RO 480
ST1D1082

FLUOR DANIEL GTI

October 14, 1997

Mr. Dale Klettke, CHMM
Hazardous Materials Specialist
Alameda County, Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Quarterly Groundwater Monitoring and Sampling Report
Former Sears Store 1058
2633 Telegraph Avenue, Oakland, California
Fluor Daniel GTI Project 020200281

Dear Mr. Klettke:

On behalf of Sears, Roebuck and Co., Fluor Daniel GTI, Inc. presents the quarterly groundwater monitoring data collected on August 25, 1997 from the site referenced above (attachment 1, figure 1). The ten groundwater monitoring wells were gauged to determine depth to groundwater and to check for the presence of separate-phase petroleum hydrocarbons in accordance with correspondence from the Alameda Health Care Services Agency dated May 1, 1996. A layer 0.03 feet thick of separate-phase hydrocarbons was detected in monitoring well MW-3 which is consistent with past measurements. Because only 0.03 foot of separate-phase hydrocarbons was detected in well MW-3, bailing of the product was not feasible during this site visit. A historical summary of groundwater monitoring data is presented in attachment 2, table 1.

After measuring depth to water, all 10 monitoring wells were purged and sampled. Groundwater monitoring and sample collections protocol, and field data sheets are presented in attachment 3. The groundwater samples were analyzed for for benzene, toluene, ethyl-benzene, xylenes (BTEX), methyl tert-butyl ether (MTBE) and for total petroleum hydrocarbons (TPH)-as-gasoline by EPA methods 8020/modified 8015, and for TPH-as-motor oil by modified EPA method 8015 (GC/FID), A summary of the groundwater analytical results is presented in table 2. A distribution map of dissolved benzene, TPH-as-gasoline and TPH-as-motor-oil concentrations is presented as figure 2. Laboratory reports and chain-of-custody records are included in attachment 4.

If you have any comments or questions, please contact me at (510) 370-3990.

Sincerely,
Fluor Daniel GTI, Inc.

Eileen Brennan
West Zone Project Manager

Attachments

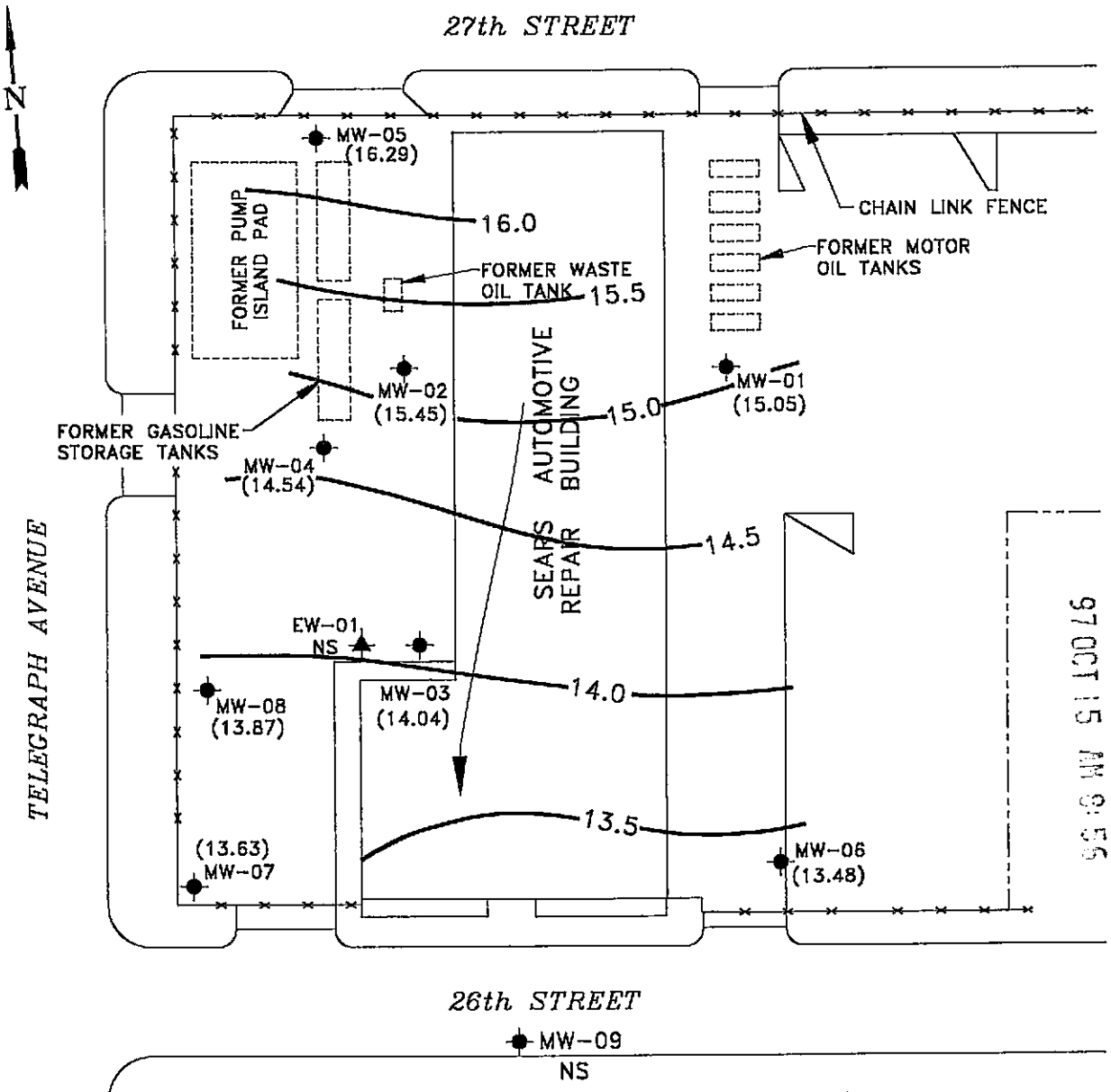
cc: Scott M. DeMuth, Sears, Roebuck and Co.
Central Files, Lenexa, Kansas

1058QMSR.j97

ATTACHMENT 1

Figures

1. Potentiometric Surface Map (8/25/97)
2. Concentrations of Benzene, TPH-as-Gasoline and TPH-as-Motor Oil in Groundwater (8/25/97)



LEGEND

✦	MONITORING WELL
▲	EXTRACTION WELL
( )	POTENTIOMETRIC SURFACE ELEVATION (FT)
NS	NOT SURVEYED
SPH	SEPARATE-PHASE HYDROCARBONS
⌒	POTENTIOMETRIC SURFACE CONTOUR
←	GROUNDWATER FLOW DIRECTION

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

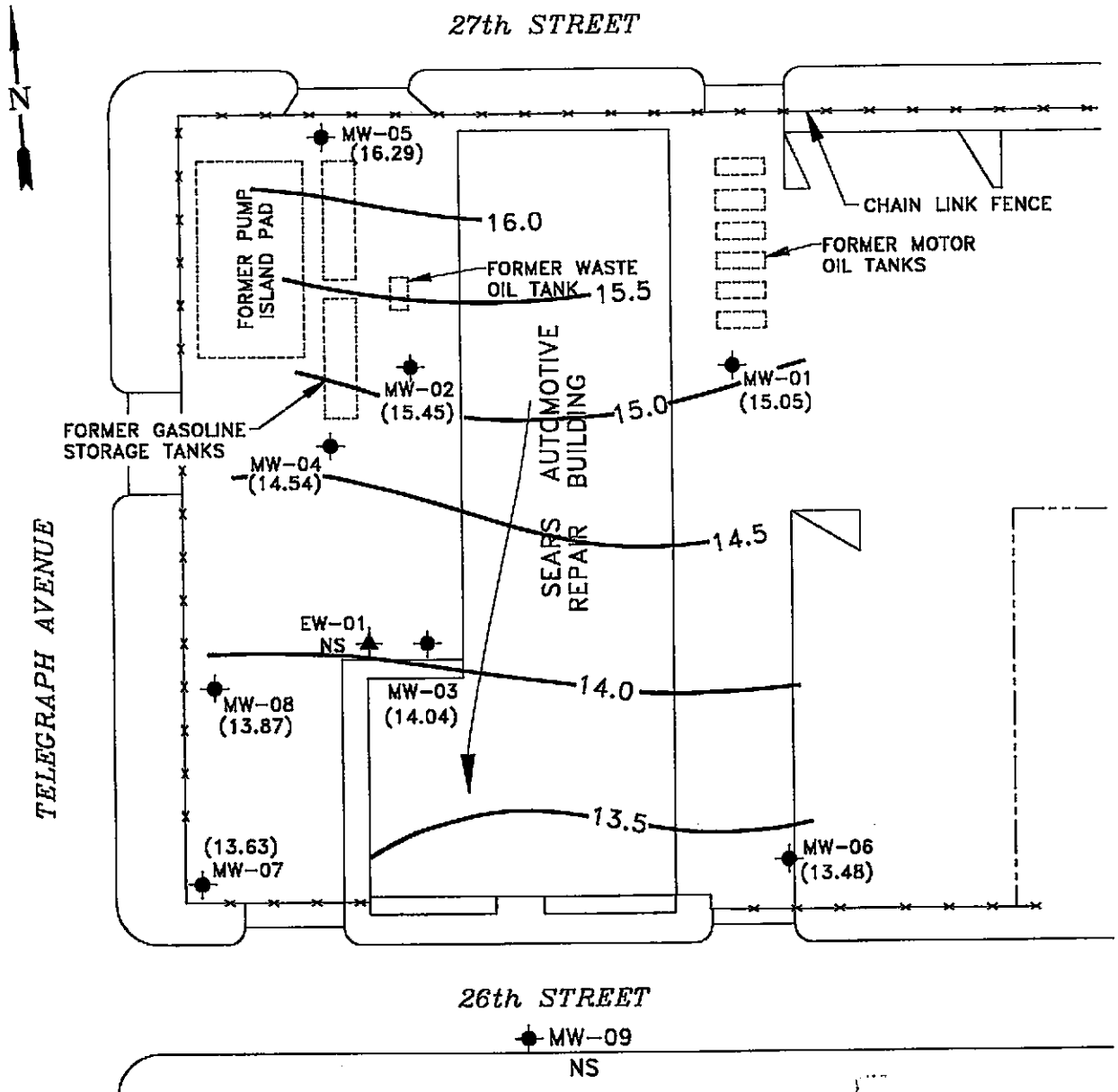
NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

