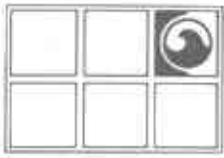


R0480



GROUNDWATER TECHNOLOGY, INC.

ALCO
HAZMAT

94 MAR -7 PM 2:21

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

FAX: (415) 685-9148

To: Alameda County Health Dept.
80 Swan Way, Room 200
Oakland, CA 94621

Date: 3/02/94 Job No. 020204554

Re: **Sears, Roebuck and Co. Site**
2633 Telegraph Ave., Oakland

Attn: Mr. Thomas Peacock

From: Mike Wray *mfw*

We are sending: Attached Via _____

The following:

2 Report(s) Originals Shop Drawings Samples
 Specifications Copy(s) Proposal Other _____

COPIES	DATE	DESCRIPTION
1	1/28/94	Additional Soil and Groundwater Assessment Report
1	3/01/94	Quarterly Monitoring and Sampling Report

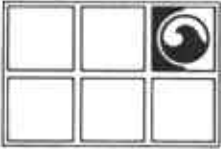
Transmitted as checked:

Approved For Approval Approved as Noted For Correction
 For Your Use As Requested For Comments
 For Your Records For Distribution Other _____

Comments: Tom: Bernadine Palka of Sears, Roebuck and Co. asked me to forward the enclosed reports to you. If you have any questions, please contact me at (510)-671-2387. Thank you, Mike Wray

cc: Richard Hielt, Regional Water Quality Control Board
Bernadine Palka, Sears, Roebuck and Co.

C:\wp51\files\mikew\sears\transm.frm



GROUNDWATER TECHNOLOGY, INC.

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

March 1, 1994

FAX: (415) 685-9148

Project No. 020204554

Ms. Bernadine Palka
Sears, Roebuck and Company
3333 Beverly Road, Building A2-281A
Department 824C
Hoffman Estates, IL 60179

SUBJECT: *Quarterly Monitoring and Sampling Report*
November 1993 through January 1994
Former Sears Automotive Center
2633 Telegraph Avenue, Oakland, California

94 MAR -7 PM 2:21
ALCO
HAZMAT

Dear Ms. Palka:

Groundwater Technology, Inc. is pleased to submit this *Quarterly Monitoring and Sampling Report* for November 1993 through January 1994. This report presents the results of monitoring well gauging and sample analyses for the former Sears Automotive Center located at 2633 Telegraph Avenue, Oakland, California (Attachment 1, Figure 1). The monitoring and sampling activities were performed and this report prepared according to the *Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites*, dated August 10, 1990, the *State Water Resources Control Board Leaking Underground Fuel Tank (LUFT) Field Manual*, and the sampling requirements approved by Alameda County Health Care Services Agency, October 7, 1992, and amended in correspondence to Sears, dated June 1, 1993.

The monitoring and sampling schedule includes monthly well monitoring and quarterly sampling and reporting. Three new monitoring wells were installed on the site in December 1993 as part of the additional site assessment. The results of that site assessment were reported in *Additional Soil and Groundwater Assessment Report* dated January 28, 1994.

SUMMARY OF WORK COMPLETED

Monitoring Well Gauging

On November 24 and December 1, 1993, the depth to groundwater was measured in monitoring wells MW-1 through MW-5. On December 27, 1993, and January 5, 1994, the depth to groundwater was measured in the same five wells and three monitoring wells (MW-6, MW-7, and MW-8) that were installed on December 14, 1993. Groundwater monitoring data are presented in Attachment 2,

4554R024.202

* Check on soil system material that may remain

Table 1. The wells were monitored during each event using an INTERFACE PROBE™ Well Monitoring System, which can detect both water and separate-phase product levels.

Groundwater monitoring data from November and December 1993 and January 1994 were used to construct potentiometric surface maps (Figures 2 through 4). A measurable thickness of separate-phase hydrocarbons was detected in well MW-3 during this reporting period. The local groundwater gradient was approximately 0.01 foot per foot (ft/ft) to the south on November 24 and December 27, 1993, and January 5, 1994.

Monitoring Well Sampling and Results

On December 1, 1993, groundwater samples were collected from monitoring wells MW-1, MW-2, MW-4, and MW-5 and analyzed for hydrocarbon constituents. The groundwater samples from monitoring wells MW-2 and MW-5 were also analyzed for dissolved metals. The groundwater sample collected from MW-4 was analyzed for dissolved lead. On December 27, 1993, groundwater samples were collected from the three monitoring wells installed on December 14, 1993, and analyzed for hydrocarbon constituents and dissolved lead. Because of a laboratory scheduling error, monitoring wells MW-1, MW-2, and MW-5 were resampled on December 30, 1993, and analyzed for total petroleum hydrocarbons-as-motor oil (TPH-M) analysis. Well MW-3 was not sampled this quarter because of the presence of separate-phase hydrocarbons in the well. Before sampling, the wells were purged of approximately 4 well-casing volumes. The temperature, conductivity, and pH of the purge water were measured during purging. Well purge data are included in Attachment 3.

Groundwater samples were collected using a Teflon™ bailer and placed in appropriate containers. The sample containers were labeled and placed in an ice-chilled, insulated cooler for transport under chain-of-custody protocol to a California-certified laboratory for the analyses described below. A summary of historical groundwater analytical results is presented in Table 2.

- Groundwater samples from wells MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, and MW-8 were analyzed for benzene, toluene, ethylbenzene, and total xylenes (BTEX) using Environmental Protection Agency (EPA) Methods 5030/8020 and TPH-M using a gas chromatograph flame-ionization detector (GC-FID) hydrocarbon scan method of detection.
- Groundwater samples from wells MW-2, MW-4, MW-5, MW-6, MW-7, and MW-8 were analyzed for total petroleum hydrocarbons-as-gasoline (TPH-G) using modified EPA Method 8015.
- Groundwater samples from wells MW-6, MW-7, and MW-8 were analyzed for total petroleum hydrocarbons (TPH) in water using EPA Method 418.1.

- Groundwater samples collected from wells MW-4, MW-6, MW-7, and MW-8 were analyzed for dissolved lead using EPA Method 7421; and samples collected from wells MW-2 and MW-5 were analyzed for cadmium, chromium, nickel, and zinc using EPA Method 6010 and dissolved lead using EPA Method 7421.

The laboratory reports and chain-of-custody records are included in Attachment 4. Figures 5 and 6 illustrate the distribution of TPH-G and TPH-M concentrations in the groundwater, respectively.

Aromatic Volatile Organic Compounds (VOCs). Concentrations of aromatic VOCs were detected in samples collected in December 1993 from wells MW-1, MW-2, MW-4, MW-5, MW-6, MW-7, and MW-8 as follows: benzene from nondetectable to 0.4 micrograms per liter ($\mu\text{g/l}$); toluene from nondetectable to 4 $\mu\text{g/l}$; ethylbenzene from nondetectable to 2 $\mu\text{g/l}$; and xylenes from nondetectable to 7 $\mu\text{g/l}$. The results of BTEX analyses are summarized in Table 2.

Total Petroleum Hydrocarbons. Total petroleum hydrocarbon-as-gasoline concentrations of 68 $\mu\text{g/l}$, 150 $\mu\text{g/l}$, 17 $\mu\text{g/l}$, 140 $\mu\text{g/l}$, and 390 $\mu\text{g/l}$ were detected in samples collected in December 1993 from wells MW-2, MW-4, MW-5, MW-7, and MW-8, respectively. No detectable concentrations of TPH-G were present in the sample collected from well MW-6. The analytical results of groundwater samples collected from wells MW-1, MW-5, MW-6, MW-7, and MW-8 reported no detectable concentrations of TPH-M. The samples from MW-2 and MW-4 showed the presence of TPH-M concentrations of 310 $\mu\text{g/l}$ and 390 $\mu\text{g/l}$, respectively. The results of TPH-G and TPH-M analyses are summarized in Table 2.

Metals. Lead was not detected in the groundwater samples from wells MW-2, MW-4, and MW-5 in December 1993. However, the laboratory did report dissolved lead concentrations of 70 $\mu\text{g/l}$, 40 $\mu\text{g/l}$, and 18 $\mu\text{g/l}$ in samples collected from wells MW-6, MW-7, and MW-8, respectively. Cadmium, chromium, nickel, and zinc were not detected in the groundwater samples from wells MW-2 and MW-5. The metals analyses results are summarized in Table 2.

WORK TO BE COMPLETED FROM FEBRUARY THROUGH APRIL 1994

Below is the schedule of planned work tasks at the site for February through April 1994:

<u>Date</u>	<u>Task</u>
02/94	Monthly well gauging.
03/94	Monthly well gauging and quarterly sampling.
04/94	Monthly well gauging and preparation of <i>Quarterly Monitoring and Sampling Report</i> for February through April 1994.

