RO480

GROUNDWATER TECHNOLOGY, INC.

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FAX: (415) 685-9148

December 7, 1994

Mr. Tom Peacock
Alameda County
1137 harbor Bay Parkway
Alameda, CA. 94502

SUBJECT: Quarterly Groundwater Monitoring and Sampling Report
Former Sears Store 1058
2633 Telegraph Avenue, Oakland, California
GTI Project 020204554

Dear Mr. Peacock:

On behalf of Sears, Roebuck and Co., Groundwater Technology presents the monthly groundwater monitoring data collected on July 28 and August 31, 1994, and the quarterly monitoring and sampling data collected on September 27, 1994, from the site referenced above. The eight groundwater monitoring wells were gauged to determine depth to groundwater (DTW) and to check for the presence of separate-phase petroleum hydrocarbons. Separate-phase hydrocarbons were detected in monitoring well MW-3 at a thickness of 0.11 feet. A potentiometric surface map and a distribution map for benzene and total petroleum hydrocarbons (TPH) as gasoline are presented in attachment 1. A summary of groundwater monitoring data is presented in attachment 2.

After measuring DTW, the monitoring wells, except for MW-3, were purged and sampled. Groundwater monitoring and sample collection protocol and field data sheets are presented in attachment 3. The groundwater samples were each analyzed for TPH-as motor oil using Modified EPA Methods 3510/8015. Additionally, monitoring well MW-1 was analyzed for dissolved benzene, toluene, ethylbenzene, and total xylenes (BTEX), using EPA method 8020, monitoring wells MW-2, MW-4, MW-5, MW-6, MW-7 and MW-8 were analyzed for BTEX and for TPH-as-gasoline using EPA method 8020, and monitoring wells MW-5, MW-6, MW-7 and MW-8 were analyzed for dissolved Cadmium, Chromium, Nickel and Zinc using EPA methods 6010 and 7421. Laboratory reports and chain-of-custody records are included in attachment 4.

A work plan for off-site assessment dated June 8, 1994, and an amendment to the work plan dated November 4, 1994 have been submitted for your review. At this time, we are waiting for a response from your agency. response written dated Dec 5, 94

Groundwater Technology is pleased to assist Sears, Roebuck and Co. on this project. Please contact me with any questions at (510) 671-2387.

Sincerely,
Groundwater Technology, Inc.

Michael J. Wray
Project Manager
Attachments

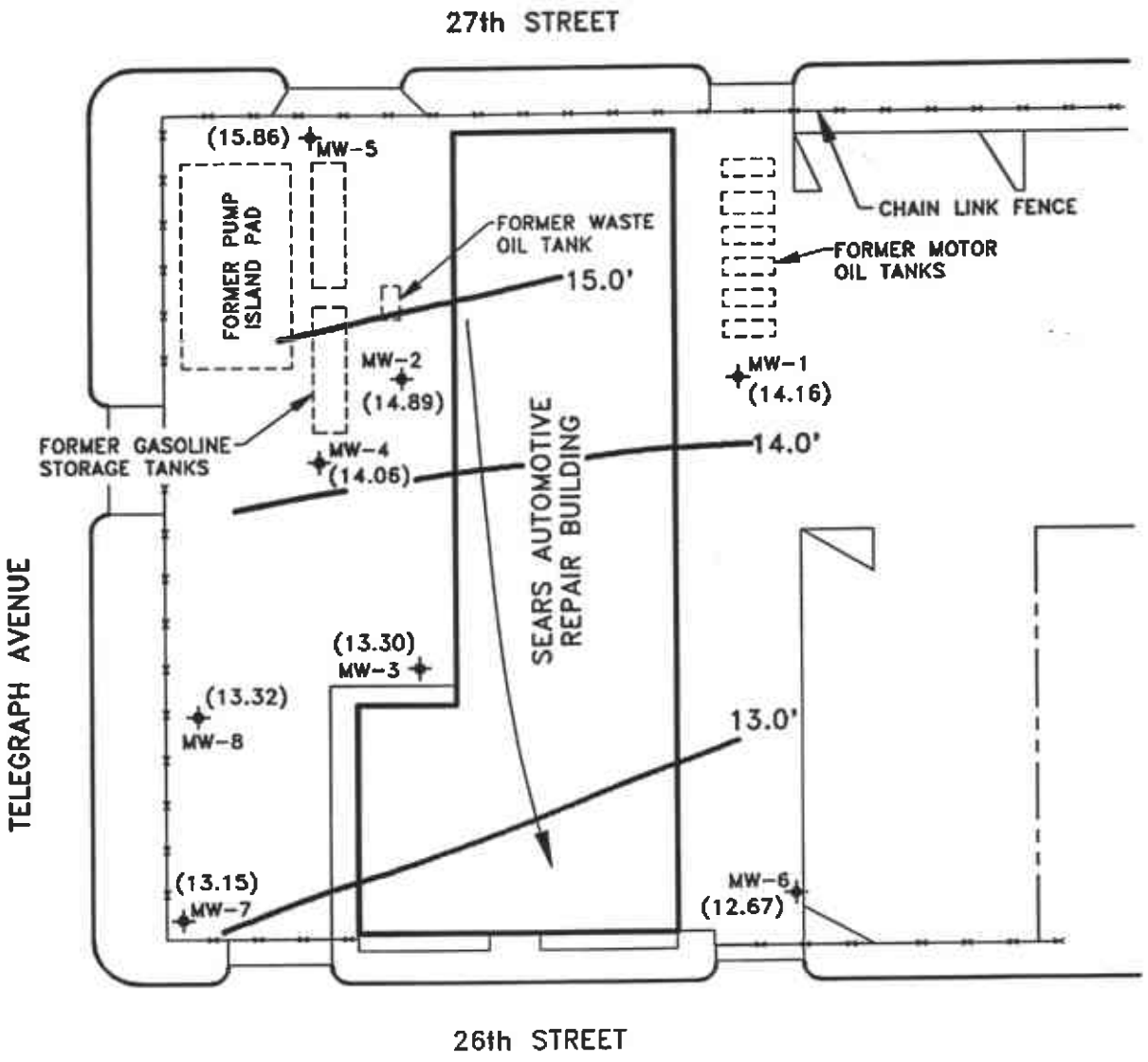
For: Wendell W. Lattz
Vice President, General Manager
Western Region

