(415) 685-7852 (800) 544-3422 from inside California

1800) 423-7143 from outside California

Page 1 of 3 **Continued**

WORK ORD#: D001065

PAUL HORTON CLIENT:

PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

MATRIX:

Hater

UNITS:

ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #	1	01 MH1	 	MM5 8 5	1	03 MH3	 	0 4 MN 8	1
1,3-Dichlorobenzene 1,2-Dichlorobenzene		0.5 0.5			(0.5 (0.5		(0.5		(0.5 (0.5		(0.5 (0.5	
1,4-Dichlorobenzene		0.5			(0.5		(0.5		⟨0.5	i	(0.5	j

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

Page 2 of 3

Northwest Region

4080 Pike Lane

Concord, CA 94520

· (415) 685-7852

~ (800) 544-3422 from inside California

2.4800) 423-7143 from outside California

WORK ORD#: D001065

CLIENT: PAUL HORTON

PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

MATRIX: Water

UNITS: ug/L (ppb)

PARAMETER	I MDL	ISAMPLE #	0 5 MW6	1	0 6 MW11	l	97 MW18	1	0 8 M 15
		. 							
Chloromethane	0. 5		(0.5	i	(0.5		(0.5		(0.5
Bromomethane	0. 5		(0.5		(0.5		(0.5		(0.5
Dichlorodifluoromethane	0. 5		(0.5	j	(0.5		⟨0.5		(0.5
Vinyl chloride	1		(1		₹1		(1		(1
Chloroethane	0.5		(0.5	i	⟨€.5		(0.5		(0.5
Methylene chloride	0. 5		(0.5		(0.5		(0.5		(0.5
Trichlorofluoromethane	0. 5		15		(0.5		(0.5		(0.5
1.1-Dichloroethene	0.2		(0.2		⟨0.2		Ø. 9		0. 5
1,1-Dichloroethane	0. 5		(0.5		⟨0.5		⟨∅. 5		(0.5
trans-1, 2-Dichloroethene	6. 5		(0.5		5.6		_36		(0.5
Chloroform	9. 5		(0.5		(0.5		5.		(0.5
1,2-Dichloroethane	6. 5		(0.5		(0.5		(0.		(0.5
1,1,1-Trichloroethane	0.5		(0.5	5	(0. 5		(0.		5
Carbon tetrachloride	0.5		⟨∅.5	j	(8. 5		⟨∅. :		(0.5
Bromodichloromethane	0.5		(0.5	5	(0.5		⟨∅.		(0.5
1,2-Dichloropropane	0.5		⟨€. 5	j	⟨₿.5		⟨∅.		(0.5
trans-1,3-Dichloropropene	0.5		(0.5	5	(0.5		⟨₽. ⅓		(0. 5
Trichloroethene	0.5		8.3	\$	67		71		5
Dibromochloromethane	0.5		(0.5	5	(8. 5	i	(0.		⟨₽.5
1,1,2-Trichloroethane	0.5		(0.5	5	(0.5		(0.		⟨0.5
cis-1, 3-Dichloropropene	0. 5		(0.5	5	(0.5		⟨0.		(0.5
2-Chloroethylvinyl ether	1		()	l	(1		((1
Bromoform	0. 5		(0.	5	⟨∅.5		⟨∅.		(0.5
1, 1, 2, 2-Tetrachloroethane	0.5		(0.	5	(0.5		⟨₽.		(0.5
Tetrachloroethene	0.5		(8.	5	(0.5	5	⟨₽.		(0.5
Chlorobenzene	0. 5		(0.	5	(0.5	•	(0.	5	(0.5

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



Northwest Region.

4080 Pike Lane

Concord. CA 94520 4 (415) 685-7852

[800] 544-3422 from inside California

(800) 423-7143 from outside California

Page 2 of 3 Continued

WORK ORD#:D001065

CLIENT: PAUL HORTON

PROJECT#: 203-680-5016.05

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	 	MDL	SAMPLE #	1	0 5 MH6	1	0 6 MW11	 	07 MW10	1	08 MH5	1
1,3-Dichlorobenzene		0.5			(0.5		(0.5		(0.5		(0.5	
1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 8.5			(0.5 (0.5		(0.5 (0.5		(0.5 (0.5		(0.5 (0.5	

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

Page 3 of 3

Northwest Region 4080 Pike Lane Concord, CA 94520 4(415) 685-7852 (800) 544-3422 from inside California 1800) 423-7143 from outside California

WORK ORD#: D001065

CLIENT: PAUL HORTON PROJECT#: 203-680-5016.05 LOCATION: OAKLAND, CA

MATRIX: Water UNITS: ug/L (ppb)

	I MDL	ISAMPLE # 1	0 9	10 MW12	1
PARAMETER	1 	11.D. 1	144 l		
Chloromethane	0. 5		(0.5	(8.5	
Bromomethane	0.5		(0.5	(0. 5	
Dichlorodifluoromethane	9.5		(0. 5	(0.5	
Vinyl chloride	1		₹1	(1	
Chloroethane	6.5		(0.5	(0.5	
Methylene chloride	0.5		(0. 5	(0.5	
Trichlorofluoromethane	0.5		(0.5	(0.5	•
1,1-Dichloroethene	0. 2		(0. 2	(0.2	
1,1-Dichloroethane	0. 5		(0.5	(0. <u>5</u>	
trans-1,2-Dichloroethene	8.5		31	1.5	
Chloroform	6. 5		1.6	(0.5	
1,2-Dichloroethane	0.5		0. 6	1.6	
1, 1, 1-Trichloroethane	0. 5		(0.5	(0. 5	
Carbon tetrachloride	6. 5		(8.5	(0. 5	
Bromodichloromethane	0. 5		(0.5	(0.5	
1,2-Dichloropropane	9. 5		(0. 5	(0.5	
trans-1, 3-Dichloropropene	0. 5		(0.5	(0.5	
Trichloroethene	0.5		430	31	
Dibromochloromethane	8.5		(0. 5	(0. 5	
1, 1, 2-Trichloroethane	0. 5		(0. 5	(0. 5	
cis-1,3-Dichloropropene	0.5		(0.5	(0.5	
2-Chloroethylvinyl ether	1		(1	<u>(1</u>	
Bromoform	0. 5		(0. 5	(0. 5	
1, 1, 2, 2-Tetrachloroethane	0.5		(0. 5	(0.5	
Tetrachloroethene	0.5		(0.5	(0.5	
Chlorobenzene	0.5		(0.5	(0. 5	

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



Page 3 of 3 Continued

Morthwest Region 1080 Pike Lane Concord. CA 94520 1415) 685-7852

 WORK DRD#: D001065

CLIENT: PAUL HORTON
PROJECT#: 203-680-5016.05
LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	i I	MDL	ISAMPLE #	 	0 9 M 14	1	10 MW12	 	 	l 1
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5	5	(0. 5 (0. 5 (0. 5	5		

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

METHOD: EPA 601

EMMO P. POLLE EMMO P. POPEK, Laboratory Director

		FE	4080- Conce							44-3			CA)		C					US IS					RE		72		14	10.	cut	top		CORD	
_		VIEONMENT ORATORIES, I	AL 415-8						0-4: e #:		143) (O	utside (CA)	_			Ţ.	_ F		NA	LY	S15	RE	QI	JES	3T	Т	1-1	5				3	
	Project Mi	anager:	Ho	1		١		AX :								ATBE C			503A 🗆	3					8		0	Leed C	0	3				3	þ
	Address:				,	or,	SI k		ocal						35.0	1501	4	- 1	~'			Ţ D			Herbicides	0	R R	g g	Reactivity D	3	·				
-	Project N	umber							igt N		e: //	1			with MTBE	20/80	O Jet Fuet		413.2	DCA only D		PCBs only []		NBS +15 C	- 1	12			3				`	33	
		680			5		70	1		Y	ne (F	E Print	<u></u>		\$	2080		8	_			2		Ž Ž	eticides		Metals 🗆	2 0 0010 D	1 1				۳.	3	1
П	attest tha rocedure: If these sa	t the proper s were used	during the o	colle	ction	0	•	است 104	10	ו מאוז	، ا	-	ž SOM	:	8020	2/801	□ Diesel	NIS)	413.1		0				&	δ			Flashpoint [425			orato		ľ
֓֞֝֟֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֟֝֓֓֓֓֓֓֓֓֡֡֝֡֓֓֓֓֡֝֡֡֝֡֡֝	Field Sample	Source	GTEL Leb#	NERS	M	lati		1	M	oth	od		Samp		0	BTEXTPH Gas 602/8015 □ 8020/8015 □ MTBE □	288	Product LD. by GC (SIMDIS) II	Total Oli & Greaser 413.1 🗆 413.2 🗆	EPA 601 # 8010 [EPA 602 [] 8020 []	EPA 608 CI 8080 CI	EPA 610 (3 8310 (3	EPA 624 8240 CPA 6240 CPA 624 EPTOX Metals		EPA Priority Pollutant		וי		*	ž	Received by Lab	a		
	ID	Sample	(Leb use only)	# CONTAINERS	WATER		SLUDGE OTHER		පි	H ₂ SO.	u	OTHER	ų	Æ	BTEX 602	KTPH	TPH as C Gas	duct LI	Ö	A 801	A 602	A 606 (A 610 (A 624	10X	TCLP Metals []	A Prior	CAM Metal	Corrosivity	34	Received by:	Received by	3	ನ	Ļ
L				*	≸ Ş	A B	3 (5	Ŧ	NH Sol	Ĩ	밀	26	DATE	TIME	18	BIE	Ē	£	<u> </u>	<u> </u>	8	EP	EP	g 8	5 1	12	쁍		8 8	48	- 🖁 ¦	E E	đ.	子	
	AWIB			2	\mathbb{A}	+		K		H	╬	+	7372	1550		-	H	\dashv	-	X	+	\vdash	\dashv		+	\dagger	\vdash	+	+-		راء ا		•	公司	1
-	4WI 4WI	<u> </u>		7	\parallel	\dagger		\parallel	T		#	+	5	150	İ															X			F	\ <u>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</u>	
	MWZS										\prod		9	Has						-		<u> </u>		_		ļ		\perp	igapha		7 -		-	- 11)	┨
	MWZ	ļ		2	\ 	_	-	\prod			11	\perp	0	1640		<u> </u>	\vdash			<u> </u>	1	-		-	+-	╀	\vdash	-	_	X	- 5	2		+	
١	SWM			7	+	+	╁┼	╂	┼	\vdash	H			600	-	-	-		\dashv		╫	╁┈			╁	+-	\vdash	+	+-		1 25	*	ă	7	l
-	MW3F	·		1/2	+#	- -	╁╼╂╴	H	╁	╁┤	H	+	+	1607	-	-	-		\dashv	×	扌	+		\dagger	+	 		\top	\dagger		1-	1	+		1
	MW3			7	+++	十	╀╾┼╴	$\dagger \dagger$	+		1	\top		160		 			1					1						X					
	MWSE	<u> </u>		li	$\dagger \dagger \dagger$	+	1 +	11	†			7	11,	1615	1																$\prod_{\sim} \prod_{i}$	'			11
	MW8			Z	V			V		'	У		V	1615	Γ					2	1								\perp		M M				١
		8PECI/	AL HANDL	ING	}				S	PEC	IAL	DE.	TECTIO	N LIN	fIT:	S (S	Spec	:ify)		REI	MAI	RKS	i:							:					
		OURS []	Hours 🗆																						_	\sim	1	<u></u>	\mathcal{L}	ス					
		N DAY	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					1													•				H	لأسا	\	(-	4		VE I	Ng.	2		İ
		ER										551	DO DTIA	- n-	<u> </u>		- 146	MIT	_	1 0	- II	50 C			`	<u></u>	<u> </u>	.oca	Hor	_	懂	M.	1		ł
	QA/C FAX	CC CLPI	.evel 🗆	Rine	Lev	/el	u			PEC		HE	PORTIN	IU KE	UU.	,1750	_ IVI C	-141	٠	Loi					•			ler#		•	E €)[[]	Refinquished by		
) """	_																		*****	- •,•				•			"			ď		ĬŒ.		_

		FF	4080- Conc				6	100-5	44-	342	2 (in	CA)		C		N	·OF	-Cl	US1 IS	TO! RE	DY I	RE ES	CO	RD	-	72		14	11_	cus	TOD.	-NE(CORD
		VIRONMENT ORATORIES.	A15-6			-	8	100-4	23-	714	3 (0	utside	CA)						Al	AF	LYS	18	RE	QU	ES	T		أفس	والمدافظ والتا		cic		\preceq
-	Project Mi	Horto,	n				Pho FAX	ne # :#:	:						MBEO		2	503E []						des 🗆		2		0,	बराह		1:1		Z
	Address:					/		loce K/						D 38.	015GA	3	1	թլ	1		2		2 2	Herbicides		HSt C		eactivity [12				
	Project No	umber. 68050	16.05.		-	う う	Pra	egt	Nam	φ: 	رم	n		with MTBE []	8020/8	☐ Jet Fuel		413.2	DCA only		PCBs only []	MBC 118 7	NBS +25	eticides 🗆	Semi VOA	Metals []	OTH	Ē	27.0			•	
	attest that procedures	t the proper were used	field sampli		tlon		San	npie	Na	7)"	Print			00	78015	□ Diesel	(SIMDIS	drocarb		_	_	, ,		2	VOA 🗆	Mart Met	1 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	18	2 Mu	!		rationy	7
	Field Sample	Source of	GTEL Leb#	NERS	M	etrix	10		leti ese	nod			pling	D 8020 C	Gas. 602	C see	by GC	Crease H	10108	1 8020 [1 8080	83101	18270	otale 🗆	\ D ##	ry Pothet	THE DISTLE			¥	¥	wed by Labo	9
	1D	Sample	(Leb use only)	* CONTAINERS	WATER SOIL	AIR SLUDGE	THER C	SON	H2SQ4	ICE	NONE	DATE	TIME	BTEX 602	BTEX/TPH Gas 602/8015 [] 8020/8015 [] MTBE []	TPH as 🗆 Gas	Product LD. by GC (SIMDIS)	Total Petroleum Hydrocarbons 418.1	EPA 601 1 8010 [EPA 602 🏻 8020 🗅	EPA 608 🗆 8080 🗅	EPA 610 U 8310 U	EPA 625 🗆 8270 🗇	EPTOX: Metale D	TCLP Metale []	EPA Priority Pollutant Metals C	CAM Meta	Corrogivity	EES !	Received by:	Received by	18	3
	NWS	<u> </u>		Z	X		Ĭ	<u> </u>		Ā			1615	Ē		Ė												Ī	X.		<u> </u>	- R	1
	NW6B			1		Ц.		1		\perp	_		K\$5	_	-	_	\dashv	+	1		\perp	_	-	-			_	-		يا ۽ ل	E	Time	315
ŀ	uw6			Z	-	-	 - -	4		\prod	-	ليع	1645	1—	<u> </u>	_	_	+	X		4	+	-	 		-	+	+-				-	$\overline{\dot{\aleph}}$
-	MW6			2	-			 	\sqcup	-	┦╸	dr.	64	-	-	-		+	╀		-		╁╌	-	\dashv	- -	+	+-	X		∃ -	┥ .	117
V	√WIIB	<u> </u>		1	╟┼╌	-	++	\vdash	H	$\ \cdot\ $	+:	K	1645	-	-	-	-	-	×	-	-+	+	+			\dashv	+-	+		ન હે	ř.		+
	MWII	<u> </u>	ļ	2	₩-	\vdash	 	-	$\left \cdot \right $	H	+-	Ť	164	-	-		\dashv	+	P	-	_	-	+	+	H	╅	+	+	X	- J	35	2	71
ļ	MWNB			16	╂┼╌	$\vdash \vdash$	++	-	+	╂╌┨	+	\vdash	1655	4	┼-	-		+	+	_		\dagger	┿	+			+	+	X	 		+	
ŀ	MWH			12			1-11		1		1		1655	₩	-	 		\top	N		\dashv	1		\dagger		1	\top	1		71	ŀ		
	MWIO			2	11.1				1		1	V	165	1-	╁	Γ	\sqcap		1	1			1				T	١,	X	71		١.	
	MWSB			1	V		1	V	1	1		44	1120																M] \ i			
	24 HC EXPE SEVE	DURS () DITED 48 I N DAY ()			0.04	V0		S	PEC	CIAL	. DET	ECTI	ON LIN	1111	S (S	pec	lfy)		REN	AAR	KS:			F		} (20	\	3	d by Sample	od by	ed by	
		R C CLPL		Blue					PEC			ORTI	NG RE	QU	IIRE	ME	NTS		Leb		o Or	ily				je Li Orde			 -	Rolinquah	Relinquish	Relinquish	

	TE	4080- Conce				20			14-34											TO RE				<u></u>	<i>U</i>	<u>7</u> 2	<u>2-</u>	1	.4	1	2		CAR	TOD	- 1	ECO	P
17.	VIEGNMENT	AL 416-6					80	0-4	23-7	143	(Ou	tside CA)						A	NA	LY	S 15	3 A	EC	UE	:81	•		141		والحا	7	<u> </u>	RN		. දි	Υ
Project Ma Address:	hartu,	^				F	AX :	pc91))			BE (1	602/8015 ☐ 8020/8015 ☐ MTBE ☐	3		203AU	ı		nly (1		15.0	28 CJ	Herbicides U		Ora Lead D	,	sectivity Ca	_							? ~~~
Project Nu 203	680=	6016.		5		54	_+	e	eme	K	-	ch		with MTBE 🗅	□ 8020/8	□ Jet Fuet	0 000	413.2	DCA only		PCBs only []		NBS +15 [NBS +25 C	sticides Herb		LEAD 7420 07421 0 238.2 0 6010 0	OTTC	E DE	Muco			,				z
I attest that	were used	field sampli during the c	ng collec		(Lra		K	NAM		t.	20		8020	02/8015	☐ Diesel	SC (SIME	Sec 413.1			0.0	0.0	0		2 3	CLP Medias C VON L Sein	2962	O ST.C	Flashpoint C	TH.KC			,		7		}
Field Sample	Source of	GTEL Lab #	CONTAINERS	<u> </u>	Aat		1	M Pre	etho sen	od ved		Sampli	ng	~		Ges	à à	90.5		802	888	D 831	0 824	0 827	a l	3 2	27.00	4	1 17	7		1	X .	ž			5
ID	Sample	(Lab use only)	SLUDGE	₹	HNOS	H2SQ	NONE	OTHER	DATE	I ME	BTEX 802 ()	BTEXTPHG	TPH as C Gas	Product LD. by GC (SIMDIS)	Total Off & Greaser 413.1 LT 413.2 LT	EDA AOT AL BOTO E	EPA 802 🗆 8020 🗅	□ 0908 □ 808 Vd3	EPA 610 C 8310 C	EPA 624 🗆 8240 🖪	EPA 625 🗆 8270 🗅	EPTOX: Metala C	EDA Principy Po	LEAD 74	CAM Metals	Corrosivi	REX	4.1		Received by	Received by		5	?			
MWS.			Z	WATER			K		8	X.			20						1	1				_	\perp	1	_	1_	_			_├	- +	-			Ì
MWG			Z				\prod			\prod		_ /	20	_				_	1	-	-	_		\dashv	4	_	- -	\downarrow	-	X		4		Time		Ī	<i>!</i>
MWYB			1			11	11	L		<u> </u>	11		75	1-	ļ			_	_						_		+	+	+	-	M	4	- (3	}	'	Ϋ́	5
MW4			Z	Ш	_		44			4	╁╇		25	_	-	Ш		_	4	4 _	+	-			+	+	╬	+	╁	X	╃╌┼	┥	ST.		-		<u> </u>
MW4			2	444	_	\prod	44	-	-	₩	┵	~~	25	1	-	-	-	-	+	+	-	-	Н	-	\dashv	+	+	┿	+	+	J	\dashv					+
MWIZE		-	11	111		┨-	╢	-		#	++	-	35	_	╀	-		+	+	+	╁	-		-	+	╁	+	+	+-	╁	1	+	2.2		ļ.		ĭ
MW 12			2	+	+	$\downarrow \downarrow$	+		\vdash	-	+		<u>139</u> 139		-	-	\vdash		_	X _	╁	┼	\vdash		┰┼	╬	+	+	+	abla	++	╫		-	-		
MWIZ		ļ <u></u> -	12	₩	+	++	1	-		4	╂╾	Y '	22	Ή-	+	-	-	\dashv	+	+-	+	-			+	-	+	十	\dagger	1	4 +	\dagger		1			
TB								1		1		1/3/900	701	,					1								1		1	1	X	1	¦ ii			: !	
											_	<u> </u>	<u>_</u>		_			1_	<u></u>								1_		-								
EXPE SEVE	DURS [] DITED 48 N DAY [] ER	(#) BUSI		3S C				S	PECI	AL 1		ORTING						5		MAI			;		Sto	Frage	C	\ 	2 3 tlor	¥ -	3		rquisher's Secret	quished by:		Reinquished by:	î
FAX	ם							(8	peci	ly)									Lo	rt #:					₩o	rk C	rde	er#	:		······································]	2	1	Ē	

Frank Roman Company of the Company



7

Morthwest Region 4080 Pike Lane Concord, CA 94520 £-(415) 885-7852 3800) 544-3422 from inside California 1800) 423-7143 from outside California

12/12/89 SP

Page 1 of 3

-MORK ORD8:C912014

CLIENT:

PAUL HORTON

SROUNDHATER TECHNOLOGY, INC

4089-D PIKE LINE

CONCORD, CA 34528

PROJECT#: 283-688-5816.65-29

LOCATION: DAKLAND, CA

SAMPLED: 11/29,38/89

C. ROBERTSON

RECEIVED: 12/81/89

ANALYZED: 12/05/89

BY: R. CONDIT

MATRIX:

Water

UNITS:

eg/L (ppb)

PARAMETER	I MDL	ISAMPLE #	01 i Mil i	MH2 1	83 I MH3 I	84
	1 	11.0.			- IM2 1	PRH 6
Chloromethane	0.5		(8. 5	(0.5	(0.5	(0. 5
Browowethane	8. 5		(8. 5	(0.5	(0.5	(0.5
Dichlorodifluoromethane	8.5		(8.5	(0. 5	(0. 5	(0.5
Vinyl chloride	1		(1	₹1	(1	(1
Chloroethane	e. 5		(8. 5	(0. 5	(0.5	(0.5
Methylene chloride	9.5		(0.5	(0.5	(0.5	(9.5
Trichlorofluoromethane	9. 5		(8. 5	(8. 5	(0.5	(0.5
1,1-Dichloroethene	9.2		(0. 2	(0.2	8. 87	(8.2
1, 1-Dichloroethane	8. 5		(0. 5	(0. 5	5.7 X	(8.5
trans-1,2-Dichloroethene	0.5		(9. 5	(0.5	2 `	0. 68
Chloroform	0. 5		(0.5	(0. 5	(0.5	(8. 5
1,2-Dichloroethane	9.5		(0.5	(0.5	3	3.7
1,1,1-Trichloroethane	8. 5		(0. 5	(0.5	0. 95	(0.5
Carbon tetrachloride	9. 5		(0. 5	(9. 5	(0.5	(8. 5
Browodichloromethane	8.5		(0. 5	(0.5	(8. 5	(0.5
1,2-Dichloropropane	0.5		(0.5	(9.5	1.1	(8. 5
trans-1,3-Dichloropropene	8.5		(8.5	(0. 5	(8. 5	(0.5
Trichloroethene	9.5		(8.5	(0.5	8.5 4	25 ×
Dibromochloromethane	8.5		(0.5	⟨8.5	(0.5	(0.5
1,1,2-Trichloroethane	9.5		(0.5	(0.5	(0.5	(0. 5
cis-1,3-Dichloropropene	0.5		(0.5	(8.5	(0. 5	(0. 5
2-Chloroethylvinyl ether			(1			· ···· 〈1
Bromoform	6.5		(8.5	⟨₽. 5	(0.5	(0. 5
1, 1, 2, 2-Tetrachloroethane	8.5		(0.5	(0.5	(0.5	(0.5
Tetrachloroethene	6.5		(0.5	(0. 5	(8.5	(8. 5
Chlorobenzene	9.5		(0.5	(8.5	0.7 3	6. 6

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



Morthwest Region

7080 Pike Lane
Cencord. CA 94520

915) 685-7852

7000) 544-3422 from inside California

7000) 423-7143 from outside California

----Page 1 of 3 Continued

MDRK ORD#: C912014

CLIENT: PAUL HORTON

PROJECT#: 283-688-5816.65-29

LOCATION: DAKLAND, CA

MATRIX:

UNITS:

Water
ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #	1	ei Mui	i I	MM5 85	i	9 3 MH3	i I	94 1948	Ī
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		9.5 9.5 9.5			(9. 5 9. 65 (9. 5		(8.5 (8.5 (8.5		(0. : (0. : (0. :	5	(8.5 (8.5 (8.5	

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

Page 2 of 3

Borthwest Region

2000 Pike Lane
Concord. CA 94520

415) 685-7852

6000) 544-3422 from inside California

600) 423-7143 from outside California

WORK ORD8:0912014

CLIENT: PAUL HORTON

PROJECT#: 283-688-5816.95-29

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	I MOL	ISAMPLE # I	85 I WH12 I	0 6	97 I	9 8 M W10
Chloromethane	8. 5		(9. 5	(8. 5	(8.5	(8.5
Bromomethane .	6.5		(8. 5	(8. 5	(0.5	(0.5
Dichlorodifluoromethane	6.5		(0.5	(8. 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		(8. 5	(8. 5	(0.5	(0.5
Trichlorofluoromethane	8.5		(0.5	(8. 5	(9. 5	(9.5
1,1-Dichloroethene	8. 2	_	(0. 2	(8. 2	8. 24	1
1.1-Dichloroethane	9.5	-	(0.5	(0.5	(0.5	(0.5
trans-1, 2-Dichloroethene	6.5		1.1	3.8 🦈 - 0		31
Chloroform	8.5		(8. 5	(8.5	(0.5	3.7
1,2-Dichloroethane	6.5		1.3	(8. 5	(0.5	(0.5
1, 1, 1-Trichloroethane	0. 5		(0.5	(0. 5	(0.5	(9.5
Carbon tetrachloride	e. 5		(0.5	(0.5	(0.5	(6.5
Browodichloromethane	9.5		(0.5	(9. 5	(8. 5	(0.5
1.2-Dichloropropane	8.5		(8. 5	(8.5	(0.5	(0.5
trans-1, 3-Dichloropropene	8.5		(8. 5	(0.5	(0.5	(8.5
Trichloroethene	8.5		2 2	55	2	610
Dibromochloromethane	6.5		(0.5	(9. 5	(8.5	(9.5
1,1,2-Trichloroethane	6.5		(8.5	(0. 5	(8.5	(0.5
cis-i, 3-Dichloropropene	8.5		(8.5	(8.5	(0.5	(8.5
-2-Chloroethylvinyl ether -			(1 -			(1
Brosofors	9.5		(0.5	(6. 5	(8. 5	(0.5
1, 1, 2, 2-Tetrachloroethane	6.5		(9.5	(0.5	(0.5	(0.5
Tetrachloroethene	0.5		(9. 5	(9. 5	(0.5	(6.5
Chlorobenzene	9.5		(8.5	(6. 5	(⊕. 5	(0. 5

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



Morthwest Region
4080 Pike Lane
Concord. CA 94520
415) 685-7852
4000) 544-3422 from inside California
4800) 423-7143 from outside California

Page 2 of 3 Continued

MORK ORD4:0912014

CLIENT: PAUL HORTON

PROJECT#: 203-680-5016.05-29

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	l I	MDL	SAMPLE #	 	8 5 M J12	1	96 MH11	1 1	8 7 MH 5	1	88 i MH10 i
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		8.5 8.5 8.5			(8. 5 (8. 5 (8. 5	i	(8. 5 (8. 5 (8. 5	i	(0. 5 (0. 5 (8. 5	5	(8.5 (8.5 (8.5

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



_Page 3 of 3 __

Morthwest Region
4080 Pike Lane
Concord. CA 94520
4415) 685-7852
500) 544-3422 from inside California
600) 423-7143 from outside California

WORK 0RD4:C912814

CLIENT: PAUL HORTON

PROJECT#: 283-680-5016.65-29

LOCATION: OAKLAND, CA

MATRIX: 'Mater UNITS: ug/L (ppb)

PARAMETER	1 MDL 1	ISAMPLE # I	69 1 1465 1	10 10/4		1
Chloromethane	9.5		(9. 5	(9. 5		
Browomethane	8.5		(8. 5	(8. 5		
Dichlorodifluoromethane	0.5		(0. 5	(9. 5		
Vinyl chloride	1		₹1	₹1		
Chloroethane	8.5		(0.5	(0. 5		
Methylene chloride	0. 5		(0. 5	(0. 5		
Trichlorofluoromethane	8.5		(8. 5	(8. 5		
1,1-Dichloroethene	8.2		8. 21	(8. 2		
1, 1-Dichlorosthane	8.5		(8. 5	(0.5		
trans-1,2-Dichloroethene	0. 5		(0. 5	25 X		
Chloroform	9.5		(8. 5	1.4		
1,2-Dichloroethane	6.5		(0. 5	8. 6		
1, 1, 1-Trichloroethane	9.5		1.7	(0. 5		
Carbon tetrachloride	6.5		(8. 5	(8. 5		
Browodichloromethane	8, 5		(8. 5	(8. 5		
1,2-Dichloropropane	8.5		(0. 5	(8.5		
trans-1, 3-Dichloropropene	9. 5		(0. 5	<9. 5		
Trichloroethene	8. 5		2.5	410		
Dibromochloromethane	8.5		(8.5	(0. 5		
1, 1, 2-Trichloroethane	9.5		(0.5	(9. 5		
cis-1, 3-Dichloropropene	9.5		(8. 5	(9. 5		
2-Chloroethylvinyl ether	1		(1		and the second	
Bromoform	9.5		(8. 5	(8.5		
1, 1, 2, 2-Tetrachloroethane	8.5		(0. 5	(0. 5		
Tetrachloroethene	8.5		(9. 5	(0. 5		
Chlorobenzene	6.5		(0.5	(0.5		

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

METHOD: EPA 601

35



Sorthwest Region 4080 Pike Lane 5Concord, CA 94520 24415) 685-7852 900) 544-3422 from inside California 800) 423-7143 from outside California Page 3 of 3 .. Continued

WORK DRD#: C912014

PAUL HORTON CLIENT

PROJECT#: 283-688-5816.85-29

LOCATION: DAKLAND, CA

MATRIX

Hater

UNITS: ug/L (ppb)

PARAMETER	1	MDL.	ISAMPLE #	I I	99 1445	1	10 18/4	1	i I	1
1,3-Dichlorobenzene 1,2-Dichlorobenzene		8.5 8.5			(0. 5 (0. 5	_	(0. :			
1,4-Dichlorobenzene		0.5			(8.		(0.			

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

METHOD: EPA 601

EMM P. POPEK, Laboratory Director



Sorthwest Region

Concord. CA 94520 **₫415) 685**-7852

- 4060 Pike Lane

LABORATORIES, INC.

1800) 544-3422 from inside California

4800) 423-7143 from outside California

PAGE 1 OF 2

MORK DRD4:C912015

CLIENT: PRUL HORTON

SROUNDHATER TECHNOLOGY, INC.

4888-D PIKE LANE

CONCORD, CA 94529

PROJECT#: 283-688-5816.65-38

LOCATION: DAKLAND, CA

SAMPLED: 11/29,38/89

C. ROBERTSON

RECEIVED: 12/01/89

BY: M. LY

MATRIX

ANALYZED: 12/84/89

UNITS:

WATER ug/L (ppb)

PARAMETER	 	MDL	ISAMPLE #	61 MJ1	1	MM5 05	1	93 Mi3	1	6 4 MJ 8	1	65 MH12	1
Benzene		. 5		(9.5		(8.5	-	(9.5		(9.5		(9.5	_
Toluene	•	3. 5		(0.5		(8.5		⟨0.5		(0.5		(8. 5	
Ethylbenzene	(B. 5		(0.5		(0. 5		(0.5		(9.5		(0. 5	
Xylenes	(3.5		(8.5		(8.5		(8.5		(8.5		(8.5	
Total BTEX	(3. 5		(0.5		(8.5		(0.5		(0.5		(8. 5	
Total Petroleum Hydrocarbons as Mineral Spirits	;	1000		(1999		(1800		(1000		(1000		(1898	

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

METHOD: Modified EPA 5830/8020/8015



Rorthwest Region
4080 Pike Lane
Cottond. CA 94520
4484 685-7852
6680) 544-3422 from inside California
6680) 423-7143 from outside California

Page 2 of 2

WORK ORD#: C912015

CLIENT: PAUL HORTON

PROJECT#: 263-680-5016.65-30

LOCATION: OAKLAND, CA

MATRIX:

MATER

UNITS: ug/L (ppb)

PARAMETER	i MDL	ISAMPLE #	i	9 6 M W11	1	87 MH6	1	6 8 MH10	1	89 1445	1	10 MH4
Benzene	0.5			(8. 5		(0.5		⟨8.5		(0.5		(0.5
Toluene	6. 5			(8, 5		(0.5		(0. 5		(0. 5		⟨₿.5
Ethylbenzene	0. 5			(0.5		(8.5		(0.5		(0.5		(0.5
Xylenes	6.5			(0. 5		(0. 5		(8. 5		(0.5		(8.5
Total BTEX	e. 5			(9.5		(8.5		(0.5		(0.5		(0.5
Total Petroleum Hydrocarbons as Mineral Spirits	1000			(1000		(1999		(1000		(1000		(1000

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

METHOD: Modified EPA 5030/8020/8015

FINAL P. POPEK. Laboratory Director



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

11/10/89 sp

Page 1 of 3

WORK ORD#: C911048

CHIP PROKOP CLIENT:

GROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05-26

LOCATION: DAKLAND, CA

SAMPLED:

C. ROBERTSON BY:

11/02/89

RECEIVED: 11/02/89

ANALYZED: 11/07/89

BY: R. CONDIT

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE # 1	01 MW1	i	82 88	† †	03 MW3	1	04 MW4	1
Chloromethane		0.5		⟨∅.		(0.		(0.5		(0.5	
Bromomethane		0.5		⟨∅.	5	(0.		(0.		(0.5	
Dichlorodifluoromethane		0.5		(0.	5	⟨∅. ⅓		⟨∅.;		(0.5	
Vinyl chloride		1		<	1	(<		(1	
Chloroethane		0.5		(0.		⟨∅. ⅓		(0.		(0.5	
Methylene chloride		0.5		⟨∅.	5	(0.		⟨∅.		⟨∅.5	
Trichlorofluoromethane		0.5		⟨∅.	5	⟨∅.		⟨∅.		(0.5	
1,1-Dichloroethene		0.2		⟨∅.	2	⟨∅.		0.6		(0.2	
1.1-Dichloroethane		0.5		⟨₽,	5	(∅.		5.		(0.5	
trans-1,2-Dichloroethene		0.5		(0.	5	(0.		2.		44	
Chloroform		0. 5		⟨∅.	5	⟨∅.		(0.		1.€	
1,2-Dichloroethane		0.5		(0.	5	(0.		3.		0.96	
1,1,1-Trichloroethane		0.5		⟨∅.		⟨∅.			1	(0.5	
Carbon tetrachloride		0. 5		⟨∅.	5	(0.		⟨₽.		(0.5	
Bromodichloromethane		0.5		(0.	5	(0.		⟨∅.		(0.5	
1,2-Dichloropropane		0.5		(0.	5	⟨∅.	5	⟨∅.		(0.5	
trans-1,3-Dichloropropene		0.5		⟨₽.	5	⟨∅.	5	⟨∅.		(0.5	
Trichloroethene		0.5		(0.	5	(0.	5	8.		600	
Dibromochloromethane		0.5		(0.	5	⟨₽.	5	⟨₽.		(0.5	
1,1,2-Trichloroethane		0.5		⟨∅.	5	⟨∅.	5	⟨0.		(0.5	
cis-1,3-Dichloropropene		0.5		(0.	5	(0.	5	⟨∅.		(0.5	
2-Chloroethylvinyl ether		1		•	i	(1	(1	<:	
Bromoform		0.5		(0.	5	(0.	5	(0.		(0.5	
1, 1, 2, 2-Tetrachloroethane		0.5		(0.	5	(0.	5	⟨₺.		(0.5	
Tetrachloroethene		0.5		(0.	5	(0.	5	⟨∅.		(0.5	
Chlorobenzene		0.5		(0.	5	⟨७.	5	Ø. E	9	⟨∅.;	5

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



Page 2 of 3 Continued

Northwest Region

4080 Pike Lane

Concord. CA 94520

- (415) 685-7852

- (800) 544-3422 from inside California

(800) 423-7143 from outside California

WORK ORD#:C909001

CLIENT:

ED PROKOP

PROJECT#: 203-680-5016.04-6

LOCATION: 404 MARKET STREET

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #	1	95 MW6	l l	06 MN5	l 	07 MH4	1	6 8 M .I2B	
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5		(Ø. 5 (Ø. 5 (Ø. 5	!	(0. : (0. : (0. :	5	(Ø. 5 (Ø. 5 (Ø. 5	5

