

**GROUNDWATER  
TECHNOLOGY, INC.**

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

Fax: (415) 685-9148

April 14, 1989

Job No. 203 799 8200

Mr. Robert D. Wyatt  
Brobeck, Phleger and Harrison  
One Market Plaza  
San Francisco, CA 94105

Dear Mr. Wyatt,

Please find enclosed documentation necessary to respond to Part I, Item Number 7 in the letter issued to you by Alameda County Department of Environmental Health and dated April 5, 1989.

Groundwater Technology, Inc. (GTI) was retained by the Martin Company on May 5, 1988 to conduct above-ground treatment of gasoline-and-diesel contaminated soil using forced aeration and Enhanced Natural Degradation (END<sup>TM</sup>). As stated in the signed proposal, GTI was contracted to reduce total-petroleum-hydrocarbons-(TPH) contaminant concentrations in the excavated soils from the former tank area to below 100 parts per million (ppm) so that the soil could be disposed of at a Class III sanitary landfill by Earth Metrics Inc. Upon initiation of the project, GTI set up three soil piles, two of diesel-contaminated soil and one of gasoline-contaminated soil (see attached soil pile layout).

Soil sampling of the diesel piles conducted on September 12, 1988 and subsequent analytical laboratory results indicated that soil samples collected were below 100 ppm TPH-as-diesel (see attached laboratory reports) except for location 4-7 which displayed TPH-as-diesel contamination of 260 ppm. Soil sampling of the gasoline pile on September 19, 1988 and subsequent laboratory analyses indicated that TPH-as-gasoline in the soil samples

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collected were below 100 ppm (see attached laboratory reports) except for sample X-9 which displayed TPH-as-gasoline contamination of 480 ppm. Based upon the September 12 and 19, 1988, laboratory results, GTI informed the Martin Company and Earth Metrics Inc. that all soil except for approximately 50 cubic yards (yd<sup>3</sup>) represented by sample 4-7 and 50 yds<sup>3</sup> represented by sample X-9 could be removed to a Class III landfill. The remaining 100 yds<sup>3</sup> of contaminated soil was to remain on site with continued treatment to bring contaminant concentrations to below the 100 ppm target levels.

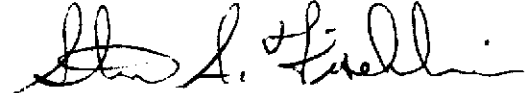
On October 6, 1988, GTI sent the Martin Company a letter reiterating this fact (see attached) and informing the Martin Company the final GTI invoice would be forthcoming. On October 12, 1988 soil samples were collected from the remaining 100 yds<sup>3</sup> on site and the subsequent laboratory analyses indicated that the soil samples contained less than 100 ppm TPH-as-gasoline and diesel. The Martin Company was informed of this fact and that the soil could be removed to the Class III landfill.

A total of approximately 1165-cubic yards of gasoline-and diesel-contaminated soils were treated on site by GTI. The TPH-as-diesel- and gasoline-concentrations were reduced to levels less than 100 ppm, (see attached laboratory reports) and the soil was therefore suitable for disposal at a Class III landfill. GTI was not involved in the subsequent disposal of any soils treated at the Marketplace site.

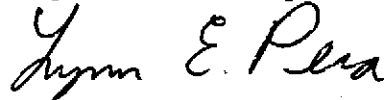
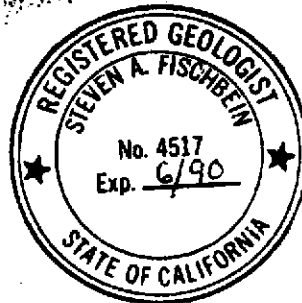
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We hope this information clarifies Part I, Item 7, of the  
aforementioned letter and any other questions which may arise  
regarding this issue. Please contact our Concord office if you  
require any additional information.

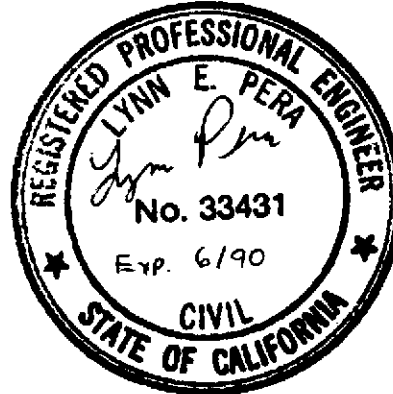
Sincerely,  
GROUNDWATER TECHNOLOGY, INC.