If you have any questions or comments concerning this report, please call our Concord office at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.
Written/Submitted by

Eileen S. Wray
Eileen S. Wray
Project Geologist

Michael J. Wray
Michael J. Wray
Project Manager



Groundwater Technology, Inc.
Reviewed/Approved by

[Signature]
Kevin M. Sullivan
Professional Engineer
No. 046253

For:
Frank J. Gorry
Vice President, Operations Manager
National Industry Division

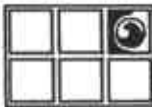
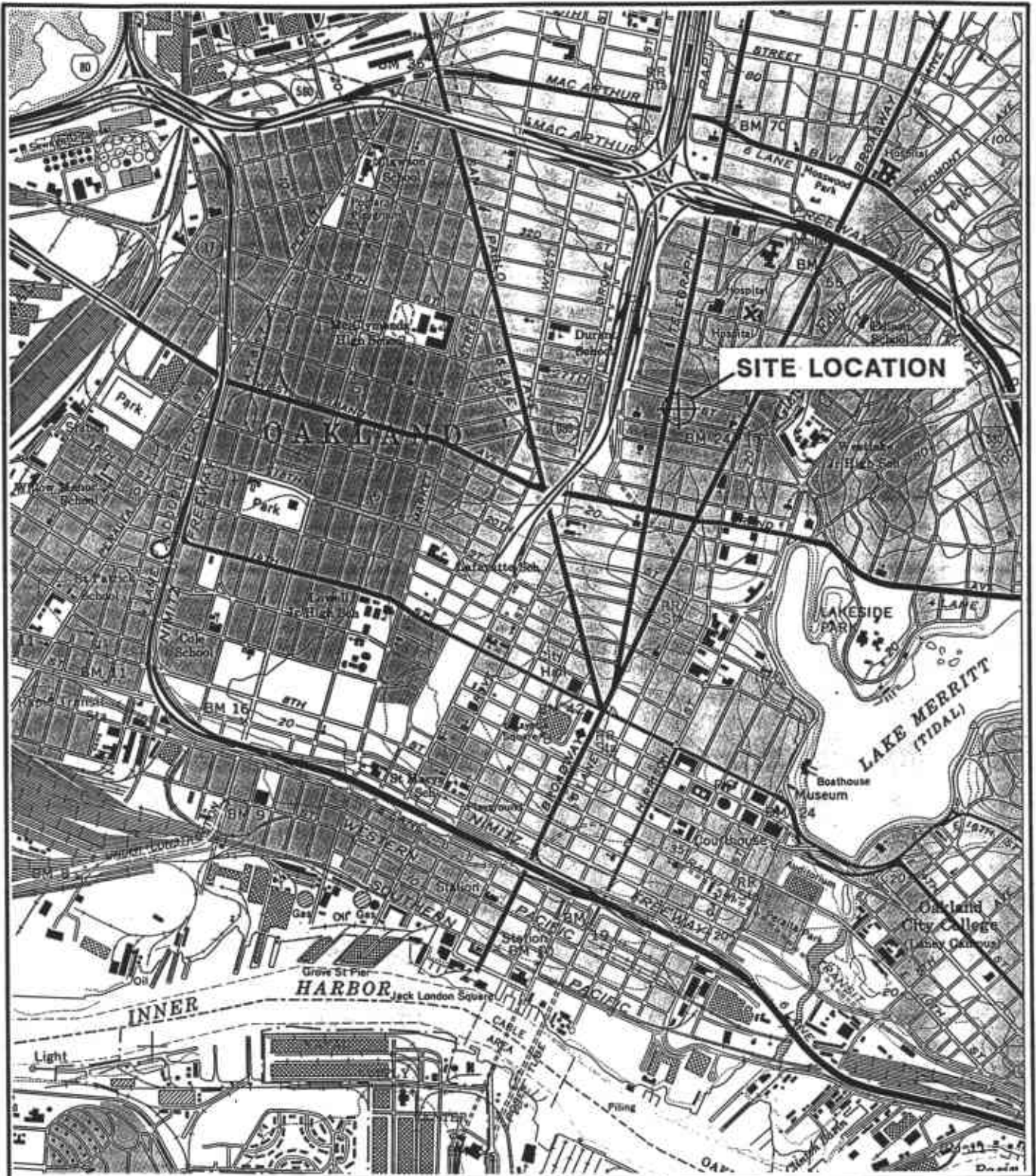
- Attachment 1 Figures
- Attachment 2 Tables
- Attachment 3 Well Purge Data
- Attachment 4 Laboratory Reports and Chain-of-Custody Record

cc: Thomas Peacock, Alameda County Health Services Agency
Richard Hlett, Regional Water Quality Control Board

ATTACHMENT 1

Figures

- Figure 1 Site Location Map
- Figure 2 Potentiometric Surface Map (11/24/93)
- Figure 3 Potentiometric Surface Map (12/27/93)
- Figure 4 Potentiometric Surface Map (01/05/94)
- Figure 5 TPH-as-Gasoline Concentrations in Groundwater (December 1993)
- Figure 6 TPH-as-Motor Oil Concentrations in Groundwater (December 1993)



**GROUNDWATER
TECHNOLOGY**

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



SCALE:



SITE LOCATION MAP

CLIENT:

**SEARS, ROEBUCK AND CO.
SITE No. 1058**

DATE:

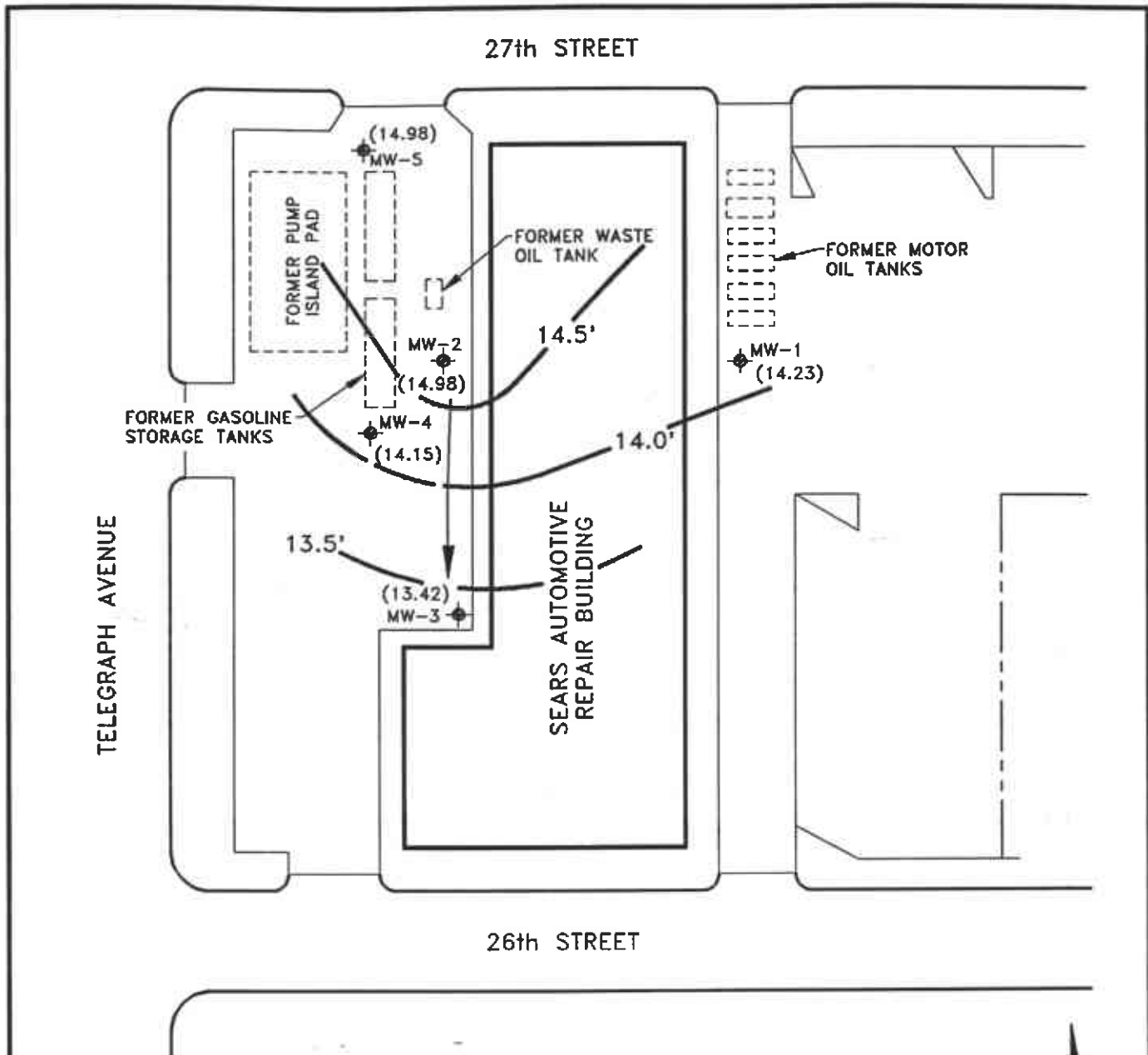
8/18/92

LOCATION:

**2633 TELEGRAPH AVE.
OAKLAND, CALIFORNIA**

FIGURE:

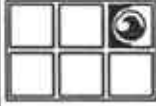
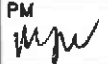
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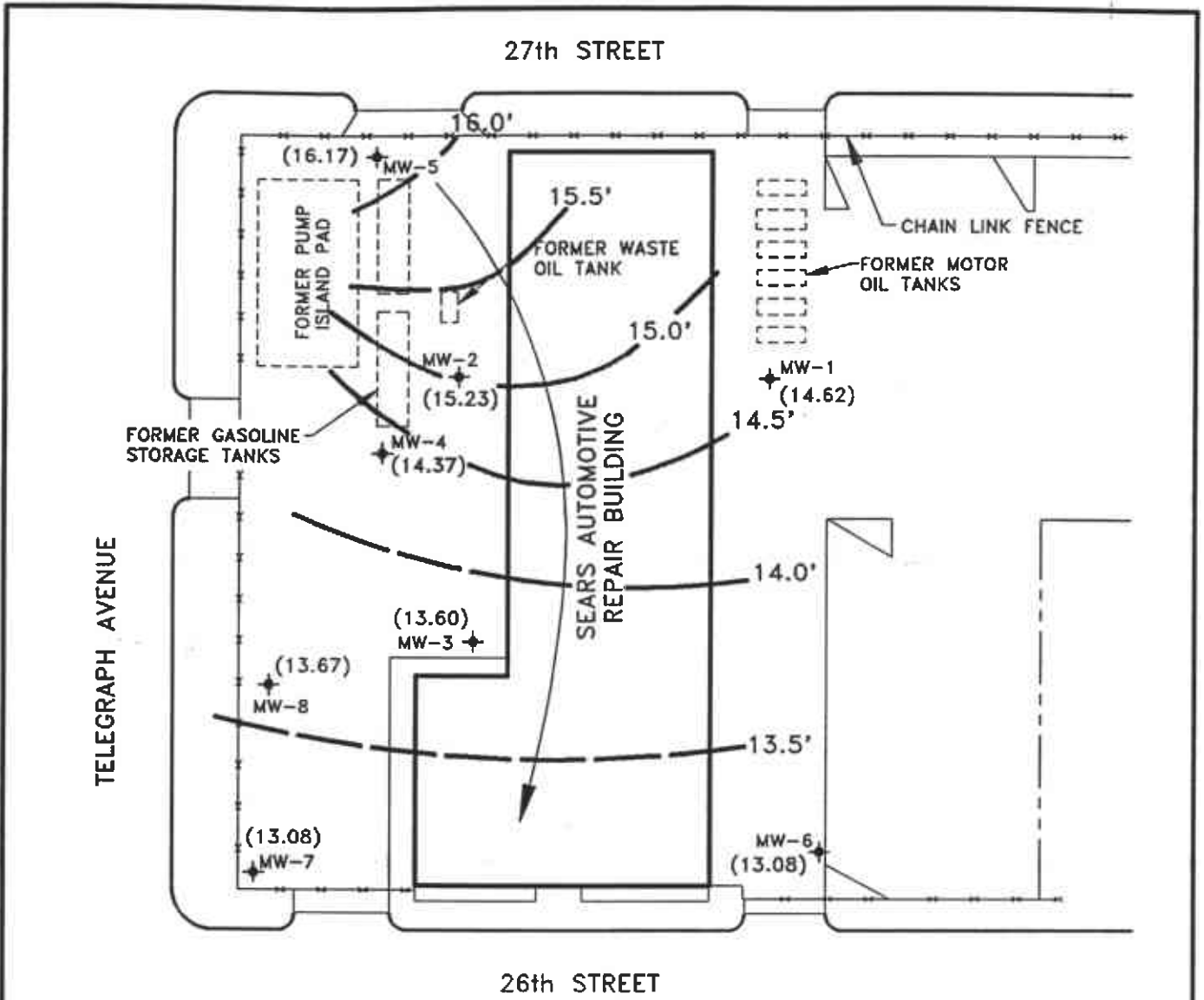


LEGEND

- ◆ MONITORING WELL
- () POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION

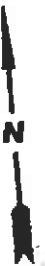


 GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY. CONCORD, CA 94520 (510) 671-2387		POTENTIOMETRIC SURFACE MAP (11/24/93)	
CLIENT: SEARS, ROEBUCK AND CO. SITE No. 1058		LOCATION: 2633 TELEGRAPH AVE. OAKLAND, CALIFORNIA	
REV. NO.: 0		DATE: 2/10/94	
PM 	PE/RG	DESIGNED BF	DETAILED ML
ACAD FILE: PSMN2493/SP193		PROJECT NO.: 020204554	FIGURE: 2

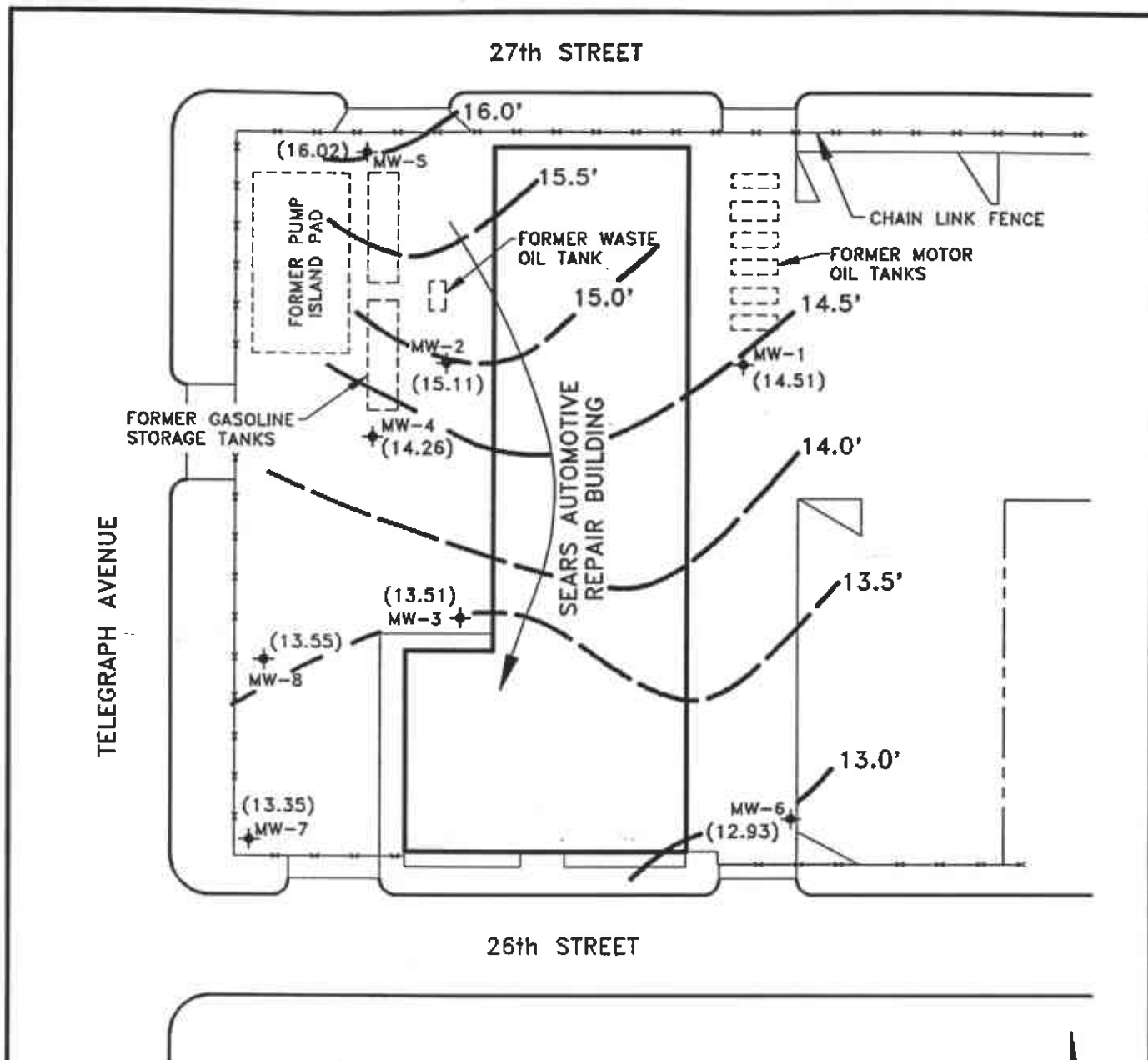


LEGEND

- ◆ MONITORING WELL
- () POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION

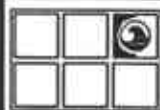


		GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY. CONCORD, CA 94520 (510) 671-2387		POTENTIOMETRIC SURFACE MAP (12/27/93)		
CLIENT: SEARS, ROEBUCK AND CO. SITE No. 1058			LOCATION: 2633 TELEGRAPH AVE. OAKLAND, CALIFORNIA		REV. NO.: 0	DATE: 2/10/94
PM <i>mjp</i>	PE/RG	DESIGNED BF	DETAILED ML	ACAD FILE: PSMD2793/SPD93	PROJECT NO.: 020204554	FIGURE: 3



LEGEND

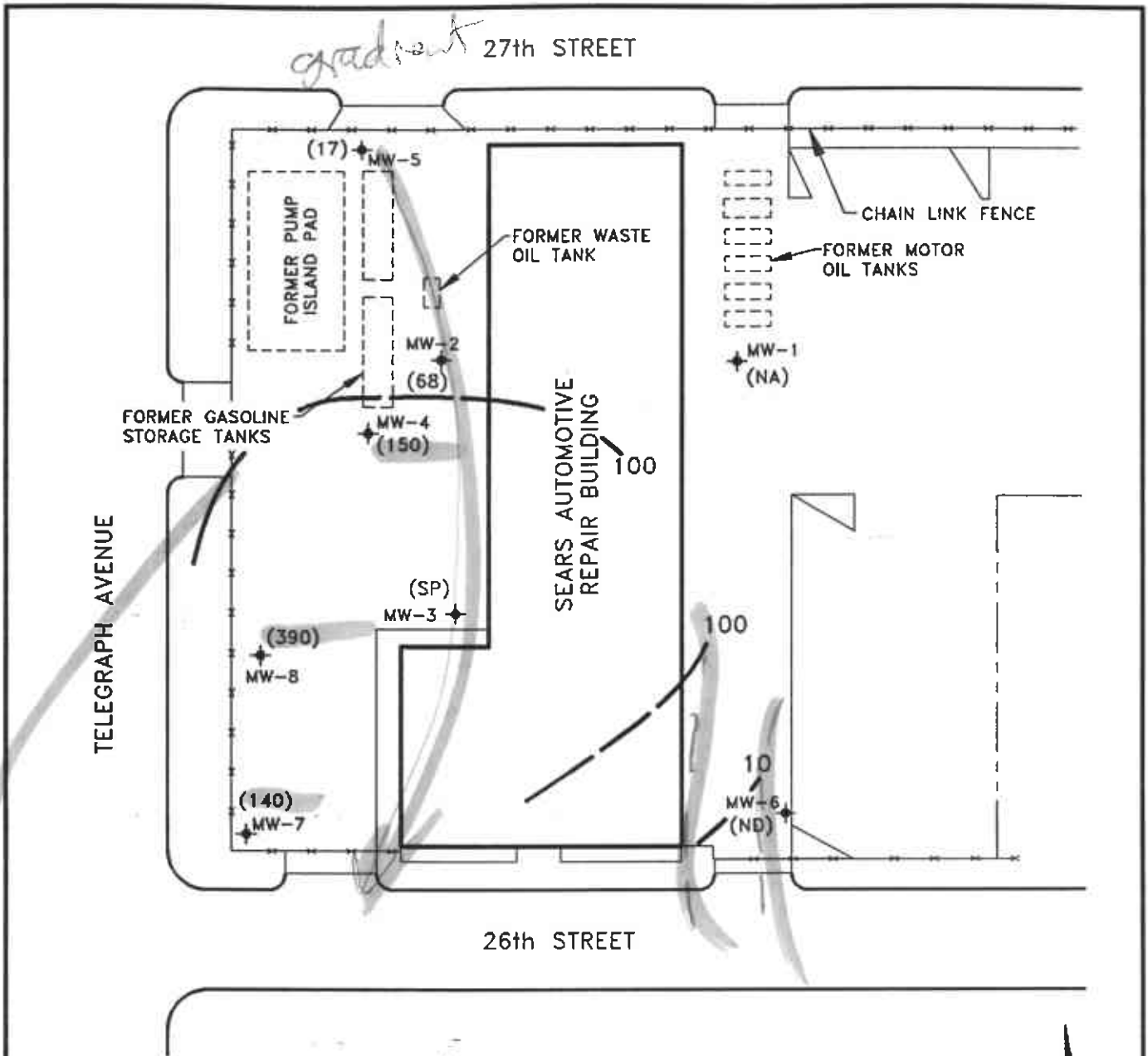
- ◆ MONITORING WELL
- () POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR
- ← GROUNDWATER FLOW DIRECTION



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

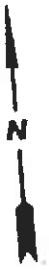
**POTENTIOMETRIC SURFACE MAP
 (1/5/94)**

CLIENT: SEARS, ROEBUCK AND CO. SITE No. 1058			LOCATION: 2633 TELEGRAPH AVE. OAKLAND, CALIFORNIA		REV. NO.: 0	DATE: 2/11/94
PM <i>[Signature]</i>	PE/RG	DESIGNED BF	DETAILED ML	ACAD FILE: PSM1594/SPD93	PROJECT NO.: 020204554	FIGURE: 4

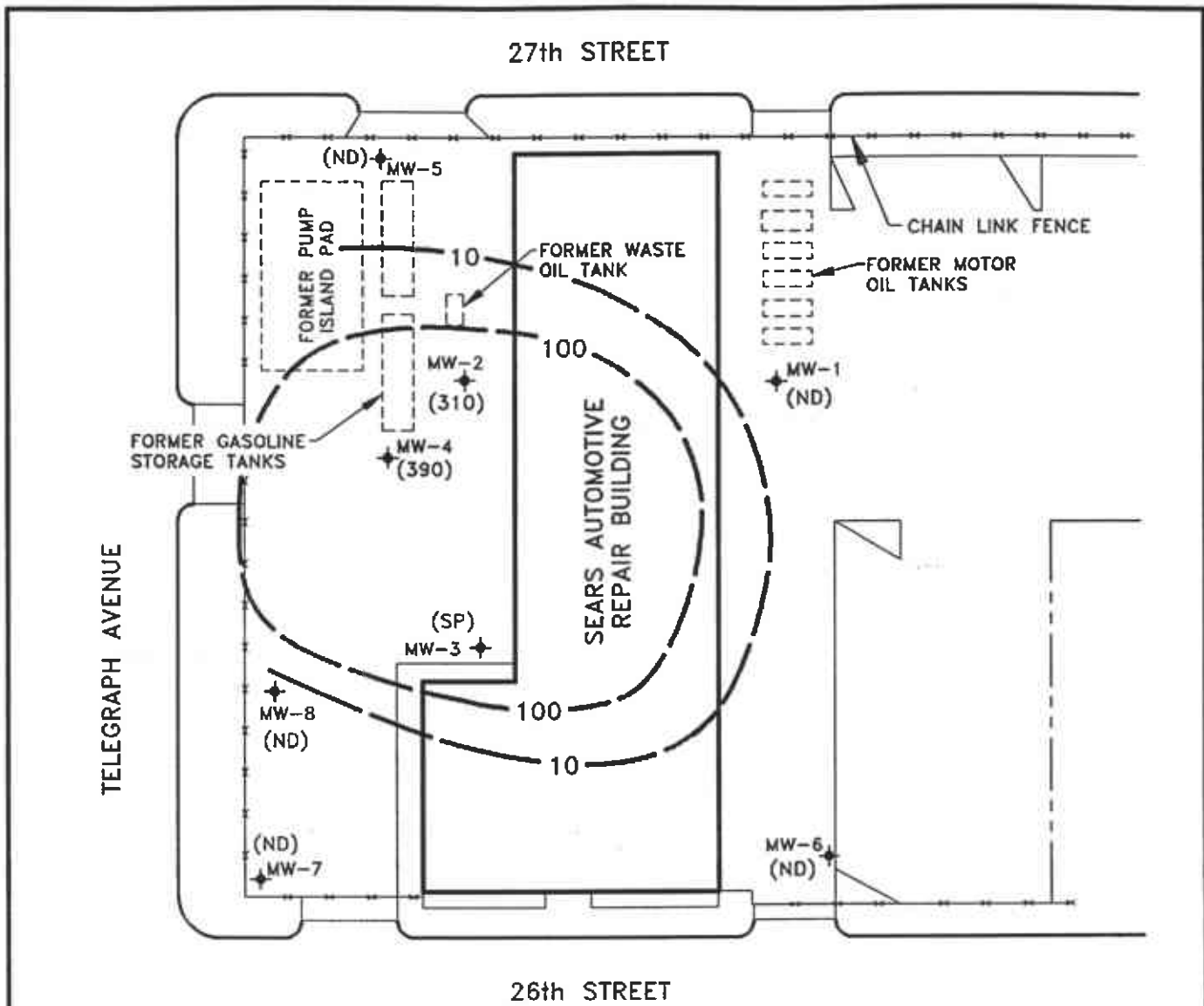


LEGEND

- ◆ MONITORING WELL
- () TPH-AS-GASOLINE CONCENTRATION (ppb)
- CONCENTRATION CONTOUR
- NA NOT ANALYZED
- ND NOT DETECTED
- SPH SEPARATE-PHASE HYDROCARBONS