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



Page 3 of 3

Northwest Region

≇080 Pike Lane

Sconcord, CA 94520

-1415) 685-7852

(800) 544-3422 from inside California

3800) 423-7143 from outside California

WORK ORD#: C909001

CLIENT:

ED PROKOP

PROJECT#: 203-680-5016.04-6 LOCATION: 404 MARKET STREET

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	I ME	L	ISAMPLE II.D.	# 1 	MM2 0 9	1	10 MW8	i	11 MW1	1	
								~~~			
Chloromethane	0.	5			(0.5	5	(0.5	5	(0.	5	
Bromomethane	ø.	5			⟨∅.5	5	⟨∅.5	5	⟨∅.	5	
Dichlorodifluoromethane	0.	5			(0.5	5	(8.	5	⟨₽.	5	
Vinyl chloride	1				(1	Į.	(:	i	(1	
Chloroethane	0.	5			(0.5	5	(0.	5	(0.	5	
Methylene chloride	0.	5			(0.5	5	(0.	5	⟨∅. ⅓	5	
Trichlorofluoromethane	0.	5			(0.5	5	⟨∅.:	5	⟨∅.	5	
1,1-Dichloroethene	Ø.	2			(0.2	2	(0.2	2	⟨∅.:	2	
1,1-Dichloroethane	0.	5			(0.5	5	(0.	5	⟨∅.	5	
trans-1,2-Dichloroethene	8.	5			(0.5	5	1.	7	⟨∅.	5	
Chloroform	8.	5			(0.5	5	(0.	5	(0.	5	
1,2-Dichloroethane	0.	5			(0.5	5	5.4	В	(0.	5	
1,1,1-Trichloroethane	0.	5			(0.5	5	(0.	5	⟨∅.	5	
Carbon tetrachloride	€.	5			(0.5	5	⟨Ø. :	5	⟨∅.	5	
Bromodichloromethane		5			⟨₽. :	5	(0.	5	⟨∅.	5	
1,2-Dichloropropane	0.				⟨0. :	5	⟨∅. ⅓	5	⟨∅.	5	
trans-1,3-Dichloropropene		5			⟨₽. :	5	(0.	5	⟨∅.	5	
Trichloroethene	0.				(0.	5	4	6	⟨∅.	5	
Dibromochloromethane		5			(8.	5	(0.	5	⟨∅.	5	
1, 1, 2-Trichloroethane	0.	5			(0.	5	(0.	5	(0.	5	
cis-1,3-Dichloropropene		5			(0.	5	⟨Ø.	5	⟨∅.	5	
2-Chloroethylvinyl ether	1				€:	1	(1	(1	
Bromoform	0.	5			(0.	5	⟨∅.	5	(0.	5	
1, 1, 2, 2-Tetrachloroethane		5			(0.	5	(0.	5	⟨∅.	5	
Tetrachloroethene		5			⟨₽. ;	5	(0.	5	⟨₽.	5	
Chlorobenzene		5			(0.	5	⟨€.	5	₹0.	5	

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



Page 3 of 3 Continued

Northwest Region

™080 Pike Lane Concord, CA 94520

(415) 685-7852 (600) 544-3422 from inside California

" 4800) 423-7143 from outside California

WORK DRD#: C909001

CLIENT: ED PROKOP

PROJECT#: 203-680-5016.04-6 LOCATION: 404 MARKET STREET

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	l l	MDL	ISAMPLE #	1	0 9 MW2	1 1	10 MW8	 	11 MW1	1	1 t
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		6.5 9.5 0.5			(0.5 (0.5 (0.5	5	(0.5 (0.5 (0.5	5	(0.5 (0.5 (0.5	5	

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



Morthwest Region

4080 Pike Lane Concord. CA 94520

(415) 685-7852

(800) 544-3422 from inside California

" (800) 423-7143 from outside California

89/87/89 JP

PAGE 1 OF 3

WORK ORD#: C909002

CLIENT: **ED PROKOP**

GROUNDHATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94529

PROJECT#: 203-680-5016.04-7

LOCATION: 404 MARKET STREET

DAKLAND, CA

SAMPLED: 08/30/89

C. ROBERTSON BY:

RECEIVED: 08/31/89

BY: K. FILLINGER

ANALYZED: 89/85/89

BY: M. LY

MATRIX:

WATER

TEST RESULTS

UNITS: mg/L (ppm)

	Ī	MDL	ISAMPLE	#	I	01	1	8	2	ł	0	3	ŧ	04	4	1	0:	5	İ
PARAMETER	i 		II.D.		 	MW 1:	l I	HH	12	1	MW	10	1	MM	3		MW	6	
Total Petroleum Hydrocarbons as Mineral Spirit	E	1					(1		(1			(1			(1			(1	1

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

METHOD:

Modified EPA Method 5030/8015



Page 2 of 3

Northwest Region

4080 Pike Lane

Concord. CA 94520

(415) 685-7852

- (800) 544-3422 from inside California

. (800) 423-7143 from outside California

WORK DRD#: C909002

CLIENT: ED PROKOP

PROJECT#: 203-680-5016.04-7 LOCATION: 404 MARKET STREET

MATRIX:

WATER

mg/L (ppm)

(1

TEST RESULTS UNITS:

1

<u> </u>	ı	MDL IS	MPLE	#1	0 6	1	0 7	f	0 8	١	0 9	ı	10	-
PARAMETER	i	11	i . D.	ł	MW 5	l	MH 4	1	WM 5		MW BB			

{1

Total Petroleum Hydrocarbons as Mineral Spirits

(1

(1

(1

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

METHOD:

Modified EPA Method 5030/8015



Page 3 of 3

Northwest Region

4080 Pike Lane **Concord**. CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

WORK DRD#: C909002

CLIENT: ED PROKOP

PROJECT#: 203-680-5016.04-7 LOCATION: 404 MARKET STREET

MATRIX:

WATER

TEST RESULTS

1

UNITS: mg/L (ppm)

	1	MDL	ISAMPLE	#1	11	j	12	1 13 I	1	1
PARAMETER	1		H.D.	ŧ	MW 1B	ŀ	MW 1	ITRIPBLANKI	1	ı

Total Petroleum Hydrocarbons as Mineral Spirits (1

<1

(1

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

METHOD:

Modified EPA Method 5030/8015

EMMA P. POPEK, Laboratory Director

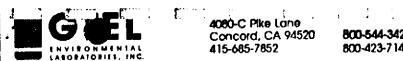


4080-C Pike Lane Concord, CA 94520 415-685-7852

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

CHAIN-OF-CUSTODY RECORD AND ANALYSIS RECEST

														· · · · · ·	٠																<u> </u>	مفسلما	استنب			بشبعف		4.3.	1.	
Project Manager; Address;	Kop						Pho	ne #	t:									A	\N/	AL I	/SI	S F	REC)UE	:91	•			-:	i þ	1	rli	'nН	ΕŅ		S	PE	Cd/ DL	AL NG	
Address:	V						FA	(#:				-										T			Γ				T		Ŧ	7	T				Т	Ť	T)
GTI																ନ୍ର			İ	-																		18	EE	!
Project Number:		_				_	Pro	eçt i	Nam	9:			<u> </u>		1,	8			j		<u>=</u>											3			i		_ .	. }		
20363	04016	<u>0</u>	<u>5</u>			765	£e	<i>t</i>	11	Ce	<u>~}`</u>	L	<u>/a</u>	Wa.	./	8	٦	6			2								اء		 -	2				I		Ş	기품	
Project Location:	irkel St	•			٠		San	pler	29	right	Jre:)			Gasoline (602/8020/8015)	5 or 8270	5 or 827	(413.1)	413.2	200			5					Te Veta	(7)	I I HOL	744				PMCE (2	2	1 1 1	E	
Sample	Lab #		nount	1	Mat	rix	,	Pr	Vet	hod	d ed	s	am	pling	(020)	SE GESS	teel (801	fuel (901	Greese	Greese		3 5	8 8	980 PCB	8	270	Ancada	Metats	Police	1421/2:		17				ONE 380	SEEMS 1	Ž.	THE	
ID	(Lab use)	# CONTAINERS	Volume/A	WAIEH	Mat	SLUDGE	OTHER	<u>구</u>	S L	NONE	ОТНЕЯ	į	1 K	TIME	BTEX (602	втехтрн	TPH as Diesel (8015 or 8270)	TPH as Jo	Total O	Total	EDA COLLEGATOR HYCITOCALDONS (418.1)	EPA STORE	EPA 608/8080	EPA 608/8	EPA 6248	EPA 625/8270	CAM- 17.	EPTOX - 8 Metats	EPA - Prior	OBGANIC (SAD	7	1 6/1/2 10 11	1010			PRORITY ONE SERVICE (24 by	BUCHOG	SPECIAL D	SPECIAL HEIGHTING RECUREDIENTS	
MW4		Z		X	-	-		X	0	- 11		7 /3	da4	1515			H	+	1	\dagger	\dagger	╁	十				\dashv	7	+	+	1		+	╁┼	+	+	+	+	 	
MWZB												2/3	la In	1320					T	T	0	(7	T	Ť	1	1			十	1	+		ĺ
MWZ		Z	П	$\left\langle \right $				T				1	77	1520	1						$\overline{\mathcal{D}}$	₹	T			\exists		7	┪	1	†	T	1	\Box	7	7	†	+	1	l
MWZ		Z	П	brack								1		150					1	1	1						1	7	1,	+	V	オ	1		7	1	+	十		l
115W8B	·	1						T				П		1330							1		1				7	1	"	†	1	1	†		1	+	+	十		l
MW3		Z	\prod	7								Π		1330	7-				7	1	7	1	T			7	††	十	1	1	1	٢	\forall		7	+	+	十	H	
MW8 MW8		7.		T				\prod						1330	_			一								7		7	T	1	×	₹			7	+	†	†	H	
MWIB		1										П		13,40					1		1	1	T			寸	寸	7	1	\top	٦		† †		+	+	†	十	1	
MWI		Z	\prod					\prod	\prod			П		1390				7	7	1	D					寸	7	T	7	1		†			7	十	十	T		
11/W/		Z						\prod				V	,	1340					T	7	1	1				7	1	_	T	1	女	1			1	\top	╁	十	П	
T-B	,		A	П					J	/		42	NSA	920			П		7	T		T				寸	7	1	\dagger	1	Ī×	1			十	十	十	╁	H	l
Relinquished t) y : _{//}		Da	te	Tin	ne		Re	ecel	ved	by:		 						•	1	Rei	ma	rks	:						<u> </u>	<u>, r _</u>	<u>.r</u>						1	닉	
11/1/1/		1	3//					19	7	36	•																												ĺ	
Relinquished b	ру	-	Da		Тіп	ne			ecei																															
Relinquished t	ру	:.			Tim			Re	ecei	ved	by	Lab	orat	lory:		、 人	. ل	— 人	<u>ー</u> ハ	- - - - - - -	CA:		ممد	د																



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

			. 14 1	1 A A
		RECORD AND		and the state of the state of
	ET LIBERTON A	RECORD ARD	ARA) YES	
CHABITO		HEADIN WILL	WILL MIN	

LABORATOR														_								-	•								-		~	<u> خبدگان</u> محد		-	
Project Manager:	Kop					Pho	ne :	#;									Al	IAP	LYS	313	RE	QU	ES	r 	40-11					b	19/1	مانات		H/	ND		10 L
Address:						FA)									<u>1</u> 9				ے											fact					i,	25	
Project Number:	50160	5/	()	15	a (r	Pro	ject /<	Nan	10: 24)		اط	Klau	N		2/8020/80	8	9		X38 (418.	•							-) V				3		TIS (30)	CURREN
Project Location:	Kot St				E	Sar	nply	n)sk	K	//@:_ ->	• ·				Office (60)	15 or 827	15 or 827	2 2 2	drocarbo			140	5				utent Met	28.2	704 18				ľ	ETWCK.	A16. 16.	TOW LEA	ORTING REQUIREMENTS
Sample	Lab#	INERS	mount	М	atri			res		ed	Si	ampli	ing	(0208/2	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	ectre (30	Total Oil & Green (413.2)	T LEGISTER H	8010	9050		8240	Q229/	1	EPTOX - 8 Metals	ionity Pol	LEAD(7420/7421/230.2)		—				PROPERY CHE SERVICE (24 hz)	E 20		
ID	(Lab use only	# CONTAINERS	Volume/Amount	SOF	AIR	OTHER	ξ	₽		OTHER	H	2 1) W	BTEX (602/8020)	втехтр	TPH ss	TPH 88		TOT Per	EPA 601/8010	EPA 602	EPA 608/8080	EPA 624/8240	EPA 625/8270	CAM-17 Metals	EPTOX	EPA - P	LEAD 2	Sec. Sec. Sec. Sec. Sec. Sec. Sec. Sec.	N	1			POR I	VERBALS/FAX	SPECIAL SPECIAL	SPECIAL
MWZB		190	7	K		+	17		\sqcap	1	狹	of 1	1.25																	P	$oxed{\Gamma}$			\prod	$oxed{oxed}$		
MW3		1	,	X		1	17					1	1:79	1_1						K												Ш	_		1	$oldsymbol{\perp}$	\coprod
		Z		XI -								, ,	425	1 1						Z				_	_	Ц		\perp	2	4	_		_	_		上	
MWSB		71	1				\prod						440	11					_			┵	_	_	_		_		\perp	X	4		4			ļ.,	,—]
mwe		Z									Ц		446			_			_	X			_ _	 	<u> </u>			\downarrow	- K	_	_		_	4	44	14	4
MWG		Z					Ш		Ц		Ш		440	1		_	\perp	1	1			1	_	1_	_			_	P	1			_	_	_	_′	1/1
MWSB		77					\prod		\coprod		11	- 11	ና <i>ህ</i> 0	1				\perp	_			_		 	_	Ц	_	_	_		4		_	_	_	-	1-1
MWS	1	Z					Ш		\coprod		\coprod	L_	יטק <i>י</i>				_	\downarrow	_			_	1	1	_	Ц	_	_		┥			_	4	4	4	
I MW5	1	Z					Щ		\coprod		\coprod	!.'_	50	<u> </u>			_	_		_		4	4.		 -		_	_	<u> </u>	4	<u>, </u>		4	4	+	<u> </u>	\square
MW4B						<u> </u>	\coprod		\coprod	_	\coprod	Ι.	5 C	1	Щ		-	-	_	Į,		_	\perp	_	-			_	٠,	#	4-	انتا	-	-	+	╀	╂╌┦
MW 4		Z					╙		Ц	<u>l</u>	<u> </u>		ट्य				丄		1	\mathbf{K}					<u> </u>				1	Ţ,	1				上	L.	Щ
Relinquished	DY:	2	77	tte Keep	Tlm	• 37		Rec	eive	d by	/:								F	Ren	nari	(S:				•			•								
Relinquished	by		Da	ate	Tim	В		Rec	eive	d by	r:																										
Relinquished	by		Da	ate	Tim	• (-)		Rec	eive	d þy	/ Lal	borato	ry:	اري	Ü	".l.		٠	,,,,	-	,																



ENVIRONMENTAL LABORATORIES, INC.

-Northwest Region

4080 Pike Lane

.. Concord, CA 94520

(800) 544-3422 from inside California

~(800) 423-7143 from outside California

05/10/89 LS Page 1 of 2

WORK ORD#: 0987626

CLIENT: CHIP PROKOP

BROUNDHATER TECHNOLOBY, INC

4080-D PIKE LANE

CONCORD, CA 94529

PROJECT#: 203-680-5016.05-19

LOCATION: DAKLAND, CA

SAMPLED: 87/27/89

BY: 6. MASON

RECEIVED: 07/28/89

ANALYZED: 67/31/89

BY: R. CONDIT

MATRIX:

Water

UNITS:

ug/L (ppb)

	MDL	ISAMPLE # I	0 1	9 2 I	9 3 I	04
PARAMETER	! 	II.D. I	MN4B I	- MH4 - 1	MN5 I	14 W6
Chloromethane	e. 5		(0.5	(0.5	(0.5	(0.5
Bromomethane	0. 5		(0.5	(0.5	⟨0. 5	(0.5
Dichlorodifluoromethane	9. 5		(0.5	(0. 5	(8.5	(0.5
Vinyl chloride	1		(1	(1	<1	(1
Chloroethane	0. 5		(0. 5	(0.5	(0.5	(0.5
Methylene chloride	e. 5		(0.5	(0. 5	(0.5	(0.5
Trichlorofluoromethane	9. 5		(0.5	(8.5	1.2	11
1,1-Dichloroethene	0. 2		(0.2	8. 37	0. 32	8. 37
1,1-Dichloroethane	e. 5		⟨0.5	(0.5	(0.5	(0.5
trans-1, 2-Dichloroethene	0. 5		(0.5	29	⟨0.5	(0.5
Chloroform	8. 5		(0.5	1.1	(0.5	(0.5
1,2-Dichloroethane	0. 5		(0.5	1.1	(0. 5	(0.5
1,1,1-Trichloroethane	0.5		(0.5	⟨₽. 5	8.57	(0.5
Carbon tetrachloride	9. 5		(0.5	(8.5	(0.5	(0.5
Bromodichloromethane	0.5		(0.5	(0.5	(0.5	⟨0.5
1,2-Dichloropropane	e. 5		(0.5	(0. 5	(0. 5	(8.5
trans-1, 3-Dichloropropene	8.5		(0.5	(0. 5	(0.5	(0.5
Trichloroethene	0.5		(0.5	3 9 0	2.9	4.7
Dibromochloromethane	0.5		(8.5	(0.5	(0.5	(0.5
1,1,2-Trichloroethane	0.5		(0.5	(0.5	(0.5	(0.5
cis-1,3-Dichloropropene	6.5		(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
1, 1, 2, 2-Tetrachloroethane	8.5		(0.5	(0.5	(8. 5	(0.5
Tetrachloroethene	0.5		(0.5	(0.5	(0.5	(0.5
Chlorobenzene	0.5		(0.5	(0.5	(0.5	(0.5

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



Northwest Region
4060 Pike Lane
Concord. CA 94520
(415) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California

Page 1 of 2 Continued

WORK ORD#:0987626

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-19

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	, ,	MDL	ISAMPLE #	1	01 MH4B	l	9 2	1	8 3 NH5	1 1	84 MH5	
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 6.5			(0. : (0. : (0. :	5	(0.5 (0.5 (0.5	i	(0. 5 (0. 5 (0. 5	5	(8.5 (8.5 (8.5	5

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



Page 2 of 2

Northwest Region 4080 Pike Lane Concord, CA 94520

= (800) 423-7143 from outside California

WORK DRD#: C987626

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-19

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS: un/L (ppb)

	I MDL	ISAMPLE # 1	9 5 l	9 6 I	9 7 i	6 8
PARAMETER	1	II.D. i	MH3 I	MM2 I	MW1 I	M 48
Chloromethane	0. 5		(0. 5	(0.5	(0. 5	(0.5
Bromomethane	0.5		(0.5	(0.5	(0. 5	(0.5
Dichlorodifluoromethane	6. 5		(8. 5	(0.5	(0. 5	(0.5
Vinyl chloride	1		(1	(1	(1	₹1
Chloroethane	9.5		(0.5	(0. 5	(0.5	(8.5
Methylene chloride	6.5		(0. 5	(0.5	(0.5	(0. 5
Trichlorofluoromethane	0.5		(0.5	(8. 5	⟨0.5	(0.5
1. 1-Dichloroethene	0.2		1.9	(0. 2	(0. 2	6.27
1,1-Dichloroethane	0.5		8.7	(0.5	(0. 5	⟨0.5
trans-1,2-Dichloroethene	9.5		3. 1	(6. 5	0. 79	2. 1
Chloroform	8.5		(0.5	(6. 5	(0. 5	⟨∅. 5
1,2-Dichloroethane	6.5		5. 3	(0. 5	(8. 5	7. 1
1, 1, 1-Trichloroethane	0.5		2	(0.5	(0.5	⟨∅.
Carbon tetrachloride	9. 5		(0.5	(8. 5	(0.5	(0.
Browodichloromethane	9.5		(0.5	(0. 5	(8.5	(0.
1.2-Dichloropropane	8.5		6. 61	(0. 5	(0.5	(0.
trans-1, 3-Dichloropropene	6.5		(0.5	(0. 5	(0. <u>5</u>	(0.
Trichloroethene	0.5		6.9	(0. 5	(8.5	42
Dibromochloromethane	9.5		(0.5	(0. 5	(0. 5	(0.
1,1,2-Trichloroethane	8.5		(0.5	(0.5	(0.5	(0.
cis-1,3-Dichloropropene	0.5		(0. 5	⟨0.5	(0. 5	(0.
2-Chloroethylvinyl ether	1		₹1	(1	(1	
Bromoform	8. 5		(0. 5	(0.5	(0.5	(0.
1,1,2,2-Tetrachloroethane	8.5		(0.5	(0. 5	(0.5	⟨€.
Tetrachloroethene	8.5		⟨0.5	(0.5	(0. 5	⟨₿.
Chlorobenzene	6.5		1.4	(0.5	(0. 5	⟨0.

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

METHOD: EPA 601

<u>i . . .</u>



Northwest Region 4080 Pike Lane Concord. CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

Page 2 of 2 Continued

WORK ORD#: C907626

CLIENT: CHIP PROKOP PROJECT#: 283-680-5016.05

LOCATION: DAKLAND, CA

Water

MATRIX: UNITS:

ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #	1	0 5 MH3	I I	9 6 MN2	1	97 MH1	1	8 8 M M8	
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5		(0.5 (0.5 (0.5	;	<0. : <0. : <0. :	5	(0.5 (0.5 (0.5	5

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

METHOD: EPA 601

Somma P. Polick



4060-C Pike Lane Concord, CA 94520 415-685-7852

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

	OF-CUSTODY	PECARD	AMO	MAL VOICE		194
CHAIN-	-UF-CU31UD1	MECOND	WILL THE	411AE 1 010	'''	

Project Manager:	IIP Pr	οK	ní				F	hor	ne #	l;								ļ	/N/	ALY	31	SF	REC	UE	:31			<u>_</u>	1			6	444			H/	AN	DL	AL- ING
Address:	Ncurd							AX								619					=																		ACOFTS MENTS
D. J A Mara-hann	3680 SC) ار	<u> </u>	ر اک ^ر	- >		<u>S1</u>	46			下		eH			RIEX/IBN as Gasoline (602/8020/8015)	Ę	6			ons (418											į	.	-		E (24 hz)	3		FIECTION LIMITS (SPECIFY) FORTING REQUIREMENTS
Project Location:	DAKLAN	11					2	jan)	γę.	lsk g	Poly	ore:	W>	7		8) 90	15 or 82	15 ar 82	(413.1)	(413.2)	Arocar			90.00	`				Literal Media	1787						SERVIC	NGE C		THON L
Sample	Lab #	1 1	mount			atr				Me res			San	npling		2000		TPH as Jethuri (8015 or 8270)	& Grees	A Grees	rojecum 1	9010	0200/	EPA 608/8080-PCBs Only	78240	2528	7 Meteb	- 8 Meta	ronty Po	LEAD(74207421/230.2)	ORGANIC LEAD	4				PRIORITY ONE SERVICE (24 hz)	EXPEDITED SERMICE (2-4 d		
ID	(Lab use)	# CONTAINERS	Volume/A	WATER	SOIL	AIR	SLUDGE	ОТНЕЯ	잗	E S	<u> </u>	OTHER	DATE	TAKE.	DIEV Jemanan		TPH as Diesel (8015 or 8270)	TPH .	Total Oil & Greese (413.1)	Total Oil	TOTAL PA	EPA 60	EPA 602/8020	EPA 60	EPA 624/8240	EPA 625/8270	CAM-17 Met	EPTCX - 8 Metals	EPA-P	LEAD(7	5	1460				HOM	9	VERBALE	SPECIAL
TrivI R			<u>4.</u> 9						X		X		7/2			İ					\perp										\prod	X		\perp				_	_ _
Travel B My 4B		1									\prod					_	_ _	_	_		_	X	+	\downarrow	-	_			-	_	+	_	_	┿	4		-	_	-
니		7_									\coprod	_			_	_ _	_ _	-	-	-	\dashv	X	+	+	 	-	_	\vdash	-	-	┥	X	╬	+	-			ᆉ	+-
58		1	Ц	4					\coprod		₩	<u> </u>	-		-		+	 	 - -	Н		abla abla	+	╁	╀	├-	-	\vdash	-	+	ተ	4	+	十	╁╌			-	-
5		12	$\downarrow \downarrow$	Ц	_	<u> </u>			Н	-	#	+			-	+	+	╁	╀	Н		Ŋ	+	┼	╁	-	 	-	\dashv	+	+	abla t	+	+	十	-	-	7	~
6 B		1	ig		├	_	-	<u> </u>	╁╂	-	╢	+		_	+	+	+	+	╫	H	$\mid \rightarrow \mid$	V	╌┼╴	╈	╁	╀╴	╁╌	H	┪	_	+	4	十	+	十				+
6	<u> </u>	2	╁┤	H	-	_	-		H	$\left \cdot \right $	#		╂╾┤	_		+	┤╌	╫	+-	H	H	4	十	╁	╁╌	t	┢	\vdash	┪		+	T	┰	†	╁				1
33		17	-		₩-	┼-	-	-	╁	\vdash	+	+-	╂═┤		\dashv	╁	╁	+	+-	-	H	V	_	T	╁	†		H			7		للفند		T				Y
3	·	-13	4	\mathbb{H}	-	╂	╁╌	-	╁╂	 	+	-	+	+	-	\dashv	+	†	十		П		_	+	╈		Τ			7	1	X							
ZB 2		- -	╁	H	-	+-	\vdash	H	4	╁	W	+		7	1	†		1	1	1		X											1:	${ m I}$	1				\perp
Relinquished	by:		7	Dati	7	Tin			<u> </u>			ed by							1		R	lerr	ark	s:				-							1	6 -1	F	2	
Relinquished						Tir						ed b					_,																						!
Relinquished	d by					Tir / j		_						oratory				i		· · · ·)												كستيجر					



4080-C Pike Lone Concord, CA 94520 415-485-7852

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

	,				عفير تشأليان أنسيسيان	بمترجون مسأغة أترج
CHAIN-OF.	CUS	RTODY	RECORD	AND	ANALYSIS	CUES
OI IVIII - OI	U U.					

LASORATOR	MENTAL 168, IMC.	4	15-	005	-785	-				····	23-1	140		JISIOU CA	<u> </u>															بالذ	e per Historia	Y	•	أولم	<u> </u>	i	۲	المنطقة المنطقة	الماداة معاملا		personi i L. Di	1
Destruct Manager	ואים הוו	υ\4	ن د	7			F	Pho	ne f	¥:				<u> </u>			<u> </u>		A	NA	LY	'SK	3 R	EQ	UE	:51	•	// /						州山	distant.			HA	ND T)LI	NO	4
Address:	<u></u>						ı	AX	#:								ļ					-	1									ŀ		1						5	- 9	,
	NEORY																ē		İ								l				ļ				ł	.			1	Ž	2 6	j
Project Number:							<u> </u>	Proj	ect	Nar	ne:	A					8					2				Ì						1		ĺ		1,	ŀ	1		8		įĮ
2036	405016					4	5/	4	<u>থ</u>	Y	, <u>,</u>	<u> </u>	<u>ر ب</u>	N_			8	5	Ð		ľ						l			1								5	[]	Ę	2 5	į
Project Location:							,	San	ıple	r Si	gnat	ute:		~			8	827	28	닭	ខ្ល	Š			1	1	١			3	R	١					" }	3 5	1		֓֞֞֟֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֡֓֜֓֓֡֓֜֡֓֡֓֡֡֡֡֡֓֡֓֡֡֡֡֡֡	5
,	GAILLA	N	L				.	E	1	g/U	gnat	a	w	۱ <u>.</u>			Š	15 a	150	413.1)	3				ğ					٤	83						{	5			2	Ē
Comple	Lab#	1	1		M	latı			ŀ	Me	tha ier	d		Sampil	ng	2/8020)	Has Ge	(B)	othed (90	Co	8	men.			988	8240	8	1	8 Metal	bothy Pol	2077421	C LEAD	97					PROBLET ONE SERVICE (ALIM)			DESCRIPTION DECLESSION	2
Sample ID	(Lab use)	# CONTAINERS	Volume/Amount	WATER	SOL	AIR	SLUDGE	OTHER	¥	HAOR	Se Se	OTHER		DATE	Ä	BTEX (602/8020)	STEXTPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jedual (8015 or 8270)	Total Of & Gr	Total Off & Greese (413.2)	Total Ped	EPA 601	EPA GORAGOED	EPA 606/8080-PCBs Only	EPA 624/8240	EPA 625/6270	CAM-17 MM	EPTOX - 8 Metals	H- Pd3	\$ 052/127/1027/JOY31		Q70A							VENT	Sec.	3
NAL A V 63		1	T/M		-	-					丌	+	17	127							7		1			T							X	-9:		┛.			1	1	نــــــــــــــــــــــــــــــــــــــ	٠
WM 1B		+	_	ιχ L	+	十	-		×	\vdash	寸	+	†					Γ	П		┪	1	X				T															
	ļ	12	<u> ``</u>	<u>4 X</u>	╁╌	╁╌	╁	-	宁	-	4		╁			╁	\vdash	 			_	_	7		1	Т									\prod							
		+-	╀	╄	┤-	-	╀╌	-	┝	├	1		+			\vdash	-	┢	Г		7	\dashv	十	十	†	1	十	T									Π	Ī	T			
		1	╀	╁_	┼	╁	 - -	-	╂-	_	\dashv	+	╀			-	╂╌	╀	-	H	\dashv	_	-†	+	╁	+	t	十	-	 	Н					1	1		T		T	
	<u> </u>	<u> </u>	_	\perp	<u> </u>	<u> </u>	1	ļ_	╄	-	-					┨—	-	╂━	-	H	\dashv	-	\dashv	- -	十	╁	┿	+	-	┢╌	Н	_				7	†	+	7	7	7	7
\		_	1	_	1	<u> </u>	4_	$oxed{oldsymbol{oldsymbol{oldsymbol{eta}}}}$	1	╄	┵	_	4			╀	-	╁	┝	-	\dashv	\dashv	-		┿	+	╁	┿	╁	┢			\vdash	 	-	十	7	+	十	+	\top	-
					_	_			1	_			4			 	╀	 	┨—	\sqcup				-}-	+-	╀	╁	┿	╁╌	┝	\vdash			-	┞╼┼	╅	+	╅	+	\dashv	+	ㅓ
								L	<u> </u> _	_		_	1			_	ļ	-	╀	_	Н	\dashv	_	+	-	- -	-}-	╀	-	├-	\vdash		-	-	┼╌┼	+	*-	-	┽	4	ď	_
								<u> </u>		_	Ш					_	╀	1	 _	igspace		\sqcup	4	-	+	╀	4-		╀	┝	-	-	نشد	4		+	+	-+	+	╅	┿	_
							\perp	L		L			1			1	↓_	1	╀	<u> </u>	lacksquare	\sqcup	-		+		╁	╀	┼-	╀	\vdash			الجنا	1	+	-	+	+	╅	+	-
				٦													L	<u></u>	_	<u> </u>		Ш		\perp				Т.			<u>L</u>	L		L		<u> </u>		_L				_
Relinquished	by:	1.	~~	Dat	te		me			Re	celv	ed b	y:								,	R	em	ark	s:									•	2	Ċ	>	F	7			
Relinquished	i by			Da	te	Ti	me			Re	ceiv	ed t	oy:																													
Relinquishe	d by			Da	ite	Ti	me							Laborato			•																									
		l	. '	•	t		, i'		1	14		٠.	,	1	11	÷	t	•	1	• •		<u> </u>																				_



Northwest Region 4080 Pike Lane

Concord. CA 94520

(415) 685-7852

(800) 544-3422 from inside California

1800) 423-7143 from outside California

88/81/89 JP

PAGE 1 OF 1

WORK ORD#:C987374

CLIENT: CHIP

CHIP PROKOP

BROUNDHATER TECHNOLOGY, INC.

4880-D PIKE LANE

CONCORD, CA 94529

PROJECT#: 203-680-5016.05-18

LOCATION: DAKLAND, CA

SAMPLED: 87/18/89

BY: 6. MASON

RECEIVED: 87/18/89

BY: L. SOUSEK

ANALYZED: 07/27/89

BY: K. PATTON

MATRIX:

OTHER

UNITS:

mg/kg

TEST RESULTS

	1	MDL	ISAMPLE #	ı	0 1	1	ŧ	!	1	
PARAMETER	l		11.D.	1	1	ı	1	1	t	

Ortho Cresol

10

18000

M-P Cresol

18

11000

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

METHOD: MEOH Extraction GC/FID

EMMA P. POPEK. DIRECTOR

ZDYA	
3L80507605 Broject Name:	1
Sampler Signature:	ACE 12-4
Method Sampling Preserved	SFAX .
(Lab use) W S THE THE THE THE THE THE THE THE THE THE	EU-BON
是一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	
2 N 3 Z N 3	
一日の合物型ZNG自由電影型目音が中容を表現。 1000日では、1000日では、1000日日では、1000日日では、1000日日では、1000日日では、1000日日では、1000日では	3 20 12
	対象を
	1
· · · · · · · · · · · · · · · · · · ·	1. 汉
	2 2
,一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个一个	5
d by Date Time Received by	
0 7/16 3:35 d by	



ENVIRONMENTAL LABORATORIES, INC.

Worthwest Region ≈4080 Pike Lane —Concord. CA 94520

4415) 685-7852 7800) 544-3422 from inside California 7800) 423-7143 from outside California

#7/27/89 JP Page 1 of 1

MORK ORD4:C907138

CLIENT: CHIP PROKOP BROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520 =

PROJECT#: 203-680-5016.05-13

LOCATION: DAKLAND, CA

SAMPLED: 07/18/89

BY: B. MRSON

RECEIVED: 87/18/89

ANALYZED: 87/17/89

BY: C. MANUEL

MATRIX: SOLVENT UNITS: ug/L (ppb)

	1	MDL	ISAMPLE # 1	81 *	1	6 2*	i 1	1	1
PARAMETER	<u> </u>		11.D.						
C hloromethane		0. 5		(2500	•	(100			
Bromomethane		8.5		(2588)	(100)	8		
Dichlorodifluoromethane		8.5		(2500	9	(199	3		
		1		(5000)	•	(566			
Vinyl chloride Chloroethane		e. 5		(250)	3	(100			
		8.5		97889	ð	(100	3		
Methylene chloride		8.5		(250)	9	(100	0		
Trichlorofluoromethane		6.2		(1000	3	(40	8		
1,1-Dichloroethene		8.5		(258)	9	(100	0		
1,1-Dichloroethane		9.5		(258)	9	(180	0		
trans-1,2-Dichloroethene		9.5		(258	0	(100	0		
Chloroform		6.5		(258)	9	(100	ð		
1,2-Dichloroethane		9.5		(250	0	(100			
1, 1, 1-Trichloroethane		e. 5		(258)	0	(186	0		
Carbon tetrachloride		9. 5		(250	Ø	(100	10		
Bromodichloromethane		6. 5		(258	8	(100	0		
1,2-Dichloropropane		e. 5		(250		(186	90		
trans-1,3-Dichloropropene				(258		(100	90		
Trichloroethene		0.5 0.5		(258		(186	90		
Dibromochloromethane		_		(258		(100	90		
1,1,2-Trichloroethane		9.5		(258		(10	98		
cis-1,3-Dichloropropene		0.5		(500		(28)			
2-Chloroethylvinyl ether		1		(258		(19			
Bromoform		8.5		(258		(10			
1, 1, 2, 2-Tetrachloroethane		8.5		(259		6100			
Tetrachloroethene		8.5		(256		(10			
Chlorobenzene		6. 5		1674	-		_ ~		

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



Rage 1 of 1 Continued

Worthwest Region

150 Pike Lane

Doncord. CA 94520

15) 685-7852

1600) 544-3422 from inside California

1800) 423-7143 from outside California

MORK DRD#:C987138

CLIENT: CHIP PROKOP

PROJECT#: 283-680-5816.85-13

LOCATION: DAKLAND, CA

MATRIX:

Nater

UNITS:

ug/L (ppb)

PARAMETER	1 1	MDL	ISAMPLE # I	01# 1	1	82 * 3	1	1	1
1,3-Dichlorobenzene 1,2-Dichlorobenzene		8.5 8.5		(250 690	0	(1 80 :	0		
1,4-Dichlorobenzene		8.5		498	8	(166	0		
Estimated Tetrachloroethene				110	0	NA			
Estimated 1,3 Dichlorobenzene				230	10	NA			

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

METHOD: EPA 601

*Detection limits raised due to dilution.

Emma P. Dolen

ENVIRONMENTAL LABORATORIES, INC.