FLUOR DANIEL GTI

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (8/25/97)

CLIENT: SEARS, ROEBUCK AND CO. SITE NO. 1058	FILE: PSM82597 (1:40)	PROJECT NO.: 020200281	PM	PE/RG	
	REV.			FIGURE: 1	
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	DES. ES	DET. ML	DATE: 10/7/97		



LEGEND

✦	MONITORING WELL
✦	EXTRACTION WELL
( )	POTENTIOMETRIC SURFACE ELEVATION (FT)
NS	NOT SURVEYED
SPH	SEPARATE-PHASE HYDROCARBONS
⌒	POTENTIOMETRIC SURFACE CONTOUR
←	GROUNDWATER FLOW DIRECTION

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

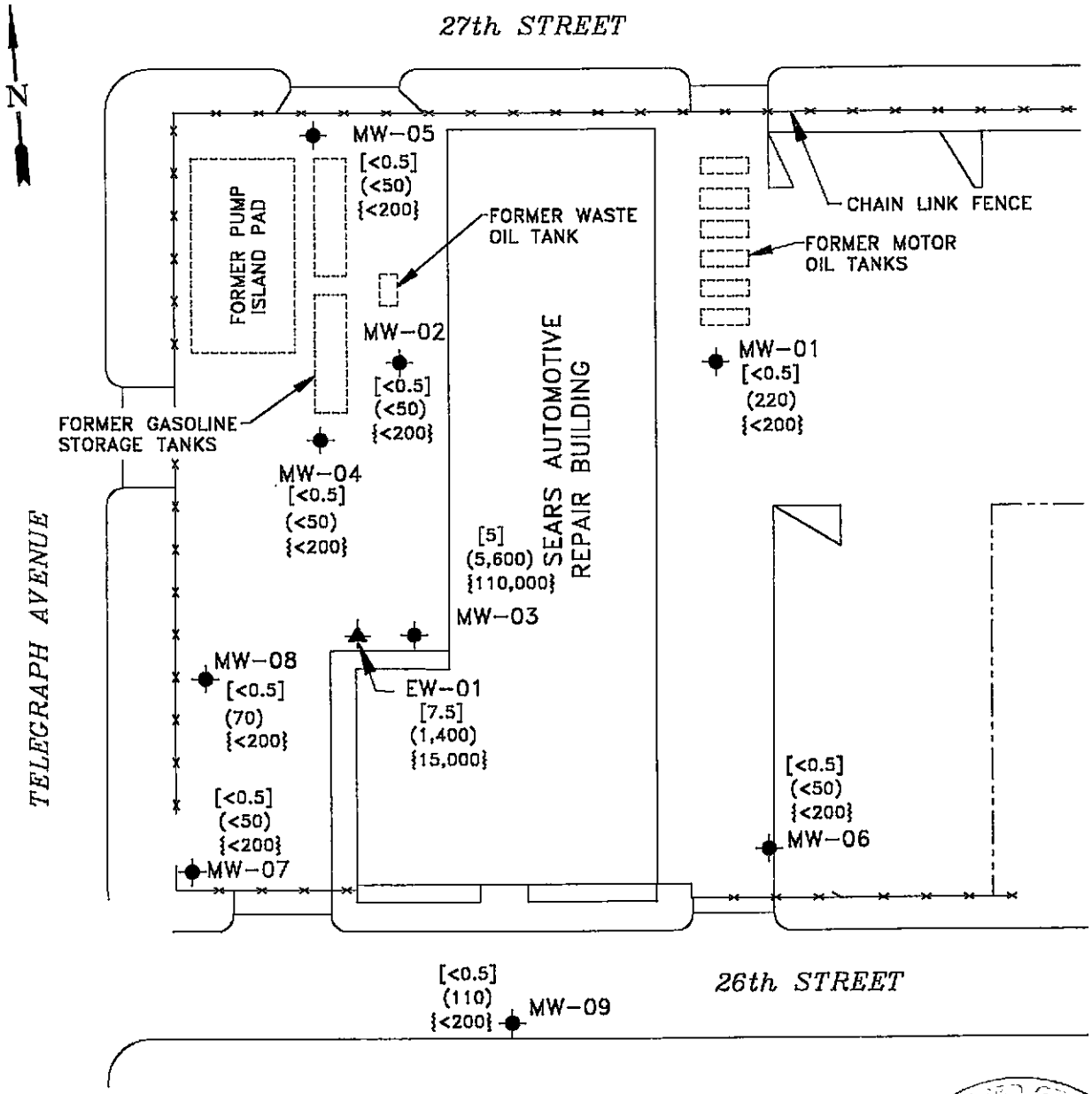
NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

FLUOR DANIEL GTI

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (8/25/97)

CLIENT: SEARS, ROEBUCK AND CO. SITE NO. 1058	FILE: PSM82597 (1:40)		PROJECT NO.: 020200281	PM	PE/RG
	REV.			FIGURE: 1	
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	DES. ES	DET. ML	DATE: 10/7/97		



LEGEND

- ✦ MONITORING WELL
- ✦ EXTRACTION WELL
- [ ] BENZENE CONCENTRATIONS [ug/l]
- ( ) TPH-AS-GASOLINE (ug/l)
- { } TPH-AS-MOTOR OIL {ug/l}

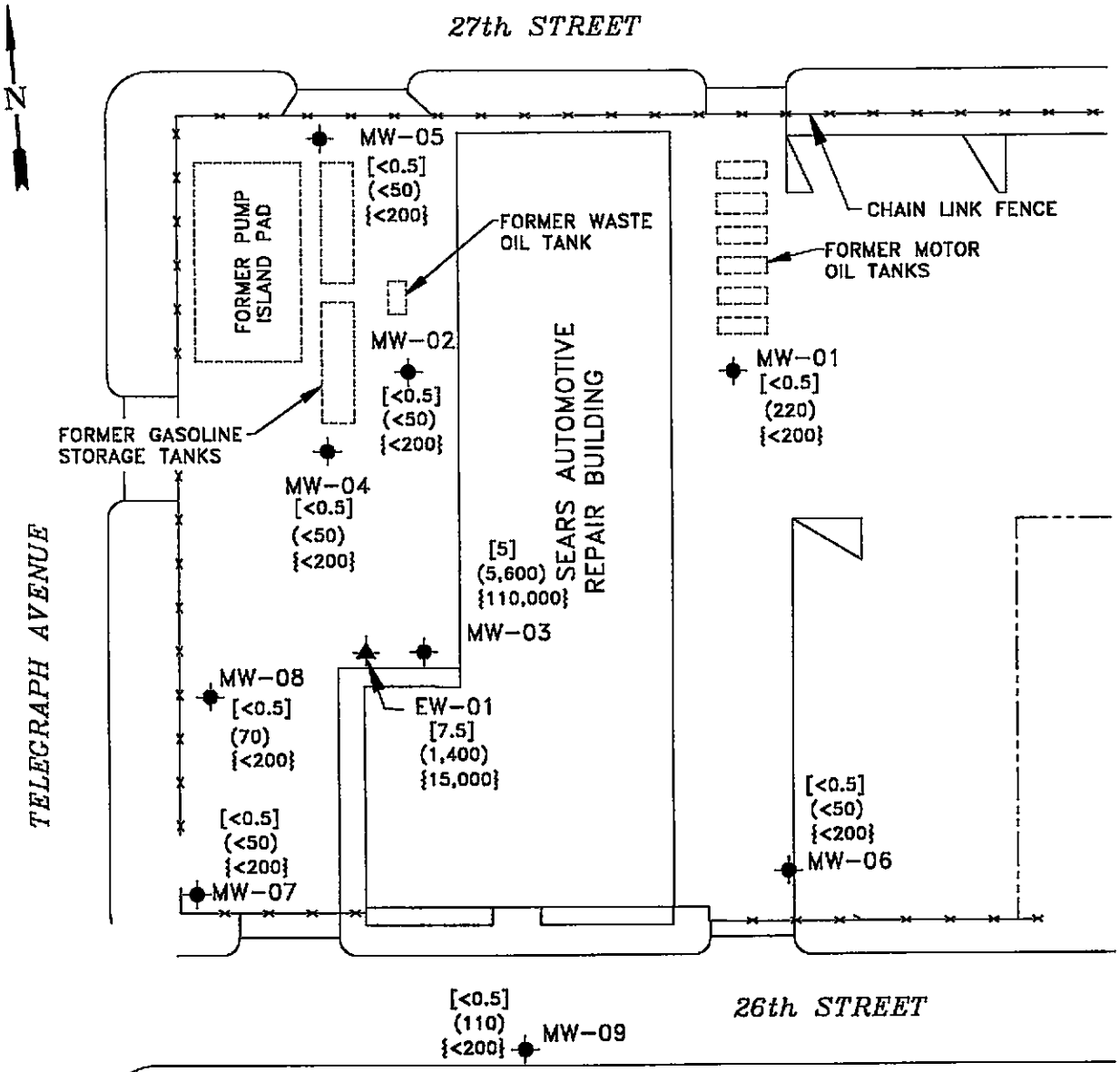
REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