c: Bernadine Palka, Sears, Roebuck and Co.

ATTACHMENT 1

Figures

1. Potentiometric Surface Map (9/27/94)
2. Concentrations of Benzene and TPH as Gasoline in Groundwater (9/27/94)



LEGEND

- ✦ MONITORING WELL
- ( ) POTENTIOMETRIC SURFACE ELEVATION
- POTENTIOMETRIC SURFACE CONTOUR (DASHED WHERE INFERRED)
- GROUNDWATER FLOW DIRECTION

REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

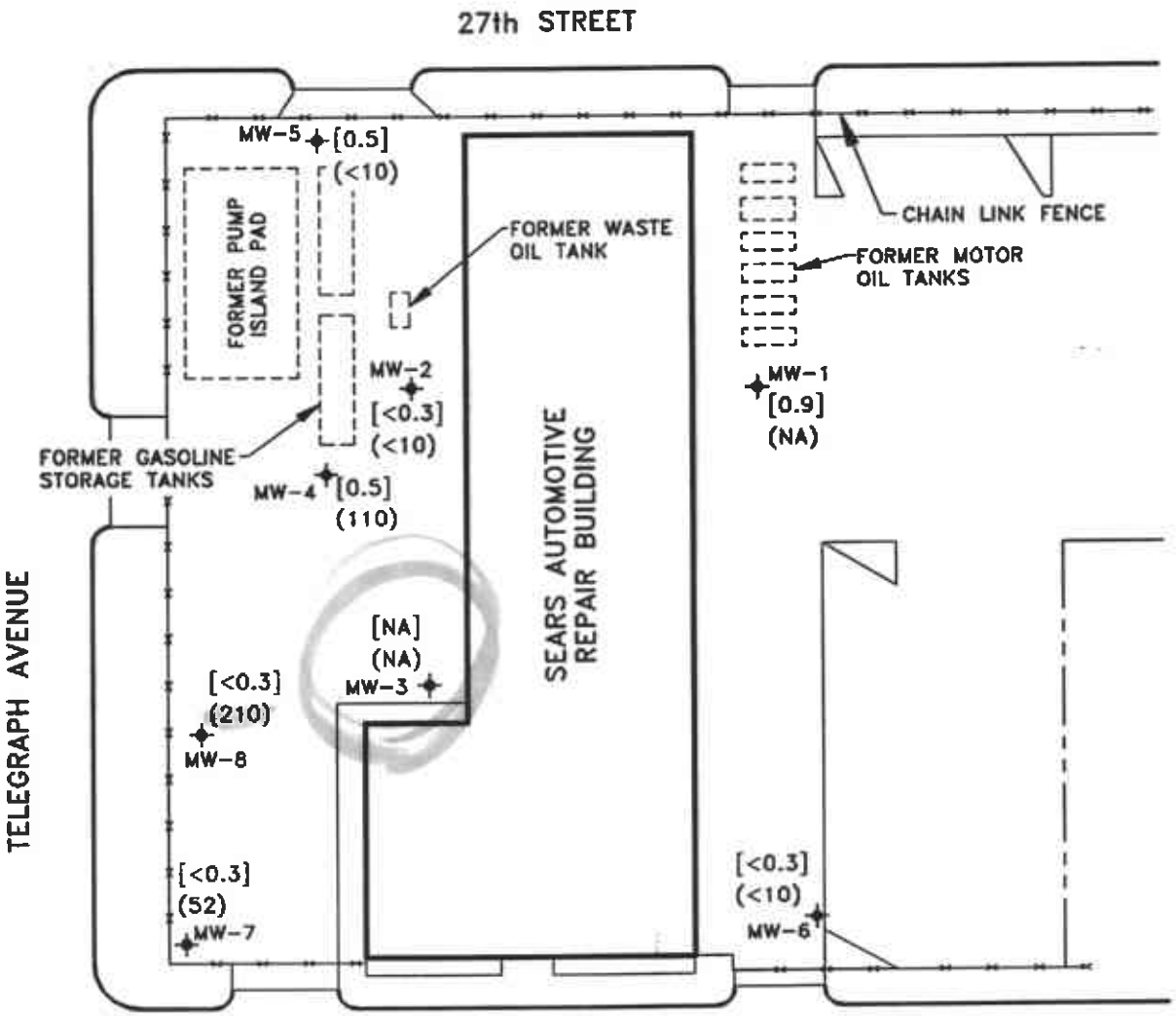
N

GROUNDWATER TECHNOLOGY

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (9/27/94)