Morthwest Region 4080 Pike Lane Concord, CA 94520 (415) 685-7852

(800) 544-3422 from inside California \$200) 423-7143 from outside California

87/28/89 jp Page 1 of 1 MORK DRD#:C907129

CLIENT: CHIP PROKOP

BROUNDHATER TECHNOLOGY, INC

4888-D PIKE LANE

CONCORD, CA 94529 -PROJECT#: 203-680-5016.05-14

LOCATION: DAKLAND, CA

SAMPLED: 07/10/89

BY: B. MASON

RECEIVED: 07/10/89

ANALYZED: 87/28/89

BY: KOWALSKI

MATRIX:

Other

UNITS: ug/Kg (ppb)

	I MDL	ISAMPLE #	İ	61	1	l l	l l	
PARAMETER	l 	II.D.	l 	4	 	 	! 	
Chloromethane	500			(500				
Browowethane	500			(500				
Vinyl chloride	500			(500				
Chloroethane	500			(500				
Methylene chloride	250			(250				
Acetone	5000		31	999999				
Carbon disulfide	250			(250				
1.1-Dichloroethene	258			(250				
1,1-Dichloroethane	250			(258				
trans-1,2-Dichloroethene	250			(250		•		
Chloroform	250			(250				
1,2-Dichloroethane	250			(250				
2-Butanone	50 00			(5000				
1,1,1-Trichloroethane	250			(250				
Carbon tetrachloride	258			(258	,			
Vinyl acetate	2560			(2500				
Browodichloromethane	250			(258				
1,2-Dichloropropane	250			(256				
cis-1,3-Dichloropropene	250			(25)				
Trichloroethene	258			(256				
Dibromochloromethane	250			(25)	9			
1, 1, 2-Trichloroethane	250			(25)				
Benzene	250			(25)				
trans-1,3-Dichloropropene	258			(25)	ð			
2-Chloroethylvinylether	500			(50)				
Bromoform	250			(25)				
4-Methyl-2-pentanone	2500		1	1 0000 00	8			
2-Hexanone	2500			(250)	8 		. <u>. </u>	

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



Page 1 of 1 **Continued**

Morthwest Region

© Concord, CA 94520

🚣 **(415) 6**85-7852

800) 544-3422 from inside California

300) 423-7143 from outside California

WDRK DRD#: C987129

CLIENT: CHIP PROKOP

PROJECT#: 203-688-5016.05-14

LOCATION: DAKLAND, CA

MATRIX:

Other

UNITS:

ug/Kg (ppb)

PARAMETER	1	MDL	ISAMPLE #	1	81 4	1	1	1	1
Tetrachloroethene		250			280000				
1, 1, 2, 2-Tetrachloroethane		250			(25	0			
Toluene		250		2	500000	00			
Chlorobenzene		250			(25	18			
Ethylbenzene		250			(25	0			
Styrene		250			(25	10		•	
1,2-Dichlorobenzene		250			(25	18			
1,3-Dichlorobenzene		250			(25	8			
1,4-Dichlorobenzene		250			(25	10			
Xylene (total)		250			⟨25	50			
Trichlorofluoromethane		250			(25	50			

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



 67/21/89 Jp

PAGE 1 OF 1

MORK DRD#: C987131

CLIENT: CHIP PROKOP

BROUNDWATER TECHNOLOGY, INC.

4888-D PIKE LANE

CONCORD, CA 94529

PROJECT#: 203-680-5016.05-15

LOCATION: DAKLAND, CA

SAMPLED:

87/18/89

BY: 6. MASON

RECEIVED: 07/10/89 ANALYZED: 07/20/89 BY: L. SOUSEK BY: R. LAPURGA

MATRIX: OTHER

TEST RESULTS

	1	LINITS	1	1	METHOD	ISAMPLE #	1	92	ŧ	8 3	1	84	Į
PARAMETER	i		i	Ī		II.D.	i	#2	ı	#3	l	#4	1
777 17 70 70 70 70 70 70 70 70 70 70 70 70 70	-												

rlashpoint

Degrees Farenheit EPA1010

105 F

80 F

80 F

EMMA P. POPEK, DIRECTOR



" "Northwest Region --- 4080 Pike Lane - Concord, CA 94520 (415) 685-7852 1800) 544-3422 from inside California -- (800) 423-7143 from outside California **€7/27/89** Jp

PAGE 1 DF 1

MORK ORD#10987132

CLIENT: CHIP PROKOP

BROUNDWATER TECHNOLOGY, INC.

4888-D PIKE LANE

CONCORD, CA 94528

PROJECT#: 203-680-5016.05-16

LOCATION: DAKLAND, CA

SAMPLED: 07/10/89

BY: 6. MASON

RECEIVED: 87/10/89 ANALYZED: 87/24/89 BY: L. SOUSEK

UNITS:

MATRIX: SOIL

PPM

BY: J. THOMAS

TEST RESULTS

PARAMETER	I MDL I	ISAMPLE # I	01 01 01	8 2	0 3 4 3	1 	84 #4	! !	<u></u>
Arsenic	13	.	(13	(13		(13	(1	3	
Barium	0. 5	5	2	50		54		4	
Cadmium	3	3	(3	(3		(3	(3	
Chromium	3	3	5	6	,	6	•	3	
Lead	:	5	270	49)	47	•	:5	
Mercury	0.0	2	(0.8 2	(0.02	2 (0	.02	⟨0. €	12	
Silver	;	3	8	7	•	7		8	
Selenium	2	5	(25	(25	5	(25	⟨⟨	≥5	

METHOD: 3005/6010



4060-C Pike Lone Concord, CA 94520 415-685-7852

800-544-3422 (In CA) 800-423-7143 (Outside CA) CHAIN-OF-CUSTODY RECORD AND ANALYSIS

LABORAIGE	111, 18C.											`																	odi	Ĺá	J	į	احاسد	وأفست	<u> </u>	T	85	e Ó	ď.	\Box
Project Manager:	HP Pr	l	٠ ~			F	²hoi	ne i	! ;									A	NA	LY	SI9	R	EQ	UE	ST			1	ŕ		}	1.0	Лį. 	الحاد اليمين		1	M	(D)	111	į
Address:	cord		- (,)				FAX									015)					(1.									,		·	- 1	<i>h</i> # 1		deline.			PECET)	MENTS
Project Number:	18050	116	> (>5	>	-	Proj	oct Y	Nan	ne: / }	<u>()</u> e	1.9.	4			(602/8020/8015)	Ð	Ŕ			2								Ą			47		1					LT3 (5)	SOUTH
Project Location:	DAKLAND				Ź	9	San To	mpk 19	or Si		ندر	<i></i> -	>			soline (60	TPH as Diesel (8015 or 8270)	015 or 82	0 (413.1)	Total Of & Greene (413.2)	harocard			(B) (B)	EPA 6246240)				Autorit Moto	(2:852/1	•	Jusou.					ERVCE (2-4		TECTION LIMITS (SPECEP)	PEPÓKTINA RECU
Sample	Lab#	NERS	mount		Mai	trix		F	Me re:	tho		5	Sam	pling	2/8020)	H se G	Yesel (8)	ettusi (8	& Great	2	Engl			34000A	Qres	8	CAM- 17 Metal	- 8 Met	Hority P.	LEAD(7420/7421/239.2)	OPICANIC LEAD)	778				Ser. Act	1	E
ID	(Lab use only	# CONTAINERS	Volume/Amount	WATER	S S	SUDGE	OTHER	₹	₹ S	<u>u</u>	STAFE OF THE PERSON		DATE	HAE.	BTEX (602/8020)	ВТЕХТРН 🐽 😘	TPH as [TPH 🕿 J	Total Of	100	Pa Pa	CT A 602	EPA BOBADE	EPA 60	EPA 62	EPA 625/6270	CME	EPTOX - 8 M	EPA P	LEAD(7	ORGAN	#C		1	4	110	GHAZ	P	39-603	SPECE
		7	1		-	1	Y	-		ম	+	_	1/10		T							X.										X		X.	۲.		_	4-	ļ	
7		Z	1	\dashv		+	1			Î	_	十	1													L	L				_			ᄉ	ᄮ	1)	4	_	1	
3		Z	Н			†-		1	┞	11	1	1	1									$\langle L$				<u></u>	_		L		<u> </u>			시	솨	1)	4	<u> ·</u>	<u> </u>	
4		2			十	-	Ħ,	1		1		1	1												X	1	<u> </u> _	_	_	_	L			XI,	XĮ.	4		+	ــا	_
1	 	- 	Н		\dashv	1	 	1		П											\perp	_	_	1	_	1.	1_	Ŀ	Ļ	ļ	<u> </u>			_	4	4	4	4		
Travel 13		1	7			1	-	1	-	V	1		V		-	-		-	 		+	+	-	+	+	-	-	-	-	-	-	<u>l</u> i	┟╾┥	\dashv	+	4	+	+	-	
		-	╀	\vdash	\vdash		╁	╀	╁	$\left \cdot \right $	╁	╁		-	╢	╁	╁┈	۲	╁╴			1	+	t	╁	T	T	1	T	1	١.					I	I			
	<u> -</u>	+	-	\vdash	\vdash	╁	╁	╁	╁	\vdash	+	╅		-	1	†	1	1	Ī				1								Ŀ		بغ	علاة						_
		-}-	+	-	H		+-	╁	╁		1	十		 		1	1	Τ																Ľ		لد	_	_	上	Ļ_
		-	╁╌	╁	-	╅	╁	+	+	-	\sqcap	十	-	1	1	T		1													نا		ľ		\Box				_	<u></u>
Helinquished	1 by:	-	7/	Date	ابا 1 •	 ime 3:		†	Re	celv	ed t	by:									R	em	ark	s:		-	S ‡	િ	7	T-	}	\$ 0	<u>ان</u> ا (~ 4	* ~	IT	5			
Relinquisher					7				Re	ceiv	ed l	by:																			:									
Relinquishe	d by			Date	e 1	Time)		Re	ceiv	/ed	by l	abo	ratory:	t.			,																						
İ		- }	11	Ï	1.	-1		l	1		. 1		•	: ·	\mathcal{M}						 												نتجح	السنفسر		-	كنشيه			



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

07/13/89 Jp Page 1 of 2

MORK ORD#: C907007

CLIENT: CHIP PROKOP

GROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05-11

LOCATION: DAKLAND, CA

SAMPLED: 06/30/89

BY: 6. MASON

RECEIVED: 06/30/89

ANALYZED: 07/07/89

BY: R. CONDIT

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	I MDL	ISAMPLE #	l l	01 MW4	l	02 MW5	l l	03 MWE	 	04 ! MW3 }
Chloromethane	0.5			(0.5	5	(0.5		(0.5		(0.5
Bromomethane	0.5			(0.5	5	⟨∅.5		⟨∅.5		(0.5
Dichlorodifluoromethane	0. 5			(0.5	5	(0.5		⟨∅,5	5	(0.5
	1			(1		⟨1		₹:		(1
Vinyl chloride	0. 5			(0.5	5	(0.5		(0.	5	(0.5
Chloroethane	0. 5			(0.5	5	(0.5		(0.5	5	(2.5
Methylene chloride	0.5			(0.5		(0.5		į	В	(0.5
Trichlorofluoromethane	0. 2			0.25		(0. 2		⟨ 0. i	2	1.7
1,1-Dichloroethere	0.5			(0.5		(0.5		(0.	5	11
1,1-Dichloroethane	e.5			1		(0.5		(0.	5	(0.5
trans-1,2-Dichloroethene	ø. 5			Ø. E.		(0.5		(0.	5	(0.5
Chloroform	0.5 0.5			0.		(0.5		⟨∅.	5	5.8
1,2-Dichloroethane	ທ.ລ 0.5			(0.		0.54		(0.	5	3
1,1,1-Trichloroethane				(0.		(0.5		(0.	5	(0.5
Carbon tetrachloride	0.5			(0.		(0.5		(0.	5	(0.5
Bromodichloromethane	0. 5			⟨∅.		(0.5		(0.	5	Ø. 88
1,2-Dichloropropane	0. 5			(0.		(0.5		(0.	5	(0.5
trans-1,3-Dichloropropene	Ø.5			38		2.9		6.	6	7.4
Trichloroethene	0.5			⟨∅.		(0.5		(₽.	5	(0.5
Dibromochloromethane	0.5			(0.		(0.5		⟨₽.	5	(0.5
1,1,2-Trichloroethane	0.5			⟨₺.		(0.5		(0.		(0.5
cis-1,3-Dichloropropers	0.5				(1	()			(1	₹1
2-Stloroethylvinyl ether	1			⟨∅.		(0.3		⟨∅.		(0.5
Bromoform	0. 5					(₽. :		⟨₺.		(0.5
1,1,2,2-Tetrachloroethane	0. 5			(0.		(0.		(0.		0.6
Tetrachloroethere	0. 5			(0.				⟨₽.		1.4
Chlorobenzene	0.5			⟨∅.	כ	⟨∅. ⅓	ب	7 % '		

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

Page 2 of 2

Morthwest Region

€ 1080 Pike Lane

≱Concord, CA 94520

-**(415) 685**-7852

(800) 544-3422 from inside California

1800) 423-7143 from outside California

WORK DRD#:C907007

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-11

LOCATION: DAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	I MDL	ISAMPLE #	1	05 MW1	1	9 6	!	07 MW8	1	†
Chloromethane	0.5			(0.5	5	⟨∅. 5	;	(0.5	;	
Bromomethane	0.5			(0.5	;	(0.5		(0.5		•
Dichlorodifluoromethane	0.5			(0.5	5	(0.5	;	⟨∅.5	5	
Vinyl chloride	1			(1		(1		(1		
Chloroethane	0.5			(0.5	5	(0.5		(0.5		
Methylene chloride	0.5			⟨0.5	;	(0.5		⟨0.5		
Trichlorofluoromethane	0. 5			(0.5	5	(0.5	,	(0.5		
1.1-Dichloroethene	0. 2			(0.2	<u>-</u>	(0.2		(0.2		
1,1-Dichloroethane	0.5			(0.5	5	(0.5		(0.5		
trans-1, 2-Dichloroethene	0.5			(0.5	5	(0.5		(0.5		
Chloroform	0.5			⟨0.5	5	(0.5		(0.5		
1.2-Dichloroethane	0.5			(0.5	5	(0.5		6.5		
1,1,1-Trichloroethane	0.5			(0.5	5	(0.5		(0.		
Carbon tetrachloride	0. 5			⟨0.5		⟨∅.5		⟨∅. ;		
Bromodichloromethane	0.5			(0.5		(0.5		(0.		
1,2-Dichloropropane	0.5			(0.5		(0.5		(0.		
trans-1,3-Dichloropropene	0.5			(0.5		⟨∅.5		(0.		
Trichloroethene	0.5			⟨@. 5		(0.5		4		
Dibromochloromethane	0.5			(0.	5	(0.5		⟨∅.		
1.1.2-Trichloroethane	0.5			(0.		(0.5		(0.		
cis-1,3-Dichloropropene	0.5			(0.		(0.5		⟨₽.		
2-Chloroethylvinyl ether	1			(₹:		(
Bromeform	0. 5			(0.		⟨₽. 5		⟨∅.		
1,1,2,2-Tetrachloroethane	0.5			(0.5		(0.		⟨∅.		
Tetrachloroethere	0.5			0.B	3	(0.		0.5		
Chlorobenzene	0.5			(0.	5	⟨∅. ;	5	Ø. 6	9	

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



Page 2 of 2 Continued

Morthwest Region =1080 Pike Lane Concord. CA 94520

<u>(415)</u> 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California WORK ORD#: C907007

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-11

LOCATION: OAKLAND, CA

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	 	MDL	ISAMPLE #	1	05 MW1	1	ØE MW2	1	0 7 MW8	!	! !
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5		(0.5 (0.5 (0.5	į	(0. 5 1.4 (0. 5		

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

METHOD: EPA 601

EMMA P. POPEK, Laboratory Director



4060-C Pike Lane Concord, CA 94520 415-685-7852

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

CHAIN-OF-CUSTOD	Y RECORD	AND AN	ALYSIS	HE	ES
_			. :		

roject Manager:	PP	(رابط (الرابط	اد ا				F	hor	ne A	f:									A	NA	LY:	S19	R	EQ	UE	ST	,			ý J			, F	/ 11		13	1	\$ A	ND	CIA	19
Address: こっんに								AX									015)				-														+					Water	KENTS.
Project Number:						*:		Proje			1	<u> ۲</u>	برمع	: 1			2/8020/8	6	ē		677)	2 E															1	1		E	FOURE
Project Location:	ONKLAN					1		Sam	ple	r Si	gnat 2/1/	yre:	MO	·	•		cline (602/8020/8015)	5 or 827	15 or 82	(413.1)	413.4	0000			CBs Only					Start Me	K 822								34 E E	TAKE	TIBEG R
Comple	Lab #		rount		M	atr				Mo	tho	d	وا		pling	2/8020)	H as Gas	(80 i	og) parti	Grees		L LINE		0808		8240	9/28	7 Metade	S Libert	EPA - Priority Pollutant Metale	LEAD(7420/7421/239.2)	ORGANIC LEAD	HOLD					PROPERTY ONE SERVICE (24 IN	EXPERITED SERVICE (2-4 OF		SPECAL PORTING REQUEENENTS
Sample ID	(Lab use)	# CONTAINERS	Volume/Amount	WATER	SOR	AIR	SLUDGE	OTHER	Ŧ	HWQ.	<u>w</u>	STHE B		0 4 1€	TIME	BTEX (602/8020)	BTEXTIP	TPH as Diesel (8015 or 8270)	TPH as Jethal (8015 or 8270)	Total Oil & Greace (413.1)		Total Percental Hydrocarbons (+16.1)	EPA Answerse	EPA 608	EPA 608/8080-P	EPA 624/8240	EPA 625/6270	CAM - 17 Met	M 8 - XOLGS	EPA - P	LEAD	ORGE	2 					E	EXPEDITED SE	VEYER	\$28.05 5
MW &			7.5		+				X		X		-	, ,].			L	L	<u> </u>				_	\dashv				+	+	+	4	+	4-1
<u>.</u> 313		1			-		_				#		┿	+-			-	-		\dashv	+	+	╁	+-	-	-		-		_	-		X	H	\vdash	十	十	\dashv	+	+	+1
1		7	-	$\frac{1}{1}$		_	_		H		+	+	╁	1		+	-	-		\dashv	+	+	ት	+	1	\dagger										士					
113		+	+	H	+	-	┞	-	H	H	1	\dagger	+	\top		1_																	K			_	_		4	4	_ i
72		7	,																		_	_	X	_	-	╁	<u> </u>	_						┝╾┤			4	4	-	+	4-
8			\perp	L			_	_	_	_	\prod	4		\downarrow	 	-	╀	_		\dashv	-	-	+	╀	╀	╀	-	┞	Н	Н			V	\vdash	-	+	┽		+	十	
215			_	\parallel	-	-	 		╀	-	H		+	+		+-	╀	╁		\dashv	-	+	Ϋ́	+	╁	╁	+-	╁	Н							_	†	7	7	+	
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \		4	4	+	+	╀	╁╴	\vdash	-	╟	$\ \cdot\ $	十	\dashv	\dagger	 	╁	╁	\dagger	-		_	7	7	十	1	†		1						Ġ.		4			I	I	
V SA	,	+	+	\forall	╁	-	t	┼┈	力	ᡧ᠆	Ч	7	1	7																			X			y".			لِـ		لــــــــــــــــــــــــــــــــــــــ
Relinquistied			6/	Dat	10	Tir	ne			Rec	eiv	ed t	y;	7								R	em	ark	s:										ļ [`] 'i	7	<u></u>		+		<u>}</u>
Relinquished	l by		1	Dat	le	Tir	ne			Re	ceiv	ed I	by:			<u>,</u>																									
Relinquished	d by				te										ratory:				امار	03	(,	_		,									سيسي		سينفيس	الأكفاد			سسبل		



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

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

CHAIN-OF-CUSTODY RECORD	AND A	K	ΑI	Y	H EK	JES	•
- 	المشرق ملان						

LABORATOR	ES. INC.	41	0-0	00-70	<u>.</u>					-20			30100		-									-					į,	1	١.			A COL	i k		71	CM	
Project Manager:	HIP P	۲	1	_ {			Pho	ne i	/: 						_			A	NA	LY	'SI	3 F	PEC	ME	: 31	r 1	-	· ;			L	~ U	1 m		" % :	H	ANI	DLF	10
							FAX	#:								015					£.																		SPECIAL PORTING REQUIREMENTS
Project Number:			-	. e-		_	Pro) ۱	ect	Na:	ne:	1/		10 6	ંના		ĮŠ					3	1														3	F	1	
<u> </u>	50501	(:::	(_	<u>)``</u>	<u> </u>		5/	<u> </u>		17	1	`		(),,		8	18	Ŕ			ğ	ļ		,												X	ž		
Project Location:	and Garage	Á				G	San L		اها انزي	One X) C	_ _		-		eric	50	15 or 8	(413.1	3	2005		ļ	8					*	17.00 22.00 23.00 24.00 26.00							3CE		2
		SFRS	E E	1	Mai	rlx		P	Me	th er	od ve	d	Sar	npling	(9050)	18 Ger	esel (801	Office (80	Greese	Greens	E E	010	8	200	982	8	Motak	8 Metals	2 A	207421/		4				YORK	B 69	SF X	9
Project Number: Project Location: Sample ID	(Lab use)	# CONTAIN	Volume/Arr	WATER	AB &	SLUDGE	OTHER	Ę	HNO	ICE	NON WE	ОТНЕЯ	DATE	TINE	BTEX (600	BTEXTP	TPH & D	TPH as L	Total Of 2	Total Oli	Total Pet	EPA 601/	EPA 602/6020	EPA 806	EPA 624/8240	EPA 625	CAM-17 Metab	EPTOX - 8 Metal	EPA - Priority Pollutant)	CEAD(7420/7421		707				PROPE	EXPERITED SERVICE (2-4 days)	VERBALS/FAX	SPECIA
Travela 15		\dagger	33	X	-	╁		X	-	¥	Н		1/30		1_						_										1	\prod	1		_	L		_	44
MW 4		Ż	i	$\dagger \dagger$	1	T		T		П												X		1		_	<u> </u>		_	_		4	\downarrow	4	4_	╄-		-	44
M		†	Ш	\prod	+	1		Π	Γ	П						L		Ш				_		\perp	_	_				\downarrow	1	\dashv	_	\bot	_	┝			4-1
414		1	П					П		\prod						1_	_					_		_	<u> </u>	上	_	\sqcup		4	- ;	시	4	+	╀	╀╌	\vdash		- -
15		1						Π		\prod						<u> </u>	_	_			\sqcup	7	_	\bot	4-	lacksquare	<u> </u>			_	4	+	+	+	4-	-		+	+-
IM				\prod				\prod				_	\Box			\perp	_	<u> </u>			1	_	_	4		╁-	╁	\sqcup			Ļ	,	+	╀	┿	╀╌		╁	┼┥
513		1	17						L	Ц	_		\Box		_	1	_	 				_	+	+	+	┿	├ -	Н			_	4	+	+	+-	┾╍	╂╾┨	┽	┽╢
is		1	\prod				_	\coprod		Ц	1_	_				4-	4_	 		H	Н	시	+	+	-	╁	╀	┝┤	 		+	-+	+	-	╫	╀	H	\dashv	
Ţħ.			Ц		\perp		1_	Ц	1	<u> </u>		L			_ -	+	-	╀	_	-	\vdash	\dashv	_	+	+	╬	╁╾	\vdash	┞	-	╬	Ħ	- L	+	+	╁	H	+	+1
14.10		\perp		Ш		\perp	1	4	ļ	Ļ	١,	_		 		4	-	╁-		H	\vdash		\dashv	+		╁	╀	╀	-	H	╅	4	44	Н	+	十	H	+	+-1
3		12	1 1					1	1_	Γ	<u> </u>		<u></u>	7			_L			<u>L_</u>	닏	<u>X</u>					١	<u> </u>	L	<u>L</u> L			ملب		<u>_</u>		76		
Reinguished			.0	ate	т \	ime	!		Re	cei	VBC	l by	':								H	em	nari	(8:											-	-	<u>ار</u>		2
Relinquished	by		C	Date	T	ime)		Re	cei	vec	i by	<i>r</i> :																										
Relinquished	by	,		Date	1/2	ime	•		Re	icel	ived	j by	/ Lab	oratory	: :人:	Ĺ	(1 4	(يسي ال)															



Northwest Region

Concord. CA 94520

4080 Pike Lane

(415) 685-7852

LABORATORIES, INC.

`(800) 544-3422 from inside California (7800) 423-7143 from outside California

06/12/89 KF

PAGE 1 DF 2

WORK DRD#: C905539

CLIENT:

CHIP PROKOP

BROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520 -

PRDJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/OAKLAND, CA

SAMPLED: 05/22/89

BY: G. MASON

RECEIVED: 05/23/89

ANALYZED: 5/30/89

BY: R. CONDIT

MATRIX:

WATER

UNITS:

ug/L (ppb)

PARAMETER	I MDL	ISAMPLE #	01 MW 4	02 MW 5	03 I MW 6 I	04 MW 1
Chloromethane	0.5		(0.5	(0. 5	(0.5	(0.5
Bromomethane	0.5		(0.5	(0. 5	(0.5	(0.5
Dichlorodifluoromethane	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
Trichlorofluoromethane	0. 5		(0.5	(0.5	9.4	(0.5
1,1-Dichloroethene	0.2		(0.2	(0.2	⟨∅, ᢓ	(0.2
1.1-Dichloroethane	0.5		(0.5	(0. 5	(0.5	(0.5
trans-1,2-Dichloroethene	0.5		24	(0. 5	(0.5	(0.5
Chloroform	0.5		5	(0.5	⟨ ₽. 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 (0.5
Carbon tetrachloride	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
trans-1, 3-Dichloropropene	0.5		(0.5	(0.5	⟨0.5	⟨ 0. 5
Trichloroethene	0.5		470	3.4	5.3	(0.5
Dibromochloromethane	0.5		(0.5	⟨∅.5	(0.5	(0.5
1,1,2-Trichloroethane	0.5		(0.5	(0.5	(0.5	(0.5
cis-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
1, 1, 2, 2-Tetrachloroethane	0.5		(∅.5	(0. 5	(0.5	(0.5
Tetrachloroethene	0.5		(0.5	(0.5	(0.5	(0.5
Chlorobenzene	0.5		(0. 5	(0.5	(0.5	(0.5

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



PAGE 1 OF 2 CONTINUED

Northwest Region
4080 Pike Lane
Concord. CA 94520
(415) 685-7852

(800) 544-3422 from inside California
(800) 423-7143 from outside California

WORK ORD#: C905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/DAKLAND, CA

MATRIX: WATER UNITS: ug/L (ppb)

PARAMETER		MDL	ISAMPLE #	1	01 MW 4	 	02 MW 5	03 MW 6	1	94 1 MW 1 1
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5		(0.5 (0.5 (0.5	(Ø. : (Ø. : (Ø. :	5	(0.5 (0.5 (0.5

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



PAGE 2 DF 2

Northwest Region 4080 Pike Lane **Concord.** CA 94520 **(415)** 685-7852 **(800)** 544-3422 from inside California

🔔 (800) 423-7143 from outside California

WORK ORD#: C905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/DAKLAND, CA

MATRIX: WATER

UNITS: ug/L (ppb)

	I MDL	ISAMPLE # 1	0 5	1	1	į.	1
PARAMETER	<u> </u>	11.D.	MW 8	! 			
Chloromethane	0. 5		(0.5				
Bromomethane	0.5		(0.5				
Dichlorodifluoromethane	0.5		(0.5				
Vinyl chloride	1		(1				
Chloroethane	0. 5		(0.5				
Methylene chloride	0. 5		(0.5				
Trichlorofluoromethane	0. 5		(0.5	i			
1.1-Dichloroethene	0.2		Ø. 22				
1,1-Dichloroethane	0.5		(0.5	i			
trans-1,2-Dichloroethene	0.5		(0.5	;			
Chloroform	0.5		(0.5	j			
1,2-Dichloroethane	0.5		5.4				
1, 1, 1-Trichloroethane	0. 5	•	(0.5	i			
Carbon tetrachloride	0.5		(0.5	į			
Bromodichloromethane	0.5		(0.5	5			
1,2-Dichloropropane	0. 5		(0.5	5			
trans-1,3-Dichloropropene	9. 5		(0.5	5			
Trichloroethene	0.5		37	7			
Dibromochloromethane	0.5		(0.5	5			
1,1,2-Trichloroethane	0.5		(0.5	5			
cis-1,3-Dichloropropere	0.5		(0.5	5			
2-Chloroethylvinyl ether	1		(1	Ļ			
Bromoform	0. 5		(0.5	5			
1,1,2,2-Tetrachloroethane	0.5		(0.5	5			
Tetrachloroethene	0. 5		(0.5				
Chlorobenzene	Ø. 5		1.3				

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



PAGE 2 DF 2 CONTINUED

Northwest Region 4080 Pike Lane Concord. CA 94520 (415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California WORK ORD#: C905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/DAKLAND, CA

MATRIX: WATER

UNITS: ug/L (ppb)

PARAMETER	I MDL 1	ISAMPLE # I	05 MW 8	1	1	!	1
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene	0.5 0.5 0.5		(0.5 (0.5 (0.5	j			

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

This report replaces one of the same number dated 06/02/89.

METHOD: EPA 601

EMMA P. POPEK, Laboratory Director



ENVIRONMENTAL LABORATORIES, INC.

Northwest Region 4080 Pike Lane Concord, CA 94520 _ **(415) 68**5-7852

(800) 544-3422 from inside California -- (800) 423-7143 from outside California

06/15/89 JP

PAGE 1 OF 2

WORK ORD#: C905539.

CLIENT: CHIP PROKOP

GROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/OAKLAND, CA

SAMPLED: 05/22/89

BY: G. MASON

RECEIVED: 05/23/89

ANALYZED: 5/30/89

BY: R. CONDIT

MATRIX:

WATER

UNITS: ug/L (ppb)

	1 MDL	ISAMPLE # 1	Ø1 !	0 2 i	Ø 3 I	04
PARAMETER	l 	II.D. I	M₩ 4 I	MW 5 1	MW E I	MW 1
Chloromethane	0. 5		(0.5	(0.5	(0.5	(0.5
Bromomethane	0.5		(0.5	(0.5	(0.5	⟨0.5
Dichlorodifluoromethane	0. 5		⟨∅.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
Trichlorofluoromethane	0.5		(0.5	⟨0.5	9.4	(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
trans-1,2-Dichloroethere	0.5		24	(0.5	(0.5	(0.5
Chloroform	0.5		5	(0.5	(0.5	(0.5
1,2-Dichloroethane	0.5		(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		⟨∅.5	⟨0.5	(0.5	
trans-1.3-Dichloropropene	0. 5		(0.5	(0.5	(0.5	(0.5
Trichloroethene	0.5		470	3.4	5.3	(0.5
Dibromochloromethane	0.5		(0.5	(0.5	(0.5	(0.5
1,1,2-Trichloroethane	0.5		(0.5	(0.5	⟨₽.5	(0.5
cis-1,3-Dichloropropene	Ø.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
1, 1, 2, 2-Tetrachloroethane	0.5		⟨₡.5	(0.5	(0. 5	(0.5
Tetrachloroethene	0.5		(0.5	(0. 5	(0.5	(0.5
Chlorobenzene	0.5	- · ·	(0.5	(0.5	(0.5	(0.5

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



PAGE 1 OF 2 CONTINUED

Morthwest Region

.**408**0 Pike Lane *Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

WORK DRD#: C905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/DAKLAND, CA

MATRIX: WATER

UNITS: ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #	1	01 MW 4	 	02 MW 5	1	0 3 MW 6	 	04 MW 1
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			<0.5 <0.5 <0.5		(0.5 (0.5 (0.5		(0.5 (0.5 (0.5	5	(0.5 (0.5 (0.5

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



PAGE 2 OF 2

Northwest Region

4080 Pike Lane
Concord. CA 94520

(415) 685-7852

(800) 544-3422 from inside California
(800) 423-7143 from outside California

WORK DRD#: 0905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/DAKLAND, CA

MATRIX: WATER UNITS: ug/L (ppb)

	I MDL	ISAMPLE	# 1	0 5	1	l i	!	
PARAMETER		; I. D.	 	MW 8	- 	 	 	
Chloromethane	0.5			(0. 5				
Bromomethane	0.5			(0.5			•	
Dichlorodifluoromethane	0.5			⟨0.5				
Vinyl chloride	1			(1				
Chloroethane	0.5			(0.5				
Methylene chloride	0.5			(0.5				
Trichlorofluoromethane	0. 5			(0.5	5			
1.1-Dichloroethene	0.2			(0.2	2			
1,1-Dichloroethane	0. 5			⟨∅.;	5			
trans-1,2-Dichloroethene	0.5			(0.	5			
Chloroform	0.5			(0.	5			
1,2-Dichlorcethane	0.5			€.				
1, 1, 1-Trichloroethane	0.5			⟨∅.				
Carbon tetrachloride	2.5			⟨∅.				
Bromodichloromethane	0.5	ı		⟨∅.	5			
1,2-Dichloropropane	0.5			(0.	5			
trans-1, 3-Dichloropropene	0.5			(0.	5			
Trichloroethene	0. 5			3	7			
Dibromochloromethane	0.5			⟨∅.	5			
1,1,2-Trichloroethane	0.5			(ହ.	5			
cis-1,3-Dichloropropene	0.5			(0.	5			
2-Chloroethylvinyl ether	1	•		(1			
Bromoform	0.5	5		(0.	5			
	0.5			(0.	5			
1,1,2,2-Tetrachloroethane	0.5			⟨∅.	5			
Tetrachloroethene	0.5			1.				
Chlorobenzene	0.0	•						

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



PAGE 2 OF 2 CONTINUED

Northwest Region

4080 Pike Lane Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

WORK ORD#: C905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/DAKLAND, CA

MATRIX: WATER

UNITS: ug/L (ppb)

PARAMETER		MDL	ISAMPLE #	1	05 MW 8	<u> </u>	 	1 1	
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5	i			

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

This report replaces one of the same number dated 06/12/89.

METHOD: EPA 601

FMMO D POPEK. Laboratory Director

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

96/82/89 MH Page 1 of 2

WORK ORD#: C905539

CLIENT: CHIP PROKOP

GROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05-5

LOCATION: 4TH STREET/DAKLAND, CA

SAMPLED: 05/22/89

BY: G. MASON

RECEIVED: 05/23/89

ANALYZED: 05/30/89 BY

BY: R. CONDIT

MATRIX:

Water

UNITS: ug/L (ppb)

	1 MDL	ISAMPLE # I	Ø1 I	6 2 I	9 3 (0 4 (
PARAMETER	 	1I.D. 1	MW 4	MW 5 1	MW 6 I	MW 1 I
Chloromethane	0. 5		(5.0	(0.5	(0.5	(0.5
Bromomethane	0.5		(5. 0	(0.5	(0.5	(0.5
Dichlorodifluoromethane	0.5		(5.0	(0.5	(0.5	(0.5
Vinyl chloride	1		(10	(1	(1	(1
Chloroethane	0.5		(5. 0	(0.5	(0.5	(0.5
Methylene chloride	0. 5		(5.0	(0.5	(0.5	(0.5
Trichlorofluoromethane	0. 5		(5.0	(0.5	9.4	(0.5
1.1-Dichloroethene	0.2		(2.0	(0.2	(0.2	(0.2
1,1-Dichloroethane	0.5		(5.0	⟨0.5	(0.5	(0.5
trans-1,2-Dichloroethere	0. 5		24	(0.5	(0. 5	(0.5
Chloroform	0.5		5	(0.5	(0.5	(0.5
1,2-Dichloroethane 1,1,1-Trichloroethane	0.5 0.5		(5.0 (5.0	⟨0.5 ⟨0.5	(0.5 (0.5	(0.5 (0.5
Carbon tetrachloride	0.5		(5.0	(0.5	(0.5	(0.5
Bromodichloromethane	0.5		(5.0	(0.5	(0.5	(0.5
1,2-Dichloropropane	0.5		⟨5. ₽	(0.5	(0. 5	(0.5
trans-1, 3-Dichloropropene	0.5		(5.0	(0.5	(0.5	(0.5
Trichloroethene	0.5		470	3.4	5. 3	(0.5
Dibromochloromethane	0.5		(5.0	(0.5	(0.5	(0.5
1,1,2-Trichloroethane	0.5		(5.0	(0.5	(0.5	(0.5
cis-1,3-Dichloropropene	0.5		(5.0	(0.5	(0.5	(0.5
2-Chloroethylvinyl ether	1		(10	₹1	(1	<u> </u>
Bromoform	0.5		(5.0	(0.5	(0.5	(0.5
1,1,2,2-Tetrachloroethane	0.5		(5.0	(0.5	⟨∅.5	(0.5
Tetrachloroethene	0.5		(5.0	(0.5	⟨0.5	(0.5
Chlorobenzene	0.5		(5.0	(0.5	₹0.5	(0.5

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



Northwest Region

4080 Pike Lane

Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

Page 1 of 2 Continued

WORK DRD#: C905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-1

LOCATION: 4TH STREET/DAKLAND, CA

MATRIX: Water

UNITS: ug/L (ppb)

PARAMETER	1	MDL	ISAMPLE #	l i	01 MW 4		02 1 MW 5 1	03 MW 6	 	04 I MW 1 i
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(5.0 (5.0 (5.0		(0.5 (0.5 (0.5	(Ø. 5 (Ø. 5 (Ø. 5	5	(0.5 (0.5 (0.5

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



Page 2 of 2

Northwest Region 4080 Pike Lane Concord. CA 94520

(415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California WORK ORD#:C905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-1

LOCATION: 4TH STREET/OAKLAND, CA

MATRIX: Water

UNITS: ug/L (ppb)

PARAMETER	I MDL	ISAMPLE # 1 0 II.D. I MW			1	
Chloromethane	0. 5		(0.5			
Bromomethane	0. 5		(0.5			
Dichlorodifluoromethane	0.5		(0.5		· ·	
Vinyl chloride	1		(1			
Chloroethane	0. 5		(0.5			
Methylene chloride	0. 5		(0.5			
Trichlorofluoromethane	0. 5		(0. 5			
1,1-Dichloroethene	0.2		0. 22			
1,1-Dichloroethane	0.5		(0.5			
trans-1,2-Dichloroethene	0.5		(0.5			
Chloroform	0.5		(0.5			
1,2-Dichloroethane	0.5		6. <u>4</u>			
1,1,1-Trichloroethane	0.5		(0.5			
Carbon tetrachloride	0. 5		(0. 5			
Bromodichloromethane	0. 5		(0.5			
1,2-Dichloropropane	0.5		(0. 5			
trans-1,3-Dichloropropene	0. 5		(0.5			
Trichloroethere	0.5		37			
Dibromochloromethane	0. 5		(0. 5			
1,1,2-Trichloroethane	0. 5		(0.5			
cis-1,3-Dichloropropene	0. 5		(0.5			
2-Chloroethylvinyl ether	1		(1			
Bromeform	0.5		⟨0.5			
1, 1, 2, 2-Tetrachloroethane	0.5		(0.5			
Tetrachloroethene	0.5		(0.5			
Chlorobenzene	0.5		1.3			

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



Page 2 of 2 Continued

Northwest Region

4080 Pike Lane

Concord. CA 94520

(415) 685-7852

12 (800) 544-3422 from inside California

1800) 423-7143 from outside California

WORK DRD#: C905539

CLIENT: CHIP PROKOP

PROJECT#: 203-680-5016.05-1

LOCATION: 4TH STREET/DAKLAND, CA

MATRIX: Water

UNITS:

S: ug/L (ppb)

PARAMETER	i Mi	DL 	ISAMPLE #	1	0 5 MW 8	1	1	1	! !
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene	0	.5 .5			(0.5 (0.5 (0.5	5			

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

METHOD: EPA 601

EMMA P. POPEK, Laboratory Director



LABORATORIES, INC.