FLUOR DANIEL GTI

0 FEET 40
SCALE

CONCENTRATIONS OF BENZENE, TPH-AS GASOLINE & TPH-AS-MOTOR OIL IN GROUNDWATER (8/25/97)

CLIENT: SEARS, ROEBUCK AND CO. SITE NO. 1058	FILE: BEN82597	PROJECT NO.: 020200281	PM	PE/RG: ES
	REV.			FIGURE: 2
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	DES.: ES	DET.: ML	DATE: 10/7/97	



LEGEND

- MONITORING WELL
- EXTRACTION WELL
- [ ] BENZENE CONCENTRATIONS [ug/l]
- ( ) TPH-AS-GASOLINE (ug/l)
- { } TPH-AS-MOTOR OIL {ug/l}

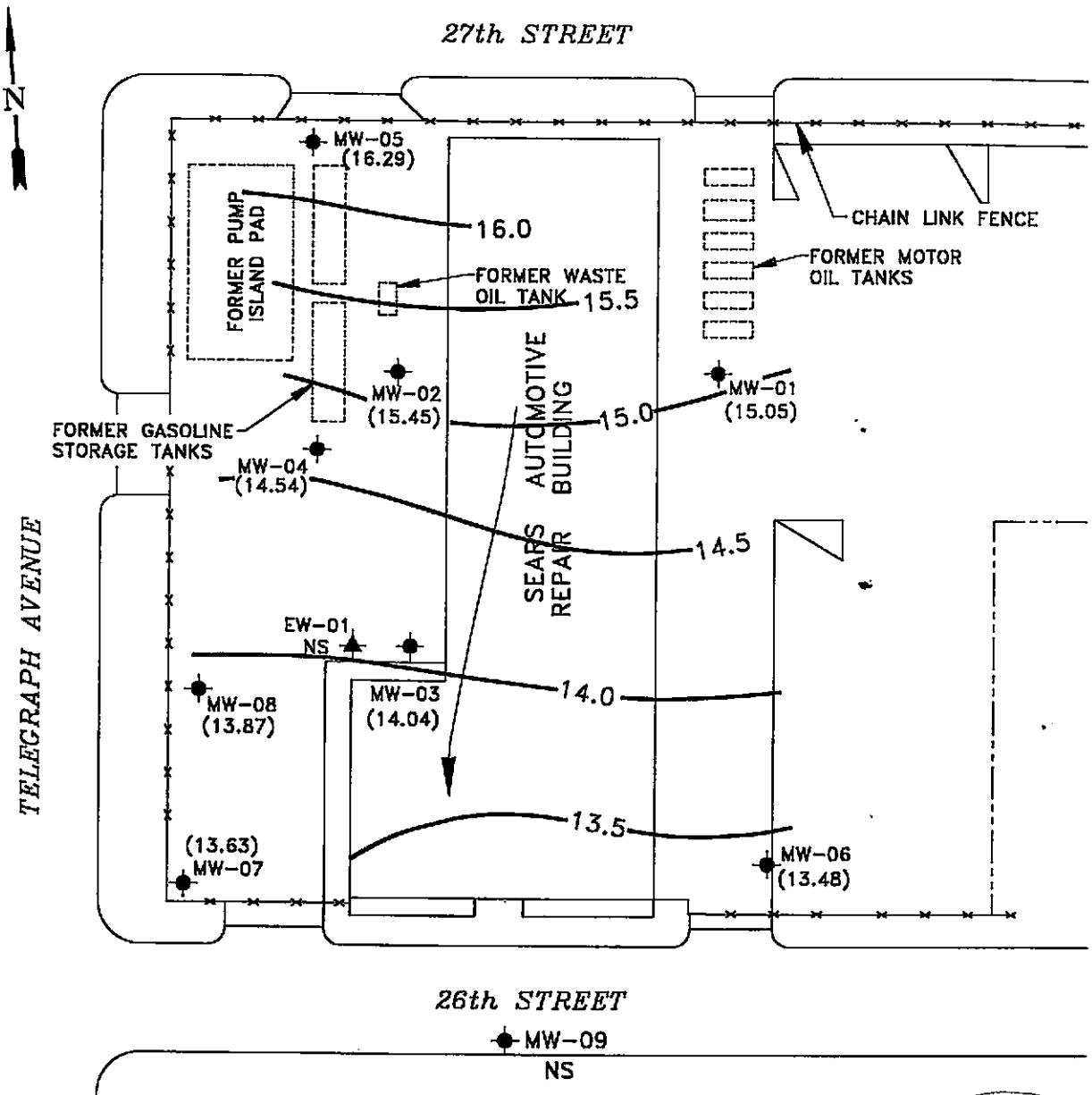
REGISTERED GEOLOGIST
EDVARDAS (ED) K. SIMONIS
No. 4422
STATE OF CALIFORNIA

FLUOR DANIEL GTI

0 FEET 40
SCALE

CONCENTRATIONS OF BENZENE, TPH-AS GASOLINE & TPH-AS-MOTOR OIL IN GROUNDWATER (8/25/97)

CLIENT: SEARS, ROEBUCK AND CO. SITE NO. 1058	FILE: BEN82597		PROJECT NO.: 020200281	PM	PE/RG ES
	REV.				
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	DES. ES	DET. ML	DATE: 10/7/97	FIGURE: 2	



LEGEND

✦	MONITORING WELL
✦	EXTRACTION WELL
( )	POTENTIOMETRIC SURFACE ELEVATION (FT)
NS	NOT SURVEYED
SPH	SEPARATE-PHASE HYDROCARBONS
⌒	POTENTIOMETRIC SURFACE CONTOUR
←	GROUNDWATER FLOW DIRECTION

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

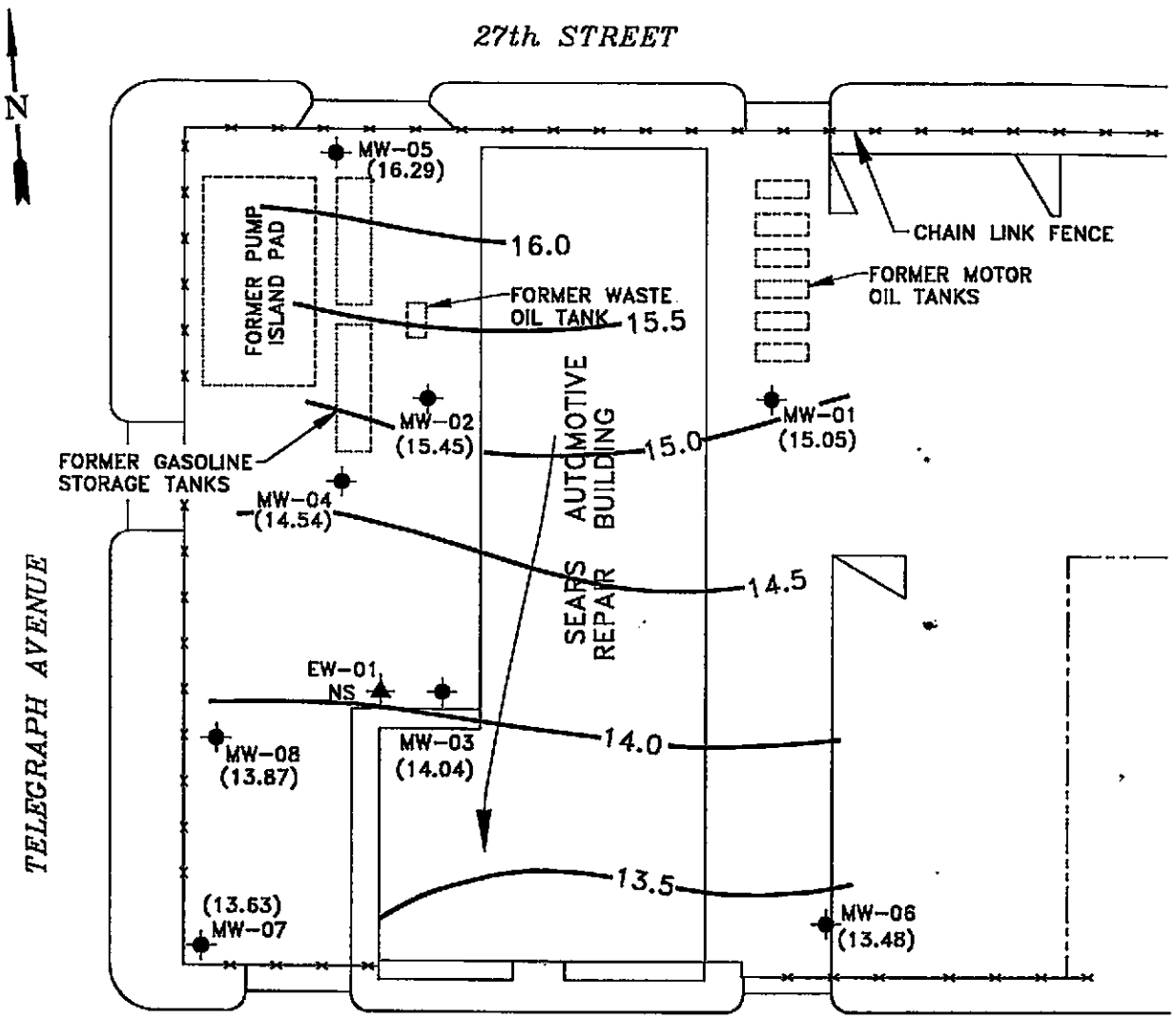
NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