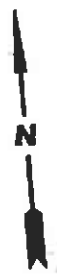


		GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY. CONCORD, CA 94520 (510) 671-2387		TPH-AS-GASOLINE CONCENTRATIONS IN GROUNDWATER (DEC. 1993)			
CLIENT: SEARS, ROEBUCK AND CO. SITE No. 1058			LOCATION: 2633 TELEGRAPH AVE. OAKLAND, CALIFORNIA		REV. NO.: 0	DATE: 2/11/94	
PM 	PE/RG	DESIGNED BF	DETAILED ML	ACAD FILE: TPHD93/SPD93	PROJECT NO.: 020204554	FIGURE: 5	



LEGEND

- ◆ MONITORING WELL
- () TPH-AS-MOTOR OIL CONCENTRATION (ppb)
- CONCENTRATION CONTOUR
- ND NOT DETECTED
- SPH SEPARATE-PHASE HYDROCARBONS



		GROUNDWATER TECHNOLOGY 4057 PORT CHICAGO HWY. CONCORD, CA 94520 (510) 671-2387		TPH-AS-MOTOR OIL CONCENTRATIONS IN GROUNDWATER (DEC. 1993)	
CLIENT: SEARS, ROEBUCK AND CO. SITE No. 1058		LOCATION: 2633 TELEGRAPH AVE. OAKLAND, CALIFORNIA		REV. NO.: 0	DATE: 2/11/94
PM <i>[Signature]</i>	PE/RG	DESIGNED BF	DETAILED ML	ACAD FILE: TPMOD93/SPD93	PROJECT NO.: 020204554
					FIGURE: 6

ATTACHMENT 2

Tables

- Table 1 Summary of Historical Monitoring Data
- Table 2 Summary of Groundwater Sample Analytical Results

**TABLE 1
SUMMARY OF HISTORICAL MONITORING DATA
Former Sears Automotive Center
2633 Telegraph Avenue, Oakland, California**

Well No.	Casing Elev	Date	DTW	DTP	PT	Groundwater Elevation
MW-1	26.20	12/30/92	10.60	---	---	15.60
		02/26/93	10.14	---	---	16.06
		03/24/93	10.48	---	---	15.72
		04/27/93	11.30	---	---	14.90
		05/28/93	11.43	---	---	14.77
		06/21/93	11.71	---	---	14.49
		07/22/93	11.87	---	---	14.33
		08/13/93	11.94	---	---	14.26
		09/16/93	12.05	---	---	14.15
		10/22/93	12.00	---	---	14.20
		11/03/93	12.10	---	---	14.10
		11/24/93	11.97	---	---	14.23
		12/01/93	11.46	---	---	14.74
		12/27/93	11.58	---	---	14.62
01/05/94	11.69	---	---	14.51		
MW-2	26.50	12/30/92	10.65	---	*	15.85
		02/26/93	10.56	---	---	15.94
		03/24/93	10.52	---	---	15.98
		04/27/93	11.17	---	---	15.33
		05/28/93	11.12	---	---	15.38
		06/21/93	11.41	---	---	15.09
		07/22/93	11.50	---	---	15.00
		08/13/93	11.54	---	---	14.96
		09/16/93	11.62	---	---	14.88
		10/22/93	11.57	---	---	14.93
		11/03/93	11.65	---	---	14.85
		11/24/93	11.52	---	---	14.98
		12/01/93	11.08	---	---	15.42
		12/27/93	11.27	---	---	15.23
01/05/94	11.39	---	---	15.11		
MW-3	26.34	12/30/92	12.43	---	*	13.91
		02/26/93	12.21	---	---	14.13
		03/24/93	12.36	---	---	13.98
		04/27/93	12.70	---	---	13.64
		05/28/93	12.72	---	---	13.62
		06/21/93	12.87	---	---	13.47
		07/22/93	12.92	---	---	13.42
		08/13/93	12.96	---	---	13.38
		09/16/93	13.01	12.97	0.04	13.36
		10/22/93	NM	12.96	NM	NM
		11/03/93	13.13	13.02	0.11	13.30
		11/24/93	12.94	12.92	0.02	13.42
		12/01/93	12.71	12.69	0.02	13.65
		12/27/93	12.77	12.73	0.04	13.60
01/05/94	12.85	12.83	0.02	13.51		

TABLE 1
SUMMARY OF HISTORICAL MONITORING DATA
Former Sears Automotive Center
2633 Telegraph Avenue, Oakland, California

Well No.	Casing Elev	Date	DTW	DTP	PT	Groundwater Elevation
MW-4	26.17	12/30/92	11.53	--	---	14.64
		02/26/93	11.35	---	---	14.82
		03/24/93	11.46	---	---	14.71
		04/27/93	11.74	---	---	14.43
		05/28/93	11.77	---	---	14.40
		06/21/93	11.92	---	---	14.25
		07/22/93	11.95	---	---	14.22
		08/13/93	12.01	---	---	14.16
		09/16/93	12.08	---	---	14.09
		10/22/93	12.03	---	---	14.14
		11/03/93	12.10	---	---	14.07
		11/24/93	12.02	---	---	14.15
		12/01/93	11.78	---	---	14.39
		12/27/93	11.80	---	---	14.37
01/05/94	11.91	---	---	14.26		
MW-5	26.98	12/30/92	10.50	---	---	16.48
		02/26/93	10.12	---	---	16.86
		03/24/93	10.31	---	---	16.67
		04/27/93	10.75	---	---	16.23
		05/28/93	10.80	---	---	16.18
		06/21/93	10.94	---	---	16.04
		07/22/93	11.01	---	---	15.97
		08/13/93	11.07	---	---	15.91
		09/16/93	11.18	---	---	15.80
		10/22/93	11.19	---	---	15.79
		11/03/93	11.23	---	---	15.75
		11/24/93	12.00	---	---	14.98
		12/01/93	10.84	---	---	16.14
		12/27/93	10.81	---	---	16.17
01/05/94	10.96	---	---	16.02		
MW-6	24.32	12/27/93	11.24	---	---	13.08
		01/05/94	11.39	---	---	12.93
MW-7	24.88	12/27/93	11.80	---	---	13.08
		01/05/94	11.53	---	---	13.35
MW-8	26.12	12/27/93	12.45	---	---	13.67
		01/05/94	12.57	---	---	13.55

Elevation in feet above mean sea level
DTW = Depth to water (in feet)
DTP = Depth to product (in feet)
PT = Product thickness (in feet)
NM = Not monitored
* = Sheen observed (<0.01 foot)
-- = Product not detected

TABLE 2
SUMMARY OF HISTORICAL GROUNDWATER SAMPLE ANALYTICAL RESULTS
Former Sears Automotive Center
2633 Telegraph Avenue, Oakland, California