Northwest Region

Concord, CA 94520

* (415) 685-7852

(4800) 544-3422 from inside California

_4800) 423-7143 from outside California

96/82/89 jp

PAGE 1 OF 1

MORK DRD#: C905540

CLIENT: CHIP PROKOP

BROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05-6

LOCATION: 4TH STREET

DAKLAND, CA

SAMPLED: 05/22/89

BY: 6. MASON

RECEIVED: 05/22/89

BY: K. FILLINGER BY: C. MANUEL

ANALYZED: 05/26/89

MATRIX: WATER

TEST RESULTS

mg/L (ppm) -UNITS:

PARAMETER	i MDL	ISAMPLE #	 	Ø1 MW 4	1	02 MW 5		03 MW 6	l l	04 MW 1	1	05 MW 8	
Total Petroleum Hydrocarbons as Mineral Spirit	1			(1		(1		(1		(1		(1	

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

METHOD:

Modified EPA Method 5030/8015

Enina P. nosen

EMMA P. POPEK, Director

GTP
SHVIROHMENTAL LASOPATORIES, INC.

4080-C 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

olect Manager:	Manager: Phone #: CHIP アットのトゥア										ANALYSIS REQUEST											<u>.</u>		OTHEN					SPECIAL HANDLING											
ddress: ∠⊙∧	1cord						FAX			•						015)					2											Per Le							ECIETY	ENTS
roject Number:	703/80501605 CUNSWULCI								!		72/8020/B	Đ	<u>g</u>			ons (418								tais			AS MAYER-L				\$4 PE	1		PETS (SE	SPECIAL REPORTING RECURPEMENTS					
roject Location:	CAKLANI CHENNEY OF CONTROL OF CON											oline (60	15 or 82	15 a 82	133	(413.2)	grocert			80.89	١				utent Metak	(2.002		101				ERVO	NCE (2		HOL	E SEE				
		SE 3	E S		Mat	trix	_		Mé	rthe	od vec	١	Sampli	ng	(0208/	as Gas	esel (80	(8) (8)	23625	Sags.	E Sec	0108	2 2	9080 PC	9728	8270	1	6 Metab	ority Pos	207421/						YOME		SFAX	DETEC	
Sample ID	Lab # (Lab use) only	# CONTAINERS	Volume/A	WAIEH S	A BA	SLUDGE	отнея		¥ S E	ઝ	NONE.	S TEX	DATE	TIME	BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	M 22 HdT	TPH as Jetitual (8015 or 8270)	TOTAL	Total Oil	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA GORAGEO	EPA 608/	EPA 624/8240	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metab	EPA - Priority Pollut	LEAD(7420/7421/239.2)	OPGANIC LEAD	MOD YOK		1104		PROBLE	EXPERIE	VERBALS/FAX	SPECIAL	SPECIAL
Trip B			M	Y				X		X		Ĭ	1:5						_		_	\perp	_	<u> </u>	-		_								_	-	-	+	-	H
MW 4B			\coprod	#	4	-					-	-							-	\dashv	-	ᆉ	+	-	-	-	_	-	\vdash	-			-		╬	╁	╁	╁	-	H
		7	H	/-		+	-	H		H	+	┥	-}-			-		\dashv	1			1	+	+	+			-	-	_		X	 	╂═╂	\top	+	\dagger	+		H
4		7	H	(+	+-	╁	 	₩		Н	╅	+		• • •				7	┪	1	T	1	+	Ť	T	<u> </u>	_	厂						\						
<u>5 y</u>	<u> </u>	2	\dashv	++	+	+	-	-			-	1	1	<u> </u>		-			1		1	X																		
		2		1	+	-		忊				_																				X				\perp		_	_	
68		11	1	\prod	Ť	十		T		1													_	ļ.,	_	_	_			_	_	_	_	M	\downarrow	1	_	4	_	
6		2	T	\prod				\prod								L	<u> </u>				\Box	2,	\perp	_	_	1	_	ļ.	ļ	_	_	<u> </u>	_		4	4	+	+-	-	\dashv
6		Z	\prod	\prod												_	┞					4	_	- -	_	- -	╀-	igdash	ļ	<u> </u>	ļ	ľ	-	4	i i	4	-	+	╁	\vdash
.) \$		1	I			$oldsymbol{ol}}}}}}}}}}}}}}}}}}$		\coprod		Ц				 -	<u>l_</u>	_	L			Ц	Ц		<u> </u>			L	L	<u></u>	<u></u>	<u></u>	L_	<u> </u>	<u> </u>	X					1	
Relinquished		5/2	D	ate 189	τι 11	ime ا چ	<u>'4</u> <	1	Red	ceiv	be	by:	•								R	em	ark	s:																
Relipquished				ate		ime			Red	ceiv	red	by:																												
Relinquished	by		D	ate	T	ime		1	Re	ceiv	/ed	by	Laborato	ory:			•																	٠. س	i Jo	1	,	1		
			10	. ,] :		٠		;				t_{i_0,\dots,i_r}	1, 4									1											1 	•	:			•••	

-	-	
	CT	
	GI	
	AN VIRONS	

4080-C Pike Lane Concord, CA 94520 415-665-7852

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

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

	PATORIES, INC.									4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1												بنطوي د خور		-																		
oject Manager:	Phone #: CHIP PROKOP SESS: FAX #: Project Name: /								ANALYSIS REQUEST OTHER HAN											PE	CI.	AL .IN	a																			
dress: という	Lord	9.1		- 1				AX			·						15)																30.0								CELL	82 AG
oject Number:	68050 4+h)	6	<u>ර</u>	5		P	roje	αl V≀	۷ar	no:	1/	<i>!</i>	;7.1			BTEX/TPH as Gasofine (602/8020/8015)	ē	(è			ons (418.1						-		1		ı	AIN'S E'L					E	4 Geye)		SPECIAL DETECTION LIMITS (SPECIFY)	SPECIAL REPORTING REQUIREMENTS
oject Location:	4+h DAK	L .	91	٧	ك	4	6		が』 ナイ	 (1)	646 27		10	W./.	;•••		Oği əvuğu	5 or 827	15 or 82	(413.1)	(413.2)	docarb			8					Ares Mo	(2.05		マンを記げ				'	EN CE	V		2	P. COMIT
Sample	Lab #	NERS	nount		M	latr	İx		P	Me	the	od ve	d	Sam	pling	(0Z08/2	. S	esel (80)	Opposite (SO)	Greense	C. Greeke	oleum H	ا و	8		0408	22	1	8 Metals	ority Polt	2077421/2	CEAD.	1		HALT			YOF	日	SVFAX	DETEC	£ 5
ID	(Lab use) only	# CONTAINERS	Volume/Amount	WATER	SOIL	AIR	SUNDGE	OTHER	₹	Ş	핑	NONE.	OTHER	DATE	TIME	BTEX (602/8020)	BTEXTP	TPH as Diesel (8015 or 8270)	TPH as A	Total Off & Grease (413.1)	Total	Total Per	EPA 601/8010	EPA 602/	CDA AMERICAN DICHE CHA	EPA 624/6240	EPA 625/8270	CAM- 17 Metal	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	OPIGANIC LEAD	Avn Sais		MA			PRIORITY ONE SERVICE (24 hz)	EQPEDITED SERVICE (2-4 days)	VERBALS/FAX	SPECIAL	SPECIAL
1W 1		Z	×	X					区		X			5/20									X]-									_						\exists	\Box		
		2		Ц					\coprod		4	\dashv	_			_	<u> </u>	↓_	<u> </u>		_		4		- -	- -	╀	$oldsymbol{\perp}$	╄	_	-	╄-	X	_	لبا		_	\dashv	-		\vdash	
88			Ц		L			_	\coprod	_	\perp					 	+	┦	 			\dashv	, 	-	+	-	+	╀	╀-	_	┞	╁	├—	 	X		-	-	\dashv		\vdash	
প্ত		3	₩.		1			_	\coprod		\parallel		_			╀	-	┨-				\vdash	片	+	+	\bot	┼-	╀-	 	-	┝	┼-	 	├-	╁┵	\vdash	-	-	-	\dashv		
8		7	1		╀			_	<u>'</u>	_	Ė	-		 		┼-	╁	╀	╀		_		-		╁	+	╂╾	╬	╁	├	┝	╫	X	╁	╂┤	╟		\dashv	ᅥ	\dashv	\vdash	
		-	1	┝	-	H		\dashv	-	-			_			╁	+	╁	-			H	1	╅	+		+	+	╁	\vdash	-	\vdash	十	\vdash		$\vdash \uparrow$	\dashv	1	+	-		
		\dagger			 	-												I																								
1											_	Ц		<u> </u>		<u> </u>	_	╽	1_	_		Ц			- -	_	_	_	-	ļ	ļ	-	ļ	_	4!				\dashv	 	-	\vdash
		Ļ	_	<u> </u>	Ļ		Ш				_		_	ļ		-	+	╁-	+	ļ	_	Н	\vdash	-	╬	- -	╀	-	╂-	-		-	-	╀	34	1		┝┥	\vdash		\vdash	\vdash
		\bot		L	1_						<u> </u>			<u> </u>	<u> </u>					<u> </u>	<u> </u>		Ш					1			I.	ــــــــــــــــــــــــــــــــــــــ	L.,	<u>. </u>	<u> </u>	<u> </u>		لا	لــا	ئـــ	L	
Relinquished by: Date Time Received by: 15:49													H	em	ark	is:																										
Relinquished	by		-	Dat		Tim			F	lec	eiv	red	by	;																												
Relinquished	by	-	 (:	Dat . , ";	_	Tin ント								Labora		1 1	. ,	-A	€ .	٠	<u> </u>												2	5 6	e	Z	C	f	Z	,		



LABORATORIES, INC.

Northwest Region 4080 Pike Lane Concord, CA 94520 4415) 685-7852

(800) 544-3422 from inside California (800) 423-7143 from outside California

96/06/89 JP

Page 1 of 1

WORK ORD#: C905575

CLIENT: CHIP PROKOP

BROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520

PRDJECT#: 203-680-5016.05-8

LOCATION: 4TH STREET, DAKLAND

SAMPLED: 05/23/89

BY: G. MASON

RECEIVED: 05/23/89

ANALYZED: 5/30/89

BY: R. CONDIT

MATRIX: Water

UNITS: ug/L (ppb)

	i MDL	ISAMPLE #	0 1	1 02	I	1	
PARAMETER		I.D.	MW-3	1 MW-2	 	 	
Chloromethane	0.5		(0.5	⟨0.5			
Bromomethane	0.5		(0.5	(0.5			
Dichlorodifluoromethane	0.5		(0.5	(0.5			
Vinyl chloride	1		(1	(1			
Chloroethane	0.5		(0.5	(0.5			
Methylene chloride	0.5		(0.5	(0.5			
Trichlorofluoromethane	0.5		(0.5	(0.5			
1,1-Dichloroethene	0.2		1.6	(0.2			
1,1-Dichloroethane	0.5		9	(0.5			
trans-1,2-Dichloroethene	0.5		2.5	(0.5			
Chloroform	0.5		0.5	(0.5			
1,2-Dichloroethane	0.5		5.7	(0.5			
1,1,1-Trichloroethane	0.5		2.9	(0.5			
Carbon tetrachloride	0.5		(0.5	(0.5			
Bromodichloromethane	0.5		(0.5	(0.5			
1,2-Dichloropropane	0.5		0.82	(0.5			
trans-1,3-Dichloropropene	0.5		(0.5	(0.5			
Trichloroethene	0.5		7	(0.5			
Dibromochloromethane	0.5		(0.5	(0.5			
1,1,2-Trichloroethane	0.5		(0.5	(0.5			
cis-1,3-Dichloropropene	0.5		(0.5	(0.5			
2-Chloroethylvinyl ether	1		{1	(1			
Bromoform	0.5		(0.5	(0.5			
1,1,2,2-Tetrachloroethane	0.5		(0.5	(0.5			
Tetrachloroethene	0. 5		0.57	(0.5			
Chlorobenzene	0. 5	•	(0.5	(0.5			

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



Page 1 of 1 Continued

Morthwest Region

4080 Pike Lane

Concord, CA 94520

<u>(415)</u> 685-7852

(800) 544-3422 from inside California

1. (800) 423-7143 from outside California

WORK DRD#: C905575

CLIENT:

CHIP PROKOP

PROJECT#: 203-680-5016.05-8

LOCATION: 4TH STREET, DAKLAND

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER	 	MDL	ISAMPLE #	 	01 MW-3	i I	02 MW-2	! !	
1,3-Dichlorobenzene 1,2-Dichlorobenzene 1,4-Dichlorobenzene		0.5 0.5 0.5			(0.5 (0.5 (0.5	5	(Ø. 5 (Ø. 5 (Ø. 5	5	

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





ENVIRONMENTAL LABORATORIES, INC.

Morthwest Region

_4080 Pike Lane

*Concord, CA 94520

· (415) 685-7852

(800) 544-3422 from inside California

..... (800) 423-7143 from outside California

TEST RESULTS

06/02/89 JP

PAGE 1 OF 1

WORK DRD#: C905576

CLIENT:

CHIP PROKOP

GROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05-9

LOCATION: 4TH STREET

DAKLAND, CA

SAMPLED: 05/23/89

BY: G. MASON

RECEIVED: **6**5/23/89

BY: K. BIAVA

ANALYZED: 05/26/89

BY: C. MANUEL

MATRIX: WATER

UNITS: mg/L (ppm)

	1	MDL	ISAMPLE	# 1	01	1	0 2	1	ļ	ļ	1
PARAMETER	1	•	II.D.	1	MW3	I	WMS	1	!	1	1

Total Petroleum Hydrocarbons as Mineral Spirits

{1

(1

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

METHOD:

Modified EPA Method 5030/8015

Comma P. Paper

EMMA P. POPEK, Director

A.C.S.V.	A.E		F	
	U	11	VL.	
			ENTAL	

4080°C Pike Lone Concord, CA 94520 415-485-7852

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

•		
THE STATE OF SUBSECTIVE PROPERTY	ALLEN ALLAS WASAN PARENT	Ġ.
CHAIN-OF-CUSTODY RECORD	AND ANALYSIS KO	
— • • • • • • • • • • • • • • • • • • •		

ENVISORS TO THE	AFNTAL IES, INC.	415	-08	5-78	52			au.	U-42	J-/ I	43 (Outside	, CAU	<u>L</u> _														- L	٠	افلا	إبليا				المنا	-	-	
roject Manager:	HIP F	>,			·	F	hor	19 #:									A	NA	LY	S 19	R	EQI	JE:	3 T				: : []:			-	HĖ	Å.		SF	ND.	HA LIN	76
Address: とりれてご	ord	,		,			AX			•			_		9015)					113										Sprits					اند		PECFT	MENTS.
Project Number: イングラム	05016	> D'	5.	4.)	5/	450	77 y		يار					2/8020/	6	B			2			ľ			ļ	1			WES				1			2 E	GURE
roject Location:	UTH OAKLAN	d				څر	Sam 31	pler	Skgr 7	ratu -//-	re:	5			BTEXTPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	15 or 827	(413.1)	413.2) Jacob Jacob			100 ag				t Starre Mar	230 25		#S MINKER					EVOCUTED SERVICE (24 deut)	VERBALSIFAX	ALI NOT	SPECIAL PRIORTING REGUIREMENTS
Sample	Lab#	1 1		N	Aatı	rlx		Pr	leti ese	rve	d	Sam	pling	(0208/2)	H S Ger	iesel (90	og) lenge	& Greess	& Groess	ABO10	808	9090	AGGG PC	/8240	A8270	1	8 Net	207221	CLEAD	Hat		Ò				SFAX	LOETEC	Ć S
ID	(Lab see)	* CONTAINERS	WATER	SOIL	AIR	SLUDGE	OTHER	로 :	<u> </u>	NON	OTHER	DATE	TIME	BTEX (602/8020)	втехтр	TPH as C	t 🛎 Ḥd⊥	Total		FPA 601	EPA 602	EPA 606/8080	EPA 608	EPA 624	EPA 625/8270	CAM-1	EPTOX - 8 M	I FAD72207421739 21	OPCAN	8015 TPH		HOLD				VERBA	SPECIA	SPECIA
Trip 13			14	$\frac{1}{\sqrt{1-x^2}}$	-		ㅓ	Χ	X	+		5/27	,															I				X		I				
NW 313		1																			\perp	Ш				_	_	┸	$oldsymbol{\perp}$	_	_	区	_	1	4	_	<u> </u>	
MW 313 MW 3		2											<u> </u>	_	_	$oxed{oxed}$			_		_	1		_	_	4	+	+	-	X	_		-	+	+	+	-	├ ┦
		감		<u>\</u>	_				$\perp \downarrow \downarrow$	<u> </u>	ļ!		<u> </u>	 	 _	-	Ц		4	_2	4				_	_	-	+	+	-	-	IJ	-	╀	+	-	┼	\vdash
MWZIZ			$\!$	\parallel	\perp			4	$\perp \downarrow \downarrow$	\bot		 	ļ	\bot	╁		\square		-	_	+	\vdash		-		+	+	╀	+	L	-	X		╀	+-	+	╀	
72.		12	$\!$	1	_	_		1		╄-	<u> </u>		 	_	 	├-		1	4	_	- -	H		Н		-		┿	╁	X				╁	╬	╁	+	╂╌┨
2_		13	4	1	-	ļ!			- -	-		<u> </u>	ļ <u> </u>	-	-	╀	H		-	- >	+	-		H		-		╫	╁	╁	-	╂╼╂		╁	+	┨-	╂╴	
			-	-	_	-	<u> </u>			╀	╂	<u> </u>	 	╁	╁┈	-	\vdash	\dashv	\dashv	+	╁	╁		Н	\vdash	┪	+	+	╁	╁╴	╂╌	1		╁	+	十	╁	
			+		╁	+-	-	-	+	╬	-	-		╁	╁╾	╁	Н	┝╌┪	-	+	+	+	اـــا	\vdash		+	+	╁	╁	1	 		_	\dagger	+	十	十	
		+	+		-	+	-	H		╁	╁╌		-	-	+	+	┟┤		\dashv	+	╁	-				\dashv	十	十	T	-				╁	1	╅	T	
Relinquished	by:		Da	l ite	l_ Tir 	ne	l	F	ecei	_l_ ived	by	:		_l_	J	1	Remarks:									1												
Relinquished	by		Da	ite	Tir	ne		F	ece	ive	d by																	-		E. C.	-							
Relinquished	by			ate			70	7	lece	ive	d by	Labor	ratory:	2 14.	د م	ر_،)										· · · · ·				ســـر. س	ندر	-					



Western Region 4000-C Pike In., Concord, CA 94520 (415) 685-7852 in CA: (800) 544-3422 Outside CA: (800) 423-7143 **65/81/89 JP**

PAGE 1 OF 2

WORK ORD4:0904503

CLIENT: STEVE FISCHBEIN

SROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05-1

LOCATION: DAKLAND, CA

SAMPLED: 04/20/89 BY: R. ROBITAILLE

RECEIVED: 04/21/89 BY: K. BIAVA ANALYZED: 04/26/89 BY: R. CONDIT

MATRIX: WATER

UNITS: ug/L (ppb)

TEST RESULTS

COMPOUND	!	MDL	1LAB #	1	01A MW-4	1	02A MW5RB	1	03A MW-5	1	0 4A MW-6	1
Bromodichloromethane		0	.5	(0)	.5	⟨∅.		(0.		⟨Ø.		
Bromoform		0	.5		.5	⟨0.		⟨∅.		⟨∅.		
Bromomethane		0	. 5		.5	⟨Ø.			. 5	⟨∅,		
Carbon tetrachloride			.5		.5	(0.			.5	⟨∅.		
Chlorobenzene			.5		.5	(0.			.5	(0.		
Chloroethane			.5		.5		. 5		.5	⟨Ø.		
2-Chloroethylvinyl ether		_	.0		.0		. 0		. 0	(1.		
Chloroform		0	.5		.5		. 5		. 5	(0.		
Chloromethane		0	.5		.5		. 5		.5	(0		
Dibromochloromethane		0	.5		. 5	(0.			.5	⟨Ø		
1,2-Dichlorobenzene		0	.5		. 5		. 5		.5		.5	
1,3-Dichlorobenzene		0	.5		. 5		.5		. 5		.5	
1,4-Dichlorobenzene		0	. 5		. 5		.5		. 5		.5	
Dichlorodifluoromethane		0	.5		.5		. 5		. 5		.5	
1,1-Dichloroethane		6	.5		.5		.5		. 5		.5	
1.2-Dichloroethane		0	. 5		78		.5		.5		.5	
1,1-Dichloroethene		2	. 2	₹0	3.2		.2		.2		.2	
trans-1,2-Dichloroethene		6	.5	48)		.5		. 5		.5	
1,2-Dichloropropane		6	.5	(€	.5		.5		.5		.5	
cis-1,3-Dichloropropene		6	. 5	(0	5.5		.5		.5		.5	
trans-1,3-Dichloropropene		9	.5	⟨€	5.5	₹0	. 5		5.5		.5	
Methylene chloride		Q	.5	⟨€	.5	(0	.5		5.5		. 5	
1, 1, 2, 2-Tetrachloroethane		0	5.5	(€	5.5	⟨€	.5		.5		5	
Tetrachloroethene		e	.5	{€	.5	₹0	. 5		5.5		.5	
1, 1, 1-Trichloroethane		Q	.5	⟨€	5.5		. 5		0.5		5.5	
1,1,2-Trichloroethane		Q	5.5	₹8	5.5		.5		5		. 5	
Trichloroethene		Q	5.5	41	10		, 5		2.5		5.3	
Trichlorofluoromethane		e	.5	(6	9.5		.5		92		. 7	
Vinyl Chloride			.0	(1	.0	(1	.0	₹1	1.0	{ } 	. 0	

MDL = Method Detection Limit.

METHOD:

EPA Method 8010



Western Region 4080-C Pike Ln., Concord, CA 94520 [415] 685-7852 In CA: (800) 544-3422 Outside CA: (800) 423-7143 PAGE 2 DF 2

WORK ORD#:C904503

CLIENT: STEVE FISCHBEIN
PROJECT#: 203-680-5016.05-1

LOCATION: OAKLAND, CA

TEST RESULTS

MATRIX: WATER UNITS: ug/L (ppb)

COMPOUND] 	MDL	ILAB #	1	0 5A MW-3	1	9 6A MW-1	i i	07A MW-2	i i	68A MW-8
Bromodichloromethane		8.	.5) . 5		ð. <u>5</u>		.5		.5
Bromoform			. 5		5.5		0.5		.5		.5
Bromomethane		0	.5		3.5		7. 5		5.5		.5
Carbon tetrachloride			.5		5. 5		0.5		5.5		.5
Chlorobenzene		0	.5		89		3. 5		5.5		.3
Chloroethane		0	.5		ð . 5		7. 5		5.5		. 5
2-Chloroethylvinyl ether		1	. 0		1.0		1.0		1.0		.0
Chloroform		0	.5		3.3		ð.5		.0		.5
Chloromethane		0	.5	(1	ð. 5		0.5		3. 5		.5
Dibromochloromethane		0	.5		ð. 5		0. 5		0. 5		.5
1,2-Dichlorobenzene		0	.5		0.5		0.5		7. 5		.5
1,3-Dichlorobenzene		0	.5	(1	7.5		0.5		0. 5		.5
1,4-Dichlorobenzene		0	. 5	< <	0.5		0. 5		ð. 5		.5
Dichlorodifluoromethane		Ø	.5	₹	0.5		0.5		7. 5		5.5
1,1-Dichloroethane		0	. 5		8.6		0.5		0.5		5.5
1,2-Dichloroethane			.5	!	5.0		0.5		0. 5		. 8
1,1-Dichloroethene			. 2		1.6	<	0. 2		0. 2		3.2
trans-1, 2-Dichloroethene			.5		2.5	(0.5		0. 5		9.96
1,2-Dichloropropane			.5		0. 80	₹	0.5		0. 5		3. 5
cis-1,3-Dichloropropene			.5	(0.5	<	0.5		0.5		ð. 5
			.5	(0.5	(0.5	<	0. 5		ð. 5
trans-1,3-Dichloropropene			. 5	(0.5	<	0. 5	<	0.5		a. 5
Methylene chloride			.5		0.5	(0.5	<	0. 5		ð . 5
1, 1, 2, 2-Tetrachloroethane			3.5		0.5		6.5 5	(0.5		7. 5
Tetrachloroethene).5		2.4		0.5	(0. 5		9. 5
1,1,1-Trichloroethane).5		7.7	(0.5		0.5		7.5
1, 1, 2-Trichloroethane). 5		0.5	(0.5	•	0.5		26_
Trichloroethene).5).5		0.5		0.5	(0.5		0.5
Trichlorofluoromethane Vinyl Chloride			1.0		1.0		1.0	•	1.0		1.0

MDL = Method Detection Limit.

METHOD:

EPA Method 8010

Comma P. Poper-

EMMA P. POPEK, Director



Western Region 4680-C Pike Ln., Concord, CA 94520 (415) 685-7852 In CA: (800) 544-3422

Outside CA: (800) 423-7143

85/83/89 KF

PAGE 1 OF 2

WORK ORD#:C984504

STEVE FISCHBEIN -CLIENT:

GROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.05-2

LOCATION: OAKLAND, CA

SAMPLED: 04/20/89

BY: R. ROBITAILLE

RECEIVED: 04/21/89

BY: K. BIAVA

ANALYZED: 04/27/89

BY: C. MANUEL

MATRIX:

WATER

UNITS: mg/L (ppm)

TEST RESULTS

PARAMETER	-	MDL	ISAMPLE			0 2A MW5RB	, ,,,,	1	0 4A M W3	 	0 5A M W1	1
				 								
Total Detroleum		1			(1	{1	(1		(1		(1	

Total Petroleum Hydrocarbons

as Mineral Spirits

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

METHOD:

Modified EPA Method 5030/8015



PAGE 2 OF 2

Western Region

4080-C Pike Ln., Concord, CA 94520

(415) 685-7852

in CA: (800) 544-3422 Outside CA: (800) 423-7143 WORK DRD#: C904504

CLIENT:

STEVE FISCHBEIN

PROJECT#: 203-680-5016.05-2

LOCATION: OAKLAND, CA

MATRIX:

WATER

TEST RESULTS

UNITS:

mg/L (ppm)

	ī	MDL	ISAMPLE	#1	0 6A	1	9 7A	ı	1	1	1
PARAMETER	1		II.D.	ŀ	WMS	ſ	MW8	l 		 	

Total Petroleum Hydrocarbons as Mineral Spirits (1

(1

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

METHOD:

Modified EPA Method 5030/8015

EMMA P. POPEK, Director



Western Region

4080-C Pike Ln., Concord, CA 94520
(415) 685-7852
In CA: (800) 544-3422
Outside CA: (800) 423-7143

PAGE 1 OF 2

MORK ORD#:C905073

CLIENT: STEVE FISCHBEIN

BROUNDHATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94528

PROJECT#: 203-680-5016.05-2 -

LOCATION: DAKLAND, CA

SAMPLED: 04/20/89

BY: R. ROBITAILLE

RECEIVED: 04/21/89

ANALYZED: 04/27/89 BY:

BY: C. MANUEL

MATRIX:

WATER

UNITS:

ug/L (ppb)

		•											
PARAMETER	MDL	ISAMPLE #	1	91 MW4	 	02 MW5	!	03 MW6	 	04 MW3	I	0 5 MW1	1
Benzene	0.5			⟨0.5		⟨∅.5		⟨0.5	i	(0.5	5	(0.5	;
Toluene	0. 5			(0.5		(0.5	ı	(0.5	i	(0.5	5	(0.5	i
Ethylbenzene	0.5			(0.5		(0.5	;	(0.5	ì	(0.5	5	(0.5	į
Xylenes	0.5			(0.5	*	⟨∅.5	i	(0.5	į	(0.5	5	(0.5	i
Total BTEX	0.5			(0.5		(0.5		(0.5	5	(0.5	5	(0.5	;
Misc. Hydrocarbons (C4-C12)	1			(1		(1		(1		€:	i	(1	ı
Total Petroleum Hydrocarbons as Gasoline	1			(1		(1		(1		€:	1	⟨1	

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



PAGE 2 OF 2

Western Region 4080-C Pike In., Concord, CA 94520 [415] 685-7852 In CA: (800) 544-3422

In CA: (800) 544-3422 Outside CA: (800) 423-7143 WORK DRD#: C905073

CLIENT:

STEVE FISCHBEIN

PROJECT#:

203-680-5016.05-2

LOCATION:

DAKLAND, CA

MATRIX:

WATER

UNITS:

ug/L (ppb)

PARAMETER	I MDL	ISAMPLE II.D.	# I I	MM5 96	1	97 MW8	1	 	
Benzene	0. 5			(0.5		(0. 5			
Toluene	0. 5			(0.5		(0.5			
Ethylbenzene	0.5			(0.5		(0.5			
Xylenes	0. 5			(0.5		(0.5			
Total BTEX	0. 5			(0.5		(0.5	i		
Misc. Hydrocarbons (C4-C12)	1			(1		(1			
Total Petroleum Hydrocarbons as Gasoline	1			(1		(1			

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

METHOD: Modified EPA 5030/8020/8015

EMMA P. POPEK, Laboratory Director

ZGT	PL.	4(C 4	080 cond 15-6	C P	ike 1, C/ 7852	Lan A 94 2	ie 4520	, -	; 80 80	00-9 00-4	44-3 23-7	1422 143	2 (In	n CA) Outsid	e CA)	1	2		All	4)F-	CL	JS.	то	DY	R	EC C	OF	7	8	19	1	الإ	Z		3		E	ST		
Project Manager:	IS, INC.					,			10 #	:						U		4)	/SI	S 1	RE() []	FS	_	_	•	s:t	· Sp		Ć	T	HE	Ħ		3P1	ECI	IAL .IN(ار
S.A. Fis	chbein								7	כנ	<u>'7</u>					_	_```	<u>}_</u>		1117	<u> </u>	, J.	- r				· ——	_				-		1			╀	Ar			4
Address:							F	AX	#:								soline (602/8020/8015) +1/1					Ì					-					W 2		Spiri	-		1			اج	23
GTI																ļ	015					-											3	뙷						ğ	ORTING REQUIREMENTS
Project Number:				,					ect N					1			8					418				ļ						Per	27.4	QS Miner	İ	1	Ē	F		S	
203 680	5016 C	25		-1										KI.	een	┨	88	8	5			Š	-							100		57	3	Š			N W	7		5	Š
Project Location:							9	Sam	pler مہ	r Si	gnat	ure	:				9	- 68	28.	13.1)	13.2)	2	- [5				2	9.2)	Ą					18	w		3	9
Oaklan	d, CA.		 1					7	2	<u>ئى</u>			4					515	9015	3	\$ (4	圣	小	ļ		3			1	를	1/23	M	•	to.			189	1		틼	DATE
	·		Sunt		M	atr	lx '				tho erv		,	San	npling	8020	88	180	Feet (8	e U	FIDE	5	8	8		3 §		1	A P	27.00	EA :	B	۲	, .		O	SOB	SFA	팋	
Sample ID	Lab # (Lab use) only	# CONTAINERS	Volume/Amount	WATER	SOIL	Œ	SLUDGE	OTHER			ii c	Τ,	OI HEH	DATE	TIME	BTEX (602/8020)	BTEX/TPH as Ga	TPH as Diesel (8015 or 8270)	TPH as Jettuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	EPA 608/8080	EPA 608/8080-PCBs Only	EPA 624/0240	CAM - 17 Men	EPTOX - 8 Ma	EPA - Priority Pollutant Metal	LEAD(7420/7421/239.2)	OPICANIC LEAD	-100	2015	FISS		PROBLEY ONE SERVICE (24 hr)	EXPEDITED SERVICE (2-4 days)	VERBALS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	SPECIAL
	\ only /	*	۶	*	8	AIR	S	0	로	Î	의	ž	{-		 	╇	100	1	-	-	-		J	0	_		+	+	+-	╀	╀	Ë	-	\vdash	X	-	┿	╁	┢	╁╌┥	
Site Blank		1	40	X					X		ΧĻ	_ _	4	<u>4-x</u>			-	╀	-	├-	ļ			\dashv	\dashv	\dashv	+	-	╁	╁	-	 -	-		X		+	╁┈	-	H	
MW4RB		1	Ц			_			Ш		1	-	_		3:3		╁-	-	╀	┼-		-		\vdash		\dashv	+		╫	╁	+	2	V	7			-	十	-	H	_
MW4	OIA	2	Ш	Ц		L			Ш			4	_	_	3:2:	_	+	-	╀	╁-	├-	Н	H	-	\dashv	-	+	╬	+-	R	1	<i>1</i> 477	15	0	\vdash	\vdash	- -	\dagger	╁╌	-	_
MW 5RB	OZA	1		П					Ш		Ш	_	_	-	3.2		- -	+	-	┼	 	-	Н	\vdash	\dashv	+	+	+	+	+`	+	N. C.	f	X	┟╌┦	┝╼┼	+	╅╴	╁	╁╌	_
MW5	03A	J		Ш					Ш		Щ		_		3:30		-		4	-	┼-	-		Н			+		+-	╀	 	TV	┞		Y	┝╌┼	╬	╁	-	十	-
MW GRB		1						L.,	Ш	_		\perp			3:3	4_	+	4	-	+	╀	<u> </u>	-		4	_		+	+	╁	+-	6	╢			-	╅	╁	-	┿	-
mw6	OYA	3	\prod							_				<u> </u>	3:3	_	_	_	╀			╁-	_	\square	-		+			+	╀	X	X	X	7	\vdash	+	┿	╫	十	
MW 3RB		1				_		L.		<u> </u>	Ш	\bot			3:3		_ _	ॏ-	_	\downarrow	 	╀-	├-	$\left - \right $		-	4	+	+-	+-	+-		٦	-	쑤	$\left \cdot \right $	+	\perp	-	十	
mw3	OSA	9							\coprod		Ш	_		\sqcup	3.4		_	_ _	1	- -	-	 _	Ļ	\vdash		\vdash	-	+	+	+	_	J#;	平	╇	b	1-1	Ą		+-	╫	┢
MWIRB		1	\prod						\prod		Ш			Ц	3:4	3		_	_	4_	\perp	4	A	A	•	A	_	H	4	£		48	٦	لفظ	尸	Ш	-	*	+	十	┝
MW I	06A	-	7						1						7:4	6	\perp					14		<u>M</u>	4	4	1	<u> </u>	Ψ	7	-		<u> </u>	12	L		 _	مركي	7	Т	<u></u>
Relinquished				Dat	e	Tir	me		١	Re	ceiv	edi	bу	•								M	Rer	nai G	kš OC	_	ø	av H	al	LY L	5; EU	3-2	S	0	201	at	C	-	ر کے	<u>ک</u>	_
Relinquished	by			Dat	.e	Tiı	me	.		Re	ceiv	ed	by	•										4	20	M	X.	<u>)</u> (a	r	Þ	عرا	<u> </u>	اسر سد		انم د	AC	he.	di	79	, .a.1
Relinquished	by	-		Dal			те 2				ceiv		Λ.	u, l	oratory:	M	<u> </u>	ر س					ل کړ		7) 	er		ار اعاء اعاء	36	اند			~	£	M	ex- ine	ral	S	α: <u>ρ:</u> γ	• 9 • †	<u>5</u>