CLIENT: SEARS, ROEBUCK AND CO. SITE No. 1058	FILE: PSM92794/SPD93	PROJECT NO: 020204554	PM	RG/PE EK
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	REV: 1			FIGURE: 1
	DES: MW	DET: ML	DATE: 11/10/94	



LEGEND

- ✦ MONITORING WELL
- [ ] BENZENE CONCENTRATIONS [ug/l]
- ( ) TPH-G CONCENTRATIONS (ug/l)
- NA NOT ANALYZED

REGISTERED GEOLOGIST
EDWARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

N

GROUNDWATER TECHNOLOGY

0 FEET 40
SCALE

CONCENTRATIONS OF BENZENE & TPH-AS-GASOLINE IN GROUNDWATER (9/27/94)

CLIENT: SEARS, ROEBUCK AND CO. SITE No. 1058	FILE: TPH92794/SPD93	PROJECT NO: 020204554	PM	RG/PE 27
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	REV: 1			FIGURE: 2
	DES: MW	DET: ML	DATE: 12/1/94	

ATTACHMENT 2

Tables

1. Summary of Historical Groundwater Monitoring Data

2. Summary of Historical Groundwater Analyses

TABLE 1
Summary of Historical Groundwater Monitoring Data
(All measurements are in feet; all elevations are in feet above mean sea level)

Sears Store 1058
2633 Telegraph Avenue, Oakland, California

Well ID	Casing Elev.	Date	Depth to Water	Depth to Product	Product Thickness	Groundwater Elev.
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
		02/08/94	11.87	--	--	14.33
		03/09/94	11.08	--	--	15.12
		04/01/94	11.47	--	--	14.73
		05/10/94	10.77	--	--	15.43
		06/30/94	11.82	--	--	14.38
		07/28/94	11.90	--	--	14.30
		08/31/94	11.94	--	--	14.26
		09/27/94	12.04	--	--	14.16
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
		02/08/94	11.49	--	--	15.01
		03/09/94	11.06	--	--	15.44
		04/01/94	11.25	--	--	15.25
		05/10/94	10.83	--	--	15.67
		06/30/94	11.44	--	--	15.06
		07/28/94	11.48	--	--	15.02
		08/31/94	11.56	--	--	14.94
		09/27/94	11.61	--	--	14.89

GROUNDWATER TECHNOLOGY, INC.

(Table 1 continues)

TABLE 1
Summary of Historical Groundwater Monitoring Data
(All measurements are in feet; all elevations are in feet above mean sea level)

Sears Store 1058
2633 Telegraph Avenue, Oakland, California

Well ID	Casing Elev.	Date	Depth to Water	Depth to Product	Product Thickness	Groundwater Elev.
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
		02/08/94	12.37	--	--	13.97
		03/09/94	12.53	--	--	13.81
		04/01/94	12.64	--	--	13.70
		05/10/94	12.32	--	--	14.02
		06/30/94	12.84	12.82	0.02	13.51
		07/28/94	12.93	12.89	0.04	13.44
		08/31/94	13.04	13.01	0.03	13.32
		09/27/94	13.13	13.02	0.11	13.30
MW-4	26.17	12/30/92	11.53	--	Sheen	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	--	--	14.99
		12/27/93	11.80	--	--	14.97
		01/05/94	11.91	--	--	14.26
		02/08/94	11.85	--	--	14.32
		03/09/94	11.61	--	--	14.56
		04/01/94	11.73	--	--	14.44
		05/10/94	11.49	--	--	14.68
		06/30/94	11.90	--	--	14.20
		07/28/94	11.97	--	--	14.27
		08/31/94	12.06	--	--	14.11
		09/27/94	12.11	--	--	14.06

GROUNDWATER TECHNOLOGY, INC.

(Table 1 continues)

TABLE 1
Summary of Historical Groundwater Monitoring Data
(All measurements are in feet; all elevations are in feet above mean sea level)