Well ID	Date	B	T	E	X	TPH-G	TPH-M	TPH (mg/l)	Dissolved Metals
MW-1 <i>Water O.I. Toluene</i>	12/30/92	1	1	2	2	--	--	1	--
	03/24/93	0.4	1	0.3	10	--	--	1	--
	06/21/93	<0.3	1	2	6	--	**<100	--	--
	09/16/93	<0.3	0.7	<0.3	7	--	**<100	--	--
	12/01/93	0.4	1	2	7	--	--	--	--
	12/30/93	--	--	--	--	--	<100	--	--
MW-2 <i>Water O.I. Toluene</i>	12/30/92	0.7	<0.3	<0.3	3	190	--	1	^a ND
	03/24/93	0.6	<0.3	<0.3	2	120	--	<1	^a ND
	06/21/93	0.3	<0.3	<0.3	0.7	82	**<100	--	^c ND
	09/16/93	<0.3	<0.3	<0.3	<0.5	28	**<100	--	^c ND
	12/01/93	<0.3	<0.3	<0.3	1	68	--	--	^c ND
	12/30/93	--	--	--	--	--	310	--	--
MW-3 <i>Down gradient</i>	12/30/92	11	0.9	<0.3	2	910	--	20	^a ND
	03/24/93	28	0.7	1	8	3,300	--	28	^a 15
	06/21/93	21	5	2	19	**2,600	32,000	26	^{cd} 5
	09/16/93	--	--	--	--	--	--	--	--
	12/01/93	--	--	--	--	--	--	--	--
	12/30/93	--	--	--	--	--	--	--	--
MW-4 <i>Positive Toluene</i>	12/30/92	2	<0.3	1	<0.5	1,200	--	<1	^a ND
	03/24/93	<0.3	<0.3	<0.3	<0.5	750	--	2	^a 7
	06/21/93	<0.3	2	<0.3	0.5	660	19,000	--	^a ND
	09/16/93	0.3	<0.3	2	3	410	2,500	--	^a ND
	12/01/93	<0.3	<0.3	<0.3	<0.5	150	390	--	^a ND
	12/30/93	--	--	--	--	--	--	--	--
MW-5 <i>Up gradient</i>	12/30/92	<0.3	<0.3	<0.3	<0.5	37	--	<1	^{bc} 5
	03/24/93	<0.3	<0.3	<0.3	0.5	19	--	2	^a 341
	06/21/93	<0.3	<0.3	<0.3	<0.5	<10	<100	--	^c ND
	09/16/93	0.3	<0.3	<0.3	1	<10	<100	--	^c ND
	12/01/93	<0.3	<0.3	<0.3	1	17	--	--	^c ND
	12/30/93	--	--	--	--	--	<100	--	--
MW-6 <i>down S E</i>	12/27/93	<0.3	<0.3	<0.3	<0.5	<10	<100	<1	^a 70
MW-7 <i>down SW</i>	12/27/93	<0.3	<0.3	1	2	140	<100	<1	^a 40
MW-8 <i>down W</i>	12/27/93	0.4	4	0.4	1	390	<100	<1	^a 18

Results in micrograms per liter [µg/l] except where noted otherwise.

- BTEX = Benzene, toluene, ethylbenzene, and total xylenes (EPA Methods 5030, 8020)
- TPH-G = Total petroleum hydrocarbons-as-gasoline (EPA Methods 5030 and modified EPA Method 8015)
- TPH-M = Total petroleum hydrocarbons-as-motor oil (modified EPA Method 8015)
- TPH = Total petroleum hydrocarbons (EPA Method 418.1 [SM 5520 FC])
- mg/l = Milligrams per liter
- = Not analyzed
- ND = Nondetectable (detection limits for each compound are listed in laboratory reports, included in Appendix D)
- * = Water samples were not filtered, analytical results represent total metals present, not dissolved concentrations.
- ** = Uncategorized hydrocarbon compound not included in this hydrocarbon concentration.
- a = Dissolved lead
- b = Dissolved lead only analyte detected
- c = Dissolved lead, cadmium, total chromium, nickel, and zinc.
- d = Cadmium only analyte detected.

ATTACHMENT 3

Well Purge Data

Project Name: SEARS/TELEGRAPH AVE.

Date: 12/1/93

Job Number: 204554.061002
020500092-0104

Page 1 of 5

Site Address: 2533 Telegraph Ave., Oakland, Calif.

Project Manager: Mike Wray

Well ID: MW-5

DTW Measurements

Initial = 10.84ft

Calc Well Volume = 10 gal

Recharge 11.10ft

Well Volume = _____ gal

Well Dia: 2"

Purge Method	Pump Depth	_____ ft
<input type="checkbox"/> Peristaltic	<input checked="" type="checkbox"/> _____	Hand Bailed
<input type="checkbox"/> Gear Drive	_____	Air Lift
<input type="checkbox"/> Submersible	_____	Other

Instruments Used	
<input type="checkbox"/> YSI 3650 pH/ C/mmbo	<input type="checkbox"/> OMEGA Cond.
<input type="checkbox"/> HYDAC pH/ F/umbo	<input type="checkbox"/> DRT-15C TURBID
<input type="checkbox"/> OMEGA pH/ C	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> CORNING	

TIME	TEMP		pH	Conductivity M _S / cm	PURGE VOLUME	COMMENTS
	C	F				
	20.3	7.59	8.98	1		
	20.3	7.60	8.32	4		
	20.2	7.61	6.58	7		
	20.2	7.61	6.32	10		

Project Name: SEARS/TELEGRAPH AVE.

Date: 12/1/93

Job Number: 204554, DB 1002
020503392, 6104

Page 3 of 5

Site Address: 2533 Telegraph Ave., Oakland, Calif.

Project Manager: Mike Wray

Well ID MW-2

DTW Measurements
Initial = 1108 ft
Recharge _____ ft

Calc Well Volume = _____ gal
Well Volume = 6 gal

Well Dia 2"

Purge Method	Pump Depth	ft
<input type="checkbox"/> Peristaltic	<input checked="" type="checkbox"/>	Hand Balled
<input type="checkbox"/> Gear Drive		Air Lift
<input type="checkbox"/> Submersible		Other

Instruments Used	
<input type="checkbox"/> YSI 3650 pH/ C/mmbo	<input type="checkbox"/> OMEGA Cond.
<input type="checkbox"/> HYDAC pH/ F/umbo	<input type="checkbox"/> DRT-15C TURBID
<input type="checkbox"/> OMEGA pH/ C	<input type="checkbox"/> Other
<input checked="" type="checkbox"/> <u>CORMAG</u>	

TIME	TEMP		pH	Conductivity	PURGE VOLUME	COMMENTS
	C	F				
	20.6		7.30	6.41	1	
	20.4		7.26	6.40	2	
	20.1		7.22	6.38	4	
	20.0		7.22	6.38	6	

Project Name: SEARS/TELEGRAPH AVE.

Date: 12/1/93
Page 4 of 5

Job Number: 204557 061002
020509392 . 6404

Site Address: 2533 Telegraph Ave., Oakland, Calif.

Project Manager: Mike Wray

Well ID MW-4

DTW Measurements
Initial = 11.76 ft
Recharge _____ ft

Calc Well Volume = 7 gal
Well Volume = _____ gal

Well Dia 2"

Purge Method	Pump Depth _____ ft
Peristaltic	<input checked="" type="checkbox"/> Hand Bailed
Gear Drive	_____ Air Lift
Submersible	_____ Other

Instruments Used	
YSI 3650 pH/ C/mmbo	_____ OMEGA Cond.
HYDAC pH/ F/umbo	_____ DRT-15C TURBID
OMEGA pH/ C	_____ Other
<input checked="" type="checkbox"/> CORNING	

TIME	TEMP		pH	Conductivity	PURGE VOLUME	COMMENTS
	C	F				
	22.2	7.22	6.27		1	
	22.2	7.15	6.49		2	
	22.0	7.07	6.73		5	
	22.0	7.06	6.73		7	

Project Name: Sears Telegraph

Date: 12-27-93

Project Number: 02020A554 - 6105

Page 1 of 1

Site Address: 2633 Telegraph Ave Oakland CA

Project Manager: Mike Wray

Well ID mw-8

Well Dia 2.0"

DTW Measurements
 12.4 Initial 7.47 ft Calc Well Volume = 4.71 gal
 Recha 12.48 ft Well Volume = 1.74 gal
 DTB 22.11' 9.66
10.70 x 1.63 = 1.57

Purged Method	Pump Depth	<u>0</u> ft
<input type="checkbox"/> Peristaltic	<input checked="" type="checkbox"/> Hand Bailed	
<input type="checkbox"/> Gear Drive	<input type="checkbox"/> Air Lift	
<input checked="" type="checkbox"/> Submersible	<input type="checkbox"/> Other	

Instruments Used	
<input checked="" type="checkbox"/> YSI 3650 pH/C/mmbo	OMEGA Cond.
<input type="checkbox"/> HYDAC pH/F/umbo	DRT-15C TURBID
<input type="checkbox"/> OMEGA pH/C	Other

GPM - Bai

TIME	TEMP	Conductivity	pH	PURGE VOLUME gallons	TURBIDITY	COMMENTS
	<input checked="" type="checkbox"/> C <input type="checkbox"/> F					
1120	19.5	741	6.48	2.0	N/A	LIGHT BROWN
1123	21.2	761	6.50	4.0	N/A	LIGHT BROWN
1127	21.5	761	6.48	5.5	N/A	LIGHT BROWN
						Sampled @ 1143

Project Name: Sears Telegraph
 Project Number: 020204554 - 6105
 Site Address: 2633 Telegraph Ave. Oakland CA

Date: 12-27-93
 Page 1 of 1
 Project Manager: Mike Wray

Well ID mw6
 Well Dia 2.0"

DTW Measurements
 Initial 11.24ft Calc Well Volume = 6.88 gal
 Recha 11.33ft Well Volume = 1.72 gal

DTB 21.80'
10.56' x .163

Purged Method	Pump Depth	<u>0</u> ft
<input type="checkbox"/> Peristaltic	<input checked="" type="checkbox"/>	Hand Bailed
<input type="checkbox"/> Gear Drive		Air Lift
<input checked="" type="checkbox"/> Submersible		Other