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

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

CHAIN-OF-CUSTODY RECORD AND ANALYSIS RECEST

roject Manager:								Phor	ne #	l;			<u>` </u>			_						ve:		DE:	 QUI		+				· .	1		in t	HE	id.	\top	3	PE	CIA	IL.
	schbein							c	χŀ	, 2	26	77								\M/	4L	10	10 I	'A F	-,-		'	,	T	_		٠		~ '	, .c.	, ,		HA	NE		NG
ddress:	3001170110						١	FAX															Ì											77						5	9
GTI	SFB																Q.					ے												Š				1	1.	<u> </u>	
roject Number:			•					Proj									88					418								֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֓֓֡			B	I_ '	'I I		[:	ξ.	È	9	3 12
203 680	5016 05	_	<u> </u>					<u>5a</u>	<u>مل</u>	ta	Y	KI	en				88	ē	Į ĝ			Sign		-		1		1		ş			combined	as Mineral	;]				7	15	
roject Location:								Sam	nple سر	r Si	gna	:lure	,				8	x 82	82	13.1)	13.2)	Sarb			1	5				ıt Ke	12		Ş	E				2	<u>.</u>	=) <u>F</u>
Oaklon	d CA	_						Z	a	~6		Dy.	کج			_	isost	015	015	4	4	ξ		Ì	a	3	1]_	2	5	1/239	_			,			8	ž.	ĮĘ	
Sample	Lab#	NERS	nount		ř	/ lat	rlx			Me res		od ved	Sa	mp	ling	2/8020)	H 88 G	iesel (8	ethod (8	& Great	& Grea	roleum	8010	8			8270	7 Ketak	8 Mets	ionty P	207742	CLEA	Ö	TPHA				5			HEP C
ID	(Lab use) only	* CONTAINERS	Volume/Amount	WATED		¥	SLUDGE	отнея	Ę	HNOS	CE CE	NONE	DATE		TIME	BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015)	TPH as Diesel (8015 or 8270)	TPH as Jettuel (8015 or 8270)	Total Oil & Grease (413.1)	Total Oil & Grease (413.2)	Total Petroleum Hydrocarbons (418.1)	EPA 601/8010	EPA 602/8020	COA CORRODO DO DE	Cry 6046340	EPA 625/8270	CAM - 17 Metals	EPTOX - 8 Metals	EPA - Priority Pollutant Metals	LEAD(7420/7421/239.2)	ORGANIC LEAD	- 109	5/00	Hold Told			PRIOFITY ONE SERVICE (24 IN)	EXPENSED SERVICE (24 days)	COECIAI OCTECTION I MATS (SPECIETY	SPECIAL DETECTION CHAINS (S. CO. 1)
			4				-		X		Y	_	42		3.48		\vdash	十	T			H		┪		┪		T	T			Γ			X					floor	
MW 2RO	N-70	1	_	4		╁	╁		H		4		170	-	3.52		┪	T	†					一				1					X	X	1						
MW 2	レナロ	1	#	+	-	+-	╁	-	╫╴			+	1-	-	3:54		╁	╁┈		 				_	7										X						
MW8RB	000	1	#	╢	┿	+	╁	-	╫╴	-	\vdash		╁┤		3:55		+	†	╁	 	 		П	寸		1	1	1		Γ	Τ		X	X	T		П			\perp	
W M &	A8G	9	+		4	+-	╁	-	 		 •	-	 			_	†-	十	\dagger	1	 			~		十		1	T	T		1		Γ			П				
		-	+	+	-	┪-	+	┼	┢	-	-		+	-		-	╁	十	+	╀┈	\dagger	1			_	┪	\top	†	丅			╽			T						
			+-	+	+		+	-	╁	-	-	┞╌┞╸	-			_	+	十	+-	T	†	1			1	1		†	\top		1	<u> </u>			T	\Box	П		T		
		-	+	+		+	╁	-	╁	├	├	┼┼				├	╁╴	+	+-	┼┈	十	╁╌	-			_		†	十	 	 	1		1	T	\prod				T	
		+	4.	\dashv		-	+	+	┼	-	├-	┤┤				-	╂	╁	+	+	+	╁	\vdash		十	+	+	1	-		 	T	1	T	1		\sqcap	_		T	
			\perp	4	_			 	╀	╁		\vdash				╁╴	╁╴	╫	-	╁	十	十	Н		十	\dashv	\dagger	+	+	┪╴	_	1	5	1	1] =	1			
		-	+	-	+	+		+-	╁	╁╌	╁	╂╌╂	-			╁	+	╅	╁	╁	╂	+-	\vdash	\vdash	7	7	V	1	C	杖	1	忊	Ľ	Ţ	C	T.	7	1		_	
		-		_			L	1_	┨—	<u></u>	<u>.</u>	<u> </u>	l		İ	<u>L</u> .			ــــــــــــــــــــــــــــــــــــــ			╁	l—. Ren	2	l		/	^ر		0		<u> </u>		-		, , ,	L				
Relinquished	l by:			Da	ate	Ti 1	me			Red	ceiv	ved t	y:										ווטר	ııaı		0	l i	a.	no	رار مرا	y 4	; ; ; W2	· •	se a	pa n	sa	te as	T	STE	ĒΧ	-T1 W/M
Relinquished	i by	+	-	Da	ate	Ti 1	me			Re	cei	ved l	y:				_								4	10	N/A	bi	42	×	vo	W.	^	n	W	احد	as di	Ø	5 P	ì	its
Relinquished	d by	 	<u> </u>	D 2	ate		lme	7)	Re	cel	vedi	y Lat		ilory:		0								V	N	İn	Ø	a	N	∕ •§	P	^ C4	⊹ ₩	\$						



(415) 685-7852

4080-C Pike Lane, Concord, CA 94520

(1900) 544-3422 from inside California

(800) 423-7143 from outside California

.94/96/89 Jp

PAGE 1 OF 2

WORK DRD4:C903538

CLIENT:

STEVE FISCHBEIN

GROUNDHATER TECHNOLOGY, INC.

4880-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016-6

LOCATION: 4TH STREET

DAKLAND, CA

SAMPLED: 03/22/89

BY: R. ROBITAILLE

RECEIVED: 03/23/89

ANALYZED: 84/03/89

BY: R. CONDIT

MATRIX:

WATER

UNITS:

ug/L (ppb)

PARAMETER I	MDL	ISAMPLE # 	01A I MH4 I	02A I MW5 I	03A NH6	94A 1 MW3 I	0 5A 1 MW1 1
Benzene	6. 5		(0.5	(0.5	(0.5	(0.5	(0.5
Toluene	0. 5		(0. 5	(0.5	(0. 5	(0.5	(0. 5
Ethylbenzene	0.5		(0. 5	(0.5	(0.5	(0. 5	(0.5
Xylenes	0. 5		(0. 5	(0.5	(0.5	(0.5	⟨0.5
Total BTEX	0.5		(0.5	(0.5	(0.5	(0.5	(0.5
Misc. Hydrocarbons (C4-C12)	1		(1	(1	(1	(1	(1
Total Petroleum Hydrocarbons as Gasoline	1		(1	(1	(1	(1	(1

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



Western Region #080-C Pike Lane, Concord, CA 94520 (415) 685-7852 (800) 544-3422 from Inside California (800) 423-7143 from outside California

PAGE 2 OF 2

WORK ORD#: C903538

CLIENT:

STEVE FISCHBEIN

PROJECT#: 203-680-5016-6

LOCATION: 4TH STREET

MATRIX:

UNITS:

WATER ug/L (ppb)

PARAMETER	I MDL	ISAMPLE #	1	86 A MH 2	1	07A NH8	1	J I	l J	i
Benzene	0.5			(0. 5		⟨∅, 5	;			
Toluene	0.5			(0.5		(0.5	i			
Ethylbenzene	0. 5			(0.5		(0.5	5			
Xylenes	8. 5			(0. 5		(0.5	i			
Total BTEX	0.5			(0.5	i	⟨0.5	5			
Misc. Hydrocarbons (C4-C12)	1			(1		(1				
Total Petroleum Hydrocarbons as Gasoline	1			(1		(1				

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



(415) 685-7852

4080-C Pike Lane, Concord, CA 94520

(900) 544-3422 from inside California (800) 423-7143 from outside California

84/85/89 Jp

PAGE 1 OF 2

WORK ORD#:C963538

CLIENT:

STEVE FISCHBEIN

SROUNDWATER TECHNOLOGY, INC.

-4880-D PIKE LANE ----

CONCORD, CA 94529

PROJECT#: 203-680-5016-6

LOCATION: 4TH STREET

DAKLAND, CA

SAMPLED: 03/22/89

BY: R. ROBITAILLE

RECEIVED: 03/23/89

ANALYZED: 04/03/89

BY: R. CONDIT

MATRIX:

WATER

UNITS:

mg/L ppm

	ł	MDL	ISAMPLE	#	1	0 1A	1	8 2A	- 1	0 3A	[840	i	9 5A	1
PARAMETER	ı		11.D.		1	14 14	1	MW5	ı	HW 6RB	1	HW3	ł	MW1	1
										~					
Total Petroleum						•	,		•	/1				£.	1
Hydrocarbons as		1				(1	Ĺ	<:	1	11		``	•	•	•
Mineral Spirits															

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



4080-C Pike Lane, Concord, CA 94520

(415) 685-7852

(800) 544-3422 from inside California

(800) 423-7143 from outside California

PAGE 2 DF 2

WORK ORD#: C903538

CLIENT:

STEVE FISCHBEIN

PROJECT#: 203-680-5016-6

LOCATION:

4TH STREET

MATRIX:

WATER

UNITS:

mg/L ppm

	ī	MDL	ISAMPLE #	1	9 68	1	87 A	ı	ı	1	1
PARAMETER	t			i				ł	1	ı	1

Total Petroleum Hydrocarbons as Mineral Spirits

1

(1

{1

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

METHOD: Modified EPA 5030/8020/8015

EMMA P. POPEK, Director

P. Popen



(415) 685-7852

84/65/89 Jp

PAGE 1 DF 2

WORK ORD#: 0903532

CLIENT:

STEVE FISCHBEIN

BROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016-4

LOCATION: 4TH STREET

DAKLAND, CA

SAMPLED: 03/22/89 BY: R. ROBITAILLE

RECEIVED: 03/23/89 BY: E. LARSEN ANALYZED: 03/26/89 BY: C. MANUEL

MATRIX: WATER

TEST RESULTS

4080-C Pike Lane, Concord, CA 94520

(800) 544-3422 from Inside California

(800) 423-7143 from outside California

UNITS: ug/L (ppb)

	ſ	MDL	ILAB #	1	0 1A	1	8 2A	1	03A	1	8 4A	1
COMPOUND	l 		II.D.#		MW4	 	MW5	 	MW6RB	 	MW6	ا
Bromodichloromethane			.5		5.5		. 5		ð. 5		.5	
Bromoform			.5		0. 5		.5		0. 5		.5	
Bromomethane			.5		5 .5		. 5		9.5		5.5	
Carbon tetrachloride			. 5		3.5		. 5		0.5). 5	
Chlorobenzene			. 5		a. 5		.5		0. 5		5.5	
Chloroethane		-	.5		7. 5		5.5		0. 5		.5	
2-Chloroethylvinyl ether			. 0		1.0		.0		1.0		.0	
Chloroform			.5		ð. 5		5		0.5		5.5	
Chloromethane			.5		ð . 5		. 5		0.5		5.5	
Dibromochloromethane			.5		3. 5). 5 -		0.5		3.5	
1,2-Dichlorobenzene		0.	.5		ð. 5		.5		0. 5		2.5	
1,3-Dichlorobenzene		0	.5		0. 5		5.5		0.5		3. 5	
1,4-Dichlorobenzene		0	.5		ð.5		. 5		0. 5		3. 5	
Dichlorodifluoromethane		0	.5		2. 5). 5		0.5		0. 5	
1,1-Dichloroethane		8	.5	(1	0. 5		5.5		9. 5		3. 5	
1,2-Dichloroethane		0	.5		0. 81		5.5		0.5		3. 5	
1,1-Dichloroethene		0	.2		ð . 5		.2		0.2		a. 2	
trans-1,2-Dichloroethene		0	. 5	3	3		3.5		0.5		3. 5	
1,2-Dichloropropane		9	.5		0.5		5.5		0.5		3.5	
cis-1,3-Dichloropropene		0	.5	(0.5		3. 5		0. 5		0. 5	
trans-1,3-Dichloropropene		0	.5	(0.5		5. 5		0. 5		ð. 5	
Methylene chloride		0	.5	<	0.5		ð. 5		0.5		0.5	
1,1,2,2-Tetrachloroethane		0	. 5	- ⟨	0.5		3. 5		0.5		0.5	
Tetrachloroethene		9	. 5	<	0.5		7.5		0.5		8.5	
1,1,1-Trichloroethane		0	.5	(0.5		ð. 5		0.5		0.5	
1,1,2-Trichloroethane		0	. 5	< <	0. 5		2. 5		Ø.5		0.5	
Trichloroethene		0	. 5	4	40	•	3. 1		0. 5		2.6	
Trichlorofluoromethane		0	.5	<	0. 5		1.1		(0.5		3.7	
Vinyl Chloride		1	.0		1.0	·	1.0		(1.0		1.0	 .

MDL = Method Detection Limit.

METHOD:

EPA Method 8010



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

TEST RESULTS

PAGE 2 OF 2

WORK ORD#: 0903532

CLIENT: STEVE FISCHBEIN PROJECT#: 203-680-5016-4

LOCATION: 4TH STREET

DAKLAND, CA

MATRIX:

WATER

UNITS:

up/L (ppb)

COMPOUND	I I	MDL	ILAB #	 	05A MH3	1	0 6A M W1	i i	07A MW2	1	88A MW8	
Browodichloromethane		8.	. 5	⟨∅,	 . 5	(0.	 . 5	(0.	 5	(0)	.5	_
Bromoform			.5	⟨Ø.	. 5	(0	. 5	(0.	. 5	(8	. 5	
Bromomethane		8.	.5	⟨∅.	. 5	⟨∅,	.5	⟨∅.	. 5	⟨Ø	. 5	
Carbon tetrachloride		0.	. 5	(0	. 5	(0	. 5	⟨∅.	. 5	(0	. 5	
Chlorobenzene		0.	.5	0	. 82	(8	. 5	(0.	. 5	1	. 1	
Chloroethane			.5	(0	. 5	⟨₽	. 5	⟨₽,	. 5	(8)	.5	
2-Chloroethylvinyl ether		1.	. 0	{1 .	. 0	₹1	. 0	(1.	. 0	₹1	.0	
Chloroform		0	.5	(9	.5	(8	.5	1.	. 3	⟨∅	.5	
Chloromethane		0.	.5	(0)	. 5	(0	. 5	⟨Ø.	. 5	(8	.5	
Dibromochloromethane			. 5	(8	.5	(0	.5	⟨∅⟩	. 5		. 5	
1,2-Dichlorobenzene		0.	.5	(0	.5	(0	.5	⟨Ø.	. 5	⟨Ø	.5	
1.3-Dichlorobenzene			.5	(0	.5	(0	.5	(0	. 5	⟨∅	.5	
1.4-Dichlorobenzene		8.	.5	(0	.5	(0	.5	⟨Ø	. 5		. 5	
Dichlorodifluoromethane			.5	⟨∅	.5	(0	.5	· (Ø	.5	€0	. 5	
1,1-Dichloroethane			.5	7	. 8	(0	.5	⟨Ø	. 5	⟨0	. 5	
1,2-Dichloroethane			.5	5	. 7	(0	. 5	⟨Ø	.5	6	. 4	
1.1-Dichloroethene			.2	1	.2	(0	.2	(0	.2	(0	. 2	
trans-1,2-Dichloroethene			.5	2	.8	(0	. 5	(0	.5		. 7	
1,2-Dichloropropane			.5	9	. 82	(0	.5	⟨Ø	.5	(0	1.5	
cis-1,3-Dichloropropene			.5	⟨0	.5	(8	. 5		.5		.5	
trans-1,3-Dichloropropene			.5		. 5	(0	. 5		.5		1.5	
Methylene chloride			. 5	⟨€	. 5	⟨€	.5	₹0	. 5		5.5	
1,1,2,2-Tetrachloroethane			.5	(0	.5	(0	. 5		.5		.5	
Tetrachloroethene		_	.5		. 5	⟨€	. 5	(8	. 5		. 5	
1,1,1-Trichloroethane			.5	a	. 3	(8	.5	(0	.5		. 5	
1,1,2-Trichloroethane			.5		5.5	⟨₽	.5	⟨₽	. 5		.5	
Trichloroethene			. 5		.5	(8	. 5	(0	.5	31		
Trichlorofluoromethane			.5		. 5	⟨₽	. 5	€€	. 5		5.5	
Vinyl Chloride			.0		.0	{1	.0	(1	.0	₹1	.0	

MDL = Method Detection Limit.

METHOD:

EPA Method 8010

Emma P. Rollie

EMMA P. POPEK, Director



4060-C Pike Lane Concord, CA 94520 415-685-7852

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

$\overline{}$	~		•	-	*				_
					22222	444	A 2 2 4 2 24 24 24	and the	تفضيحه والأ
	'CHAIN-	Ot-Cl	SIL	זענ	HECOND	ANU	ANALYSIS	H	:U =-51
•									. — — .

LATOPATOR	TES. ING.																 		-													******	-	Ψ.	الماني		-teri-	-	₩-				
Project Manager:		,	4					Pho					٠.,							•	\N/	AL	YS	IS 1	RE	QU	E9	T				.4 1-15	1.1	•	łO	TH	ĖŘ	ļ	M	SP IAN	EC	HAL LIN	G
Address:	1 1/1/1/27	٧./						FA)		_		<u>/ · · · · · · · · · · · · · · · · · · ·</u>				::	-	Γ	Т					1	Т		Т	Т	T	T	Τ	T	T	1	7	+	T	Τ.	+	T			
	SCO.							. , ,										<u>ြ</u>																1	3							3	£
Project Number:	77 1.2							Pro	ject	Na	me	:		-			1	8					18	-			1								3							8	2
1.00 B							·):	: (رڻ	F /:-	v I	de	44	10	<u>ر</u> يور	110	J		808/	_	5			벌		Ì						4				ישיואן ארייין				2	1		55 55	ş
Project Location:						·		Sar										8	827	827	Ξ	N,	욁		Ì		E				1				•				W	g		3	Ĭ.
المراجع المراجع المراجع	Oakla J	<u> </u>	4						<i>;</i> ·									e ijo	150	15 a	(413	(413	휯	l		3	8	1		1	֓֞֞֞֜֞֜֞֜֞֜֞֜֜֞֜֓֓֓֓֓֓֓֓֓֓֓֡֓֓֡֓֡֡	2		Ŀ	3			1	18	Š		ğ	ğ
Sample	Lab #	NERS	nount		N	latı				re	se		ed	l	am	pling	2/8020)	es Gas	(90) Jesse	chuel (80	Grease	Greese	T Emelo	<u>8</u>	죓				2 1			7421/	6	12.2	3/2/	1		.	ORES	E3 85	ž	DETECT	ğ
ID	(Lab use)	* CONTAINERS	Volume/Ar	WATER	SOF	AIR	SLUDGE	OTHER	쟞	ENO8	波	NONE	OTHER	4	DATE OATE	TIME	BTEX (602/8020)	BTEXTPH	TPH as Diesal (9015 or 8270)	TPH as Jethuel (8015 or 8270)	Total Oil 8	Total Oil	Total Petr	EPA 601/	EPA 602/8	EPA 608/8080	CDA 6248340	ELA SCAVOCAU	CAM. 17 LEAD	COTTON O MAN	CDA - Drivelly Dolls from 1 thronts	LEADOZE	OPGANIC LEAD	(6.7)	100]			PROPERTY ONE SERVICE (24 hg)	EXPEDITED SERVICE (2-4 days)	VERBALS	SPECIAL DETECTION LAWITS (SPECIFY)	SPECIAL
15004		†																																			I						
) TS		1	40	X					X		X			7,	7 2	7.30									\perp		⊥								1	4	\perp		L				
1164 RB		1							1						1	2.51		L	<u> </u>						╛						\perp	\perp		L	X	(<u> </u>	<u> </u>	_			
1.14		3									Ц				_	1)	_	L	1_						_	_	\perp	\perp		_	1	_	_	7	4	\perp	\perp	丄	L			Ш	_
1.W 5 //B		1	\coprod				L		Ц		Ц			ļ		75		L	_				\Box	_				1		1	\perp	1	Ļ	<u> </u>	1	4	<u> </u>	_	L	L		Ш	_
140 G		3	Ш	Ц	<u> </u>				Ш			L		<u> </u>		5.18		_	_				_	_	4	_	┸	1	1	┸	\perp	1	_	X	-1-	1	<u> </u>		<u> </u>	L			_
(12000		1	1/	Ц	<u> </u>	_		<u> </u>	\coprod	_	Ц		L		_	7.01	_	Ļ	1					_	_	_	_	_	1.	1	_	1	<u> </u>	2		_	_	<u> </u>	<u> </u>				_
1146		3	11	Ц		_	L	_	\coprod	L	\prod	L		_	_	363	4	_	1	L				_	_		1		1	1	\perp	1	\perp	ľ	4	丄	4	╄			_		8
:11W 5 KG		1	Ц	Ш	_				11	<u> </u>	Ц		_	ļ	-	1.00	+		-		_			_	_	_ .	4	4	_ _	-	_	-	1_	↓_	2	4	4	╄	ļ		Ц	Ц	コ
11(1)3		્ર	山	小		1_		_	U	1	14	_	╀	-	<u>ÿ</u>	3.10	<u> </u> _	1	╀			Ц	\dashv	4	_	-	+	4	+	\downarrow	\bot	\bot	╄	17	4	4	4	╄	<u> </u>	<u> </u>			_
		_	<u> </u>			L	L	<u> </u>	┦_		<u>L</u>	<u></u>		<u>l</u> _		1	<u> </u>	<u></u>	L	<u> </u>			_					_L	1	\perp	1_	1_	Ŀ	1_		L	<u>1:</u>	\bot			Ш		4
Relinquished t	by:		E	Dat	е	Tin	пе		1	Re	ceh	/ed	by	':									R	6 M	arl	KS:																	١
THU.		7	Y	,	11																4		, _	(/ c	•										•							1
Relinquished l	by		[Dat	e 	Tin	ne			Re	cei	ved	by	/:										•	•																		
Relinquished	by	14			e 			<u> </u>		Re	cei	vec		11.00		atory:	o .:																										



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

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

CHAIN-OF-CUSTODY RECORD	AND ANALYSIS RE	JE3
CHAIN-OF-COSTOD I TIEGOTIO	AND MINE OIS II	,

LABORATOR	ES, INC.	4	10-0	85-7	004	: 					31/	140		UI NO 6		Ļ												_				Τ,		نسن	-1-			بردند. محور	مبد مارا	<u> </u>	1
roject Manager:		-		Phone #: (1/1 2737											1	\N/	L 1	/ SI	S F	REC)UE	S 1	•			١,		į	Ö	H	ER		ห	SPE AN	iUI. DL	NC INC	, [
· Jop ri	idue:1										7	, 1	<u>/</u>			┝╌	 	Τ	 	П	_	7	Т	Т	Τ				7	Т		ť	T	T	T				Т		1
\ddress:							F	AX	#:																Ì					ł	-	1		1						2	2
C-11	ラドレ															┨	100					5										٤							.]	Σ	5
Project Number:										lam		l					8					3							Ì	-			٠		-		Ē	Ţ		Ø	4
203 67	0 9016						<u>ر د</u>	'	<u> 16</u>	, ,		15	<u>ci</u>	16	Hind	4	88	Ę	Ę								٠						Ĭ				E	Ţ	Ì		
Project Location:				_			S	am	pler	Sig	net	ure:					9	× 82	28	13.1)	13.2	8			हि					조 같	N		2				Ş	ä		Z 1	
11 Mist	Catland			1					<u> </u>				T			┨	12	915	5	4) 64	7	퇽	1		ğ			_	#	퇽	<u> </u>	.	2				8	3		5	֓֞֞֞֞֞֞֞֞֞֞֓֓֓֓֡֞֡֓֓֓֡֡֞֡֓֓֓֡֡֡֡֡֡֡֡֡֡֡
Sample	Lab#	NEAS	mount	Matrix Method Preserved Soll Park Now Finds No									pling	2/8020	I	iesel (8	ettuel (6	& Grea	& Great	molor	9010	8	908	28240	9/28/	7 Merek	- 8 Met	riority P.	120742	֓֞֞֓֞֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֡֓֓֡֓֓֓֡֓	700				TYON	TED S	SFAX	DET			
ID	(Lab use)	# CONTA	Volume/A	WATER	SOL	AIR	SLUDGE	OTHER	덮	SONT		OTHER BIRTO		DATE	T (RTEX (602/8020)	RTEXTE	TPH as Diesel (9015 or 8270)	TPH 88	Total Oil	Total Oil	Total Per	EPA 601	EPA 602	EPA 606/8080-PCBs Orty	EPA 62	EPA 62	CAM-1	EPTOX - 8 Metals	EPA-P	COCAMC CAD		200 (Ca)				PRICH	EXPEDITED SERVICE (2-4 days)	VEHEALS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	313
0.1120		Н					-		ฎ			\top	╁	3- JJ		T	+	-	T															1						_	
भाग । हेए		,	7		┰┤		+	_	1	十	it	\dagger	1	1	לענ ב	_	Τ															7	4								╝
11111		4	H	Н		\dashv	\dashv		+	十	$\dagger \dagger$	-	†	_	7:27	_	Ť	┪	1	T						Τ						T	7	1							
M 10 3 5		-	╁	H			+		H	十	╁┼	十	╁	- -	3.74		+	╁	\dagger	†		П		1		1	<u> </u>	Γ	П			٦,	7			Τ					
1100		3	╁	H			\dashv		H	+	╫	┽	╅	+	->-4		╁	十	╁	†				†		1	T	T				1	7	XT		Τ					7
		╨	H	\vdash					H	+	₩		+		40		╅	-	+	+	一		\dashv	+	\top	†	┼	-			┪	1	시	†							
1103		13	11	╀	-		\vdash			-	-	╬	╂	1	1 7 1	+	╁	+	╁	╀╌	 	H	\vdash	十	\dagger	╁	╁	✝	Н	_	_	+	†	_		╁	T			1	
		1	 		_	<u> </u>					4		4			+	+	╌├╌	十	╁	╂╾	-	\vdash	-	╅	╁	+	╀╌	┢╌			╅		\dagger	+	+	1				7
		_	<u> </u>	_	_					\vdash	-	+	4		-	+	+	╁	+	╫	-	├	\vdash	\dashv	+	+	╂╌	╁╌	Н	Н		╌	+	╅		+	╁			7	
		_	_	<u> </u>		 _			igspace		4	_	-			+	+	╬	+	╀	-	-		\dashv	+	╬	╁	╁	 	H		+	╅	+	+	十	十		Н	十	7
			_		L			_			_	_	4		. -	4			+	╁	┨—	╂-	Н	-		┿	╁	╁╌	+-	-		╁	╅	╅	4. — Н. ч	┿	╁╌	-	Н	\dashv	-
		_	L		L		L	L	_			\perp			<u>.l</u>		_L				1_	 		Щ				<u></u>	<u></u>		L_L				1	_ـــ	1	Щ.	Ш		\dashv
Relinquished	by:		1	Date	Ð	Tin	ne		F	Rec	eiv	ed b	y:									t		nari																	
1 11 10	-	1,	77.	Ýř,	1] .	4	Ч	6																
Relinquished	by			Date		Tin	ne		1	Received by:																			•	•											
Relinquished) by			Dat				<u> </u>		Réc	ew	ed l	рy	Labo	ratory:		, ,1	,_																							



(415) 685-7852

\$3/87/89 KB

PAGE 1 DF 2

WORK DRD##C902437

CLIENT:

STEVE FISCHBEIN

GROUNDWATER TECHNOLOGY, INC.

4880-D PIKE LAME

CONCORD, CA 34320

PROJECT#: 203-680-5016-2

LOCATION: 4TH STREET

DAKLAND, CA

SAMPLED: 02/22/89 BY: R. ROBITAILLE

RECEIVED: 02/23/89 BY: K. BIAVA ANALYZED: 03/01/89 BY: C. MANUEL

MATRIX: MATER

UNITS: ug/L (ppb)

TEST RESULTS

4080-C Pike Lane, Concord, CA 94520

(800) 544-3422 from inside California

(800) 423-7143 from outside California

	1	MDL	ILAB #	1	9 1A	1	9 28	1	03A MW −5	i	8 48 MH -6
COMPOUND	<u> </u>		II.D.#		MH-4	! 	RB5	 		·	FRF-D
Bromodichloromethane		_	. 5		.5		. 5		.5		.5
Bromoform			. 5		.5		.5		.5		.5
Bromomethane			. 5		.5		.5		.5		.5
Carbon tetrachloride			.5		5.5		5.5		.5		.5
Chlorobenzene			.5		5.5		.5		5.5		.5
Chloroethane			.5		5.5		5.5		.5		.5
2-Chloroethylvinyl ether			. 0		. 0		.0		.0		.0
Chloroform			.5		3.5		3.5).5).5
Chloromethane			.5		3.5		5.5). 5).5).5
Dibromochloromethane			.5		3.5		3.5). 5 . 5), 5 -
1,2-Dichlorobenzene			.5		3.5		3.5		3.5		a. 5
1,3-Dichlorobenzene			. 5		7. 5		3.5). 5 . 5		a. 5
1,4-Dichlorobenzene			.5		3. 5		ð.5).5		ð.5
Dichlorodifluoromethane			. 5		0.5 -		ð.5		0.5 5		8.5
1,1-Dichloroethane			. 5		2. 5		2.5		3. 5		0.5 0.5
1,2-Dichloroethane			.5		0. 94		8. 5		3. 5		
1.1-Dichloroethene			1.2		0.2		2.2		8.2		0.2 0.5
trans-1,2-Dichloroethene			.5		52		0.5		9.5		0.5
1,2-Dichloropropane		e	. 5		0.5		8.5		0.5		0.5 0.5
cis-1,3-Dichloropropene		Q	5.5		0. 5		0.5		0. 5		0.5
trans-1,3-Dichloropropene		e	.5		0. 5		0.5		0.5		0.5
Methylene chloride			5.5		0.5		0.5		0.5		
1, 1, 2, 2-Tetrachloroethane			.5		0.5		0.5		0. 5		0.5 0.5
Tetrachloroethene		6	5.5		0. 5		0.5		0.5		0.5
1.1.1-Trichloroethane			.5		0.5		0.5		0.5		v. 5
1,1,2-Trichloroethane		C	0. 5		0.5		0.5		0.5		5. 1
Trichloroethene		6	3. 5		20		0.5		4.0		5. 1 5. 9
Trichlorofluoromethane		•	ð.5		0. 5		0.5		1.4		1.0
Vinyl Chloride		:	1.0	•	1.0	(1.0	•	1.0	'	1.0

MDL = Method Detection Limit.

METHOD:

EPA Method 8010



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

(800) 423-7143 from outside California

PAGE 2 OF 2

WORK DRD#:C902437

CLIENT: STEVE FISCHBEIN PROJECT#: 203-680-5016-2 LOCATION: 4TH STREET

DAKLAND, CA

MATRIX:

WATER

TEST RESULTS			UNITS:	n!	/L (p	pb)						
	1	MDL	ILAB #		8 5A	1	6 6A	1	97 A	ŀ	0 8A	1
COMPOUND			11.D.#	<u> </u>	MH3	<u> </u>	MH1	 	MHS	 	MHB	i
Browdichloromethane		· · · · · · · · · · · · · · · · · · ·	.5		. 5		0. 5		0.5		3. 5	
Bromoform			.5		3. 5		0. 5		3.5		0.5	
Bromomethane			.5		3.5		8. 5		5.5		0.5 0.5	
Carbon tetrachloride			.5		ð. 5		0. 5		3.5		0. 5	
Chlorobenzene			.5		3. 51		0. 5		5		0. 84	
Chloroethane			.5		2.5		0.5		3.5		9.5	
2-Chloroethylvinyl ether		1	.0		1.0		1.0		1.0		1.0	
Chloroform		9	.5		ð. 5		8. 5		9. 5		0.5	
Chloromethane		8	.5		7. 5		9. 5		7. 5		0. 5	
Dibromochloromethane		0	.5		e. 5		0. 5		8.5		0. 5	
1,2-Dichlorobenzene			.5		0. 5		0. 5		8.5		0. 5	
1,3-Dichlorobenzene			. 5		0. 5		8. 5		0.5		0. 5	
1,4-Dichlorobenzene			.5		0.5		0.5		8. 5		0. 5	
Dichlorodifluoromethane			. 5		8. 5		0. 5		0.5		0. 5	
1.1-Dichloroethane			.5		5. 1		0. 5		0.5		0. 5	
1,2-Dichloroethane			. 5		4. B		0.5		0.5		6.2	
1.1-Dichloroethene		e	. 2		0.8 2		0.2		ø. 2	(0.2	
trans-1,2-Dichloroethene		6	.5		1.7		0. 5		0.5		1.3	
1,2-Dichloropropane		e	. 5		0. 65		0. 5		0.5		0.5	
cis-1,3-Dichloropropere		Q	5. 5		Ø. 5		0. 5		0.5		0.5	
trans-1,3-Dichloropropene		9	.5	<	0. 5		0. 5		0.5		0.5	
Methylene chloride		8	.5	(0.5		l 0. 5		0.5		0.5	
1, 1, 2, 2-Tetrachloroethane		e	.5	< <	0.5		0.5		0. 5		0.5	
Tetrachloroethene		e	5.5	<	0.5		(0.5		0.5		0.5	
1,1,1-Trichloroethane			.5		1.3		0.5		0. 5		0.5	
1, 1, 2-Trichloroethane			.5		0.5		(0.5		0.5	•	0. 5	
Trichloroethene		Q	5.5		€. 4		(0.5		0.5		30	
Trichlorofluoromethane		•	5.5	(0.5		(0.5		0.5		(0.5	
Vinyl Chloride				(1.0		(1.0	(1.0	•	(1.0	

MDL = Method Detection Limit.