FLUOR DANIEL GTI

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (8/25/97)

CLIENT: SEARS, ROEBUCK AND CO. SITE NO. 1058	FILE: PSM82597 (1:40)	PROJECT NO.: 020200281	PM	PE/RG	
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	REV.			FIGURE: 1	
	DES. ES	DET. ML	DATE: 10/7/97		



LEGEND

✦	MONITORING WELL
✦	EXTRACTION WELL
( )	POTENTIOMETRIC SURFACE ELEVATION (FT)
NS	NOT SURVEYED
SPH	SEPARATE-PHASE HYDROCARBONS
⌒	POTENTIOMETRIC SURFACE CONTOUR
←	GROUNDWATER FLOW DIRECTION

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

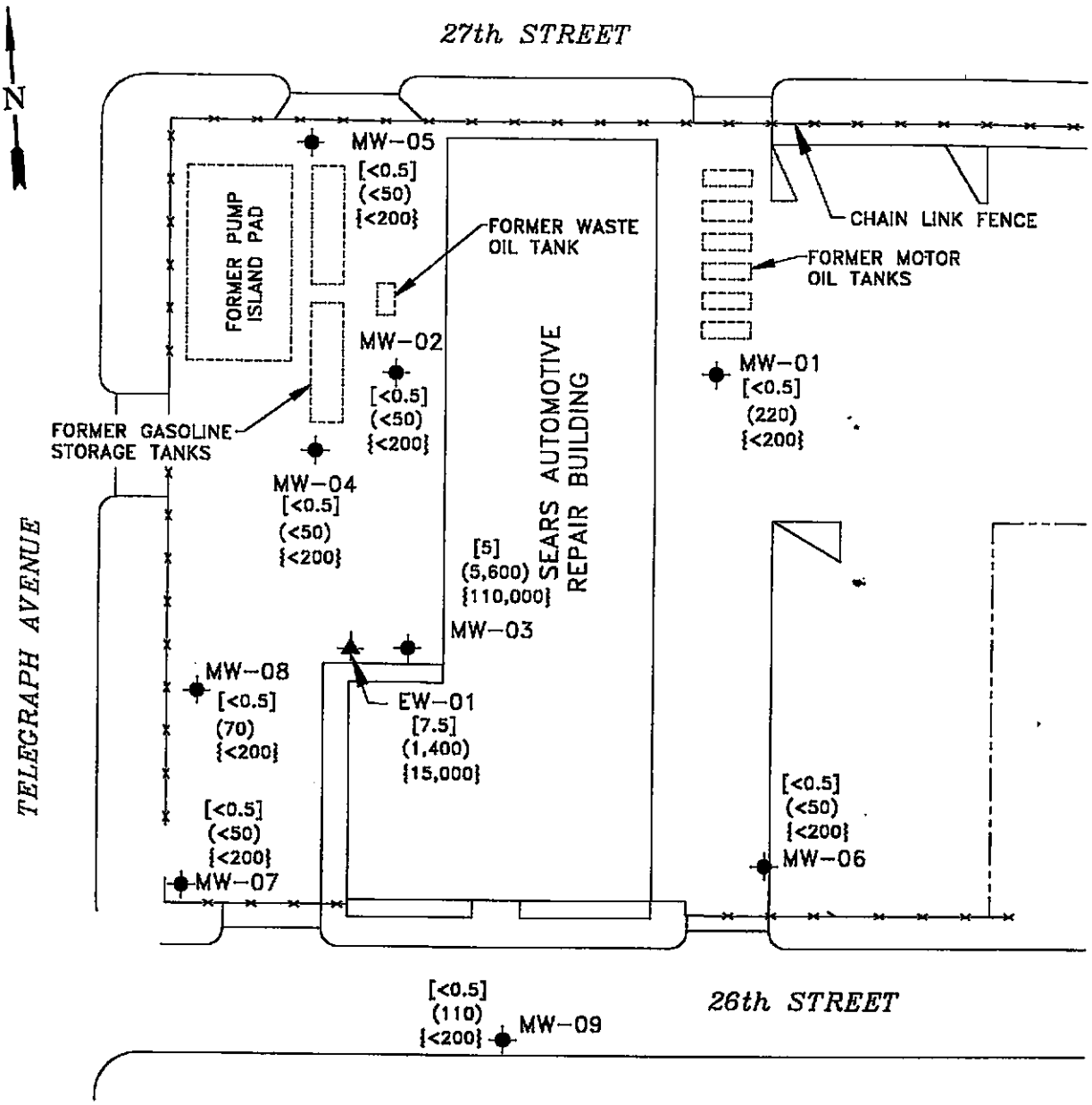
NOTE:
1. CONTOURS REPRESENT APPROXIMATE ELEVATIONS ABOVE MEAN SEA LEVEL.

FLUOR DANIEL GTI

0 FEET 40
SCALE

POTENTIOMETRIC SURFACE MAP (8/25/97)

CLIENT: SEARS, ROEBUCK AND CO. SITE NO. 1058	FILE: PSM82597 (1:40)	PROJECT NO.: 020200281	PM	PE/RG	
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	REV.			FIGURE: 1	
	DES. ES	DET. ML	DATE: 10/7/97		



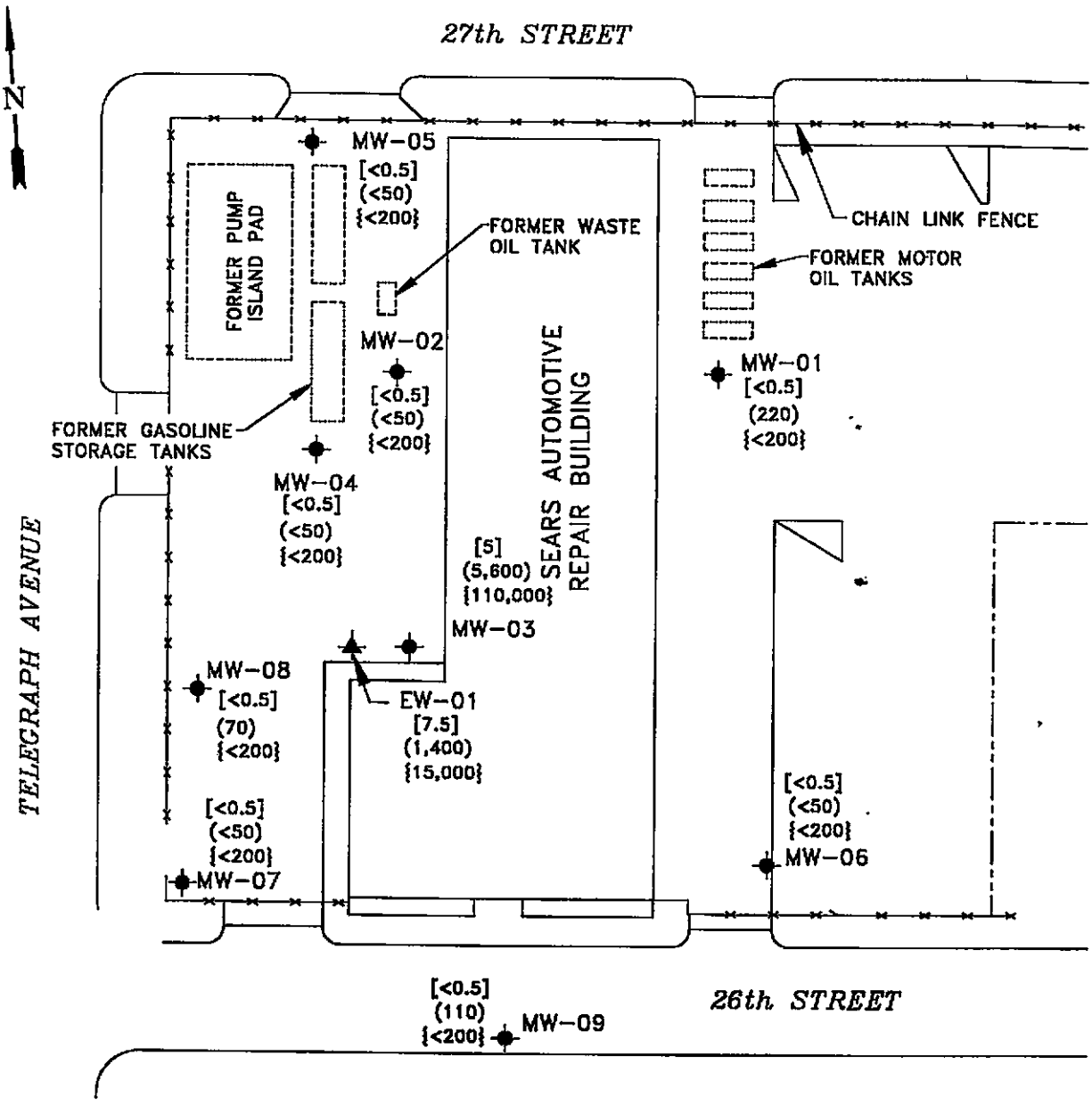
LEGEND

- MONITORING WELL
- EXTRACTION WELL
- [ ] BENZENE CONCENTRATIONS [ug/l]
- ( ) TPH-AS-GASOLINE (ug/l)
- { } TPH-AS-MOTOR OIL {ug/l}