Instruments Used	
<input checked="" type="checkbox"/> YSI 3650 pH/ C/mmbo	OMEGA Cond.
<input type="checkbox"/> HYDAC pH/ F/mmbo	DRT-15C TURBID
<input type="checkbox"/> OMEGA pH/ C	Other

TIME	TEMP	Conductivity	pH	PURGE VOLUME gallons	TURBIDITY	COMMENTS
	<input checked="" type="checkbox"/> C <input type="checkbox"/> F					
1312	19.9	505	6.55	2.0	N/A	Light Brown/muddy
1315	19.3	576	6.54	4.0	N/A	Light Brown/muddy
1318	19.7	555	6.46	6.0	N/A	Light Brown/muddy
1322	19.5	550	6.49	7.0	N/A	Light Brown/muddy
						sampled @ 1325

Project Name: SEAS TELEGRAPH

Date: 12/30/93

Site Address: 2633 TELEGRAPH, OAKLAND

Page _____ of _____

Project Number: 020204554

Project Manager: A. WRAY

Well ID: MW-2

DTW Measurements:

Well Diameter: 2"

Initial: /

Calc Well Volume: _____ gal

Recharge: /

Well Volume: 4 7 gal

Purge Method _____ Pump Depth _____ ft.
 Peristaltic _____ Hand Bailed
 Gear Drive _____ Air Lift _____
 Submersible _____ Other _____

Instruments Used
 YSI:
 Hydac: _____
 Omega: _____
 Other: _____

Time	Temp ✓ C F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
9:10	Temp	.59	6.33	0		Clear
9:12	Probe Broken	.59	6.46	3		cloudy sheer
9:14	↓	.58	6.47	6		u
9:15		.58	6.46	7		u
	↓					

ATTACHMENT 4
Laboratory Reports
and
Chain-of-Custody Record



4080 Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
(800) 423-7143 Outside CA
(510) 825-0720 FAX

Client Number: 020204554
Project ID: 2633 Telegraph
Oakland, CA
Work Order Number: C3-12-0011

December 8, 1993

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

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 12/01/93, under chain of custody record 27611.

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

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

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

Sincerely,
GTEL Environmental Laboratories, Inc.

 - I worked on
6-20-13
C312011

Rashmi Shah
Laboratory Director

Client Number: 020204554
 Project ID: 2633 Telegraph
 Oakland, CA
 Work Order Number: C3-12-0011

Table 1
ANALYTICAL RESULTS
Purgeable Aromatics in Water
EPA Method 8020^a

GTEL Sample Number		01	02	03	F120393
Client Identification		TRIP BLANK	DUP	RBMW-5	METHOD BLANK
Date Sampled		12/01/93	12/01/93	12/01/93	--
Date Analyzed		12/03/93	12/21/93	12/03/93	12/03/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
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
Xylene, total	0.5	<0.5	<0.5	<0.5	<0.5
Chlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,2-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,3-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
1,4-Dichlorobenzene	0.5	<0.5	<0.5	<0.5	<0.5
Detection Limit Multiplier		1	1	1	1
BFB Surrogate, % recovery		102	91.4	98.8	85.4

a. Federal Register, Vol. 49, October 26, 1984. Test Methods for Evaluating Solid Waste, SW-846, 3rd edition, Rev. 0, U.S. EPA, November, 1986.

Client Number: 020204554
 Project ID: 2633 Telegraph
 Oakland, CA
 Work Order Number: C3-12-0161

Table 1
ANALYTICAL RESULTS
 Purgeable Aromatics in Water
 EPA Method 602^a

GTEL Sample Number		02	1213P		
Client Identification		MW-3D	METHOD BLANK		
Date Sampled		12/01/93	--		
Date Analyzed		12/14/93	12/13/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	<0.5	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	<0.5	<0.5		
Chlorobenzene	0.5	<0.5	<0.5		
1,2-Dichlorobenzene	0.5	<0.5	<0.5		
1,3-Dichlorobenzene	0.5	<0.5	<0.5		
1,4-Dichlorobenzene	0.5	<0.5	<0.5		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		99.8	87.0		

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

Client Number: 020204554
 Project ID: 2633 Telegraph
 Oakland, CA
 Work Order Number: C3-12-0161

Table 1
ANALYTICAL RESULTS
 TPH as Motor Oil in Water
 Method: GC-FID^a

GTEL Sample Number		01	GCJ 121693		
Client Identification		MW-4	METHOD BLANK		
Date Sampled		12/01/93	--		
Date Analyzed		12/16/93	12/16/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as motor oil	10	390	<10		
Detection Limit Multiplier		1	1		
OTP surrogate, % recovery		76.0	57.6		

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



GTEL

ENVIRONMENTAL
LABORATORIES, INC.

4080 Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 Inside CA
(800) 423-7143 Outside CA
(510) 825-0720 FAX

Client Number: 020204554
Project ID: 2633 Telegraph
Oakland, CA
Work Order Number: C3-12-0161

December 21, 1993

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

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 12/01/93, under chain of custody record 27611.

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

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

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

Sincerely,
GTEL Environmental Laboratories, Inc.

Bill Samboda

for
Rashmi Shah
Laboratory Director

Client Number: 020204554
 Project ID: 2633 Telegraph
 Oakland, CA
 Work Order Number: C3-12-0161

Table 1

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	Q121293		
Client Identification		MW-4	METHOD BLANK		
Date Sampled		12/01/93	--		
Date Analyzed		12/12/93	12/12/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3		
Toluene	0.3	<0.3	<0.3		
Ethylbenzene	0.3	<0.3	<0.3		
Xylene, total	0.5	<0.5	<0.5		
TPH as Gasoline	10	150	<10		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		104	101		

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

Client Number: 020204554
 Project ID: 2633 Telegraph
 Oakland, CA
 Work Order Number: C3-12-0011

Table 1
ANALYTICAL RESULTS
 Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water
 EPA Methods 5030, 8020, and Modified 8015a

GTEL Sample Number		04	05	06	Q120893
Client Identification		MW-5	MW-1	MW-2	METHOD BLANK
Date Sampled		12/01/93	12/01/93	12/01/93	--
Date Analyzed		12/08/93	12/08/93	12/08/93	12/08/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	0.4	<0.3	<0.3
Toluene	0.3	<0.3	1	<0.3	<0.3
Ethylbenzene	0.3	<0.3	2	<0.3	<0.3
Xylene, total	0.5	1	7	1	<0.5
TPH as Gasoline	10	17	NR	68	<10
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		112	103	101	101

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.
 NR = Not Requested.

Client Number: 020204554
 Project ID: 2633 Telegraph
 Oakland, CA
 Work Order Number: C3-12-0161

Table 1
ANALYTICAL RESULTS
 Dissolved Lead in Water by Graphite Furnace AA
 EPA Methods 7421¹

GTEL Sample Number		01 ²	120193 MET		
Client Identification		MW-4	METHOD BLANK		
Date Sampled		12/01/93	--		
Date Prepared		12/01/93	12/01/93		
Date Analyzed		12/06/93	12/06/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Lead, total	5	<5	<5		
Detection Limit Multiplier		1	1		

1. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, November 1986.
2. Unpreserved water sample was passed through a 0.45 micron filter and analyzed as a dissolved metal. Sample was laboratory filtered on 12/01/93.

Client Number: 020204554
 Project ID: 2633 Telegraph
 Oakland, CA
 Work Order Number: C3-12-0011

Table 1
ANALYTICAL RESULTS
Metals in Water

GTEL Sample Number			04	06	120193 MET	
Client Identification			MW-5	MW-2	METHOD BLANK	
Date Sampled			12/01/93	12/01/93	--	
Date Prepared ^d			12/01/93	12/01/93	12/01/93	
Date Analyzed (Method 6010)			12/06/93	12/06/93	12/06/93	
Date Analyzed (Method 7421)			12/06/93	12/06/93	12/06/93	
Analyte	EPA Method ^a	Detection Limit, ug/L	Concentration, ug/L			
Cadmium	EPA 6010 ^b	5	<5	<5	<5	
Chromium, total	EPA 6010 ^b	10	<10	<10	<10	
Lead	EPA 7421 ^c	5	<5	<5	<5	
Nickel	EPA 6010 ^b	20	<20	<20	<20	
Zinc	EPA 6010 ^b	20	<20	<20	<20	
Detection Limit Multiplier			1	1	1	

- a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986.
- b. Inductively Coupled Argon Plasma (ICP)
- c. Graphite Furnace Atomic Absorption (GFAA)
- d. Unpreserved water sample was passed through a 0.45 micron filter and analyzed as a dissolved metal. Sample was lab filtered on 12/01/93.