METHOD:

EPA Method 8010

EMMA P. PDPEK, Director



(415) 685-7852

4080-C Pike Lane, Concord, CA 94520

1800) 544-3422 from inside California

(800) 423-7143 from outside California

03/14/89MT

Page 1 of 2

MORK DRD#:C982436

CLIENT:

STEVE FISCHBEIN

BROUNDWATER TECHNOLOGY, INC

4880-D PIKE LANE

CONCORD, CA 94528 ---

PROJECT#: 203-680-5016-1

LOCATION: 4TH STREET, DAKLAND, CA

SAMPLED: 02/22/89

BY: R. ROBITAILLE

RECEIVED: 02/23/89

ANALYZED: 82/24/89

BY: R. CONDIT

MATRIX: Water

UNITS:

mg/L (PPM)

PARAMETER	l l	MDL	ISAMPLE	# I	01 MH-4	1	02 MN-5	1	0 3 MW-6	1	84 MH-3	l	05 MW-1	1
Total Petroleum Hydrocarbons as Mineral Spirits		1			(1		(1		(i		(1		(1	

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



Western Region 4080-C Pike Lane, Concord, CA 94520 (415) 685-7852 (800) 544-3422 from inside California 4800) 423-7143 from outside California Page 2 of 2

MORK DRD#: C982436

CLIENT: STEVE FISCHBEIN PROJECT#: 203-680-5016-1

LOCATION: 4TH STREET, DAKLAND, CA

MATRIX: Water

UNITS: mg/L (PPM)

(1

Total Petroleum Hydrocarbons as Mineral Spirits

1

₹1

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

METHOD: Modified EPA 5030/8020/8015

EMMA P. POPEK, Laboratory Director



83/14/89mt

Page 1 of 2

WORK DRD#: C902436

Western Region

STEVE FISCHBEIN BROUNDWATER TECHNOLOGY, INC

4080-C Pike Lane, Concord, CA 94520 (415) 685-7852

4080-D PIKE LANE

CONCORD, CA 94520 T

(800) 544-3422 from inside California

PROJECT#: 203-680-5016-1

(300) 423-7143 from outside California

LOCATION: 4TH STREET, DAKLAND, CA

SAMPLED: 02/22/89

CLIENT:

BY: R. ROBITAILLE

RECEIVED: 02/23/89

ANALYZED: 02/24/89

BY: R. CONDIT

MATRIX:

Water

UNITS:

ug/L (ppb)

PARAMETER I	MDL	ISAMPLE # I	01 I MW-4 I	02 MN-5	93 MH-6	64 MH-3	95 I MW-1 I
Benzene	0.5	·	(0.5	(0.5	(0.5	(0.5	(0.5
Toluene	0. 5		(0.5	(0.5	(0.5	(0.5	(0. 5
Ethylbenzene	0.5		(0.5	(0.5	(0.5	(0. 5	(0.5
Xylenes	0.5		(0.5	(0.5	(0.5	(0.5	⟨∅.5
Total BTEX	0.5		(0.5	(0.5	(0.5	(0. 5	(0.5
Misc. Hydrocarbons (C4-C12)	1		(1	(1	(1	(1	₹1
Total Petroleum. Hydrocarbons as Gasoline	1		(1	(1	₹1	(1	{1

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



Western Region 4080-C Pike Lane, Concord, CA 94520 (415) 685-7852 (800) 544-3422 from inside California (1800) 423-7143 from outside California

Page 2 of 2

WORK ORD#: C982436

STEVE FISCHBEIN CLIENT: PROJECT#: 203-680-5016-1

LOCATION: 4TH STREET, DAKLAND, CA

MATRIX:

Water

UNITS: ug/L (ppb)

PARAMETER	MDL 1	ISAMPLE #	1	8 6 MW-2	i	67 MH-8	1	l 		
Benzene	0. 5			⟨0.5		(0.5				
Toluene	0.5			(0.5		(0.5				
Ethylbenzene	0. 5			(0.5		(0.5	•			
Xylenes	0. 5			(0.5		(0.5	i			
Total BTEX	0.5			(0.5		(0.5	i			
Misc. Hydrocarbons (C4-C12)	1			(1		(1				
Total Petroleum Hydrocarbons as Gasoline	1			(1		(1				

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

METHOD: Modified EPA 5030/8020/8015

EMMA P. POPEK, Laboratory Director



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

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

CHAIN-OF-CUSTODY	RECORD AND	ANALYSIS F	
------------------	------------	------------	--

ENVIRON	MENIAL	4	15-6	.85 -	785	2			8	900-	423-	714	3 ((Outside (CA)																خدت	4 -i		لنبيد	ــــــــــــــــــــــــــــــــــــــ	حسم		-				_	ᆈ
Project Manager:								hoi									-		A	\N/	ALY	YS!	IS I	RE	QU	ES	T				. !	1		O	TH	IEF	4 1.		SI Ha	PE NI	CI/ DLI	AL INC	3
Heuc F										ا ز	٠ ;) "			_		1			_	_			T		T	Т	Т	Т	<u> </u>	Ť	┿	—	丁	Т	Т	+	T	T	T	T	_
Address:							F	AX	#:] -						-	ļ				١			ļ	ı	1		-						H	2	2
GIL OF	B																8					=			-			1		Ì		ļ	١		١	ł		ļ	İ	ĺ.		짌	3
Pfoject Number:								roj									8					3								١		}	1	ĺ	ľ				E	\$		<u> </u>	
100 080	5016							<u></u>	٠.	10		<i>K.</i> I.		e l		ł	18	E	Ŕ			ğ		-			ļ						١						<u>اع</u> س	7		5	
Project Location:	+ Oatle	Ą		ے.)_		\$	Sarr	nple	or S	gne /	itur	D: -				soline (6	15 or 82	15 or 82	8 (413.1)	e (413.Z	ydrocar				8						12.8.2)							SERVIC	HWCE			RTING
Sample	Lab #	NERS	nount		M	atr	İχ		F	Me re:	th	od	i	Samp	oling	2/8020)	H BS G) jesej	ethos (8)	Total Oil & Grease (413.1)	& Greek	rojeum }	/8010	0208/	9808	EPA 608/8080-PCBs Only		2/26/0	CAM - 1/ METH	EPTOX - 8 Metals	EPA - Priority Politicant Median	CEAU(1460/1461/638.6)	OHENNIC IEAN	اء					PRIORITY ONE SERVICE (24 IN)	EXPEDITED SERVICE (2-4 days)	LS/FAX	SPECIAL DETECTION LIMITS (SPECIFY)	7
ID	(Lab use)	# CONTAINERS	/olume/A	WATER	SOIL	AIR	SLUDGE	этнея	₹	H S	<u>56</u>	NO.	OTHER	DATE	TI ME	BTEX (602/8020)	BTEX/TPH as Gasoline (602/8020/8015), 1,1,1	TPH as Diesel (8015 or 8270)	TPH as Jethuel (8015 or 8270)	Total O	Total Oil & Grease (413.2)	Total Per	EPA 601	EPA 602/8020	EPA 606	EPA 60	CLY SEARCH	Er'A bz	3	EPTOX	H- W			Hold	•				POER		VERBY	3	33 85
20,0		╁╌	40		-		-	_	X		X		1	2.33	2.4	1	į,	1																X	\Box	\Box			_			_	
		4	-	m	一		7		Ħ						2:45	1	>	1					X].		_	1	۱,	Y	ightharpoonup	_	_	_	_	_	_		_	
MW 7 RB 8		4	H	$\dagger \dagger$					11	-	11													\perp				_	⅃		즤	_	_	_	_	_	_	_	_				
MW3		4	1	#	-				11	-	П				8 6		\supset	1					X				_	_	\perp	\downarrow	_	\perp	4	_		_	_	_	_	_	_	\dashv	_
MW 0		4		╁	╁					1									<u> </u>								1	_	_		\perp	\bot	_	_	\perp	_	\perp	_	_	_		_	
		+	1	1	 	 		-	1	十																			\bot	_	_	1	4			_		_		_	_		_
		++		T	1			一	T	1		Γ															_	\bot	_	_	\perp	_[Ц		_	_	_	_	_		
	<u> </u>	+	1	1	1	 			1		Γ					\int_{-}											\perp		4	_	\bot		4			\sqcup		_	_	_		4	
		14	i	\top	+	1				Τ		Γ										┸		_			_	_		_	_	_	_	<u> </u>		استر		4		_		 	_
		1	1	1	1					1									\perp		_	┸	<u> </u>	_			\dashv	_	_	4	_	_	Ź		L L	Ш						\sqcup	
		†	4	†	†	1	T		T	1	1								\perp		_	\perp	L														Ш					Ш	<u></u>
Relinquished	by:	-	۱.	Dat	e 1	Tin	ne			Re	cei	ved	by	<i>r</i> :								F	₹er	na	rks	: i	-1		`	/ /		'H			ا ' ب	16.	ď		,				
Relinquished	by	-	1	 Dat	 e 	Tir	пе		+	Re	cei	vec	by	<i>r</i> :	<u> </u>							in the special section of the second section of the																					
Relinquished		+	1			Tir			1					/ Labor	atory:	1 ,	;			- 															عننب								



18/28/88mt

Western Region 4080-C Pike Lane, Concord, CA 94520 (415) 685-7852

(800) 544-3422 from Inside California (800) 423-7143 from outside California Page 1 of 3 Work Order#:8818149

CLIENT: Kelly Kline/Stave Fischbein

Broundwater Technology, Inc.

4080 Pike Lm. 💳

Concord, CA 94528

PROJECT#: 203-680-5016.01-18

LOCATION: 4th & Market

Bakland, CA

SAMPLED: 10/13/88 BY: R. Hughes RECEIVED: 10/14/88 BY: E. Larsen ANALYZED: 10/17/88 BY: C. Manuel

MATRIX: Water UNITS: ug/L (ppb)

TEST RESULTS

COMPOUND	1	MDL	1LAB #	1	91A RB-4	i I	6 2A MI-4	1	83 A RB-5	1	84A MH-5	1
									 . 5). 5	
Bromodichloromethane			.5		.5 .5). 5		.5		3.5	
Bromoform			.5). 5). 5		.5		3.5	
Bromomethane			.5). 5		.5		3.5	
Carbon tetrachloride		_	.5		. 5		3. 5		.5		3.5	
Chlorobenzene			.5).5). 5		.5		9.5	
Chloroethane			.5		5.5		.0		.0		1.0	
2-Chloroethylvinyl ether			. 0		. 0		. 68		.5		8.5	
Chloroform			.5		3.5). 5		.5		B. 5	
Chloromethane			.5).5		3.5		.5		9.5	
Dibromochloromethane			.5		3.5		9. 5		.5		0. 5	
1,2-Dichlorobenzene			.5). 5 		3.5		.5		0.5	
1,3-Dichlorobenzene		-	.5		0.5 . 5). 5		. 5		0.5	
1,4-Dichlorobenzene			.5		3.5		9. 5		.5		0. 5	
Dichlorodifluoromethane			.5		3.5 3.5		D. 5		.5		0.5	
1,1-Dichloroethane			. 5		0. 5		8.93		3.5		0.5	
1.2-Dichloroethane			. 5		8. 5). 2		0. 2	
1,1-Dichloroethene			. 2		9.2		9.2).5		8. 5	
trans-1,2-Dichloroethene			. 5		9.5		1.5		5.5		0. 5	
1.2-Dichloropropane			. 5		9.5		8.5). 5		0.5	
cis-1,3-Dichloropropene			. 5		0. 5		0. 5). 5		0.5	
trans-1, 3-Dichloropropene		e	. 5		0. 5		0. 5		ð. 5		0.5	
Methylene chloride		9	1.5		0.5		9. 5		8. 5		6. 5	
1, 1, 2, 2-Tetrachloroethane			.5		0.5		0. 5		7. 5 7. 5		8. 5	
Tetrachloroethene		8	.5		0. 5		0.5		8.5		0.5	
1, 1, 1-Trichloroethane			.5		6. 5		0. 5		9.5		0. 5	
1,1,2-Trichloroethane			.5		0. 5		0.5		0.5		6.2	
Trichloroethene		•	.5		0. 5	47					0.5	
Trichlorofluoromethane		•	5.5		0.5		0.5		0. 5		1.0	
Vinyl Chloride		1	0	(1.0		1.0	· · ·	1.0		 -	

MDL = Method Detection Limit.

METHOD:

EPA Method modified 8010



Western Region 4080-C Pike Lane, Concord, CA 94520 (415) 685-7852

(200) 544-3422 from inside California (890) 423-7143 from outside California Page 2 of 3

MORK ORD#:8819148

Kelly Kline/Stave Fischbein CLIENT:

PROJECT#: 283-680-5016.01-18

LOCATION: 4th & Market

Bakland, CA

MATRIX:

Water

ug/L (ppb) UNITS: TEST RESULTS

COMPOUND	 	MDL	ILAB #	l l	65 A MH-6	1 1	0 6A MH-3	i i	6 7A HH-1	i	88 A MM- 2	1
			.5			(E	. 5	⟨€	.5	(6	5.5	
Bromodichloromethane			.5		. 5	(6	5.5	⟨€	.5		5.5	
Bromoform		_	.5		.5	⟨€	3.5	<€	5.5		3. 5	
Bromomethane			.5		.5	(6	5.5	₹6	5.5		ð. 5	
Carbon tetrachloride		_	.5		.5	•	. 73	<€	3.5		3.5	
Chlorobenzene		_	.5 .5		. 5	((a. 5	(6	5.5		ð. 5	
Chloroethane			.0		.0	()	1.0	(1	l.0		1.0	
2-Chloroethylvinyl ether		_	.5		. 74		a. 5	•	3.51	((8. 5	
Chloroform		_	.5 .5		. 5		3.5	((3.5	(1	3. 5	
Chloromethane		_	.5 .5		. 5		7. 5	₹(3.5	(1	8. 5	
Dibromochloromethane		-	. 5		.5		a. 5	((3.5		9. 5	
1,2-Dichlorobenzene			.5 .5		0.5	-	ð. 5	<(9. 5	<	8. 5	
1,3-Dichlorobenzene			.5		.5		ð. 5	((3.5	(8. 5	
1,4-Dichlorobenzene					3.5		8.5	(1	3. 5	(0. 5	
Dichlorodifluoromethane			.5 .5). 5). 5		5. 6	{(9.5	(8. 5	
1,1-Dichloroethane					0.5		5.7	(8. 5	<	9.5	
1,2-Dichloroethane			. 5		0.2		9.87	(1	8.2	<	0.2	
1.1-Dichloroethene		_	. 2		3.5		0. 5		0.5	(6. 5	
trans-1,2-Dichloroethene			.5). 5		1.0		9. 5	(e. 5	
1,2-Dichloropropane		_	.5		3. 5		6. 5		0.5	(9. 5	
cis-1,3-Dichloropropene			.5		8.5		0.5 0.5	-	0.5	(9. 5	
trans-1,3-Dichloropropene			.5		9. 5		0. 5		0.5	(9.5	
Methylene chloride			.5		3. 5		0. 5		0. 5	(9. 5	
1, 1, 2, 2-Tetrachloroethane			3.5		9.5		9.5		0.5	(0.5	
Tetrachloroethene		-). 5 -		0.5		1.4		9.5	(0.5	
1,1,1-Trichloroethane			.5		9. 5		0.5	_	0.5	(0.5	
1,1,2-Trichloroethane		-	3.5		в. 2		B. 0		Ø. 5	•	0.5	
Trichloroethene			9.5		1.1		0.5		9. 5	•	0.5	
Trichlorofluoromethane			3. 5				1.0		1.6		(1.8	
Vinyl Chloride		1	l.0	•	1.0							

MDL = Method Detection Limit.

METHOD:

EPA Method modified 8010



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

Page 3 of 3

CLIENT: Kelly Kline/Steve Fischbein

PROJECT#: 283-688-5816.81-18

LOCATION: 4th & Market

Dakland, CA

TEST RESULTS

MATRIX: Water

UNITS: ug/L (ppb)

COMPOUND	i MD	L ILAB #	1 69A 1 MW-8	1
Bromodichloromethane		9. 5	⟨€.5	
Brosoform		0. 5	(0.5	
Bromomethane		0. 5	(0.5	
Carbon tetrachloride		0. 5	(6.5	
Chlorobenzene		9. 5	1.4	
Chloroethane		0. 5	(0. 5	
2-Chloroethylvinyl ether		1.0	(1.0	
Chloroform		0. 5	(0.5	
Chloromethane		8. 5	(0. 5	
Dibromochloromethane		8. 5	(8.5	
1.2-Dichlorobenzene		0.5	(0.5	
1,3-Dichlorobenzene		0. 5	(0. 5	
1,4-Dichlorobenzene		8. 5	(8. 5	
Dichlorodifluoromethane		0.5	⟨0.5	
1,1-Dichloroethane		0.5	(0.5	
1.2-Dichloroethane		9. 5	7.2	
1,1-Dichloroethene		8. 2	(0.2	
trans-1,2-Dichloroethene		8. 5	(0.5	
1,2-Dichloropropane		6. 5	(0. 5	
cis-1,3-Dichloropropene		0. 5	(0.5	
trans-1, 3-Dichloropropene		0.5	(9. 5	
Methylene chloride		0. 5	(0. 5	
1, 1, 2, 2-Tetrachloroethane		6. 5	(8.5	
Tetrachloroethene		0. 5	0. 56	
1,1,1-Trichloroethane		8. 5	(0. 5	
1,1,2-Trichloroethane		9. 5	(0.5	
Trichloroethene		8. 5	45	
Trichlorofluoromethane		0. 5	(0.5	
Vinyl Chloride		1.0	(1.0	

MDL = Method Detection Limit.

METHOD:

EPA Method modified 8010

Crowa P. Poper

EMMA P. POPEK, Director



(415) 685-7852

19/29/88 rw

Page 1 of 1 CLIENT:

Kelly Kline/Stave Fischbein

Broundwater Technology, Inc.

4888 Pike Ln.

Concord, CR 94528 -

PROJECT#: 283-689-5816.01-19

LOCATION: 4th & Market

Oakland, CA

BY: R. Hughes SAMPLED: 18/13/88 RECEIVED: 18/14/88 ANALYZED: 18/18/88

BY: E. Larsen BY: P. Kowalski

Water MATRIX:

L. Hinson

•

V. D. A. TEST RESULTS

4080-C Pike Lane, Concord, CA 94520

(800) 544-3422 from inside California (800) 423-7143 from outside California

ug/L (ppb) UNITS:

	I MDL	ILAB #	1	33763 I	33764 1	ļ	!
COMPOUNDS	1	11.D.#	1	MIS-6241	MIB-6241	1	<u></u>
Chloromethane	10			(10	(10		
Bromomethane	10			(10	(18		
Vinyl Chloride	10			(10	(10		
Chloroethane	10			(10	(10		
Methylene Chloride	5			(5	(5		
Acetone	18			(10	(10		
Carbon Disulfide	5			(5	(5	•	
1,1-Dichloroethene	5			(5	(5		
1,1-Dichloroethane	5			(5	(5		
Trans-1, 2-Dichloroethene	5			(5	45		
Chloroform	5			(5	(5		
1,2-Dichloroethane	5			(5	19	•	
2-Butanone	10			(10	(10		
1, 1, 1-Trichlorosthame	5			(5	(5		
Carbon Tetrachloride	5			(5	(5		
Vinyl Acetate	10			<10	(10		
Bromodichloromethane	5			(5	(5		
1,2-Dichloropropane	5			(5	(5		
cis-1,3-Dichloropropene	5			(5	(5		
Trichloroethene	5			(5	80		
Dibromochloromethane	5			(5	(5 (5		
1,1,2-Trichlorethane	5			(5	(5		
Benzene	5			(5	(5		
Trans-1, 3-Dichloropropene	5			(5	(5		
2-Chloroethylvinylether	18			(10	(10		
Bromoform	5			₹5	(5		
4-Methyl-2-Pentanone	10			(10	(10		
2-Hexanone	10			(10	(18		
Tetrachloroethene	5			(5	(5		
1, 1, 2, 2-Tetrachloroethane	5			(5	(5		
Toluene	5			(5	(5		
Chlorobenzene	5			(5	(5		
Ethylbenzene	5			₹5	(5		



4080-C Pike Lane, Concord, CA 94520

(415) 685-7852

(890) 544-3422 from inside California

(800) 423-7143 from outside California

Page one continued

Kelly Kline/Stave Fischbein CLIENT

PROJECTO: 283-688-5016.01-19

LOCATION: 4th & Market

Dakland, CA

MATRIX: Water

UNITS: ug/L (ppb)

	MDL	LLAB #	1	33763 I	33764	1	1
COMPOUNDS		I.D.#	i	MN5-6241	MH8-6241	1	!
Styrene	5			(5	(5		
1,2-Dichlorobenzene	5			(5	(5		
1, 3-Dichlorobenzene	5			(5	(5		
1.4-Dichlorobenzene	5			(5	(5		
Total Xylenes	5			(5	(5		
Trichlorofluoromethane	5			(5	(5		
Dichlorodifluoromethane	5			(5	(5		

MDL = Method Detection Limit! compound below this level would not be detected. METHODS: EPA 624/8240.



(415) 685-7852

18/26/88 JP

Page 1 of 2

₹ (800) 544-3422 from Inside California

(800) 423-7143 from outside California

TEST RESULTS

Kelly Kline/Steve Fischbein CLIENT:

Broundwater Technology, Inc.

Western Region 4080 Pike Ln. 4080-C Pike Lane, Concord, CA 94520

Concord, CR 94528 -PROJECT#: 203-680-5016.01-20

LOCATION: 4th & Market

Dakland, CA

SAMPLED: 18/13/88

BY: R. Hughes BY: E. Larsen

RECEIVED: 18/14/88 ANALYZED: 10/20/88

BY: P. Hanners

MATRIX: Water

UNITS:

mg/L (ppm)

	1	MDL	ILAB #	5	33765	1	33766 I	33767	1	33768	1	33769	1
COMPOUNDS	i		11.D.#	ì	MH4 MS	I	MH5 MS I	MH6 MS	ı	MH3 MS	ł	MH1 MS	1

Total Petroleum Hydrocarbons as Mineral Spirits

1

(1

(1

{1

(1

(1

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

METHOD:

Modified EPA Method 5030/8015



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

(800) 423-7143 from outside California

Page 2 of 2

CLIENT:

Kelly Kline/Steve Fischbein

PROJECT#: 203-680-5016.01-20

LOCATION: 4th & Market

Dakland, CA

MATRIX:

Water

TEST RESULTS

UNITS:

mg/L (ppm)

<u></u>	T	ILAB #					
COMPOUNDS	ŧ	11.D.#	I	MH2 MS	1	MH8 MS	ļ

Total Petroleum Hydrocarbons as Mineral Spirits

1

{1

(1

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

METHOD:

Modified EPA Method 5030/8015

EMMA P. POPEK, Director

· Poner (S.K).



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

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

						. liu	 أحد شاب بالله
CHAIN-OF-C	ICT	INY E	3年でのおり	AND	ANA	l YSIS	113.
CHAIN-OF-C	U 31\	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1200110	~	71177		, – – –

Labo	ratories 🛂											- `																		د اف د د ا	Π	~				T	-	المناط الجوا		, –
Project Manager: アクレビード	CINE/F	es.	14.	4 1	ر.		Ph	One	*;	+ .	, ` <u>.</u>	<u> </u>	٠٠		<u> </u>			A	NA	LY	'SI	S F	REC	UE	ES 1	<u> </u>	, • -		14			, O) 	1	HA	NO T		ia
Address:	Cor		: ,	(-1	~ · •		FA	X #	ł:							15)					اء				11.0.11															EXTS
Project Number:							Pro	-		ame						8					4				1,7				ŀ	1			1			1	6 1	ŗĺ.	9	
203 600	5 6010 0	, \ 				<u> </u>	ĸ	JF. (1	<i>j</i> (111	1	اب با ر	٠,	1	800	g	ê			뚱	١			3				1	1	ĺ		1					:		
Project Location:							Sa	ımp	ler	Sigr	atu	re;		,		oline (60	15 or 827	15 ar 82	(413.1)	(413.2)	ydrocarb			ALO SE	1,7,7				Start Ke	(2.052)		7					NA SERVICE		1	ORTING RECUREMENTS
Sample	Lab #	NERS	TOUNT	ı		atri		_1_		feti ese			Sam	pling	2/8020)	H M Car	iesel (80	ettuel (80	& Greass	4 Greass	H Emelo	9010	9090	9	8240	828	1	EPTOX - 8 Metals	orty Po	LEAD(7420/7421/230.2)	ORGANIC LEAD	र्			11/1/17					
ID	(Lab use) only	* CONTA	Volume/Amount	WATER	SOF	AIR	OTHER	; ; ;	2 3	ICE ICE	NON	ОТНЕЯ	DATE	TIME	BTEX (602/8020)	BTEXTP	TPH as 0	TPH as Jettuel (8015 or 8270)	Total Of	Total Oil & Gresse (413.2)	Total Per	EPA 601	EPA 602/8020	EPA 608	EPA 624	EPA 625	CAM-17 Ments	EPTOX	EPA - Pr	LEAD(7,	SHOW!	艺			777		PROCESSES (SOR)		VENER	SPECIAL
K13 4		↓	74 ⁷ 5 154	-					1	×	-1			٠, ١							_	겍		1						\dashv	_	_	4	+	-	+	-	4	-	+-
1000										4	_	_	<u> </u>	<u> </u>	\perp		L		_	\dashv		겍	+	+	-	┼-	├	H	\dashv	\dashv	-	\exists	\dashv	+	+	╬	╅	╀	╀	┼┤
14. 11 1113		-,	i					_	1	4	_	_		<u> '</u>	Ш	_	_		_		_				╬	╀	-			-		ᄊ	+		+	+	+	╬	+	╀┦
KB 5	,	1						_	1		4_	_	<u> </u>	-	ļ	_	_				-	¥	-	+	╬	-	╁			\dashv	4	∤-	+	+	+	+	╬	╬	┿	┼┤
18180		2		با			_	_	1	Ц	_	_		, ··	_	L		_			_	시	-	-		╀	╀		-		-	+	+	+	╬	╬		╬	╌┼╌	┼┤
MW 5 N3		2		L		_	_	4	1	\bot	4	_	-	-1	ļ	-	╀	\vdash		Н	\dashv	4		+	+	-	┼-		Н	+	-	시	十	╬		+	╬	┽	┽	┿┩
MY, Citt		<u>[]</u>	1	<u> </u>		_		_	4	-	<u> </u>	<u> </u>		'	 	-	ļ		\dashv			-	-	- -	<u> </u> X	╀	╀╴	-			\dashv	+	╅	-	+	xt	╬	+	┿	士
8126	. <u></u>	1		<u> </u>		_	_ _	\perp	1	_ -	$\!$	1			-	-	╁	┡	\vdash		1	$\overline{}$		+	┿	┼-	-	-	-	-	_	-	-	-	-{	4		+	┿	
111/2 (1,		 /		-	+	<u> </u>	<u> </u>	+	╢	╁-	 	11	╁┈	-	╁	-		-	\dashv	У.	+	+	+	+	╁	 	-	\dashv		V	+		\dagger	\dagger	+	+		+1
Mrs (HIS	•	+	V	-	\vdash	\dashv	+	\dashv	+	+	+	╁	-	1-	╫╌	-	1			Н		7	+	1															<u> </u>	
Relinquished t	py:		. [)ate	•	<u>Lim</u>	e 	1	R	ece	ived	l by	<u> </u>					-			R		ark 772		- · · · · · · · · · · · · · · · · · · ·	- 1-	ربر.	, ,					-							
		1	. 1																						ļ	\														
Relinquished t	ру		C	Date	, ·	Tim	e		R	ece	ive	d by	/:										1"																	
Relinquished	by			Date		Tim	е		,F	lece	ive	d by	Labo	ratory:			٠.,																-			- نورون			المرادات	



4080-C Plke Lane Concord, CA 94520 415-685-7852

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

CHAIN-OF-CUSTODY RECORD AND ANALYSIS CUEST

Labo	oratories 🗷	_											_ `				—								•	-				-11	-	نظب	***	امليا	+		4	بعليد	نب	مفات	
Project Manager: レイレンドレル	NG/FIGH	IB!	(-1	ار) ا			-	Pho	ne i	P:	4	ر 4	2. /	?× /	,				,	A	NA	LY	SIS	R	EQ	UE	ST		٠	拼	1	ļi) روخ د د	OT L		H		HA	NE		NG
Addross:	Concep							FAX	# :									(S)									120,184													5	REMEMBS
Project Number:											me:							8		.	-		9.				꼂										;	<u>.</u>		Įį	2 0
203 600	501601			5	116	1,1	y	12	131	· ~	6	*!K	1.) (()	,			8	8	6	-						7			4								<u>a</u>		E	3
Project Location:							ļ	San	nple	r Si	igna / _	ituri	9 :					09) eugo	15 or 827	15 or 827	(413.1)	(413.2)	yarocaro			Se Only	10 to certilizanion			EPA - Priority Pollutant Metals	230.23		£					EFACE	3		SPECIAL REPORTING REQUIREMENTS
Sample	Lab #	INERS	mount			atr			P	re	rth ser	ve			mpll	ng	2/8020)	Has Gas	iesel (80	ethel (90	& Greese	Greats	700Um H	88	9090	/8080-PC	A240	9270		Pol vio	LEAD(7420/7421/239.2)	OPIGANIC LEAD						306			R PO
ID	(Lab use only	# CONTA	Volume/Amount	WATER	SOIL	AIR	SUUDGE	OTHER	Ŧ	8	301	NONE	OTHER	DATE	1	¥	BTEX (602/8020)	BTEXTP	TPH 245	TPH 855	Total O	Total	EPA 601/8010	EPA 602	EPA 608	EPA 608	EPA 624	EPA 625/8270	ACT OF	EPA-P	EAD(74	OPGAN	T.J.				10	PRICRITY ONE SERVICE (24 la)	THE STATE OF THE S	2000	SPECIA
123.3			7.	1					X		X			U L	1 2	. U															L					_	X			I	
144.3		2	,													•							\times	1								_						_			
HIV 3 MS		10	1	li					-					1		•								L	<u> </u>						_		X			_		_		┵	
RB 1		7												ı	1)	. ,							\perp	_	<u> </u>					\perp	$oldsymbol{\perp}$	┶			Ц		炓	_	1	_	4.
1910		2	П												,	,							×	丄	_		Ц	\bot	┸	┸	↓_		L			_	_	_	_	_ _	
1416-14:5		2	$\cdot \cdot $													11			L			\bot	_	\perp	$oldsymbol{ol}}}}}}}}}}}}}}$	<u> </u>		_	_	4	↓_	<u> </u>	\times	ندا	\sqcup	_	_	4		_ _	4
Rp,-2		1													3	71	Ш	L				_		1	_	_	Ц	_	\bot	1	↓.	<u> </u>				_}	4	_	_	4	4-4
MW2		2												1		٠.			_		_	_	<u> </u>	1	1			_	_	_	-	 	_	<u>.</u>	\vdash	_	4	4	4	-(
1111 2195		2	<u> </u>	1				_	\	<u> </u>	٧		_	V	<u> </u>	1)	_				_	_	_	-	 	_	Щ	\dashv	1	\bot	╽-	1	×	 -	-	-		+	+	+	4-4
			_	$oldsymbol{igstyle igytyle igstyle igytyle igstyle igytyle igytyle igytyle igytyle igytyle igytyle igstyle igytyle$		_	_		_	_					_ _		\vdash	ļ	_		4	\dashv	-	+	╀	\vdash	\vdash	-	┿	╁	╀╌	╁-	<u> </u>	+		+	4	+	+	╁	+
ļ. <u></u>		_	1	<u></u>				L	ļ					L	L_			<u> </u>	1_			_		1	<u>Ļ</u>	<u></u>	Ш					1		1				L	i_		Щ
Relinquished t	oy:		ŧ	Date	•	Tim	10		1	Rec	elv	ed	by:										Re	me					ــر	_				1							
1, 14 + 1	19	- E	; 1	: `	,2																						1	C	1	7.											
Relinquished I	by		Ţ	Date	,	Tim	ne			Red	elv	ed	by:										٠.	, '	10	•															i
Relinquished	by			Date	_					Red	ceiv	ed	by	Lab	orator	ry:	,		ر دک																						



4080-C Pike Lane Concord, CA 94520 800-544-3422 (In CA)

			1 .	
CHAIN OF	-CUSTODY RI	ECOPO AND	ANAI VOIC	
CHAIN-OF	~vojiodi ni	ECOND MIND	VIIVE I OLO	

Labo	oratories 🗗	4	15-0	585-	785	2							(Outsid	e CA)															-14	-4	النعا	-i			ب			
Project Manager: (८.(٠૫.১.৮.)	<u> </u>	i VP-(. 11.				F	ho	ne I	ł: _]	-	2	4					A	NA	LY	S13	RI	EQL					ij.	7	4	0	İ	**		H/	PE		NG L
Address:								AX	_							15)									マンク・ローダー・ディー・ディー・ディー・ディー・ディー・ディー・ディー・ディー・ディー・ディ												Ş	EME:
Project Number:							F	roj	ect	Nan	10:]	8				9				١	¥					-					5	2	ğ	
203680	5016 01												<u> </u>]	8	5	a	١	1					2			1							3	1	E	8
Project Location:							9	Sam	ple	r Sign	nat 7	ure:			BTEX (602/8020)	D9) eugo	15 or 827	15 or 827	(413.1)	(413.2)	2			40 8	2		EPTOX - 8 Metals	Literit Mei	17872						SCHWCE	₹ K	a LaCE	SPECIAL R HITING RECUREMENTS
Sample	Lab#	INERS	mount			atr			P	res	tho	ed		npling	12/8020)	T se Gar	Nesel (80	ethuel (80	& Greek	Coast	70000 /8010	/8020	EPA 608/8080	7 000 P	28.78	CAM - 17 Ments	8 Meta	riority Pol	LEAD(7420/7421/239.2)	~ .	Ž			Ş	17 OF	150 SE	VEHEN SPEAK	
ID	(Lab use)	* CONTAINERS	Volume/A	WATER	SOIL	AIR	SLUDGE	ОТНЕЯ	Ę	S N		OTHER	DATE	TIME	OTEX (6)	BTEXTP	TPH as [TPH as	10E	100	EPA 601/8010	EPA 602	EPA 608	EPA 600	CDA ROKAROTE	3	EPTQ.	EPA - P	LEAD(7	ORGAN SAN	184			JA.	PRICETY ONE SERVICE (24 hg		MEHEN	SPECIA
12P3.80							-		×		Y	\top		y 3																				X				
11W.8		2	7	j					. 1				,	1)							X	丄														_		11
111W & 195		2	\top				П		i	一	İ		1	'1																	X					_		
MN 5 (2)		2									1		1	I.											X_							1_	Ц		_	_	_	Ш
									П																	_		Ш	_	_	_	\perp				4	4	\perp
SIL BANK		1											14.15							4		1_			_	_	L			4	_	-	_	X	_	_	_ -	\bot
116.17 Priline		1	Ü	Ĭ,							V		60.7	<u> </u>		_	_			_	_	_		_	_		<u> </u>			4	-	_	_	×		_	+	
													<u> </u>		_	_	_		_	4	\bot	<u> </u>	-	4	4	4	╁.			_	-	-		Ш			+	9
									L		\bot	_ _			$oldsymbol{\perp}$	┖	_		\sqcup	_	_	4	Ц	\perp	4	_	-	_		4	-	+-	<u> </u>	H	+	-	+	┼┤
				<u> </u>					_		_	_			_	_	┼	Ш		_	+	╄	$\left \cdot \right $	_	+	-	-	_	\vdash	-	+	1	4			-+	+	-
				L,					L								<u> </u>	L		4		L	لبا	Ц			L	<u> </u>					<u> </u>					1
Relinquished t	ρ <mark>΄</mark> γ:		. C	ate	•	Tin	1e			Зес	elve	d b	y:								Re	ma	rks	:								,						
4	•	li.	15	· ֆ.	-1													`		╛		1-	۲ -	3	w		3					•						
Relinquished t	ру		C	ate	,	Tin	ne		1	Rec	eive	d b	y:									!	<i>/</i>	.1														
Relinquished	by		Ē		 9 		ne	+		Rec	eive	d b	y Labo	ratory:																					_			



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

TEST RESULTS

09/22/88 JP

Page 1 of 3

CLIENT: Kelly Kline

Groundwater Technology, Inc.

4080 Pike Ln.

Concord, CA 94520

PROJECT#: 203-680-5016.01-15

LOCATION: Dakland, CA

SAMPLED: 09/06/88

BY: J. Mead

RECEIVED: 09/08/88

BY: K. Fillinger

ANALYZED: 09/14,15/88

BY: C. Manuel

MATRIX: Water

UNITS: ug/L (ppb)

COMPOUND	 	MDL	1LAB # 11.D.#	 	31142 #1	 	31143 RB 4	 	31144 #4	! 1	31145 #5
Bromodichloromethane		0.	. 5				0.5		0.5		3.5
Bromoform		Ø.	. 5		0.5		0.5		0.5		D.5
Bromomethane		Q.	. 5		0.5		0.5		0.5		a.5
Carbon tetrachloride		0.	.5		(0.5		(0.5		0.5		0.5
Chlorobenzene		Ø.	.5		(0.5		(0.5		0. 5		0.5
Chloroethane		Ø.	.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		0.66		(0.5		0.5		0.5
Chloromethane		0	.5		(0.5		(0.5		0.5		0.5
Dibromochloromethane		Ø	.5		(0.5		(0.5		0. 5		0.5 0.5
1,2-Dichlorobenzene		9	.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		Q.5		0.5
Dichlorodifluoromethane		Ø	.5		(0.5		(Ø. 5		0.5		0.5
1, 1-Dichlorcethane		Ø	.5		(0. 5		(0.5		0.5		Ø.5
1,2-Dichloroethane		0	.5		(0.5		(0.5		0.5		0. 5
1,1-Dichloroethene			.2		(0.2		(0.2		0.2		0.2
trans-1,2-Dichloroethene		0	.5		(0.5		(0.5		34		0.5
1,2-Dichloropropane		0	. 5		(0.5		(0.5		0.5		0.5
cis-1,3-Dichloropropene			. 5		(0.5		(0.5		0.5		0.5
trans-1,3-Dichloropropene			. 5		(0.5		(0.5	•	(0.5		0.5
Methylene chloride			.5		(0.5		1.6		0. 80		2.8
1,1,2,2-Tetrachloroethane			.5		(0.5		(0.5		(0.5		0.5
			5.5		(0.5		(0.5		(Ø. 5		0.5
Tetrachloroethene			1.5		(0.5		(0.5		(0.5		(e. 5
1,1,1-Trichloroethane).5		(0.5		(0.5		(0.5	•	(0.5
1, 1, 2-Trichloroethane), 5		(0.5		(0.5		540		3.7
Trichloroethere			5 3.5		(0.5		(0. 5		(0.5		2.5
Trichlorofluoromethane Vinyl Chloride			.0		(1.0		(1.0		(1.0 		(1.0

MDL = Method Detection Limit.