Sears Store 1058
2633 Telegraph Avenue, Oakland, California

Well ID	Casing Elev.	Date	Depth to Water	Depth to Product	Product Thickness	Groundwater Elev.
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	--	--	15.60
		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
		02/08/94	10.94	--	--	16.04
		03/09/94	10.54	--	--	16.44
		04/01/94	10.77	--	--	16.21
		05/10/94	10.44	--	--	16.54
		06/30/94	10.88	--	--	16.10
		07/28/94	10.98	--	--	16.00
		08/31/94	11.07	--	--	15.91
		09/27/94	11.12	--	--	15.86
MW-6	24.32	12/27/93	11.24	--	--	13.08
		01/05/94	11.39	--	--	12.93
		02/08/94	11.15	--	--	13.17
		03/09/94	10.97	--	--	13.35
		04/01/94	11.25	--	--	13.07
		05/10/94	10.78	--	--	13.54
		06/30/94	11.49	--	--	12.83
		07/28/94	11.59	--	--	12.73
		08/31/94	11.56	--	--	12.76
		09/27/94	11.65	--	--	12.67
MW-7	24.88	12/27/93	11.80	--	--	13.08
		01/05/94	11.53	--	--	13.35
		02/08/94	11.90	--	--	12.98
		03/09/94	11.23	--	--	13.65
		04/01/94	11.34	--	--	13.54
		05/10/94	11.02	--	--	13.86
		06/30/94	11.49	--	--	13.39
		07/28/94	11.58	--	--	13.30
		08/31/94	11.69	--	--	13.19
		09/27/94	11.73	--	--	13.15
MW-8	26.12	12/27/93	12.45	--	--	13.67
		01/05/94	12.57	--	--	13.55
		02/08/94	12.02	--	--	14.10
		03/09/94	12.22	--	--	13.90
		04/01/94	12.33	--	--	13.79
		05/10/94	12.00	--	--	14.12
		06/30/94	12.52	--	--	13.60
		07/28/94	12.61	--	--	13.51
		08/31/94	12.72	--	--	13.40
		09/27/94	12.80	--	--	13.32

Notes: "--" indicates no datum for the cell, including "product not detected"
NM = Not monitored

GROUNDWATER TECHNOLOGY, INC.

TABLE 2
Summary of Historical Groundwater Sample Analyses
(All results expressed in parts per billion)

Sears Store 1058
2633 Telegraph Avenue, Oakland, California

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH as Gasoline	TPH as Motor Oil	TPH (mg/l)	Dissolved Metals
MW-1	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	--	--
	03/09/94	<0.3	<0.3	1	4.2	--	<100	--	--
	06/30/94	0.6	0.7	2.4	15	--	<100	--	--
	09/27/94	0.9	0.5	1.4	10	--	[e]<250	--	--
MW-2	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	-	--
	03/09/94	<0.3	<0.3	<0.3	<0.5	47	<100	--	ND
	06/30/94	<0.3	<0.3	<0.3	<0.5	<10	100	--	ND
	09/27/94	<0.3	<0.3	<0.3	<0.5	<10	[e]<250	--	[d]15
MW-3	12/30/92	11	0.9	<0.3	2	910	--	20	[a]ND
	03/24/93	28	0.7	1	8	3,300	--	28	**15
	06/21/93	21	5	2	19	**2,600	32,000	26	[cd]5
	09/16/93	--	--	--	--	--	--	--	--
	12/01/93	--	--	--	--	--	--	--	--
	03/09/94	2	1.4	4.5	13	2,000	**5,700	***63	[a]ND
	06/30/94	--	--	--	--	--	--	--	--
	09/27/94	--	--	--	--	--	--	--	--
MW-4	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	**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
	03/09/94	0.7	0.8	2	3.6	1,500	780	--	[c]ND
	06/30/94	<0.3	1.7	0.5	1.0	450	130	--	ND
	09/27/94	0.5	<0.3	<0.3	<0.5	110	1,100	--	ND
MW-5	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	**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	--	--
	03/09/94	<0.3	<0.3	<0.3	<0.5	22	<100	--	[c]ND
	06/30/94	<0.3	<0.3	<0.3	<0.5	<10	<100	--	ND
	09/27/94	0.5	0.4	<0.3	<0.5	<10	560	--	ND
MW-6	12/27/93	<0.3	<0.3	<0.3	<0.5	<10	<100	<1	[a]70
	03/09/94	<0.3	<0.3	<0.3	<0.5	15	<100	--	[c]ND
	06/30/94	<0.3	<0.3	<0.3	<0.5	<10	<100	--	ND
	09/27/94	<0.3	<0.3	<0.3	<0.5	<10	<250	--	[d]8
MW-7	12/27/93	<0.3	<0.3	1	2	140	<100	<1	[a]40
	03/09/94	<0.3	<1.0	1.5	4.1	620	<100	--	[c]ND
	06/30/94	<0.3	<0.3	<0.3	<0.5	33	<100	--	ND
	09/27/94	<0.3	<0.3	0.4	0.7	52	[e]<250	--	ND

GROUNDWATER TECHNOLOGY, INC.

(Table 2 continues)

TABLE 2
Summary of Historical Groundwater Sample Analyses
(All results expressed in parts per billion)

Sears Store 1058
2633 Telegraph Avenue, Oakland, California

Well ID	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH as Gasoline	TPH as Motor Oil	TPH (mg/l)	Dissolved Metals
MW-8	12/27/93	0.4	4	0.4	1	390	<100	<1	[a]18
	03/09/94	0.6	0.8	0.5	1.5	420	<100	--	[a]ND
	06/30/94	0.9	<0.3	<0.3	1.1	250	<100	--	ND
	09/27/94	<0.3	<0.3	<0.3	<0.5	**210**	[e]<250	--	[d]9

Source: GTEL Environmental Laboratories

Notes: "--" indicates no datum for the cell, including "not analyzed for this constituent". Values beginning with "<" indicate the compound was not detected above the laboratory reporting limits.

mg/l = Milligrams per liter
TPH = Total petroleum hydrocarbons
ND = Non-detectable (detection limits for each compound are listed in laboratory reports, included in attachment 4)
* = 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.
[e] = Hydrocarbon pattern not characteristic of motor oil.