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

FLUOR DANIEL GTI	0 FEET 40 SCALE	CONCENTRATIONS OF BENZENE, TPH-AS GASOLINE & TPH-AS-MOTOR OIL IN GROUNDWATER (8/25/97)

CLIENT: SEARS, ROEBUCK AND CO. SITE NO. 1058	FILE: BEN82597	PROJECT NO.: 020200281	PM	PE/RG ES
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	REV.			FIGURE: 2
	DES. ES	DET. ML	DATE: 10/7/97	



LEGEND

- MONITORING WELL
- EXTRACTION WELL
- [ ] BENZENE CONCENTRATIONS [ug/l]
- ( ) TPH-AS-GASOLINE (ug/l)
- { } TPH-AS-MOTOR OIL {ug/l}

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

FLUOR DANIEL GTI

0 FEET 40
SCALE

CONCENTRATIONS OF BENZENE, TPH-AS GASOLINE & TPH-AS-MOTOR OIL IN GROUNDWATER (8/25/97)

CLIENT: SEARS, ROEBUCK AND CO. SITE NO. 1058	FILE: BEN82597	PROJECT NO.: 020200281	PM	PE/RG
LOCATION: 2633 TELEGRAPH AVENUE OAKLAND, CALIFORNIA	REV.			FIGURE: 2
	DES. ES	DET. ML	DATE: 10/7/97	

ATTACHMENT 2

Tables

1. Summary of Historical Groundwater Monitoring Data
2. Summary of Historical Groundwater Sample 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
		10/28/94	12.06	--	--	14.14
		11/15/94	10.02	--	--	16.18
		12/01/94	10.61	--	--	15.59
		01/04/95	9.93	--	--	16.27
		02/01/95	9.56	--	--	16.64
		03/08/95	10.51	--	--	15.69
		04/03/95	NM	NM	NA	NA
		05/18/95	10.80	--	--	15.40
		06/09/95	11.18	--	--	15.02
		07/13/95	11.27	--	--	14.93
		08/03/95	11.48	--	--	14.72
		08/29/95	11.56	--	--	14.64
		09/15/95	11.71	--	--	14.49
		10/20/95	11.80	--	--	14.40
		11/15/95	11.61	--	--	14.59
		01/15/96	11.21	--	--	14.99
		03/05/96	9.35	--	-	16.85
		04/19/96	10.60	--	--	15.60
		05/10/96	11.18	--	--	15.02
		06/03/96	10.90	--	--	15.30
		09/04/96	11.31	--	--	14.89
		12/02/96	10.61	--	--	15.59
		02/26/97	10.31	--	--	15.89
		06/09/97	11.25	--	--	14.95
		08/25/97	11.15	--	--	15.05

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-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
		10/28/94	11.65	--	--	14.85
		11/15/94	9.65	--	--	16.85
		12/01/94	10.71	--	--	15.79
		01/04/95	10.11	--	--	16.39
		02/01/95	10.38	--	--	16.12
		03/08/95	10.80	--	--	15.70
		04/03/95	10.61	--	--	15.89
		05/18/95	10.95	--	--	15.55
		06/09/95	11.13	--	--	15.37
		07/13/95	11.15	--	--	15.35
		08/03/95	11.26	--	--	15.24
		08/29/95	11.32	--	--	15.18
		09/15/95	11.42	--	--	15.08
		10/20/95	11.42	--	--	15.08
		11/15/95	11.37	--	--	15.13
		01/15/96	11.10	--	--	15.40
		03/05/96	10.24	--	--	16.26
		04/19/96	10.84	--	--	15.56
		05/10/96	11.13	--	--	15.37
		06/03/96	10.94	--	--	15.56
		09/04/96	11.24	--	--	15.26
		12/02/96	10.80	--	--	15.70
		02/26/97	10.70	--	--	15.80
		06/09/97	11.10	--	--	15.40
		08/25/97	11.05	--	--	15.45

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	NA	NA
		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
		10/28/94	13.30	13.08	0.22	13.22
		11/15/94	11.05	11.02	0.03	15.31
		12/01/94	11.90	11.88	0.02	14.46
		01/04/95	11.80	11.76	0.01	14.55
		02/01/95	12.00	11.98	0.02	14.36
		03/08/95	12.35	12.30	0.05	14.03
		04/03/95	12.09	12.05	0.04	14.28
		05/18/95	12.43	12.40	0.03	13.93
		06/09/95	12.60	12.58	0.02	13.76
		07/13/95	12.55	12.46	0.09	13.87
		08/03/95	12.64	12.61	0.03	13.73
		08/29/95	12.65	12.62	0.03	13.71
		09/15/95	13.00	12.86	0.14	13.45*
		10/20/95	12.86	12.03	0.03	13.50*
		11/15/95	12.81	12.74	0.07	13.59*
		01/15/96	12.60	12.47	0.13	13.84*
		03/05/96	11.68	11.64	0.04	14.69
		04/19/96	12.36	12.34	0.02	14.00
		05/10/96	11.93	11.91	0.02	14.43
		06/03/96	12.93	12.50	0.43	13.75
		09/04/96	12.60	12.55	0.05	13.79
		12/02/96	12.11	12.00	0.03	14.25
		02/26/97	12.03	12.02	0.01	14.32
		06/09/97	12.39	12.35	0.04	13.98
		08/25/97	12.28	12.25	0.03	14.04

* Corrected elevations. Review of calculations indicated that these elevations were incorrect in past reports.

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-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
		10/28/94	12.18	--	--	13.99
		11/15/94	10.72	--	--	15.45
		12/01/94	11.37	--	--	14.80
		01/04/95	11.20	--	--	14.97
		02/01/95	11.16	--	--	15.01
		03/08/95	11.49	--	--	14.68
		04/03/95	11.35	--	--	14.82
		05/18/95	11.56	--	--	14.61
		06/09/95	11.72	--	--	14.45
		07/13/95	11.72	--	--	14.45
		08/03/95	11.81	--	--	14.36
		08/29/95	11.88	--	--	14.29
		09/15/95	11.99	--	--	14.18
		10/20/95	12.00	--	--	14.17
		11/15/95	11.96	--	--	14.21
		01/15/96	11.71	--	--	14.46
		03/05/96	11.02	--	--	15.15
		04/19/96	11.51	--	--	14.46
		05/10/96	11.74	--	--	14.43
		06/03/96	11.60	--	--	14.57
		09/04/96	11.85	--	--	14.32
		12/02/96	11.45	--	--	14.72
		02/26/97	11.42	--	--	14.75
		06/09/97	11.70	--	--	14.47
		08/25/97	11.63	--	--	14.54

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	--	--	15.80
		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
		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
		10/28/94	11.21	--	--	15.77
		11/15/94	10.05	--	--	16.93
		12/01/94	10.39	--	--	16.59
		01/04/95	10.18	--	--	16.80
		02/01/95	9.93	--	--	17.05
		03/08/95	10.35	--	--	16.63
		04/03/95	10.15	--	--	16.83
		05/18/95	10.43	--	--	16.55
		06/09/95	10.62	--	--	16.36
		07/13/95	10.76	--	--	16.22
		08/03/95	10.82	--	--	16.16
		08/29/95	10.91	--	--	16.07
		09/15/95	11.00	--	--	15.98
		10/20/95	11.02	--	--	15.96
		11/15/95	11.95	--	--	15.03
		01/15/96	10.57	--	--	16.41
		03/05/96	9.81	--	--	17.17
		04/19/96	10.32	--	--	16.66
		05/10/96	10.56	--	--	16.40
		06/03/96	10.46	--	--	16.52
		09/04/96	10.86	--	--	16.12
		12/02/96	10.45	--	--	16.53
		02/26/97	10.38	--	--	16.60
		06/09/97	10.78	--	--	16.20
		08/25/97	10.69	--	--	16.29

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-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
		10/28/94	11.59	--	--	12.73
		11/15/94	10.24	--	--	14.08
		12/01/94	10.30	--	--	14.02
		01/04/95	9.81	--	--	14.51
		02/01/95	10.01	--	--	14.31
		03/08/95	10.64	--	--	13.68
		04/03/95	10.26	--	--	14.06
		05/18/95	10.81	--	--	13.51
		06/09/95	11.07	--	--	13.25
		07/13/95	10.91	--	--	13.41
		08/03/95	11.15	--	--	13.17
		08/29/95	11.09	--	--	13.23
		09/15/95	11.35	--	--	12.97
		10/20/95	11.32	--	--	13.00
		11/15/95	11.20	--	--	13.12
		01/15/96	10.83	--	--	13.49
		03/05/96	9.60	--	--	14.72
		04/19/96	10.71	--	--	13.61
		05/10/96	11.05	--	--	13.27
		06/03/96	10.91	--	--	13.41
		09/04/96	10.84	--	--	13.48
		12/02/96	10.46	--	--	13.86
		02/26/97	10.46	--	--	13.86
		06/09/97	10.90	--	--	13.42
		08/25/97	10.84	--	--	13.48