METHOD: EPA 8010



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

Page 2 of 3

CLIENT: Kelly Kline

PROJECT#: 203-680-5016.01-15

LOCATION: Dakland, CA

MATRIX: Water

TEST RESULTS UNITS: ug/L (ppb)

COMPOUND	1	MDL	ILAB # !I.D.#	 	31146 RB 6	 	31147 #6	i 1	31148 #3	1 	31149 #2
Bromodichloromethane		0.	. 5		0. 5		Ø. <u>5</u>		0.5		0.5
Bromoform			.5		0. 5		0.5		0.5		0.5
Bromomethane		0.	.5		0. 5		0.5		0.5		0.5
Carbon tetrachloride		Ø.	.5		0.5		0.5		0.5		0.5
Chlorobenzene		Ø.	. 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		Ø	.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-Dichlarobenzene		0	.5	(0.5		0.5		(Ø.5		(0.5
1,3-Dichlorobenzene		Ø	.5	(0.5		0.5		(0.5		(0.5
1,4-Dichlorobenzene		0	.5	(0.5		0. 5		(0.5		(0.5
Dichlorodifluoromethane		Ø	.5	4	0.5	•	0.5		(0.5		(0.5
1,1-Dichloroethane			.5	•	0.5	+	0.5		5.0		(0.5
1,2-Dichloroethane		0	.5		0.5	+	0.5		3.9		(0.5
1,1-Dichloroethene			. 2	•	0.2	•	0.2		0. 58		(0.2
trans-1,2-Dichloroethene			. 5		(0.5	+	(0.5		2.0		(0.5
1,2-Dichloropropane			. 5	,	0.5	•	(0. 5		(0.5		(0.5
cis-1,3-Dichloropropene			.5		(0.5		Ø.5		(0.5		(0.5
			.5		(0.5		(Ø. 5		(0.5		(0.5
trans-1,3-Dichloropropene			.5		(0.5		(0.5		(0.5		(0.5
Methylene chloride			.5		(0.5		(0.5		(0.5		(0.5
1,1,2,2-Tetrachloroethane			1.5		(0.5		(0.5		(0.5		(0.5
Tetrachloroethene			1,5		(0.5		(0.5		1.4		(0. 5
1,1,1-Trichloroethane).5		(0.5		(0.5		(0.5		(0. 5
1,1,2-Trichloroethane).5		(0.5		5.3		6.5		(0.5
Trichloroethene). 5). 5		(2.5		1.1		(0.5		⟨0.5
Trichlorofluoromethane Vinyl Chloride			Ø		(1.0		(1.0		(1.0	 _	<1.0

MDL = Method Detection Limit.

METHOD: EPA 8010



Western Region 4080-C Pike Lane, Concord, CA 94520 **4415) 685-7852** (800) 544-3422 from inside California (800) 423-7143 from outside California

Page 3 of 3

Kelly Kline CLIENT:

PROJECT#: 203-680-5016.01-15

LOCATION: Oakland, CA

Water MATRIX: UNITS: ug/L (ppb)

TEST RESULTS

COMPOUND	† 	MDL	ILAB # II.D.#	† 		! !
Bromodichloromethane		2.	. 5		(0.5	
Bromoform			.5		(0.5	
Bromomethane			.5		(0.5	
Carbon tetrachloride			.5		(0.5	
Chlorobenzene			.5		(0.5	
Chloroethane		0	.5		(0.5	
2-Chloroethylvinyl ether		-	.0		(1.0	
Chloroform			.5		(Ø.5	
Chloromethane			.5		(0.5	
Dibromochloromethane			.5		(0.5	
1,2-Dichlorabenzene			.5		(0.5	
1,3-Dichlorobenzene			. 5		(0.5	
1,4-Dichlorobenzene			.5		(0.5	
Dichlorodifluoromethane			.5		(0.5	
1,1-Dichloroethane			. 5		(0.5	
1,2-Dichloroethane			.5		7.B	
1,1-Dichloroethene			.2		(0.2	
trans-1,2-Dichloroethene			.5		3.8	
1.2-Dichloropropane		6	.5		(0.5	
cis-1,3-Dichloropropene		Q	.5		(0.5	
trans-1,3-Bichloropropere		Q	1.5		(0.5	
Mathylene chlorida		Q	.5		(0.5	
1,1,2,2-Tetrachloroethane		9	5.5		(0.5	
Tetrachloroethene		Q	0.5		(0.5	
1,1,1-Trichloroethane		٤	1.5		(0.5	
1, 1, 2-Trichloroethane			ð. 5		(0.5	
Trichloroethene		6	ð.5		52	
Trichlorofluoromethane		Ę	ð.5		(0.5	
Vinyl Chloride		1	1.0		(1.0	

MDL = Method Detection Limit.

METHOD: 8010



Western Region 4080-C Pike Lane, Concord, CA 94520 (415) 685-7852 (BOO) 544-3422 from Inside California

(800) 423-7143 from outside California

Page 1 of 2

69/14/88mt

CLIENT: Kelly Kline kf

Groundwater Technology, Inc.

4980 Pike Ln.

Concord, CA 94520 -

PROJECT#: 203-680-5016.01-16

LOCATION: Oakland, CA

SAMPLED: 09/06/88

BY: J. Mead

RECEIVED: 09/08/88

BY: K. Fillinger

ANALYZED: 0.0102272

BY: P. Hanners

MATRIX: Water

TEST RESULTS

mg/L (ppm) UNITS:

	1	MDL	ILAB #	ī	31151	ı	31152	1	31153	1	31154	1	31155	1
COMPOUNDS	1		I.D.#	ŧ	#1	1	#4	1	#5	1	#6	Ī	#3	1

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



Page 2 of 2

CLIENT: Kelly Kline

PROJECT#: 203-680-5016.01-16

LOCATION: Oakland, CA

MATRIX:

Water

TEST RESULTS

UNITS: mg/L (ppm)

Total Petroleum Hydrocarbons as Mineral Spirits

1.0

(1.0

(1.0

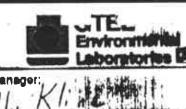
MDL = Method Detection Limit; compound below this level would not be detected. Results rounded to two significant figures.

METHOD:

Modified EPA Method 5030/8015

SAFY KHALIFA. Ph.D., Director

ect Manager: Kellu K	line this	*	ļ				F	ho	ne f	1:									11.42	A	NA	LY	313	AI	EO	UE	#		1.		H	!" !	1		p li	14	0.65	rann. M	1	¥ 1		1
Iress:	^	-	-				F	AX	#:											1	T	T	Τ	Γ						1	1		1				ď		- Car		A TO	ľ
G I I (Lingard	_	_	_	-	-	-	Prol	ect	Nar	ne:	_	-			-		(602/8020/8015)				:	3			,		2	1	i	į		1	1		4	4					
	- 3016 (1.0					1.7	77	200		200	1	1	or L	ر			/8020		2		11 8 17	2							1	4	i i	1!	13	*		ď			-1	K	
ect Location:						_				_	$\overline{}$	ture	_	^.				(602	8270	8270		9	8			*		f		d.	i i	30	H	1	N.				4			腰
	leland Juna 7					m	1.1	8	H	oline	15 or	15 0	(413	5				0 80		Ė			X	8		2			ij,	1	1	1										
amplé	Lab#	NERS	Amount		M	atı	ix	9				bd ved	,	San	npl	ling	2/8020)	in Ges	90 Jane	octroel (90	Greess	Greens	9010	8008	- 8000	SOUTH PC	8246	86278		8 Blanch	Oralle Pos	7129/102	LEAG	18		K	ā			*	101	
ID	(Lab use)	# CONTAINERS		WATER	SOR	AIR	SUDDRE	отнея	¥	E SOR	8	NOME	CINER	DATE		MIT WE	BTEX (600	втехля	TPH as DX	TPH as Je	Total Of	TOWN COM	EPA 601A	EPA 602A	EP'A 608A	EPA 608	EPA 624	EPA 625	C.685. 17	BATCH	3.30	LEADO74	OPIGABLE	000		fical						
ip Blank		1			287			075.0		1	X	\dagger	1	1/45	+					1	1	+	T	T				44	J					Ī.	Ŀ	I	I	Į,		柳	įį	11
te Han	L	1				T	Ħ				Í	1	7	1	1								I	L		eī.		1	.1		Li	111	L					4	7		W	
BI	1	2				Т	П				1		٦										X	-	-	-	-	4	4	-	L	Ŀ	+	E	4	#	1		ш		4	Щ
1		1							X		I			T	4	5:42								L	L	_	ı			L			ننا	X	٤	يبلي	ш	M.	Щ			1
1 .		2								Ц.,	I				!	5.47	_						X		1			داد		L	L	_	ننه	L	نيا	4	4	lil.		Ü	4	AL.
281	42	1	Г																				×	×	-	-	-	=			E		+	1	1	+	蚍	-			4	崊
4	•	2	Γ						X							6:05	Ĺ							1	L	4.	i	4	Ŀ	į.	L	L	1	X	بنابة	4	4	4	범		1	1
4		2													1	6:05					_	1	_ X	4_	1		1		نبا		u	Ļ	4	بنا	با	4	4	4	4	4	ļ,	4
2B5	- wheat	14	-	1	t										1	133		L			_	1	1	1	4	-	L	5	H		Ļ		Ш	H		118	de la	· ilii			*	44
5	1	2	1						×						1	6,21			_		4	4	1	1	L.	i.	Ŀ	Ŀ	Ц	L	نيا	1	L	劃	*	i jr		al:		44 III		#
5	Asta a	12	4								1					4.5	1_					4	X	1	Li.		L.	i	Ц	L	L	la:	Ц	-	(1-E)	20	giorgi.	-114	Ш	H.	Щ	4
elinquished t	n. C	9	//	Date /	1	Tin	ne ·/	ý.	-	300	elv	1	1	4		12,	1	5	16	1	(Re	ma	rks	!	İ		i	1.1.	1	J		押	機能	1		1	-		14	
elinquished I	Dy .		t	Date	9	Tir	ne		1	Rec	elv	ed t	by:						f.	i	,		*		- ; - i	-		***	11.	+	!	111	• 1	Ì	, it	1		1	7	I		1



15-665-7882 800-544-3422 (In CA) 800-423-7143 (Outside CA)

CHAM OF CUSTORY HECOMO

-	Periodis	4.	-		_	_	_				_	_	_				_	_			_	1	4	4		1 le	J.	: 1	N.	W	1		* <u>†</u>			HEL.	ηψ.	0.0				1171.31	110
roject Manager: Kullu Kl	. E	1	1				F	ho	ne i	#:	2							i	_	N.	AL	₹9	13	Re		/世	1						1		74	1			1 34	11	-	F.	
Address:	Com con	3	2				F	AX	#:								i i				4			İ	1	1	i,					i	- F	1	h	4		1		ŀ			
Project Number:							-	Proj	ect	Na	me	1													743		:	4			ν: ! .]	# 1	3	1		8	ď	7.0	i și		11.1	41	
203-680	-5016	-1	2	,	_	3	S	4	1	4	_	100							5				(4)			.1	1			1	-	1		1	3				10	1			
Project Location	<i>j</i> · .			()	le.	H.	r)	San		1	300	ntur		2			8015	15/82/70)	5 or 82709				1	ŀ	1	Se Only					北京	20.00			5								
Sample	Lab#	NERS	nount	1)	M	atr	ix		P			ve od		Sam	pling	2,6020)	esoline (Second (90	edul (801	4	宁	(1)	8016	96625	- 5908	BOBO PC	6246	NZ/		8 Mecella	PA AN	BOYTHZIK	C LEAST		1		٢			1	, "	Ĺ	
ID	200 #	# CONTAINERS	Volume/Ar	WATER	SOR	AIR	SLUDGE	OTHER	HC	#O#	200	NOME	OTHER	DATE	MAIT	BTEX (60	TPH # G	TPH as D	TPH	TOG (41)	TOG (411	TP99 (418	EPA SOL	EPA eda	EPA COL	EPA 605	EVARSA	THE SEC	3	i di	THE P.	F EEABR74	OPCAR	Compa	1	明		ie.	,		4.	iš.	1
· RBC	1	8	T				Г				X			%/r	8								4	1	4	_		-	4	1	in	#		#	#		****	I.	NAME OF	11/2	888		1100
46		2							х		×		×	1	6:35			L		L	L	L	_	.,	1	11	4	٠	1	1	t.	Ĺ	1	Ł	4	4		er fat			ali.		117.0
46		2									×				6.35	L		L		L	L	L	x	٠.	1	1	4	_	H	4	1	1	-	4	*			Milit	113				
4RB3		1									1						L	L	_	_	L	L	X.	**		=			Ħ	#	+	7	L	1	Ŧ		10 PM	19° .4 11171	117				
3		2							×		1				6.48	1	L		į.	_	L	_			1	1	4	1	14	Ŀ	4	4	1	12	4	4		era. Bien		L		J.	September 1
3		2	1						L	L	1		L		6.4	8	_	L	L	١.	_	_	X	_	j.	4	-1	-	44	4	4	1	H	į.	4	4							
882	3.4	1								1	1		_			1	╀	1	1	-	-	1	_	-1	#	i	.10	14	انا	1	4	1	+	4	*	4							
بد	الملحا	2	4						×	1	Ц	L.		1	7 W	+	1	1	1	-	1	+	-		į		4		die	+	4	4	٠	¥		*							
2	Lane Maria	-	2					L	L	L	Ц	_	L	1	7:00	1	+	1	4	-	╀	-	×	hi	+	۵		14	ALC:	+	1	H				1			1	1 "			į.
	PHILIPPIN		L	1	L	L	1	L	L	L	L	1	_	\vdash	-	+	+	1	+	╀	╀	┝	H	lie.	4	H	-	14	4	4	111	μ	i i''	1				- 78		II 44	r in		
	sto Lett.		L		L	L	L	L	L	بل	L	L	L	1		Ŀ	L.	L.	4	L.	L	+	L	ننا	L pu	L	Ļ	ш	11	4	L	4	Ц,	14	1 3		17	4	216	1112			dia.
Relinquished by:	Hind	1	D	ate	K	lm ·/	9	F	160	elv	- 3	by:	11	Cy	a	1	6	0	1	0		F	ler	new	PKS	•			C	1	i		f :#	10	P.	-		制	di.	201.00			
Relinquished by			D.	ate		īm	9	F	700	elv	ed	by:		1					ŭ,		1			1			1			1.	10				131						The state of		
Relinguished by	Kline		. 1	ate S	17 M 1 D	im j:(• X		H	elv L	100 (by:	L	Y	iu	i	4	2	21		لب				1		. 1	1.1		-		C.	1	i i	4				*				

oject Manager:	Spinal	NI.	;				1	ho	ne i	#: <i>/</i>									A	MA	LY	915	3 H	#d	U	8	r			ł	d.				e del			il.	<i>(1)</i>	
Kelly	Kline						_	_	_	_	_	_	_	-					+	Т	Т	+	Т	Т	-	T	T I	1		H			111			n,	148			1
ddress: T	Conce		1	7				FAX									S)		;				1			1		1		1	T	T	I	4			• •		N.	
roject Number:	Conce	444		_	_	-		Pro	ect	Na	ne:	1	.,	_			9020/B015)					418.1)								l	1			8				, i i i	1	
203-68	0-5016		0	1				5	d	1	_	K		1.14	_		22/802		Ŕ	1		8			1		1			1	1	1		7		ď	(r∈t) hi		4	
rolect Location:	, ,		Q				1	San	nple	r 9	gna	ture:	: ~	11.			39) ec	OK 82	9 82	13.1	13.27	00			ő		9	-		1	1	1	1	2		ø		j.	1	
Ouk	and		-	1	_	Matrix Method Samplin						1	-	8015	2108	4	-	1		1	8			1	1				9	X.			6		1					
Sansala	144	ERS.	nounk		N	afi	K		P			ved ved		Sam	piling	2/802) person	poppe	8	5	1	1				1	1		ł			3	3	1	()		*	#	
Sample ID	Lab use	# CONTAINERS	MA/An	6			9	ER					6	,iii	w	X (60	ATTY.	200	1	100	0	Per			8		A COR	1		5			2	Ç.			100			
	only	8	Volum	WATER	S	AIR	SUNDGE	OTHER	至	Š	ਲ	Š	5	DATE	TIME	BIEX	BTEVI	F	T	Top	ğ	5	6	6	â	a	1 8		18	7 8			5	3			T.	11	1	150
RB8		1	1	1							X		1	9/4/61								-	6	1	1	1	1	4	1	1	4	1	۵	1	ناب	11	gr gr	1 71		्य
X		2							X		I		I	1	7:10		L	L				1	4	-	Ļ	+	+	4	#	4	1	4	4	X.	4					
8		2									1		1	\perp	1:10	1	L	-		-	4	4	X.	+	+	+	+	4	1	+	4	4	H	11	4	関係		114	3151	1
					L				_	_	i	4	+			╀	-	╀	-	-	Н	+	+	+	+	+	+	41	+	+	+	+	+	+	-			****		T
		-	_	_	_	L	_		-	-	4	Н	+	2	-	+	-	+	1	-	Н	+	+	+	+	+	+		1	+	4			*	1	侧草			1	Ţ
		+	+	+	╀	-	-	-	╀	-	1	-	+		-	+	+	╁	+	-	H	+		+	+	+	+	1	1		1	-	٦	1		I		20	13	L
		+	+	ŀ	╁	┝	-	\vdash	╁	-	-	H	+			+	1	+	+	1		1	+	1	1	+	1				1			1		Al.	J		1	7
-		+	+	+	+	+	H	+	t	۲	-	H	+		1.61	-	†	T	T	1		7	1	1	1	T	T	I		I	I		A	أغار	140					٠,
	1 2 8 6	+	+	+	+	+	t	+	+	t	T	1			. *	T	T	T	1					I	I	1	T		1	1		. 1		16.5		t _{io} g			山	
	100	-	+	t	+	+	t	T	†	T	T	Ħ	٦			T	T	T		1			7		1							1	ľ			NA.		EL.	4	4
Relinquished		+	,	Dal	8	Tir	ne	_	1	Re	belt	/ed l	by:			1,			1	TI.		R	em	ark	\$				1	-		4	1		111			1	計	1
1	11. 0	1	γ.	/	1	X	1/	1		_	K	ll	1	1	14	un	1	_		_	¥			Ů	+			*		i			ı.			1:1	1	7	L	111
Relinquished	New York		7	Da	te	Tit	ne		- 11	Re	cel	bev	бу:	1							ï			į	ŀ					ï		'n	1		4:			對	4	1
								್				. 0			93 92		_				1	1			1				1	1		1	!	10	i!	16	1		1	11

APPENDIX D MONITORING DATA

Water Table Elevations Safety-Kleen Oakland, California Monitored April 11, 1990

			r	
	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.42		0.57
MW−2	8.20	8.18	and the second second	0.02
MW-3	6.66	7.23		-0.57
MW-4	10.32	9.56		0.76
MW-5 .	10.28	9.83		0.45
MW−6	8.97	8.91		0.06
MW-7	8.57	11.38	7.55	0.25
MW-8	7.80	7.76		0.04
MW-9	8.21	11.08	7.28	0.17
MW-10	10.43	9.37		1.06
MW-11	7.91	8.00		-0.09
MW-12	6.74	7.84		-1.10
MW-13	8.08	9.13		-1.05
SK-1	8.44	12.05	7.09	0.36
SK-3	8.45	11.48	7.37	0.26

^{*} Elevation adjusted for product density

Water Table Elevations Safety-Kleen Oakland, California Monitored March 14, 1990

	,			
	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.11		0.88
MW-2	8.20	7.80		0.40
MW-3	6.66	6.78		-0.12
MW-4	10.32	9.26		1.06
MW-5	10.28	9.51		0.77
мw-б	8.97	8.56		0.41
MW−7	8.57	12.18	6.9	0.61
MW-8	7.80	7.38		0.42
MW-9	8.21	10.82	6.91	0.52
MW-10	10.43	9.13		1.30
MW-11	7.91	7.58		0.33
MW-12	6.74	7.17		-0.43
MW-13	8.08	8.68		-0.60
SK-1	8.44	11.99	6.68	0.70
SK-3	8.45	11.25	7	0.60

^{*} Elevation adjusted for product density

Water Table Elevations Safety-Kleen Oakland, California Monitored January 30, 1990

	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation
MW-1	7.99	7.03		0.96
MW-2	8.20	7.73		0.47
MW-3	6.66	6.54		0.12
MW-4	10.32	9.18		1.14
M₩-5	10.28	9.37		0.91
MW-6	8.97	8.37		0.60
MW-7	8.57	11.86	7.2	0.44
MW-8	7.80	7.26		0.54
MW-9	8.21	11.07	7.11	0.31
MW-10	10.43	9.06		1.37
MW-11	7.91	7.34	100	0.57
MW-12	6.74	7.38		-0.64
พ ₩−13	8.08	NA **		NA
sk-1	8.44	12.04	6.92	0.50
SK-3	8.45	11.61	7.15	0.41

^{*} Elevation adjusted for product density

NA ** Not Available, well inaccessible

Water Table Elevations Safety-Kleen Oakland, California Monitored January 3, 1990

				1
,	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.53		0.46
MW-2	8120	8.22		-0.02
MW-3	6.66	7.13		-0.47
MW-4	10.32	9.67		0.65
MW-5	10.28	9.88		0.40
MW-6	8.97	8.87		0.10
MW-7	8.57	NA **	• • = 1114-1114-1114-1114-1114-1114-1114-11	NA
MW-8	7.80	7.75		0.05
MW-9	8.21	10.94	7.44	0.07
MW-10	10.43	9.55		0.88
MW-11	7.91	7.90		0.01
MW-12	6.74	7.46	449	-0.72
MW-13	8.08	9.02		-0.94
SK-1	8.44	11.50	7.39	0.23
SK-3	8.45	11.27	7.58	0.13

^{*} Elevation adjusted for product density

NA ** Not Available, well inaccessible

Water Table Elevations Safety-Kleen Oakland, California Monitored November 29, 1989

Well No.	Casing Elevation	Depth to Water	Depth to Product	Water Elevation
MW-1	7.99	7.69		0.30
MW-2	8.20	8.47		-0.27
MW-3	6.66	7.73		-1.07
MW-4	10.32	9.90		0,42
MW-5	10.28	10.25		0.03
MW-6	8.97	9.43		-0.46
MW-7	8.57	11.39	8.03	-0.13
MW-8	7.80	8.10		-0.30
MW-9	8.21	11.13	7.75	-0.22
MW-10	10.43	9.69		0.74
MW-11	7.91	8.45		-0.54
MW-12	6.74	8.55		-1.81
MW-13	8.08	9.75		-1.67
sk-1	8.44	11.79	7.65	-0.04
SK-3	8.45	11.33	7.91	-0.14

^{*} Elevation adjusted for product density

Water Table Elevations Safety-Kleen Oakland, California

Monitored November 1, 1989

	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.23		0.76
MW-2	8.20	7.91		0.29
MW-3	6.66	6.66		0.00
MW-4	10.32	9.40		0.92
M₩ -5	10.28	9.55		0.73
MW-6	8.97	NA **		NA
MW-7	8.57	11.28	7.23	0.53
MW-8	7.80	7.44		0.36
MW-9	8.21	11.05	6.95	0.44
MW-10	10.43	9.29		1.14
M₩-11	7.91	7.52		0.39
MW-12	6.74	6.94		-0.20
MW-13	8.08	8.62		-0.54
SK-1	8.44	11.60	6.92	0.58
SK-3	8.45	11.35	7.07	0.52

^{*} Elevation adjusted for product density

NA ** Not Available, street box lid frozen shut

Water Table Elevations Safety-Kleen Oakland, California Monitored September 28, 1989

	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.56		0.43
MW-2	8.20	8.39	5-505	-0.19
MW-3	6.66	7.40		-0.74
, MW-4	10.32	9.71		0.61
MW-5	10.28	10.00		0.28
MW-6	8.97	9.18		-0.21
MW-7	8.57	11.61	7.79	0.02
MW-8	7.80	7.93		-0.13
MW-9	8.21	11.44	7.48	-0.06
MW-10	10.43	9.51		0.92
MW-11	7.91	8.17		-0.26
MW-12	6.74	8.01	200	-1.27
	8.08	9.59		-1.51
sk-1	8.44	11.86	7.43	0.12
SK-3	8.45	11.99	7.52	0.04

^{*} Elevation adjusted for product density

Water Table Elevations Safety-Kleen Oakland, California Monitored July 27, 1989

	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.28		0.71
MW-2	8.20	8.16		0.04
MW-3	6.66	7.00		-0.34
MW-4	10.32	9.37		0.95
MW-5	10.28	9.62		0.66
MW-6	8.97	81.72		0.25
M₩-7	8.57	11.60	7.33	0.39
MW-8	7.80	7.65		0.15
MW-9	8.21	11.79	6.97	0.28
SK-1	8.44	11.69	7.02	0.49
sk-3	8.45	11.76	7.13	0.39

^{*} Elevation adjusted for product density

Water Table Elevations Safety-Kleen Oakland, California

Monitored June 30, 1989

				-
٠	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.55		0.44
MW-2	8.20	8.49		-0.29
MW-3	6.66	7.64		-0.98
MW-4	10.32	9.70		0.62
MW-5	10.28	10.05		0.23
MW-6	8.97	9.28		-0.31
MW-7	8.57	11.40	7.88	-0.01
MW-8	7.80	8.04		-0.24
MW-9	8.21	11.92	7.42	-0.11
SK-1	8.44	11.83	7.47	0.10
SK-3	8.45	11.56	7.6	0.06

^{*} Elevation adjusted for product density

Water Table Elevations Safety-Kleen Oakland, California Monitored May 22, 1989

			150	
	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	6.93		1.06
MW-2	8.20	7.88		0.32
MW-3	6.66	6.73		-0.07
MW-4	10.32	9.02	10.00	1.30
MW-5	10.28	9.23		1.05
MW-6	8.97	8.26		0.71
MW−7	8.57	10.58	7.42	0.52
MW-8	7.80	7.21		0.59
MW-9	8.21	11.38	6.83	0.47
SK-1	8.44	11.87	6.75	0.67
SK-3	8.45	11.50	6.97	0.57

^{*} Elevation adjusted for product density

Water Table Elevations Safety-Kleen Oakland, California Monitored April 20, 1989

	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	6.67		1.32
MW-2 -	8.20	7.48		0.72
MW-3	6.66	6.42		0.24
MW-4	10.32	8.77		1.55
MW-5	10.28	9.02		1.26
MW-6	8.97	8.09		0.88
MW-7	8.57	8.03	7.47	0.99
MW-8	7.80	7.00		0.80
MW-9	8.21	11.39	6.24	0.94
SK-1	8.44	12.07	6.12	1.13
SK-3	8.45	11.61	6.35	1.05

^{*} Elevation adjusted for product density

Water Table Elevations Safety-Kleen Oakland, California Monitored March 23, 1989

	Casing	sing Depth to De		Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	6.46		1.53
MW-2	8.20	7.19		1.01
MM-3	6.66	6.25		0.41
MW-4	10.32	8.63		1.69
MW-5	10.28	8.90		1.38
MW-6	8.97	7.96		1.01
MW-7	8.57	8.45	7.12	1.18
8-WM	7.80	6.78		1.02
MW-9	8.21	10.91	6.1	1.15
sk-1	8.44	NA **	www.www.eannanae	NA
SK-3	8.45	11.61	6.07	1.27

^{*} Elevation adjusted for product density

^{**} Not Available, truck parked over well

Water Table Elevations Safety-Kleen Oakland, California Monitored February 22, 1989

	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.21		0.78
MW-2	8.20	7.92		0.28
MM-3	6.66	6.89		-0.23
MW-4	10.32	9,34		0.98
MW-5	. 10.28	9.58		0.70
MW-6	8.97	8.63		0.34
MW-7	8.57	NA **		NA
MW-8	7.80	7.50		0.30
MW-9	8.21	11.24	6.9	0.44
SK-1	8.44	12.33	6.74	0.58
SK-3	8.45	11.75	6.94	0.55

^{*} Elevation adjusted for product density

^{**} Not Available, pump in well

Water Table Elevations Safety-Kleen Oakland, California Monitored October 13, 1988

	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation
MW-1	7.99	7.61	302 31000	0.38
MW-2	8.20	8.46		-0.26
MW-3 ·	6.66	7.52		-0.86
MW-4	10.32	9.75		0.57
MW-5	10.28	10.10		0.18
MW-6	8.97	9.28		-0.31
MW-7	8.57	NA **		NA
MW-8	7.80	8.04		-0.24
MW-9	8.21	11.92	7.36	-0.06
sk-1	8.44	11.90	7.5	0.06
SK-3	8.45	11.94	7.4	0.14

^{*} Elevation adjusted for product density

NA ** Not Available, pump in well

Water Table Elevations Safety-Kleen Oakland, California Monitored September 7, 1988

	Casing	Depth to	Depth to	Water
Well No.	Elevation	Water	Product	Elevation *
MW-1	7.99	7.32		0.67
MW-2	8.20	8.13		0.07
MW-3	6.66	7.04		-0.38
MW-4	10.32	9.40		0.92
M ₩-5	10.28	9.70		0.58
MW=6	8.97	8.81		0.16
м ₩-7	8.57	12.32	7.11	0.42
MW-8	7.80	7.64		0.16
MW -9	8.21	11.36	7.03	0.31
sk-1	8.44	12.11	8.9	-1.10
sk-3	8.45	12.23	6.97	0.43

^{*} Elevation adjusted for product density

APPENDIX E SOIL VENT TESTING

SOIL VENT FEASIBILITY TEST SAFETY-KLEEN OAKLAND SERVICE CENTER 404 MARKET STREET OAKLAND, CA

On January 18, 1990, Groundwater Technology, Inc. conducted a Soil-Vent Feasibility Study at the Safety-Kleen Oakland Service Center. The feasibility study consisted of collecting data to determine the flow characteristics of the soil, the radius of influence for vapor extraction wells, and the concentration of hydrocarbon vapors in the soil gas.

A soil-vent remediation system operates by creating a vacuum in soil-vent points with a high-vacuum blower. This vacuum draws fresh air through the ground to the contaminated soil. The liquid hydrocarbons trapped in the soil vaporize into the air within the pore spaces and are captured by the vacuum at the soil-vent point. This air may then be treated to remove the hydrocarbon vapors and discharged to the atmosphere.

To determine the applicability of soil-vent remediation, a soil-vent feasibility study was conducted. The two criteria for determining the feasibility of soil-vent feasibility are the ability of air to move through the soil (transmissivity), and the concentration of hydrocarbon vapors in the air extracted from the soil.

To measure the transmissivity of the soil, a vacuum drawdown test was conducted. This test is similar to a pump test for a water well. The test was conducted by using an Internal Combustion Catalytic Unit (ICCU) which utilizes a 1-1/2 horsepower high-vacuum blower to evacuate air from the soil-vent point being tested. The vacuum created by the blower was measured in inches of water column by a vacuum gauge and the air-flow velocity was

measured with a hot-wire anemometer. An existing groundwater monitoring well was utilized at the Safety-Kleen site for the vacuum drawdown test and the vacuum induced in nearby monitoring wells was measured using magnehelic vacuum gauges. To determine the concentration of hydrocarbon vapors in the extracted air, samples were collected in Tedlar bags for laboratory analysis.

At the Safety-Kleen location, groundwater monitoring wells MW-9 and MW-8 were utilized as vapor extraction points for two vapor extraction tests. These monitoring wells are screened from 5 to 30 feet below surface. The depth to water in these wells was approximately 9 feet in MW-9 and 7.75 in MW-8. Several feet of free floating mineral spirits were present on top of the water in MW-9.

Lithologic data from the boring logs for the groundwater monitoring wells at the site suggests that the subsurface materials are fairly uniform across the site and consist primarily of clayey, silty, fine-grained sands in the interval above the water table.

During the first test, monitoring well MW-9 was used as the extraction point. For a second test, monitoring well MW-8 was used as the extraction point. During both of these tests, vacuum response was measured in other on-site groundwater monitoring wells. The wells labeled as "MW" wells were all installed by Groundwater Technology and are completed from 5 to 30 feet with approximately 2 to 4 feet of screened section above the water table. Two monitoring wells on the site (Sk-1 and SK-3) were installed by another consultant, and are screened from 5 to 20 feet below grade. The high vacuum blower was operated at a vacuum of approximately 60- to 70-inches of water column while venting from MW-9. Flow from this well was approximately 3.5 cubic feet per minute (CFM). While venting from MW-8, vacuum was approximately the same and flow was approximately 4.0 CFM.

During the period of each vent test, the induced vacuum in monitoring well SK-3 was monitored versus time by utilizing a Magnehelic vacuum transducer capable of detecting variations of .01" of water column. The data from this transducer along with the time of each measurement was recorded in an ORS Environmental Equipment Model DL-120 Datalogger. This data set was then downloaded at the office into an IBM-PC computer for reduction and analysis.

RESULTS

The vacuum drawdown data from monitoring well SK-3 was plotted versus time on a log-log plot and analyzed by matching with Hantush type-curves for leaky confined aquifers inn a method analogous to that used for the analysis of aquifer pumping tests. The applicability of using aquifer testing methods in the analysis of vapor extraction tests was explored by J.W. Massman in the Journal of Environmental Engineering, Vol. 115, No. 1, February, 1989. The analysis of time-drawdown data from soil vent tests offers the advantage of allowing for a more accurate determination of transmissivity to air and the opportunity to more accurately detect inhomogeneities in the subsurface materials beneath the potential soil vent test.

The data plot and type-curve fit generated for the soil vent test on Monitoring Well MW-9 are attached. The analysis of this test yielded a hydraulic conductivity to air of 0.00235 meter per second. This is a relatively low value due to the silty and clayey nature of the near surface materials at the site. Due to the distance from Monitoring Well MW-8 to SK-3 being in excess of the radius of influence for the well, no drawdown data was recorded during the vent test on MW-8

Radius of influence for the soil vent points was determined directly by plotting the induced vacuum in the observation wells against the log of the distance from the vented well. When the observation wells are at different distances from the vented well, this plot defines a straight line that can be extended to the zero vacuum intercept to estimate radius of influence. The plots of the data are attached. During the test on MW-0, a radius of influence of less than 35 feet was determined. This was based on a significant induced vacuum of 0.35-inch of water, measured in SK-3 at a distance of 18 feet, and near zero readings in monitoring wells at 38 and 40 feet from the vented well. During the test on MW-8, the closest observation well was 50 feet away and the data from this well is inconclusive, indicating that if there was an influence on this well, it was small enough to be lost in noise created by wind at the site.

Given the low flow (3.5 to 4.0 CFM) recovered during the tests, several venting wells would be required to supply an adequate volume of air for efficient cleanup of the subsurface. Since the plume at the site extends underneath buildings, and since the unsaturated zone is generally less than 8 feet in thickness, it has been recommended that a system of horizontal trenches at the perimeter of each building may be the most efficient extraction system for this site.

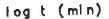
Samples of extracted air were collected during the soil vent testing conducted on MW-8, and were submitted to a California-certified laboratory for analysis. After venting from extraction point MW-8 for 20 minutes, 63 minutes, and 120 minutes, samples of the influent air to the ICCU were collected in Tedlar bags. A sample of the effluent air from the ICCU was simultaneously collected at about 20 minutes into the test. The influent and effluent samples collected at 20 minutes into the test (MW8-IN1 and MW8-OUT1) as well as the influent sample collected after 120

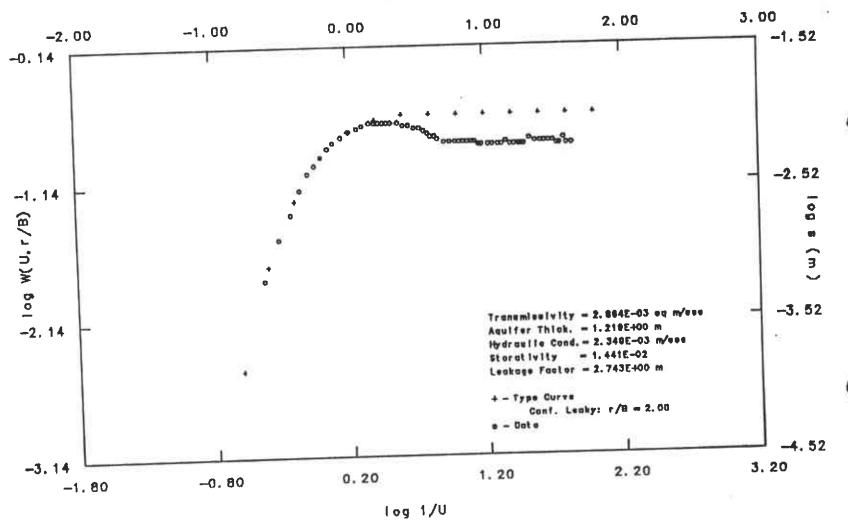
minutes (MW8-IN3) were submitted for laboratory analyses. The samples were analyzed within 48 hours of collection for volatile organic compounds using U.S. Environmental Protection Agency (EPA) Method 8010 to look for chlorinated components and also for Total Petroleum Hydrocarbons (TPH) as Mineral Spirits. The laboratory analyses reports are attached. No chlorinated components were detected in either the influent or effluent samples. The analyses for TPH as Mineral Spirits detected 40 micrograms per litter (ug/l) in sample MW8-IN1, 24 ug/l in sample MW8-OUT1, and 8 ug/l in sample MW8-IN3. Since monitoring contamination, it is recommended that the soil vent system be retested after installation in order to obtain the data necessary to design emission controls for the site.

EMISSION CONTROLS

This test was conducted as a pilot test for soil vapor extraction under Regulation 8, Rule 46 of the Bay Area Air Quality Management District (BAAQMD). The extracted vapors were routed through the ICCU where the hydrocarbon vapors were combusted. Effluent concentrations were monitored with a Lower Explosive Limit Meter at intervals of approximately 30 minutes while the system was operating.