GROUNDWATER TECHNOLOGY, INC.

ATTACHMENT 3

Groundwater Monitoring and Sample Collection Protocol
and
Field Data Sheets

GROUNDWATER TECHNOLOGY GROUNDWATER MONITORING AND SAMPLE COLLECTION PROTOCOL

Groundwater Monitoring

Groundwater monitoring is accomplished using a INTERFACE PROBE™ Well Monitoring System. The INTERFACE PROBE™ Well Monitoring System is a hand held, battery operated device for measuring the depth to separate-phase hydrocarbons and depth to water. The INTERFACE PROBE™ Well Monitoring System consists of a dual-sensing probe which utilizes an optical liquid sensor and electrical conductivity to distinguish between water and petroleum products.

Monitoring is accomplished by measuring from the surveyed top of well casing or grade to groundwater and separate-phase hydrocarbons if present. The static water elevation is then calculated for each well and a potentiometric surface map is constructed. If separate-phase hydrocarbons are detected the water elevation is adjusted by the following calculation:

(Product thickness) x (0.8) + (Water elevation) = Corrected water elevation

Groundwater monitoring wells are monitored in order of wells with lowest concentrations of volatile organic compounds to wells with the highest concentrations, based upon historical concentrations. If separate-phase hydrocarbons are encountered in a well, the product is visually inspected to confirm and note color, amount, and viscosity. Monitoring equipment is washed with laboratory grade detergent and rinsed with distilled or deionized water before monitoring each well.

Groundwater Sampling

Before groundwater samples are collected, sufficient water is purged from each well to ensure representative formation water is entering the well. Wells are purged and sampled in the same order as monitoring, from wells with the lowest concentrations of volatile organic compounds to wells with the highest concentrations. Wells are purged using either a polyvinyl chloride (PVC) bailer fitted with a check valve or with a stainless steel submersible Grundfos pump. The purge equipment is decontaminated before use in each well by washing with laboratory grade detergent and tripled rinsing with deionized or distilled water. A minimum of 3 well-casing volumes of water are removed from each well while pH, electrical conductivity, and temperature are recorded to verify that "fresh" formation water is being sampled and the parameters have stabilized. If the well is low yielding, it may be purged dry and sampled before 3 casing volumes are purged. The wells are then allowed to recharge to approximately 80 percent of the initial water level before a sample is collected.

Groundwater samples are collected from each well using a new, prepackaged disposable bailer and string. The water sample is decanted from the bailer into laboratory-provided containers (appropriate for the analyses required) so that there is no headspace in the containers. Samples collected for benzene, toluene, ethylbenzene, xylene, and total petroleum hydrocarbons (TPH)-as-gasoline analyses are collected in 40-milliliter vials fitted with Teflon® septum lids. Samples are preserved with hydrochloric acid (HCL) to a pH of less than 2. Dissolved metals samples are filtered through a 0.45-micron paper filter in the field and preserved as required before submitting to the laboratory for analyses. All samples are labeled immediately upon collection and logged on the chain-of-custody record. Sample label and chain-of-custody recorded information includes the project name and number, sample identification, date and time of collection, analyses requested, and the sampler's name. Sample bottles are placed in plastic bags (to protect the bottles and labels) and on ice (frozen water) in an insulated cooler and are shipped under chain-of-custody protocol to the laboratory.

The chain-of-custody record documents who has possession of the samples until the analyses is performed. Other pertinent information is also noted for the laboratory use on the chain-of-custody record.

Trip blanks (TBLBs) are used for each project as a quality assurance/quality control measure. The TBLBs are prepared by the laboratory and are placed in the insulated cooler and accompany the field samples throughout the sampling event.

Project Name: Sears - Telegraph

Site Address: 2633 Telegraph Ave., Oakland

Project Number: 020204554.061002

Date: 9.27.99

Page 1 of 8

Project Manager: E. Brennan

Well ID: MW-5

Well Diameter: 2"

DTW Measurements:
Initial: 11.12
Recharge: 11.14

Calc Well Volume: 2.30 gal
Well Volume: 6.9 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

Instruments Used
YSI: _____
Hydac: _____
Omega: X

Other:_____

Time	Temp X C F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
10:05	19.0	.717	7.09	0		clear
10:06	19.0	.717	7.07	3		4
10:07	19.0	.715	7.07	5		4
10:08	19.0	.714	7.07	7		4

Project Name: Sears - Telegraph

Site Address: 2633 Telegraph Ave., Oakland

Project Number: 020204554.061002

Date: 7.27.99

Page 2 of 8

Project Manager: E. Brennan

Well ID: MW-1

Well Diameter: 2"

DTW Measurements:
Initial: 12.04
Recharge: 12.10

Calc Well Volume: 1.5 gal
Well Volume: 4.7 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI:
Hydac:
Omega: X
Other:

Time	Temp ~~C~~ F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
10:19	19.6	.669	7.03	0		Clear
10:20	19.6	.660	6.72	02		4
10:21	19.6	.658	6.68	4		4
10:22	19.6	.656	6.68	5		4

Project Name: Sears - Telegraph

Site Address: 2633 Telegraph Ave., Oakland

Project Number: 020204554.061002

Date: 9.26.99

Page 3 of 8

Project Manager: E. Brennan

Well ID: MW-6

Well Diameter: 4"

DTW Measurements:
Initial: 11.65
Recharge: 11.69

Calc Well Volume: 1.69 gal
Well Volume: 5 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

Instruments Used
YSI: _____
Hydac: _____
Omega: X

Other:_____

Time	Temp X C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
10:31	19.4	.555	6.52	0		Clear
10:32	19.9	.553	6.47	2		"
10:33	19.9	.553	6.44	4		"
10:34	19.9	.551	6.44	5		"

Project Name: Sears - Telegraph

Site Address: 2633 Telegraph Ave., Oakland

Project Number: 020204554.061002

Date: 9.27.99

Page 4 of 8

Project Manager: E. Brennan

Well ID: MW-7

Well Diameter: 2"

DTW Measurements:
Initial: 11.73
Recharge: 11.76

Calc Well Volume: 1.62 gal
Well Volume: 5 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI:
Hydac:
Omega: X

Other:

Time	Temp ✓ C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
10:45	19.9	.559	6.60	0		Clear
10:46	19.3	.554	6.59	2		"
10:47	19.1	.554	6.59	4		"
10:48	19.1	.552	6.58	5		"

Project Name: Sears - Telegraph

Site Address: 2633 Telegraph Ave., Oakland

Project Number: 020204554.061002

Date: 9.27.99

Page 5 of 8

Project Manager: E. Brennan

Well ID: MW-8

Well Diameter: 2"

DTW Measurements:
Initial: 12.80
Recharge: 12.83

Calc Well Volume: 1.52 gal
Well Volume: 4.56 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

Instruments Used
YSI: _____
Hydac: _____
Omega: X

Other:_____

Time	Temp ~~C~~ F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
10:55	19.3	.747	6.43	0		clear
10:56	19.4	.745	6.43	2		"
10:57	19.4	7.425	6.41	4		"
1058	19.4	7.42	6.39	5		"

Project Name: Sears - Telegraph

Site Address: 2633 Telegraph Ave., Oakland

Project Number: 020204554.061002

Date: 9.27.99

Page 6 of 8

Project Manager: E. Brennan

Well ID: MW-2

Well Diameter: 2"

DTW Measurements:
Initial: 11.61
Recharge: 11.74

Calc Well Volume: 1.65 gal
Well Volume: 4.97 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

Instruments Used
YSI: _____
Hydac: _____
Omega: X

Other:_____

Time	Temp X C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
11:05	19.7	.640	6.63	0		clear
11:06	19.7	.638	6.59	2		4
11:07	19.7	.632	6.59	4		4
11:08	19.7	.631	6.56	5		4

Project Name: Sears - Telegraph

Date: 9.27.99

Site Address: 2633 Telegraph Ave., Oakland

Page 7 of 8

Project Number: 020204554.061002

Project Manager: E. Brennan

Well ID: MW-9

Well Diameter: 2"

DTW Measurements:
Initial: 12.11
Recharge: 12.13

Calc Well Volume: 1.77 gal
Well Volume: 5.3 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ ft.
Hand Bailed_____
Air Lift_____
Other_____

Instruments Used
YSI: _____
Hydac: _____
Omega: X

Other:_____

Time	Temp C / F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
11:15	19.6	.682	6.56	0		Clear
11:16	19.6	.691	6.56	2		4
11:17	19.6	.700	6.56	4		6
11:18	19.6	.703	6.57	6		9

Project Name: Sears - Telegraph

Site Address: 2633 Telegraph Ave., Oakland

Project Number: 020204554.061002

Date: 9.27.94

Page 8 of 8

Project Manager: E. Brennan

Well ID: MW-3

Well Diameter: _____

DTW Measurements:
Initial: _____
Recharge: _____

Calc Well Volume: _____ gal
Well Volume: _____ gal

Purge Method
Peristaltic _____
Gear Drive _____
Submersible _____

Pump Depth _____ ft.
Hand Bailed _____
Air Lift _____
Other _____

Instruments Used
YSI: _____
Hydac: _____
Omega: _____

Other: _____

Time	Temp _____ C _____ F	Conductivity	pH	Purge Volume Gallons	Turbidity	Comments
	HAS .11" of PRODUCT IN WELL					

ATTACHMENT 4

Laboratory Reports
and
Chain-of-Custody Record

10-18-94

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: Sears
2633 Telegraph Ave.
Work Order Number: C4-09-0475

October 17, 1994

Eileen Brennan
Groundwater Technology, Inc.
275 E. South Temple
Salt Lake City, UT 84111

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 09/28/94, under chain of custody record 30185.

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.