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-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
		10/28/94	11.77	--	--	13.11
		11/15/94	10.29	--	--	14.59
		12/01/94	10.89	--	--	13.99
		01/04/95	10.77	--	--	14.11
		02/01/95	10.70	--	--	14.18
		03/08/95	11.05	--	--	13.83
		04/03/95	10.88	--	--	14.00
		05/18/95	11.12	--	--	13.76
		06/09/95	11.25	--	--	13.63
		07/13/95	11.15	--	--	13.73
		08/03/95	11.32	--	--	26.79
		08/29/95	11.53	--	--	13.35
		09/15/95	11.65	--	--	13.23
		10/20/95	11.64	--	--	13.24
		11/15/95	11.60	--	--	13.28
		01/15/96	11.07	--	--	13.81
		03/05/96	10.50	--	--	14.38
		04/19/96	12.02	--	--	12.86
		05/10/96	11.14	--	--	13.74
		06/03/96	11.10	--	--	13.78
		09/04/96	11.45	--	--	13.43
		12/02/96	10.96	--	--	13.92
		02/26/97	11.02	--	--	13.86
		06/09/97	11.34	--	--	13.54
		08/25/97	11.25	--	--	13.63

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-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
		10/28/94	12.84	--	--	13.28
		11/15/94	11.72	--	--	14.40
		12/01/94	11.87	--	--	14.25
		01/04/95	11.75	--	--	14.37
		02/01/95	11.64	--	--	14.48
		03/08/95	12.04	--	--	14.08
		04/03/95	11.86	--	--	14.26
		05/18/95	12.11	--	--	14.01
		06/09/95	12.34	--	--	13.78
		07/13/95	12.37	--	--	13.75
		08/03/95	12.50	--	--	13.62
		08/29/95	12.55	--	--	13.57
		09/15/95	12.70	--	--	13.42
		10/20/95	12.69	--	--	13.43
		11/15/95	12.67	--	--	13.45
		12/11/95	11.80	--	--	14.32
		01/15/96	12.38	--	--	13.74
		03/05/96	11.44	--	--	14.68
		04/19/96	10.80	--	--	15.32
		05/10/96	12.40	--	--	13.72
		06/03/96	12.26	--	--	13.86
		09/04/96	12.51	--	--	13.61
		12/02/96	11.99	--	--	14.13
		02/26/97	11.98	--	--	14.14
		06/09/97	12.36	--	--	13.76
		08/25/97	12.25	--	--	13.87
MW-9	N/A	12/02/96	11.52	--	--	N/A
		02/26/97	11.55	--	--	N/A
		06/09/97	11.91	--	--	N/A
		08/25/97	11.80	--	--	N/A
EW-1	N/A	12/02/96	12.17	--	--	N/A
		02/26/97	12.13	--	--	N/A
		06/09/97	12.46	--	--	N/A
		08/25/97	12.35	--	--	N/A

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

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	MTBE
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	–	*<250	–	–	–
	12/01/94	0.4	0.4	<0.3	6.6	–	*<250	–	–	–
	03/08/95	<0.3	0.6	<0.3	2.7	–	*<250	–	–	–
	06/09/95	<0.3	1.4	4.7	5.6	–	*<250	–	–	–
	08/29/95	0.3	0.9	3.9	2.8	–	*<250	–	–	–
	11/15/95	<0.5	<0.5	<0.5	27	–	*<200	–	–	–
	03/05/96	<0.5	<1.0	<1.0	<2.0	–	*<200	–	–	–
	06/03/96	<0.5	<1.0	<1.0	3.4	340	*<200	–	–	–
	09/04/96	<0.5	<1.0	3.7	<2.0	390	310	–	–	–
	12/02/96	<0.5	<1.0	<1.0	2.7	400	*<200	–	–	–
	02/26/97	<0.5	<1.0	<1.0	4.5	390	*<200	–	–	–
	06/09/97	<0.5	<1.0	<1.0	2.3	340	<200	–	–	<10
	08/25/97	<0.5	<0.5	<0.5	3	220	<200	–	–	<5
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	*<250	–	[d]15	–
	12/01/94	<0.3	<0.3	<0.3	<0.5	54	[f]1,300	–	[e]6	–
	03/08/95	<0.3	<0.3	<0.3	<0.5	<10	3,000	–	ND	–
	06/09/95	<0.3	<0.3	<0.3	<0.5	<50	2,000	–	ND	–
	08/29/95	<0.3	<0.3	<0.3	<0.5	<50	4,300	–	[b]20	–
	11/15/95	<0.5	<0.5	<0.5	<0.5	<50	6,100	–	ND	–
	03/05/96	<0.5	<1.0	<1.0	<2.0	<100	3,200	–	ND	–
	06/04/96	<0.5	<1.0	<1.0	<2.0	<100	3,800	–	ND	–
	09/04/96	<0.5	<1.0	<1.0	<2.0	<100	3,100	–	–	–
	12/02/96	<0.5	<1.0	<1.0	<2.0	<100	2,200	–	–	–
	02/26/97	<0.5	<1.0	<1.0	<2.0	<100	2,100	–	–	–
	06/09/97	<0.5	<1.0	<1.0	<2.0	<100	2,400	–	–	<10
	08/25/97	<0.5	<0.5	<0.5	<2.0	<50	<200	–	–	<5

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	MTBE
MW-3	12/30/92	11	0.9	<0.3	2	910	SPH	20	*ND	–
	03/24/93	28	0.7	1	8	3,300	SPH	28	**15	–
	06/21/93	21	5	2	19	**2,600	32,000	26	[cd]5	–
	09/16/93	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	12/01/93	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	03/09/94	2	1.4	4.5	13	2,000	**5,700	**63	*ND	–
	06/30/94	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	09/27/94	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	12/01/94	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	03/08/95	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	06/09/95	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	08/29/95	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	11/15/95	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	03/05/96	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	06/03/96	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	09/04/96	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	12/02/96	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	02/26/97	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	–
	06/09/97	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH	SPH
	08/25/97	5	6	5	16	5,600	110,000	–	–	<30
MW-4	12/30/92	2	<0.3	1	<0.5	1,200	–	<1	*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	–	*ND	–
	09/16/93	0.3	<0.3	2	3	410	2,500	–	*ND	–
	12/01/93	<0.3	<0.3	<0.3	<0.5	150	390	–	*ND	–
	03/09/94	0.7	0.8	2	3.6	1,500	780	–	*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	–
	12/01/94	0.6	0.5	0.3	0.8	290	580	–	*<5	–
	03/08/95	<0.3	<0.3	<0.3	<0.5	360	1,000	–	*<5	–
	06/09/95	<0.3	0.4	<0.3	<0.5	64	1,100	–	*<5	–
	08/29/95	<0.3	<0.3	<0.3	<0.5	<50	1,200	–	*<5	–
	11/15/95	<0.5	<0.5	<0.5	<0.5	<50	2,100	–	*ND	–
	03/05/96	<0.5	<1.0	<1.0	<2.0	<100	590	–	*ND	–
	06/03/96	<0.5	<1.0	<1.0	<2.0	<100	860	–	ND	–
	09/04/96	<0.5	<1.0	<1.0	<2.0	<100	600	–	–	–
	12/02/96	<0.5	<1.0	<1.0	<2.0	<100	940	–	–	–
	02/26/97	<0.5	<1.0	<1.0	<2.0	<100	390	–	–	–
	06/09/97	<0.5	<1.0	<1.0	<2.0	<100	630	–	–	<10
	08/25/97	<0.5	<0.5	<0.5	<2.0	<50	<200	–	–	<5