SK OAKLAND * SVT MW9-SK3





GROUNDWATER
TECHNOLOGY, INC.

Data for Soil Vent Test

SAFETY KLEEN OAKLAND

Date of Test: 1/18/90 Well Name: MW9-SK3

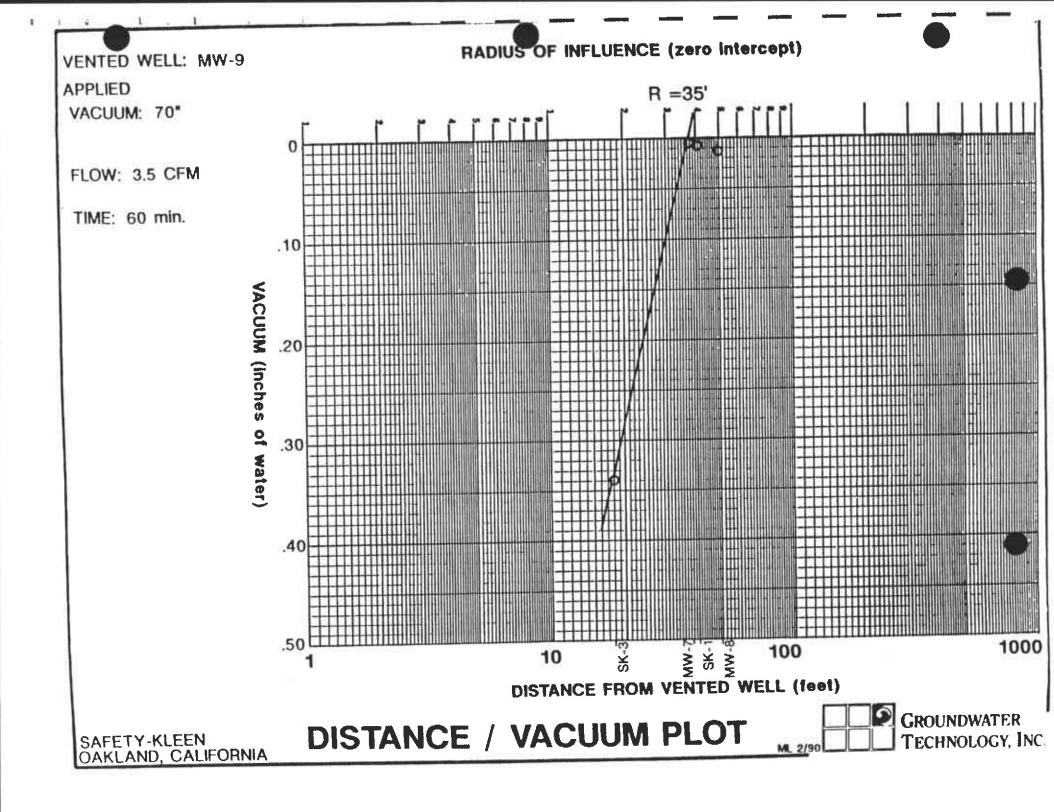
4.000 ft Aquifer Thickness (b) = Vented Well Discharge(Q) = 3.000 cfm 3.000 0.167 ft Radius of Vented Well =

Distance of Observation Well from Vented Well = 18.0 ft

			2
Entry `	Time(t)	Drawdown(s)	t / d
No.	(min)	(ft)	(min/sq ft)
*****	*******	*******	*****
1	0.000	0.000	
2	0.033	0.000	1.02E-04
3	0.067	0.000	2.07E-04
4	0.101	0.000	3.12E-04
5	0.167	0.000	5.15E-04
6	0.234	0.002	7.22E-04
7	0.300	0.004	9.26E-04
8	0.368	0.006	1.14E-03
9	0.434	0.009	1.34E-03
10	0.500	0.012	1.54E-03
11	0.568	0.014	1.75E-03
12	0.634	0.016	1.96E-03
13	0.700	0.018	2.16E-03
14	0.768	0.020	2.37E-03
15	0.900	0.022	2.78E-03
16	1.034	0.024	3.19E-03
17	1.167	0.025	3.60E-03
18	1.301	0.026	4.02E-03
19	1.433	0.027	4.42E-03
20	1.567	0.027	4.84E-03
21	1.701	0.028	5.25E-03
22	1.833	0.028	5.66E-03
23	1.967	0.027	6.07E-03
24	2.100	0.027	6.48E-03
25	2.350	0.027	7.25E-03
2 6	2.600	0.026	8.02E-03
27	2.850	0.026	8.80E-03
28	3.100	0.025	9.57E-03
29	3.350	0.025	1.03E-02
30	3.600	0.024	1.11E-02
31	3.850	0.023	1.19E-02
32	4.100	0.022	1.27E-02
33	4.350	0.022	1.34E-02
34	4.600	0.021	1.42E-02
35	5.100	0.020	1.57E-02
36	5.600	0.020	1.73E-02
37	6.100	0.020	1.88E-02
38	6.600	0.020	2.04E-02
39	7.100	0.020	2.19E-02

SAFETY KLEEN OAKLAND * SOIL VENT TEST * MW9 - SK3

7.600	0.020	2.35E-02
8.100	0.020	2.50E-02
8.600	0.020	2.65E-02
9.100	0.019	2.81E-02
9.600	0.019	2.96E-02
10.600	0.019	3.27E-02
11.600	0.019	3.58E-02
12.600	0.019	3.89E-02
13.600	0.019	4.20E-02
14.600	0.020	4.51E-02
15.600	0.019	4.81E-02
16.600	0.019	5.12E-02
17.600	0.019	5.43E-02
18.600	0.019	5.74E-02
19.600	0.019	6.05E-02
21.600	0.021	6.67E-02
23.600	0.020	7.28E-02
25.600	0.020	7.90E-02
27.600	0.020	8.52E-02
29.600	0.020	9.14E-02
31.600	0.020	9.75E-02
33.600	0.019	1.04E-01
35.600	0.019	1.10E-01
37.600	0.021	1.16E-01
39.600	0.019	1.22E-01
43.600	0.019	1.35E-01
	8.100 8.600 9.100 9.600 10.600 11.600 13.600 14.600 15.600 17.600 21.600 23.600 25.600 27.600 29.600 31.600 33.600 37.600 39.600	8.100 0.020 8.600 0.020 9.100 0.019 9.600 0.019 10.600 0.019 11.600 0.019 12.600 0.019 13.600 0.019 14.600 0.020 15.600 0.019 17.600 0.019 19.600 0.019 21.600 0.021 23.600 0.020 27.600 0.020 27.600 0.020 33.600 0.019 35.600 0.019 37.600 0.021 39.600 0.019





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

Page 1 of 1

MORK DRD#:D001437

PAUL HORTON CLIENT:

GROUNDWATER TECHNOLOGY, INC

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.06

LOCATION: DAKLAND, CA

SAMPLED: 01/18/90

BY: F. SEILER

RECEIVED: 01/18/90

ANALYZED: 01/18/90

BY: R. GONZALEZ

MATRIX:

Air

UNITS:

ug/L

PARAMETER	1 MDL	ISAMPLE #	1 01 1MW8 IN 1	I WAS DOT 1	1 03 Limwb in 3		
Benzene	0.5		(0.5	(0.5	(0.5		
Toluene	0. 5		(0.5	(0.5	(0.5		
Ethylbenzene	0. 5		(0.5	(0. 5	(0.5		
Xylenes	0. 5		(0.5	(0.5	(0.5		
Total BTEX	0. 5		(0.5	(0.5	(0. 5		
Misc. Hydrocarbons (C4-C12)	. 1		40	24	. 8		
Total Petroleum Hydrocarbons in the range of Mineral Spirits	1		40	24	8		

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

METHOD: Modified EPA 5030/8020/8015



GTEL 01/23/90 JP

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 P Page 1 of 1 WORK ORD#:D001492

CLIENT: PAUL HORTON

BROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE CONCORD, CA 94520

PROJECT#: 203-680-5016.06 LOCATION: 404 MARKET STREET

DAKLAND, CA

SAMPLED: 01/18/90 BY: F. SEILER RECEIVED: 01/18/90 BY: K. FILLINGER ANALYZED: 01/19/90 BY: R. GONZALEZ

MATRIX: Air UNITS: ug/L

PARAMETER I 11.D. I MUSINLET! I I I

Total Petroleum Hydrocarbons as Mineral Spirits

10

43

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

METHOD:

Modified 8015

Conenia P. Pople

EMMA P. POPEK, Laboratory Director



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

TEST RESULTS

81/23/98 PM

PAGE 1 DF 1

MORK DRD#:D001438

CLIENT: PAUL HORTON

BROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE

CONCORD, CA 94520

PROJECT#: 203-680-5016.06

LOCATION: 404 MARKET STREET

DAKLAND, CA

SAMPLED: 01/18/90

BY: F. SEILER

RECEIVED: 01/18/90

BY: K. FILLINGER

ANALYZED: 01/21/90

BY: K. PATTON

MATRIX: AIR

UNITS:

ug/L

	1	MDL	Ī	SAMPLE	#1	01	t	1	1
PARAMETER	1		ı	I.D.	114	HBINLE	T31	I	- 1

Methane

20

(20

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

METHOD: GC TCD

FMMO D. POPEK, Laboratory Director



GTEL*

ENVIRONMENTAL LABORATORIES, INC.

Northwest Region 4080 Pike Lane Concord, CA 94520 (415) 685-7852 (800) 544-3422 from insi

(415) 685-7852 (800) 544-3422 from inside California (800) 423-7143 from outside California **01/23/90** jp

PAGE 1 DF 1

WORK DRD#: D001493

CLIENT:

PAUL HORTON

GROUNDWATER TECHNOLOGY, INC.

4080-D PIKE LANE CONCORD, CA 94520

PROJECT#: 203-680-5016.06 LOCATION: 404 MARKET STREET

DAKLAND, CA

SAMPLED: 01/18/90 BY: F. SEILER RECEIVED: 01/18/90 BY: K. FILLINGER ANALYZED: 01/22/90 BY: R. CONDIT

MATRIX: AIR UNITS: ug/L

TEST	RESUL	TS

		MDL	1LAB #	01 MH80UTLET1	02 MBINLET3	1
COMPOUND	 		11.D.#			
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	⟨∅. 5	(8.5	
Chloroethane		9	.5	(0.5	(0.5	
2-Chloroethylvinyl ether		1	.0	(1.0	(1.0	
Chloroform		6	. 5	(0.5	(0.5	
Chloromethane		0	.5	(0.5	(0.5	
Dibromochloromethane		6	.5	(0.5	(0.5	
1,2-Dichlorobenzene		9	.5	(0.5	(0.5	
1,3-Dichlorobenzene		9	5.5	(0.5	(0.5	
1,4-Dichlorobenzene		6	. 5	(0.5	(0.5	
Dichlorodifluoromethane		6	5.5	⟨Ø.5	(0.5	
1,1-Dichloroethane		6	5.5	(0.5	(0. 5	
1,2-Dichloroethane			ð. 5	(0.5	(9.5	
1,1-Dichloroethene		6	3. 2	(0.2	(0.2	
trans-1, 2-Dichloroethene			3. 5	⟨0.5	(0.5	
1,2-Dichloropropane			ð. 5	(0.5	(0.5	
cis-1,3-Dichloropropene			ð. 5	(0.5	(0. 5	
			2.5	(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			8. 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	
Trichlorofluoromethane			1.0	(1.0	(1.0	
Vinyl Chloride						

MDL = Method Detection Limit.

METHOD: Modified ADDL002

EMMA P. POPEK, Laboratory Director

[m2TE	4080	Pike L	ane					0.11=	CAY		A						Y F			D	7	2-	- 6	4	41		CUST	D ₁	RECO	PC
1	Project Manager: Address: Address: Project Number: 203600 St. I attest that the proposedures were used these samples. Field Source of Sample	Concession 415-6 TON St. Obe Obe er field sampled during the obe obe obe obe obe obe obe obe obe ob	Ord, CA 885-785	945: 52 Sa on t	e fe	Phone AX # Site lo	et Na	on:	172 (Prin e	Utside		20 C with MTBE CL.	18. 602/8015 @ 8020/8015 MTBE		Total Oil & Grease: 413.1 🗆 413.2 🗆 503A 🗆	AI	NAI	PCBs only []		NBS +25 🗆	☐ Pesticides ☐ Herbicides ☐		92 0 6010 0 Org Lead 0		☐ Flashpoint ☐ Reactivity ☐	METHANE	(1758)	Received by:		(しくとなってくっている。
	mw-8 injet 1 mw-8 injet 2 mw-8 injet 2 mw-8 injet	2 3	1						1 1 1 1	118	124 124 128 228	2														X		Date Time	• E I	Date Time	to Single
	24 HOURS DE EXPEDITED 4 SEVEN DAY OTHER 72	8 Hours 🗆 					SP		L RE	TECTI				£41: ••	 	La	·	RKS:	nly			orag ork (Relingenished by Sequpler,	Relinquished by:	Relinquished by:	

APPENDIX F MINERAL SPIRITS REPORT

MINERAL SPIRITS: DETECTION AND REMEDIAL ALTERNATIVES IN SOIL AND GROUNDWATER

Prepared by

Steve Fischbein, M.S. and Peter Kroopnick, Ph.D.

MAY 1988

GROUNDWATER TECHNOLOGY, INC. CONCORD, CALIFORNIA



Fax: (415) 685-9148

MINERAL SPIRITS; DETECTION AND REMEDIAL ALTERNATIVES IN SOIL AND GROUNDWATER

ABSTRACT

Recent work pertaining to the subsurface mitigation and remediation of free-phase, adsorbed, and dissolved, mineral spirits solvent has led to an in-depth study of the general composition of clean and dirty mineral spirits. Previous laboratory analyses by U.S. Environmental Protection Agency (EPA) Modified Method 8270 flame ionization detection (FID) (the approved method by California Department of Health Services (DHS) has erroneously indicated that dissolved mineral spirits concentrations may reach levels in the hundreds of parts per million (ppm) range.

Laboratory analyses by EPA Method 624 and 8015 indicate that virgin mineral spirits solvent generally consists of C9 to C11 aliphatic and cyclic hydrocarbons, and that mineral spirits concentrations dissolved in groundwater at ambient conditions cannot exceed 2.6 ppm.

The final results of this study show that the best available method of analysis to detect the presence of dissolved mineral spirits concentrations is EPA Modified Method 8015/FID with total area integration within the mineral spirits spectrum, and that mineral spirits is within the volatility range which can be treated by conventional-treatment technologies such as air stripping, soil ventilation, and bioreclamation.

INTRODUCTION

Safety-Kleen Corporation, an industrial solvent-distribution and recycling company, has numerous sites throughout the United States which have leaked or spilled moderate to large quantities of mineral-spirits solvent into the ground. Recent work in California for Safety-Kleen Corporation by Groundwater Technology, Inc. has brought to the forefront serious issues concerning the treatment of free, adsorbed, and dissolved-phase mineral-spirits solvent and what constituents of clean and dirty mineral-spirits-solvent are soluble.

Laboratory analysis by EPA Modified Method 8270/FID, which was the prescribed method of analysis set forth by the California Department of Health Services, has shown extremely high dissolved concentrations of mineral spirits in water. A literature search of available data on mineral spirits indicated that the solvent was insoluble (NIOSH, 1985; Crystal Refining Company MSDS, 1984; AMOCO IHTDS, 1983). This discrepancy prompted further investigation into the subject.

The initial phase of investigation was to ascertain the stepwise methodology involved in the Modified 8270 FID technique. Communication between GT Environmental Laboratories (GTEL) and Anlab (the previous testing laboratory) revealed that the Modified 8270/FID procedure called for sonically homogenizing the sample and then extracting everything present in the water with a solvent (methylene chloride). The extractable portion was then run on a Gas Chromatography (GC)/FID where everything ionizable in the mineral spirits range was quantified as "mineral spirits".

This method of analysis yielded results indicating that dissolved mineral-spirits-concentrations may reach values as high as 410 ppm.

Further investigation of this technique showed that the results were enhanced by the presence of minute amounts of free product which were dissolved by the added methylene chloride solvent and subsequently extracted. Laboratory-controlled experiments following this same procedure also yielded erroneously high results (see section on comparison of analytical methods).

This work prompted laboratory analyses of virgin mineral spirits to determine the general composition and maximum solubility at ambient conditions.

COMPOSITION OF VIRGIN MINERAL SPIRITS SOLVENT

The initial phase of research conducted was to determine the general composition of mineral-spirits solvent. The method of analysis determined to yield the most information in this area was GC/mass spectroscopy (MS).

An aliquot of virgin mineral spirits (obtained from Saftey-Kleen Corp.) was diluted in chloroform and directly injected into the GC/MS.

Analysis of the virgin solvent showed a very narrow compositional range which was restricted between C9 and C11 hydrocarbons.

Preliminary analysis only allowed for identification of the number of carbon and hydrogen ions per compound and not for specific compound name or isomers. A more detailed analysis of the solvent is presently underway and results from that study will be forthcoming.

The carbon number identification was based on the ion chromatogram generated during the analysis and can be seen on Figure 1.

A tentative list of components based on carbon number is as follows:

Component

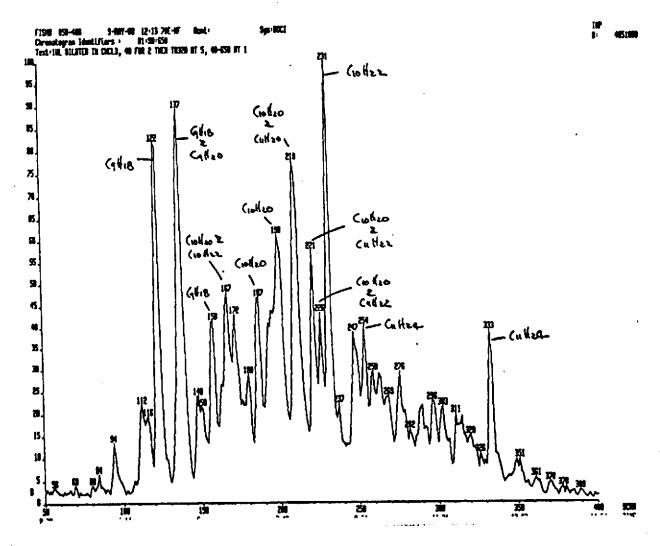
C₉ H₁₈ C₉ H₂₀ C₁₀ H₂₀ C₁₀ H₂₂ C₁₁ H₂₀ C₁₁ H₂₂

C₁₁ H₂₄

Although this method was determined to be the most effective in identifying individual compounds, it was determined to not be specific enough to quantify overall solubility. This was based on the fact that quantification by this method is related to the most prominent peak intensity comparisons between standard and unknown solutions. In this study, we felt that this may lead to erroneous results, and that quantification based on total area integration in the mineral spirits spectrum would be more effective. As a result, samples were run on the GC/FID by EPA Method 8015 (purge and trap) which proved to be the best available method for quantification.



GC/MS



ION CHROMATOGRAM OF VIRGIN MINERAL SPIRITS SOLVENT

FIGURE 1



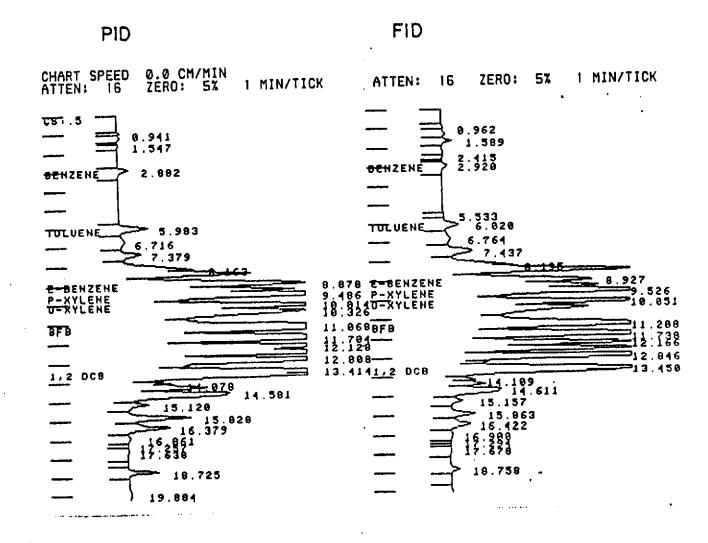
SOLUBILITY OF VIRGIN MINERAL SPIRITS

As previously done in the composition study, another sample was prepared by adding 5 milliliters of virgin solvent to 100 milliliters of laboratory pure water in a graduated cylinder and allowing the mixture to equilibrate for 48 hours. An aliquot of the water was then collected from below the solvent-water interface and subsequently injected into the GC/FID. The present configuration of equipment in the laboratory allows for simultaneous confirmation by GC/photo-ionization detector (PID) (EPA 602) as the detectors are in series.

Figure 2 shows the GC/FID and GC/PID chromatograms for the equilibrated water. Both the FID and PID traces show the distinct range and GC fingerprint of virgin mineral-spirits solvent. Basically, mineral spirits consists of compounds discussed above which elute with retention times between xylene and dichlorobenzene. The equilibrated water sample was run against standards of solutions with known quantities of virgin solvent spiked into them. The results of this study showed that the solubility of virgin mineral spirits in water under ambient conditions is approximately 2.6 ppm.

Figure 3 shows the GC/FID and GC/PID chromatograms for a standard solution of virgin mineral spirits at the level of 2800 ppb. Note the obvious similarity between the spiked trace and the equilibrated trace, which shows the very specific range that comprises the mineral-spirits solvent.

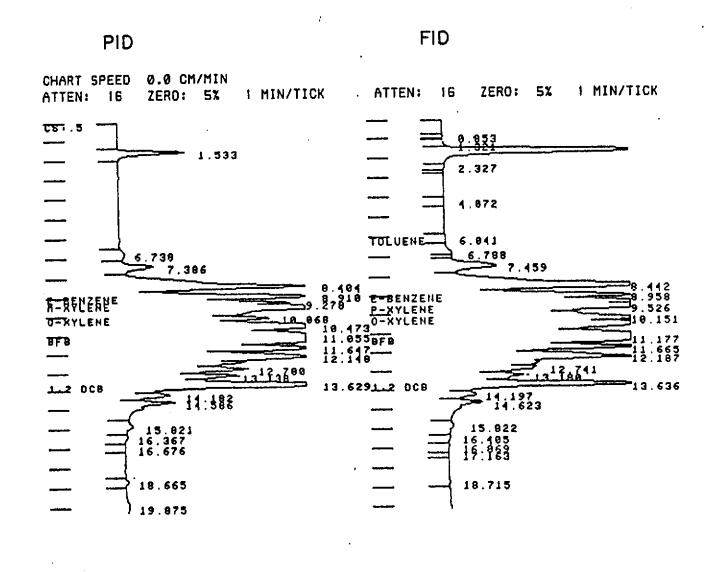




FID AND PID CHROMATOGRAMS OF WATER EQUILIBRATED WITH MINERAL SPIRITS

FIGURE 2





FID AND PID CHROMATOGRAMS OF STANDARD SOLUTION AT 2800 ppb VIRGIN MINERAL SPIRITS

FIGURE 3.



To prove that this method was effective, actual groundwater samples were obtained from the recovery well at the Safety-Kleen site in Santa Clara, California. The recovery well had approximately two inches of free-floating product in the well bore.

Water and free product were taken from the well using an acrylic bailer and poured into a separatory funnel. The water was subsequently decanted from the mixture and put into several one-liter glass bottles and several VOA's. The water was assumed to be saturated with dissolved components because of the prolonged presence (several months) of free product in the well bore while the well was not pumping.

Figure 4 shows the GC/FID and GC/PID chromatograms of the water from the site. Again note the marked similarity to the equilibrated and standard traces (Figure 2 and 3, respectively). Some differences are obvious in comparing the site-water chromatograms to those of the standard and equilibrated solutions. The discrepancies are a result of comparing dirty and degraded solvent with virgin solvent. Even though minor differences are apparent, the overall fingerprint of the chromatographs are the same. The results of this portion of the study indicated that dissolved mineral-spirits concentrations in the water from the site did not exceed 690 and 750 ppb by GC/FID and GC/PID respectively. This is interesting to note because previous water samples taken from this site and analyzed by EPA Modified Method 8270 FID indicated dissolved mineral-spirits concentrations up to 270 ppm.

COMPARISON OF ANALYTICAL METHODS

In order to prove that the 8270 FID technique was not applicable for this type of solvent, a comparison between analytical methods was conducted.



FID PID 9.0 CM/MIN CHART SPEED ZERO: 5% 1 MIN/TICK ATTEN: 15 ZERO: 5% 1 MIN/TICK ATTEN: 64 एडा ड 1:459 2.026 BENZEHE BENZEHE 3.695 AER 3 E-BEHZEME 9.121 9.722 MEXYLENE. 9.719 O XYLCHE 10.306 O MYLCHE 1.2008

> FID AND PID CHROMATOGRAMS OF ACTUAL GROUNDWATER FROM THE SANTA CLARA SITE

> > FIGURE 4



Contract to the second second

Water collected from the site was subjected to four different methods of analysis (EPA 8015, 624, 8270 FID, and 413.1). Two of the methods required a purge-and-trap procedure (8015 and 624) and two methods required a liquid-liquid solvent extraction (8270 FID and 413.1). The results indicated large differences in values between the purge-and-trap methods versus the liquid-liquid solvent-extraction methods. The results are shown in the table below.

8015 690 1 624 500 1	RESULT					
8270 FID 6.7 1 413.1 5.0	ppb					

The discrepancy between analytical methods is a result of the presence of free product in the sample. Minute amounts of the free product are present in the water and are also stuck to the sides of the glassware because of the greasiness of the product. The free product present in the sample is not discernable upon visual inspection, but as can be seen by the data, can significantly bias analytical results. In the liquid-liquid solvent extraction (methylene chloride solvent for 8270 and freon solvent for 413.1), the free product is immediately dissolved in the presence of the added solvent which is subsequently extrac-The extracted solvent is then boiled down to concentrate the extract which is subsequently run on the respective detectors. Because the free product is extremely soluble in the solvent, it is detected during the final analysis and is reported as total-dissolved product in water. Based on these results, the extraction methods of analysis are believed unsuitable for a mineral-spirit type solvent.



To further justify that the 8015 method was the correct method to be used, a comparison was done on a known spiked solution to determine percentage recovery between the two methods (8015 versus 8270). The results of this portion of the study indicate that only a 76 percent recovery is achieved through the solvent extraction (8270) versus a 98 percent recovery for the purge and trap (8015). The reason the recovery for the solvent extraction is less than the purge and trap, is that during the boiling-down process the lighter-end components are volatilized and are lost. These results indicate another unsuspected reason for eliminating the solvent extraction method. The example for not using this method is, if a sample is collected, and it is KNOWN that no free product is present in the sample, then the results would yield lower values than the purge-and-trap method.

Obviously, this is a reverse of the situation that sparked the entire investigation, however it is another piece of data that indicate that the 8015 FID is the best available technology.

COMPOSITION OF RECYCLED AND DIRTY MINERAL SPIRITS

The composition and solubility of virgin mineral spirits represents only one half of the problem presented by the Saftey-Kleen sites. The other half of the problem consists of the composition and soluble components in the recycled and dirty mineral spirits.

Basically the contamination of virgin mineral spirits occurs when the virgin material is sent out to the customers (gas stations, car repair shops, machine shops, etc.) and is subsequently contaminated during use as a cleaning solvent for dirty and greasy parts. At that time, other solvents (such as chlorinated hydrocarbons) and oil and grease are introduced into



the virgin material. The dirty material is then picked up from the customer and returned to a Saftey-Kleen recycling facility where it is subsequently distilled. The distillation process drives off the light-end components consisting of the virgin mineral spirits and chlorinated hydrocarbons (as well as any other light components) and the heavy ends are left behind (essentially the oil and grease). This process results in a concentration of chlorinated hydrocarbons in the recycled product.

High concentrations of chlorinated hydrocarbons are reduced by the addition of virgin mineral spirits to the recycled, thereby causing a "thinning" of chlorinated concentrations. The recycled material is then sent back out to the client to be re-used and the process repeats itself theoretically endlessly.

This information becomes imperative when considering treatment alternatives for sites contaminated with recycled and dirty mineral spirits.

In general, the composition of recycled mineral spirits consists of two major components. They are essentially virgin mineral spirits and chlorinated hydrocarbons. Also, in general, the composition of dirty mineral spirits can be said to consist of three major components. They are, virgin mineral spirits, chlorinated hydrocarbons, and oil and grease.

Of particular importance are the chlorinated hydrocarbons. The number and type of chlorinated constituents in recycled and dirty product can obviously vary widely based on the demographics of the client base for any given area. However a general statement can be made based on the analyses of chlorinated hydrocarbons in the water and product from the Santa Clara site.



Laboratory analyses of water from the Santa Clara site by EPA Method 601 indicate the following chlorinated compounds are present at concentrations ranging from 1 to 60 ppb.

COMPOUND	CONCENTRATION (ppb)
Chlorobenzene	8.1
1,2-Dichlorobenzene	13.0
1,1-Dichloroethane	59.0
1,2-Dichloroethane	1.9
1,1-Dichloroethene	0.73
Trans-1,2-Dichloroethene	37.0
Cis-1,3-Dichloropropene	4.5
Tetrachloroethane	3.0
1,1,1-Trichloroethane	23.0
Trichloroethene	1.7
Vinyl Chloride	13.0

Figure 5 is a chromatograph of the water from the site by EPA 601.

Laboratory analyses of free product from the Santa Clara site by EPA 601 indicate that the following chlorinated compounds are present:

COMPOUND	CONCENTRATION (ppb)
Chlorobenzene	24.0
Chloroethane Chloroform	11.0
Chloromethane 1,2-Dichlorobenzene	4.8 13.0
1,1-Dichloroethane 1,1-Dichloroethene	12.0 1.2
Trans-1,2-Dichloroethene Methylene Chloride	21.0 33.0
Tetrachloroethane	2.2
1,1,1-Trichloroethane Trichloroethene	83.0 1.1
Vinyl Chloride	4.6

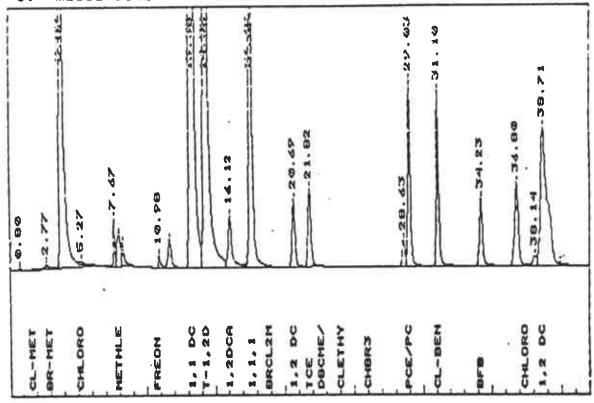


HALL DETECTOR

Date File = 00:A0700.PTG Printed on 04-27-1786 4t 17:11:26

Start time: 0.00 min. Stop time: 42.01 min. Offset: 0 mv.

Full Range: 30 millivolts



GC/HALL CHROMATOGRAM OF ACTUAL GROUNDWATER FROM THE SANTA CLARA SITE (EPA 601)

FIGURE 5



Figure 6 is a chromatogram of the free product from the site by EPA 601.

ANALYTICAL PROCEDURES FOR CONTAMINATED SOILS

Soils contaminated with mineral spirits solvent also posed a problem in handling and analysis. The main problem that existed was how to analyze for the presence of mineral spirits as well as chlorinated solvents. This was solved by utilizing EPA Methods 8010 and 8015 with a selective-solvent extraction on the soils. Soil samples are collected as normal (brass tubes) in the field and extruded in the lab. The soil cores are cut into quarters along their long axis and two quarters are used for analysis and two are saved for back-up. One of the quarters is crushed and is extracted with methanol to remove chlorinated components. The methanol extract is run by EPA Method 8010 (purge and trap). The other quarter is crushed and extracted with methylene chloride to remove any mineral spirits present. The methylene chloride extract is run by EPA Method 8015 (direct injection).

Figure 7 shows a typical chromatograph of the methylene chloride extract by EPA Method 8015. Figure 8 shows a standard of 250 ppm virgin mineral spirits in methylene chloride. Note the marked similarity between the two chromatograms.

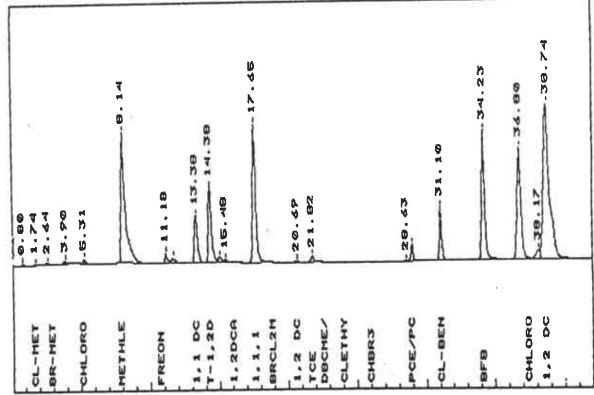


HALL DETECTOR

Data File = D:A29B2.PTS Printed on 04-29-1988 at 18:17:35

Start time: 0.00 min. Stop time: 42.01 min. Offset: 0 mv.

Full Range: 30 millivolts



GC/HALL CHROMATOGRAM OF ACTUAL FREE PRODUCT FROM THE SANTA CLARA SITE (EPA 601)

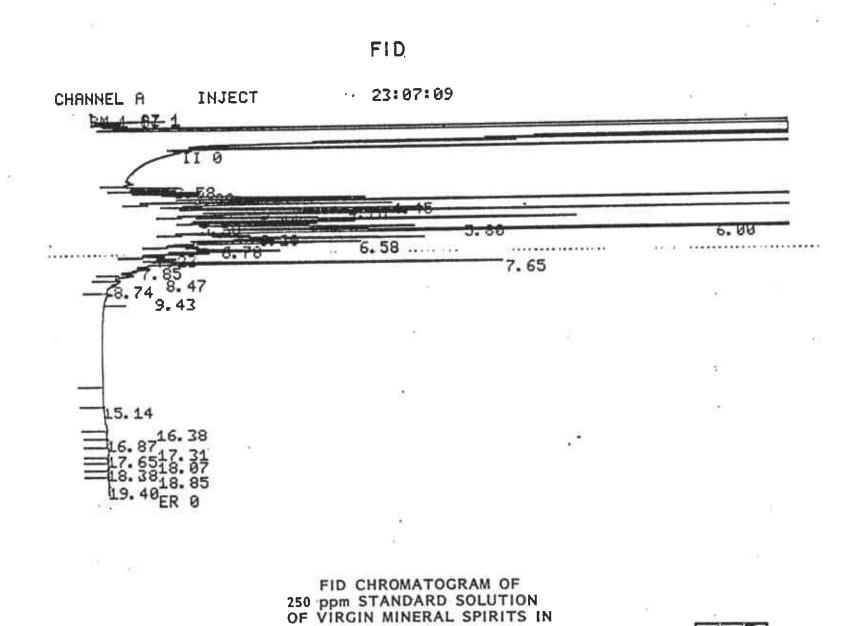
FIGURE 6



FID . 01:11:00 CHANNEL A INJECT PM 1 BZ 1 14. 25 14. 89 15. 58 16. 20 17. 47 FID CHROMATOGRAM OF METHYLENE CHLORIDE EXTRACT FROM SOILS AT THE SANTA CLARA SITE GROUNDWATER TECHNOLOGY, INC.

FIGURE 7

DETERICH POST REORDER NO. 116233



METHYLENE CHLORIDE

FIGURE 8

GROUNDWATER TECHNOLOGY, INC.

SUMMARY

This investigation has shown that previous laboratory analyses for dissolved mineral-spirits-concentrations in water by EPA Modified Method 8270 FID were incorrect due to final data enhancement by the presence of minute amounts of free product. A liquid-liquid solvent-extraction proved impractical, time-consuming, and inaccurate for this type of contaminant in water. Determination was made that the best available method of analysis to detect dissolved mineral spirits in water is EPA Method 8015 (purge and trap) with total-area-integration in the mineral spirits range. EPA Method 624 and 602 are also available for confirmation of results. Solubility experiments conducted have shown that dissolved mineral-spirits-concentrations in water cannot exceed approximately 2.6 ppm at ambient conditions.

Soil samples contaminated with mineral spirits are best handled by two separate extractions with methanol and methylene chloride with the subsequent extracts being run by EPA Methods 8010 and 8015 (direct injection).

Based on our present understanding, mineral spirits contamination falls into the volatility range to be treated with conventional treatment technologies such as air stripping, soil venting and bioreclamation. These treatment techniques will also mitigate chlorinated hydrocarbon concentrations associated with the mineral spirit's contamination.

Document.SAF



REFERENCES CITED

- Amoco Industrial Hygiene and Toxicology Data Sheet, 1983, Petroleum Naptha.
- Crystal Refining Company, Carson, City, Michigan, Material Safety Data Sheet, 1984, Stoddard Solvent.
- U.S. Department of Health and Human Services, NIOSH Pocket Guide to Chemical Hazards, Publication No. 85-114, February, 1987.

Document.SAF