Company Name: **GTI** Phone #: _____
 Company Address: **4057 Port Chicago Concord** Site location: **2633 Telegraph Oakland, CA**
 Project Manager: **Mike Wray** Client Project ID: (#) **020204554**
 I attest that the proper field sampling procedures were used during the collection of these samples. (NAME) **Sears - Telegraph** Sampler Name (Print): **Grey Mason**

8020 with MTBE
 BTEX/Gas Hydrocarbons PID/FID with MTBE
 Hydrocarbons GC/FID Gas Diesel Screen
 Hydrocarbon Profile (SIMDIS)
 Oil and Grease 413.1 413.2 SM 503
 TPH/IR 418.1 SM 503
 EDB by 504 DBCP by 504
 EPA 503.1 EPA 502.2
 EPA 601 EPA 8010
 EPA 602 EPA 8020
 EPA 608 8080 PCB only
 EPA 624/PPPL 8240/TAL NBS (+15)
 EPA 625/PPPL 8270/TAL NBS (+25)
 EPA 610 8310
 EP TOX Metals Pesticides Herbicides
 TCLP Metals VOA Semi-VOA Pest Herb
 EPA Metals - Priority Pollutant TAL RCRA
 CAM Metals TTLC STLC
 Lead 239.2 200.7 7420 7421 6010
 Organic Lead
 Corrosivity Flash Point Reactivity
TPH MOTOR OIL 8015
Dissolved lead, Cd, Cr, Ni, Zn
Dissolved lead

Field Sample ID	GTEL Lab # (Lab use only)	# Containers	Matrix						Method Preserved				Sampling			
			WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	HCl	HNO ₃	H ₂ SO ₄	ICE	UNPRESERVED	OTHER (SPECIFY)	DATE	TIME
Trip blank	01	1	X													
Dup	02	1	X													
RBMW-5	03	1	X													
MW-5	04	7	X													
MW-1	05	4	X													
MW-2	06	7	X													
MW-4	07	7	X													

TAT _____
 Priority (24 hr)
 Expedited (48 hr)
 7 Business Days
 Other _____
 Business Days
 Special Handling _____
 GTEL Contact _____
 Quote/Contract # _____
 Confirmation # _____
 PO # _____
 QA / QC LEVEL _____
 BLUE CLP OTHER _____

SPECIAL DETECTION LIMITS _____
 SPECIAL REPORTING REQUIREMENTS _____
 FAX

REMARKS
analysis unpreserved - please filter
Standard Turn around
 Lab Use Only Lot # _____
RECEIVED AT 5°C
 Storage Location: **T-Box DR 2/1 Pink**

CUSTODY RECORD

Relinquished by Sampler: **Grey Mason** Date: **12/1** Time: **15:15**
 Relinquished by: _____ Date: _____ Time: _____
 Relinquished by: _____ Date: _____ Time: _____

Work Order # **C3120011**
 Received by: _____
 Received by: _____
 Received by Laboratory: **Ronald C. Jensen**



Northwest Region

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

Client Number: 020204554
Project ID: 2633 Telegraph Ave.
Oakland, CA
Work Order Number: C3-12-0484

January 5, 1994

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

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 12/28/93, under chain of custody record 24454.

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

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

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

Sincerely,
GTEL Environmental Laboratories, Inc.

Edwin Pasandini
For,

Rashmi Shah
Laboratory Director

Table 1

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	02	03	04
Client Identification		MW-6	MW-7	MW-8	TBLB
Date Sampled		12/27/93	12/27/93	12/27/93	12/27/93
Date Analyzed		01/03/94	01/03/94	01/03/94	01/03/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3	0.4	<0.3
Toluene	0.3	<0.3	<0.3	4	<0.3
Ethylbenzene	0.3	<0.3	1	0.4	<0.3
Xylene, total	0.5	<0.5	2	1	<0.5
TPH as Gasoline	10	<10	140	390	<10
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		90.1	90.9	89.6	90.1

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

Table 1 (Continued)

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		05	06	07	010394M
Client Identification		RBMW-6	RBMW-7	RBMW-8	METHOD BLANK
Date Sampled		12/27/93	12/27/93	12/27/93	--
Date Analyzed		01/04/94	01/04/94	01/04/94	01/03/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.3	<0.3	<0.3	<0.3	<0.3
Toluene	0.3	<0.3	<0.3	<0.3	<0.3
Ethylbenzene	0.3	<0.3	<0.3	<0.3	<0.3
Xylene, total	0.5	<0.5	<0.5	<0.5	<0.5
TPH as Gasoline	10	<10	<10	<10	<10
Detection Limit Multiplier		1	1	1	1
BFB surrogate, % recovery		91.7	88.4	90.2	88.9

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision. Bromofluorobenzene surrogate recovery acceptability limits are 70-130%.

Table 1

ANALYTICAL RESULTS

**Total Petroleum Hydrocarbons in Water
 by Infrared Spectrometry**

EPA Method 418.1¹(SM 5520 FC²)

1. Methods for Chemical Analysis of Water and Wastes, EPA 600/4-79-202, Revised March 1983, U.S. Environmental Protection Agency.
2. Standard Methods for the Examination of Water and Wastewater, 17th ed., 1989, American Public Health Association.

GTEL Sample Number		01	02	03	010494 TOG
Client Identification		MW-6	MW-7	MW-8	METHOD BLANK
Date Sampled		12/27/93	12/27/93	12/27/93	--
Date Prepared		01/04/94	01/04/94	01/04/94	01/04/94
Date Analyzed		01/04/94	01/04/94	01/04/94	01/04/94
Analyte	Detection Limit, mg/L	Concentration, mg/L			
Total Petroleum Hydrocarbons	1	<1	<1	<1	<1
Detection Limit Multiplier		1	1	1	1

Client Number: 020204554
 Project ID: 2633 Telegraph Ave.
 Oakland, CA
 Work Order Number: C3-12-0484

ANALYTICAL RESULTS

TPH as Motor Oil in Water

Method: GC-FID^a

GTEL Sample Number		01	02 ^b	03 ^b	GCK 123093
Client Identification		MW-6	MW-7	MW-8	METHOD BLANK
Date Sampled		12/27/93	12/27/93	12/27/93	--
Date Extracted		12/30/93	12/30/93	12/30/93	12/30/93
Date Analyzed		01/04/94	01/04/94	01/04/94	01/04/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as Motor Oil	100	<100	<100	<100	<100
Detection Limit Multiplier		1	1	1	1
OTP surrogate, % recovery		86.8	102	104	96.2

- a. O-Terphenyl surrogate recovery acceptability limits are 50-150%. Test Methods for Evaluating Solid Waste, SW-846, 3rd edition, Rev. O, U.S. EPA, November, 1986.
- b. Uncategorized compounds present are not indicative of hydrocarbon requested.

Table 1
ANALYTICAL RESULTS
Lead in Water by Graphite Furnace AA
EPA Methods 7421¹/3005²

GTEL Sample Number		01	02	03	123093 MET
Client Identification		MW-6	MW-7	MW-8	METHOD BLANK
Date Sampled		12/27/93	12/27/93	12/27/93	-
Date Prepared		12/30/93	12/30/93	12/30/93	12/30/93
Date Analyzed		12/30/93	12/30/93	12/30/93	12/30/93
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Lead, total	5	70	40	18	<5
Detection Limit Multiplier		1	1	1	1

1. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, November 1986.
2. Sample preparation by EPA Method 3005.



Client Number: 020204554
Project ID: Sears 2633 Telegraph Ave.
Work Order Number: C3-12-0507

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Concord, CA 94520
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(800) 423-7143 Outside CA
(510) 825-0720 FAX

January 10, 1994

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

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 12/30/93, under chain of custody record 24490.

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

GTEL is certified by the California State Department of Health Services, Laboratory certification number E1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

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

Sincerely,
GTEL Environmental Laboratories, Inc.

A handwritten signature in black ink, appearing to read 'Rashmi Shah', is written over a faint, illegible typed name.

Rashmi Shah
Laboratory Director

Table 1

ANALYTICAL RESULTS

TPH as Motor Oil in Water

Method: Modified EPA 8015^a

GTEL Sample Number		01	02 ^b	03 ^c	GCK 010794
Client Identification		MW-5	MW-1	MW-2	METHOD BLANK
Date Sampled		12/30/93	12/30/93	12/30/93	--
Date Extracted		01/05/94	01/05/94	01/05/94	01/05/94
Date Analyzed		01/08/94	01/08/94	01/08/94	01/07/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as motor oil	100	<100	<100	310	<100
Detection Limit Multiplier		1	1	1	1
OTP surrogate, % recovery		97.2	96.9	95.7	87.2

- a. O-Terphenyl surrogate recovery acceptability limits are 50-150%. Test Methods for Evaluating Solid Waste, SW-846, 3rd edition, Rev. O, U.S. EPA, November, 1986.
- b. Uncategorized compound present is not indicative of hydrocarbon requested.
- c. Hydrocarbon pattern is not characteristic of motor oil standard.