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	MTBE
MW-5	12/30/92	<0.3	<0.3	<0.3	<0.5	37	–	<1	[b,c]5	–
	03/24/93	<0.3	<0.3	<0.3	0.5	19	–	2	[a,c]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	–
	12/01/94	<0.3	<0.3	<0.3	<0.5	<10	<250	–	ND	–
	03/08/95	<0.3	<0.3	<0.3	<0.5	<10	<250	–	ND	–
	06/09/95	<0.3	<0.3	<0.3	<0.5	<50	<250	–	[d]7	–
	08/29/95	<0.3	<0.3	<0.3	<0.5	<50	<250	–	[b]36	–
	11/15/95	<0.5	<0.5	<0.5	<0.5	<50	<200	–	ND	–
	03/05/96	<0.5	<1.0	<1.0	<2.0	<100	<200	–	ND	–
	06/03/96	NS	NS	NS	NS	NS	NS	NS	NS	–
	09/04/96	<0.5	<1.0	<1.0	<2.0	<100	310	–	–	–
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS	–
	02/26/97	<0.5	<1.0	<1.0	<2.0	<100	<200	–	–	–
	06/09/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/25/97	>0.5	<0.5	<0.5	<2.0	<50	<200	–	–	<5
MW-6	12/27/93	<0.3	<0.3	<0.3	<0.5	<10	<100	<1	[e]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	–
	12/01/94	<0.3	<0.3	<0.3	<0.5	<10	<250	–	[g]32	–
	03/08/95	<0.3	<0.3	<0.3	<0.5	<10	<250	–	ND	–
	06/09/95	<0.3	<0.3	<0.3	<0.5	<50	<250	–	ND	–
	08/29/95	<0.3	<0.3	<0.3	<0.5	<50	<250	–	[b]24	–
	11/15/95	<0.5	<0.5	<0.5	<0.5	<50	<200	–	[g]31	–
	03/05/96	<0.5	<1.0	<1.0	<2.0	<100	<200	–	ND	–
	06/03/96	NS	NS	NS	NS	NS	NS	NS	NS	–
	09/04/96	<0.5	<1.0	<1.0	<2.0	<100	230	–	–	–
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS	–
	02/26/97	<0.5	<1.0	<1.0	<2.0	<100	<200	NS	NS	–
	06/09/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/25/97	<0.5	1.1	<0.5	<2.0	<50	<200	–	–	<5
MW-7	12/27/93	<0.3	<0.3	1	2	140	<100	<1	[g]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	[f]<250	–	ND	–
	12/01/94	<0.3	<0.3	<0.3	1.1	<10	[f]<250	–	[g]28	–
	03/08/95	<0.3	<0.3	<0.3	<0.5	<10	[f]<250	–	ND	–
	06/09/95	<0.3	<0.3	<0.3	<0.5	<50	<250	–	ND	–
	08/29/95	<0.3	<0.3	<0.3	<0.5	<50	<250	–	[h]13	–
	11/15/95	<0.5	<0.5	<0.5	<0.5	<50	<200	–	ND	–
	03/05/96	<0.5	<1.0	<1.0	<2.0	<100	270	–	ND	–
	06/03/96	NS	NS	NS	NS	NS	NS	NS	NS	–
	09/04/96	<0.5	<1.0	<1.0	<2.0	<100	<200	–	–	–
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS	–
	02/26/97	<0.5	<1.0	<1.0	<2.0	<100	<200	NS	NS	–
	06/09/97	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/25/97	<0.5	<0.5	<0.5	<2.0	<50	<200	–	–	<5

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	MTBE
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	--	[c]9	--
	12/01/94	5.4	<0.3	0.7	1.3	230	[e]<250	--	[c]ND	--
	03/08/95	<0.3	<0.3	<0.3	<0.5	230	[e]<250	--	ND	--
	06/09/95	<0.3	<0.3	<0.3	<0.5	<50	[e]<250	--	ND	--
	08/29/95	0.9	0.4	<0.3	0.8	200	[e]<250	--	[h]15	--
	11/15/95	0.58	<0.5	<0.5	0.54	120	--	--	[g]21	--
	12/11/95	--	--	--	--	--	[e]<200	--	--	--
	03/05/96	0.6	<1.0	<1.0	<2.0	<100	[e]<200	--	ND	--
	06/03/96	<0.5	<1.0	<1.0	<2.0	100	--	--	--	--
	09/04/96	<0.5	<1.0	<1.0	<2.0	110	<200	--	--	--
	12/02/96	<0.5	<1.0	<1.0	<2.0	110	<200	--	--	--
	02/26/97	<0.5	<1.0	<1.0	<2.0	<100	<200	--	--	--
	06/09/97	<0.5	<1.0	<1.0	<2.0	110	<200	--	--	<10
	08/25/97	<0.5	<0.5	<0.5	<2.0	70	<200	--	--	<5
MW-9	12/02/96	<0.5	<1.0	<1.0	<2.0	210	250	--	--	--
	02/26/97	<0.5	<1.0	<1.0	<2.0	170	340	--	--	--
	06/09/97	0.8	<1.0	<1.0	<2.0	130	350	--	--	<10
	08/25/97	<0.5	0.8	<0.5	<2.0	110	<200	--	--	<5
EW-1	09/04/96	<0.5	<1.0	<1.0	<2.0	1,100	1,700	--	--	--
	12/02/96	6.2	<1.0	<1.0	<2.0	1,000	14,00	--	--	--
	02/26/97	12	<1.0	<1.0	<2.1	1,200	2,100	--	--	--
	06/09/97	83	<1.0	<1.0	<2.0	1,400	12,000	--	--	13
	08/25/97	7.5	0.9	0.9	2.0	1,400	15,000	--	--	12

Notes:

"--" = No datum for the cell, including "not analyzed for this constituent."
"<" = 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 metal is listed in laboratory reports, included in attachment 4)
SPH = Separate phase hydrocarbon
NS = Not sampled
* = 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.
[f] = Uncategorized compounds included in concentration
[g] = Zinc only analyte detected
[h] = Chromium only analyte detected
MTBE = Methyl Tert-Butyl Ether

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.

FILE COPY

SITE VISIT FORM
Fluor Daniel GTI - Martinez, California

Project: **20200281.00** Technician: Mike Infante / Bob Butler
Site: **SEARS/#1058/Oakland, CA** Scheduled: **8/25/97**
Project Mgr: **Eileen Brennan** Site Mgr: **Bob Butler**

PREPARATORY COMMENTS

Visit Date: 8/25/97 Arrival Time: 9:40 Departure Time: 1530

Work Order read in office: (Y)/N upon arrival: (Y)/N upon departure: (Y)/N

Called PM? Y/N Time: _____ Who: _____ Topic: _____

Are You In Possession of a Site Safety Plan? (Y)/N

COC: Complete with store #, site address & proj office address? (Y)/N

Job # and task #

GROUNDWATER SAMPLING - Task Nr: 030543 [Quarterly]

Notify Tom Peacock 72 hrs in advance (510) 567-6782 DONE: 8/26/97 1:45 jaw

SITE ADDRESS: 2633 Telegraph Avenue, Oakland, CA

cc: Eileen Brennan, Bob Butler

During any sampling activities, a minimum work zone will be defined by a 10ft by 10ft square centered around the monitor well and marked with 36" -high orange traffic cones with flag poles and flags placed in the center of the cone and caution tape stretched between the cones. Employees will be constantly aware of the public access to the work zone and keep them within the outer perimeter of the cones and caution tape at all times.

BRING 9/16 BOLTS FOR ALL 8 WELLS. Need three (3) new drums for this site.

1. MARCH(1st)/SEPT(3rd): Monitor and sample all wells (MW-1 through MW-9 and EW-1) in the following order: MW-5, MW-1, MW-6, MW-7, MW-8, MW-2, MW-4, MW-3, MW-9 and the new extraction well (EW-1) located next to MW-3. USE DISPOSABLE BAILERS.

JUNE(2nd)/DEC(4th): Monitor all wells (MW-1 through MW-9, and EW-1). Sample seven (7) wells in the following order: MW-9, MW-1, MW-8, MW-2, MW-4, MW-3 and EW-1. USE DISPOSABLE BAILERS.

2. Record DTW, DTP, pH, Conductivity and temperature. NOTE: Recharge DTW.

3. Collect one trip blank and one duplicate from MW-4 and submit for BTEX-8020 only.

SITE VISIT FORM
Fluor Daniel GTI - Martinez, California

Project: **20200281.00** Technician:
Site: **SEARS/#1058/Oakland, CA** Scheduled: **8/25/97**
Project Mgr: **Eileen Brennan** Site Mgr: **Bob Butler**

GROUNDWATER SAMPLING (Continued) - Task Nr: 030543 [Quarterly]

EQUIPMENT NEEDED: 9/16" Ratchet to remove well lids. 1 or 2 55-gallon drums, I.P.

4. Complete detailed drum count. Check with owner if drums can be left in corner.

5. Submit samples to AEN Lab. in Pleasant Hill, CA ph# (510) 930-9090.

Note: Add THP-MO to concentration map

6. COMPLETED ALL THREE PAGES OF WASTE INVENTORY FORM? ~~NO~~ YES. IF NO, EXPLAIN ~~NOT PROVIDED WITH WORK ORDER~~ (MADE COPIES OF Blank one)

7. Analysis for Groundwater samples: Please note first and third Quarterly analysis of wells MW-5, MW-6, and MW-7.

Analysis	MW-1	MW-2	MW-3	MW-4	MW-5	MW-6	MW-7	MW-8	EW	MW-9	
TPH-Motor Oil(8015) AMBER/NONE	X	X	X	X	X	X	X	X	X	X	2L
BTEX/MTBE/TPH-G	X	X	X	X	X	X	X	X	X	X3	VOA/HCL

HOURS ESTIMATED FOR MARCH/SEPT 6.0 JUNE/DEC 4.0

Hours Estimated	4.00	Hours Used	

FINAL CHECKS

SITE SECURITY: well/covers/gates... secure? Y/N-If No, Explain

WASTE COMPLIANCE: # of Drums w/: Water 2, Soil___, Empty___, Other___

DRUMS labeled? NA/Y/N Gen. Date: 8/25/97 Label Type: NON CLASS

SOIL pile? Y/N size: X cu.yds. SITE LEFT CLEAN? Y/N

SITE VISIT FORM
Fluor Daniel GTI - Martinez, California

Project: 20200281.00
Site: SEARS/#1058/Oakland, CA
Project Mgr: Eileen Brennan

Technician:
Scheduled: 8/25/97
Site Mgr: Bob Butler

TECHNICIAN'S COMMENTS

MONITORED AND SAMPLED ALL WELLS, ALL WENT FINE
SEGREGATED 2 DRUMS. MW1 IS UNDER
20' TRAILOR, HAD TO CRAWL UNDER TO GET SAMPLE.