Steven A. Fischbein  
Industrial Group Manager/  
Register Geologist No. 4517



Lynn E. Pera  
Registered Civil Engineer  
No. 33431



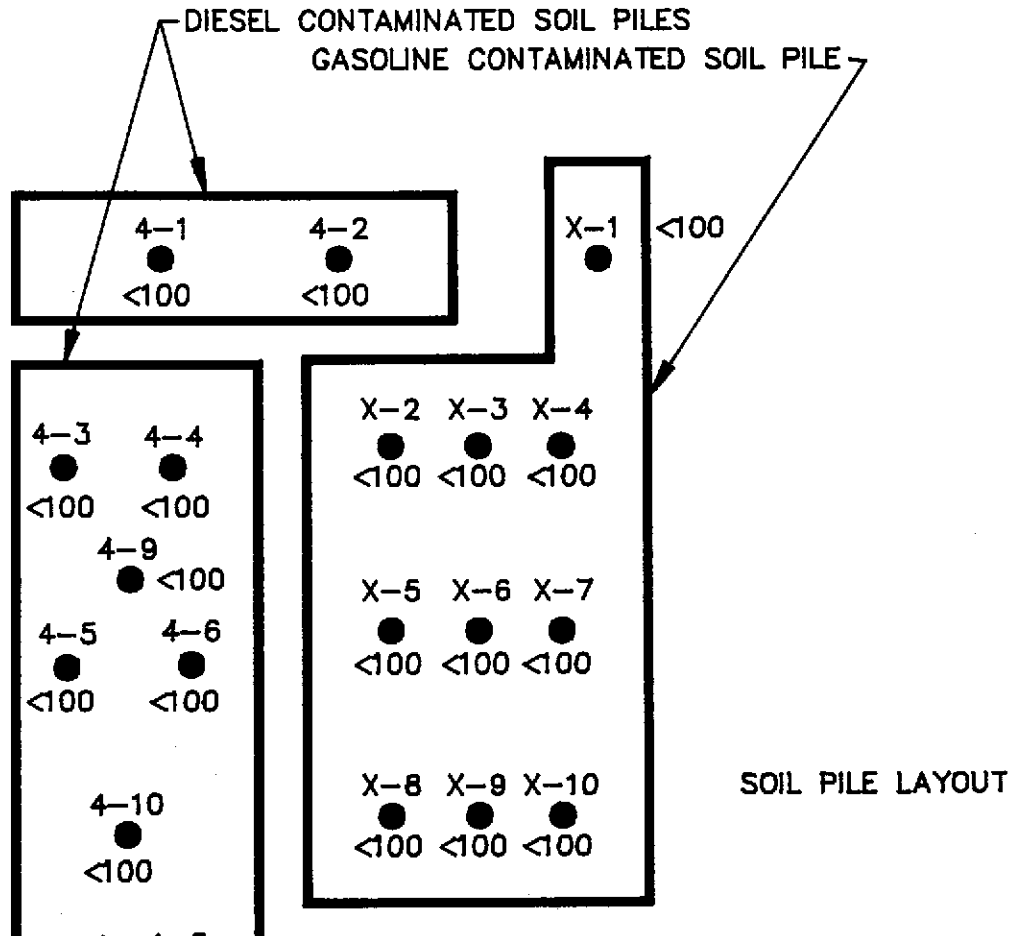
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Attachments

cc: Walter Kaczmarek

L8200M.SF

CHRISTIE STREET



SOIL PILE LAYOUT

**LEGEND**

- 4-3 ● DIESEL PILE SOIL SAMPLING LOCALITY
- X-2 ● GASOLINE PILE SOIL SAMPLING LOCALITY
- <100= LESS THAN 100 ppm TPH as GASOLINE OR DIESEL

Soil Samples Localities and Results for Samples

Collected 9/12/88, 9/19/88, and 10/12/88



EARTH METRICS, INC.  
64th AND CRISTIE STREET  
EMERYVILLE, CALIFORNIA



GROUNDWATER  
TECHNOLOGY, INC.