Rashmi Shah
Laboratory Director

Client Number: 020204554
Project ID: Sears
2633 Telegraph Ave.
Work Order Number: C4-09-0475

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons as Motor Oil in Water

Modified EPA Methods 3510/8015[a]

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

GTEL Sample Number		02[b]	03[c]	04	05[c]
Client Identification		MW5	MW1	MW6	MW7
Date Sampled		09/27/94	09/27/94	09/27/94	09/27/94
Date Extracted		10/03/94	10/03/94	10/03/94	10/03/94
Date Analyzed		10/14/94	10/13/94	10/14/94	10/14/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as Motor Oil	250	560	<250	<250	<250
Detection Limit Multiplier		1	1	1	1
O-Terphenyl surrogate, % recovery		167	114	132	126

GTEL Sample Number		06[c]	07[c]	09	101194 GCJ
Client Identification		MW8	MW2	MW4	METHOD BLANK
Date Sampled		09/27/94	09/27/94	09/27/94	--
Date Extracted		10/03/94	10/03/94	10/03/94	10/03/94
Date Analyzed		10/14/94	10/14/94	10/14/94	10/11/94
Analyte	Detection Limit, ug/L	Concentration, ug/L			
TPH as Motor Oil	250	<250	<250	1100	<250
Detection Limit Multiplier		1	1	1	1
O-Terphenyl surrogate, % recovery		116	125	144	80.4

b. Surrogate recovery high due to target compound interference.
c. Hydrocarbon pattern not characteristic of motor oil

GTEL ENVIRONMENTAL LABORATORIES, INC

Client Number: 020204554
Project ID: Sears
2633 Telegraph Ave.
Work Order Number: C4-09-0475

ANALYTICAL RESULTS

Dissolved Metals in Water

GTEL Sample Number			02	04	05	06
Client Identification			MW5	MW6	MW7	MW8
Date Sampled			09/27/94	09/27/94	09/27/94	09/27/94
Date Prepared[e]			09/30/94	09/30/94	09/30/94	09/30/94
Date Analyzed (Method 6010)			10/05/94	10/05/94	10/05/94	10/05/94
Date Analyzed (Method 7060, 7421, 7740, 7841)			10/10/94	10/10/94	10/10/94	10/10/94
Analyte	EPA Method[a]	Detection Limit, ug/L	Concentration, ug/L			
Cadmium	EPA 6010[b]	5	<5	8	<5	9
Chromium, total	EPA 6010[b]	10	<10	<10	<10	<10
Lead	EPA 7421[c]	5	<5	<5	<5	<5
Nickel	EPA 6010[b]	20	<20	<20	<20	<20
Zinc	EPA 6010[b]	20	<20	<20	<20	<20
Detection Limit Multiplier			1	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)
e. Unpreserved water sample passed through a 0.45 micron filter and analyzed as a dissolved metal. Sample was lab filtered on 09/30/94.

Client Number: 020204554
Project ID: Sears
2633 Telegraph Ave.
Work Order Number: C4-09-0475

ANALYTICAL RESULTS

Dissolved Metals in Water

GTEL Sample Number			07	09	093094 MET	
Client Identification			MW2	MW4	METHOD BLANK	
Date Sampled			09/27/94	09/27/94	–	
Date Prepared[e]			09/30/94	09/30/94	09/30/94	
Date Analyzed (Method 6010)			10/05/94	10/05/94	10/05/94	
Date Analyzed (Method 7060, 7421, 7740, 7841)			10/10/94	10/10/94	10/10/94	
Analyte	EPA Method[a]	Detection Limit, ug/L	Concentration, ug/L			
Cadmium	EPA 6010[b]	5	15	<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)
e. Unpreserved water sample passed through a 0.45 micron filter and analyzed as a dissolved metal. Sample was lab filtered on 09/30/94.

GTEL Client ID: 020204554
Login Number: C4090475
Project ID (number): 020204554
Project ID (name): SEARS, Oakland, CA

ANALYTICAL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

GTEL Sample Number	C4090475-01	C4090475-02	C4090475-03	C4090475-04
Client ID	TB	MW5	MW1	MW6
Date Sampled	09/27/94	09/27/94	09/27/94	09/27/94
Date Analyzed	10/09/94	10/08/94	10/08/94	10/08/94
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.3	ug/L	< 0.3	0.5	0.9	< 0.3
Toluene	0.3	ug/L	< 0.3	0.4	0.5	< 0.3
Ethylbenzene	0.3	ug/L	< 0.3	< 0.3	1.4	< 0.3
Xylenes (total)	0.5	ug/L	< 0.5	< 0.5	10.	< 0.5
BFB (Surrogate)	--	%	96.2	91.6	112.	100.
TPH as GAS	10.	ug/L	--	< 10.	--	< 10.

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846", Third Edition, Revision 1, US EPA November 1986. Acceptability limits for recovery in the Bromofluorobenzene (BFB) surrogate is 62-129%. Gasoline Range Hydrocarbons (TPH) quantitated by GC/FID with purge and trap.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL Client ID: 020204554
Login Number: C4090475
Project ID (number): 020204554
Project ID (name): SEARS, Oakland, CA

ANALYTICAL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

GTEL Sample Number	C4090475-05	C4090475-06	C4090475-07	C4090475-08
Client ID	MW7	MW3	MW2	DMW-4
Date Sampled	09/27/94	09/27/94	09/27/94	09/27/94
Date Analyzed	10/08/94	10/08/94	10/08/94	10/09/94
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.3	ug/L	< 0.3	< 0.3	< 0.3	< 0.3
Toluene	0.3	ug/L	< 0.3	< 0.3	< 0.3	< 0.3
Ethylbenzene	0.3	ug/L	0.4	< 0.3	< 0.3	< 0.3
Xylenes (total)	0.5	ug/L	0.7	< 0.5	< 0.5	< 0.5
BFB (Surrogate)	--	%	104.	100.	107.	88.7
TPH as GAS	10.	ug/L	52.	210	< 10.	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846", Third Edition, Revision 1, US EPA November 1986. Acceptability limits for recovery in the Bromofluorobenzene (BFB) surrogate is 62-129%. Gasoline Range Hydrocarbons (TPH) quantitated by GC/FID with purge and trap.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL Client ID: 020204554
Login Number: C4090475
Project ID (number): 020204554
Project ID (name): SEARS, Oakland, CA

ANALYTICAL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

GTEL Sample Number	C4090475-09	--	--	--
Client ID	MW-4	--	--	--
Date Sampled	09/27/94	--	--	--
Date Analyzed	10/09/94	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:			
Benzene	0.3	ug/L	0.5	--	--	--
Toluene	0.3	ug/L	< 0.3	--	--	--
Ethylbenzene	0.3	ug/L	< 0.3	--	--	--
Xylenes (total)	0.5	ug/L	< 0.5	--	--	--
BFB (Surrogate)	--	%	107.	--	--	--
TPH as GAS	10.	ug/L	110	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020:

"Test Methods for Evaluating Solid Waste, Physical and Chemical Methods, SW-846", Third Edition, Revision 1, US EPA November 1986. Acceptability limits for recovery in the Bromofluorobenzene (BFB) surrogate is 62-129%. Gasoline Range Hydrocarbons (TPH) quantitated by GC/FID with purge and trap.

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL Client ID: 020204554
Login Number: C4090475
Project ID (number): 020204554
Project ID (name): SEARS, Oakland, CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020
Matrix: Aqueous

Method Blank Results

	QC Batch No:	G100794-5	G100894-5
	Date Analyzed:	07-OCT-94	08-OCT-94
Analyte		Method:EPA 8020	Concentration: ug/L
Benzene		< 0.30	< 0.30
Toluene		< 0.30	< 0.30
Ethylbenzene		< 0.30	< 0.30
Xylenes (Total)		< 0.50	< 0.50
TPH as Gasoline		< 10.0	< 10.0

Notes:

GTEL ENVIRONMENTAL LABORATORIES, INC.

GTEL ENVIRONMENTAL LABORATORY, INC.

4080 PIKE LANE, SUITE C
CONCORD, CA 94520
(510) 685-7852
(800) 423-7143

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

30185

Company Name: Brain DWATER Technology
Phone #:
FAX #:
Company Address: 275 E. South Temple.
Site Location: 2633 Telegraph Ave
Project Manager: EILEEN Brennan
Client Project ID: (#) 620004554
(NAME) SEARS
I attest that the proper field sampling procedures were used during the collection of these samples.
Sampler Name (Print): MARK GARCIA

Field Sample ID	GTEL Lab # (Lab Use only)	# CONTAINERS	Matrix: WATER	SOIL	AIR	SLUDGE	PRODUCT	OTHER	Method Preserved: HCl	HNO_3	H_2SO_4	ICE	UNPRESERVED	OTHER (Specify)	Sampling: DATE	TIME
TB	01	1	X						X			X			9/28/94	—
MW5	02	8	↓						↓			↓	X		↓	1125
MW1	03	5											X			1225
MW6	04	8											X			1235
MW7	05	8											X			1135
MW8	06	8											X			1150
MW2	07	8											X			1200
DMW-4	08	1														1210
MW-4	09	8											X			1210

ANALYSIS REQUEST | OTHER

BTEX 602 ☐ 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/PPL ☐ 8240/TAL ☐ NBS (+15) ☐	EPA 625/PPL ☐ 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	Dissolved Lead Cd, Cr, Ni, Zn	TCLP
	X																				X		X	
X																					X			
	X																				X	X	X	
	X																				X		X	
	X																				X		X	
	X																				X	X		
X																					X	X		
	X																				X	X		

Please Bend Results to:
Eileen Brennan
275 E. South Temple
Salt Lake City, Utah
84111

TAT
Expedited 48 hr
5 Business Days
Other
Business Days

Special Handling
GTEL Contact
Quote/Contract #
Confirmation #
P.O. #

QA/QC Level
Blue CLP Other

SPECIAL DETECTION LIMITS

SPECIAL REPORTING REQUIREMENTS
FAX ☐

REMARKS: USED DISPOSABLE Bailer. (3°)

Lab Use Only Lot #:
Storage Location B 3/4
Work Order #: C4090475

CUSTODY RECORD

	Date	Time	
Relinquished by Sampler: Mark A Garcia	9.28.94	09:30	Received by: John Weber
Relinquished by: John Weber	9-28-94	10:00	Received by:
Relinquished by:	9-28-94	10:00	Received by Laboratory: Waybill # R W. Molander