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

CLIENT: Dave Drury  
Groundwater Technology, Inc.  
4080 Pike Lane  
Concord, CA 94520  
PROJECT#: 203-799-2728-7  
LOCATION: Emeryville, CA

SAMPLED: 09/12/88 BY: D. Kaufman  
RECEIVED: 09/13/88 BY: E. Larsen  
ANALYZED: 09/16/88 BY: P. Hanners  
MATRIX: Soil  
UNITS: mg/kg (ppm)

TEST RESULTS

PARAMETER	MDL	I. D. #	LAB # 31531 4-1	31532 4-2	31533 4-3	31534 4-4	31535 4-5
Total Petroleum Hydrocarbons as Diesel	100		<100	<100	<100	<100	<100

MDL = Method Detection Limit.

METHOD:  
Modified EPA Method 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

CLIENT: Dave Drury  
 PROJECT#: 203-799-2728-7  
 LOCATION: Emeryville, CA  
 MATRIX: Soil  
 UNITS: mg/kg (ppm)

TEST RESULTS

PARAMETER	MDL	I.D.#	LAB # 31536 4-6	31538 4-8	31539 4-9	31540 4-10
Total Petroleum Hydrocarbons as Diesel	100		<100	<100	<100	<100

MDL = Method Detection Limit.

METHOD:  
 Modified EPA Method 8015.

*Safy Khaliya/Emf*  
 SAFY KHALIYA, Ph.D., Director

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

CLIENT: Dave Drury  
 Groundwater Technology, Inc.  
 4080 Pike Ln.  
 Concord, CA 94520  
 PROJECT#: 203-799-2728-8  
 LOCATION: 64th & Christie St.  
 Emeryville, CA  
 SAMPLED: 09/19/88 BY: M. Czipka  
 RECEIVED: 09/19/88 BY: K. Fillinger  
 ANALYZED: 09/19/88 BY: R. Condit  
 MATRIX: Soil  
 UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB #	32044	32045	32046	32047	32048
	I.D. #	X-1	X-2	X-3	X-4	X-5	
Benzene	0.5	<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	<0.5
Ethylbenzene	0.5	<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	<0.5
Total BTEX	0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
Misc. Hydrocarbons (C4-C12)	1	<1	12	16	<1	12	
Total Petroleum Hydrocarbons as Gasoline	1	<1	12	16	<1	12	

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

METHOD:  
 Modified EPA Method 5030/8020/8015



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

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CLIENT: Dave Drury  
 PROJECT#: 203-799-2728-8  
 LOCATION: 64th & Christie St.  
 Emeryville, CA

MATRIX: Soil  
 UNITS: mg/kg (ppm)

TEST RESULTS

COMPOUNDS	MDL	LAB #	32049	32050	32051	32053
	I.I.D. #	X-6	X-7	X-8	X-10	
Benzene	0.5	<0.5	<0.5	<0.5	<0.5	
Toluene	0.5	<0.5	<0.5	<0.5	<0.5	
Ethylbenzene	0.5	<0.5	<0.5	<0.5	<0.5	
Xylenes	0.5	<0.5	<0.5	<0.5	<0.5	
Total BTEX	0.5	<0.5	<0.5	<0.5	<0.5	
Misc. Hydrocarbons (C4-C12)	1	72	5	24	<1	
Total Petroleum Hydrocarbons as Gasoline	1	72 *	5	24	<1	

MDL = Method Detection Limit; compound below this level would not be detected.  
 Results rounded to two significant figures.  
 METHOD: Modified EPA Method 5030/8020/8015  
 \* = Hydrocarbon pattern suggests the presence of diesel fuel.

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





ENVIRONMENTAL LABORATORIES, INC.

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

10/17/88 rw
CLIENT: Dave Drury
Groundwater Technology, Inc.
4080 Pike Lane
Concord, CA 94520
PROJECT #: 203-799-2728-9
LOCATION: Emeryville, CA

SAMPLED: 10/12/88 BY: D. Drury
RECEIVED: 10/12/88 BY: K. Biava
ANALYZED: 10/13/88 BY: R. Condit
MATRIX: Soil
UNITS: mg/kg (ppm)

TEST RESULTS

Table with 5 columns: COMPOUNDS, MDL, LAB #, I.D. #, 33617, 33618, DIESEL, GAS. Rows include Benzene, Toluene, Ethylbenzene, Xylenes, Total BTEX, Total Petroleum Hydrocarbons as Gasoline, and Total Petroleum Hydrocarbons as Diesel.

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

METHOD:
Modified EPA Method 5030/8020/8015
\* Modified EPA 8015, direct injection.

Safy Khalifa / SM7
SAFY KHALIFA, Ph.D., Director