Total Hours Estimated	4.00	Total Hours Used	
Travel Time Estimated	1.50	Travel Time Used	

Technician

SITE VISIT FORM
FLUOR DANIEL GTI

Project: Sears/#1058/Oakland
Store #: 1058/2633 Telegraph
Project Manager: Eileen Brennan

Technician: Hector Merino / BOB BOTLEY
Schedule:
Job No. 020200281.030543

WELL WATER SAMPLING - TASK Nr: 030543 [QUARTERLY]
Gauge wells for volume of water & bail 3 well Vol,s. DECON
PREPATORY COMMENTS

Visit Date: 8/25/97 Arrival Time: 9:40 Departure Time: _____

Called Project Manager? YES NO Time: _____ Who: _____

If you did not call, why not? _____

Weather: Rain Snow Sunny Cloudy Temperature: _____

Well ID				
MW-1:	DTB_21.72	DTW 11.15'	SAT. THICK ___	#GAL. BAILED _____
MW-2:	DTB_21.79	DTW 11.05'	SAT. THICK ___	#GAL. BAILED _____
MW-3:	DTB_24.67	DTW 12.28 (12.30)	SAT. THICK 12.25	#GAL. BAILED _____
MW-4:	DTB_22.97	DTW 11.63'	SAT. THICK ___	#GAL. BAILED _____
MW-5:	DTB_25.27	DTW 10.69'	SAT. THICK ___	#GAL. BAILED _____
MW-6:	DTB_22.05	DTW 10.84'	SAT. THICK ___	#GAL. BAILED _____
MW-7:	DTB_21.70	DTW 11.25'	SAT. THICK ___	#GAL. BAILED _____
MW-8:	DTB_22.14	DTW 12.25'	SAT. THICK ___	#GAL. BAILED _____
MW-9	DTB_20.30	DTW 11.80'	SAT. THICK ___	#GAL. BAILED _____
EW-1	DTB_22.30	DTW 12.35'	SAT. THICK ___	#GAL. BAILED _____

→ corrected DTW = 12.30' Correct elevtn 14.04'

Casel. 26.34

NOTES: MW-1 UNDER MOBILE HOME had to crawl under to get Readings.
INSTALLED NEW LOCK ON MW-6
INSTALLED NEW CAP ON MW 9

HOURS ESTIMATED: HOURS USED:

FINAL CHECKS

Are Wells Locked? YES NO Why Not?

Are Manholes Bolted Down? YES NO Why Not?

SITE VISIT FORM
FLUOR DANIEL GTI

Project: Sears/#1058/Oakland
Store #: 1058/2633 Telegraph
Project Manager: Mike Wray

Technician:
Schedule:
Job No. 020200281.030543

TECHNICIAN'S COMMENTS

TOTAL HOURS ESTIMATED: HOURS USED:

TRAVEL TIME ESTIMATED: TRAVEL TIME USED:

TECHNICIAN

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 1 of
Project Manager: Eileen Brennan

Well ID: MW-5
Well Diameter: 2

DTW Measurements:
Initial: 10.69 Calc Well Volume: 2.3 gal
Recharge: 10.75 Well Volume: X3 7.1 gal
DTB: 25.27

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed X
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

CALIBRATED YSI to 4 + 7 BUFFER SOLUTION @ 10:56 on 8/25/97

Time	Temp ~~X~~ C / F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
10:57	23.5	0.46	6.30	2	Brown	
10:59	23.5	0.51	6.43	4	↓	
11:03	23.6	0.51	6.51	6		
11:11	23.6	0.51	6.52	8		

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 2 of
Project Manager: Eileen Brennan

Well ID: MW-1
Well Diameter: 2

DTW Measurements:
Initial: 11.15
Recharge: 11.24
DTB: 21.72

Calc Well Volume: 17 gal
Well Volume: x3 51 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

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

Time	Temp °C / F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
11:20	24.2	0.46	6.11	2	Cloudy	
11:22	23.9	0.43	6.23	4	↓	
11:23	23.4	0.45	6.26	6	↓	

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 3 **of** _____
Project Manager: Eileen Brennan

Well ID: MW-6
Well Diameter: 2

DTW Measurements:
Initial: 10.84 Calc Well Volume: 1.8 gal
Recharge: 10.95 Well Volume: x3 5.4 gal
DTB: 22.05

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

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

Time	Temp °C / F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
11:30	23.3	0.44	6.35	2	cloudy	
11:31	22.6	0.44	6.29	4	↓	
11:32	22.2	0.43	6.30	6	↓	

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 4 **of** _____
Project Manager: Eileen Brennan

Well ID: MW-7
Well Diameter: 2

DTW Measurements:
Initial: 11.25
Recharge: 11.30
DTB: 21.20

Calc Well Volume: 10 gal
Well Volume: X3 5.1 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

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

Time	Temp ~~C~~ F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
11:35	22.7	0.50	6.49	2	BROWN	
11:36	22.4	0.41	6.32	4		
11:38	22.2	0.50	6.35	6	↓	

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 5 of
Project Manager: Eileen Brennan

Well ID: MW-8
Well Diameter: 2

DTW Measurements:
Initial: 12.25
Recharge: 12.30
DTB: 22.14

Calc Well Volume: 116 gal
Well Volume: x3 48 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

Time	Temp °C / °F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
11:42	23.0	0.53	6.40	2	Cloudy	
11:43	23.2	0.54	6.34	4		
11:44	22.9	0.55	6.38	6		

Project.Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 6 of
Project Manager: Eileen Brennan

Well ID: MW-2
Well Diameter: 2

DTW Measurements:
Initial: 11.05
Recharge: 11.12
DTB: 21.09

Calc Well Volume: 17 gal
Well Volume: x3 51 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

Time	Temp °C / F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
11:50	23.3	0.45	6.48	2	Cloudy	
11:51	23.1	0.46	6.37	4	↓	
11:53	22.8	0.45	6.39	6	↓	

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 1 **of** _____
Project Manager: Eileen Brennan

Well ID: MW-4
Well Diameter: 2

DTW Measurements:
Initial: 11.63 Calc Well Volume: 18 gal
Recharge: 12.18 Well Volume: X3 55 gal
DTB: 22.97

Purge Method
Peristaltic_____
Gear Drive_____
Submersible_____

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

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

Time	Temp °C / °F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
11:59	23.2	0.50	6.44	2	Cloudy	
12:03	23.8	0.50	6.40	4	↓	
12:04	23.5	0.50	6.43	6	↓	

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 8 **of** _____
Project Manager: Eileen Brennan

Well ID: MW-9
Well Diameter: 2

DTW Measurements:
Initial: 11.80
Recharge: 11.81
DTB: 20.30

Calc Well Volume: 1.13 gal
Well Volume: X3 4.4 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible_____

Pump Depth_____ft.
Hand Bailed_____
Air Lift_____
Other_____

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

Time	Temp C / F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
12:08	24.1	0.55	6.85	1	cloudy	
12:09	23.2	0.55	6.53	2		
12:12	22.7	0.55	6.52	3		
12:14	22.4	0.54	6.51	4		
12:15	22.1	0.54	6.52	5	↓	

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 9 of
Project Manager: Eileen Brennan

Well ID: EW 1
Well Diameter: 4

DTW Measurements:
Initial: 12.35
Recharge: 12.41
DTB: 22.30

Calc Well Volume: 6.4 gal
Well Volume: x3 19.4 gal

Purge Method
Peristaltic
Gear Drive
Submersible X

Pump Depth ft.
Hand Bailed
Air Lift
Other

Instruments Used
YSI: X
Hydac:
Omega:
Other:

Time	Temp °C / °F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
12:30	22.3	0.56	6.67	5	cloudy	ODOR
12:32	22.7	0.56	6.65	10	↓	
12:34	22.7	0.56	6.65	15		
12:	22.6	0.56	6.66	20		

Project Name: Sears / #1058/Oakland, CA
Site Address: 2633 Telegraph Ave., Oakland
Project Number: 020200281.030543

Date: 8/25/97
Page 10 of _____
Project Manager: Eileen Brennan

Well ID: MW-3
Well Diameter: 2

DTW Measurements:
Initial: 12.28
Recharge: 12.31
DTB: 24.67

Calc Well Volume: 2.0 gal
Well Volume: X3 6.0 gal

Purge Method
Peristaltic_____
Gear Drive_____
Submersible X

Pump Depth_____ft.
Hand Bailed X
Air Lift_____
Other_____

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

Time	Temp X C / F	Conductivity (mmhos/cm)	pH	Purge Volume Gallons	Turbidity	Comments
12:47	22.3	0.60	6.68	2	Dark gray/ sheen HC odor	Bailed with Disposable bailer
12:52	22.2	0.56	6.72	4	↓	↓
12:55	22.2	0.55	6.75	6	↓	↓

ATTACHMENT 4

Laboratory Reports and Chain-of-Custody Record

RECEIVED
SEP 15 1997

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

FLUOR DANIEL GTI
757 ARNOLD DRIVE, STE. D
MARTINEZ, CA 94553

ATTN: BOB BUTLER
CLIENT PROJ. ID: 020200281
CLIENT PROJ. NAME: STORE #1058 Oakland

REPORT DATE: 09/11/97

DATE(S) SAMPLED: 08/25/97

DATE RECEIVED: 08/26/97

AEN WORK ORDER: 9708299

PROJECT SUMMARY:

On August 26, 1997, this laboratory received 12 water sample(s).

Client requested sample(s) be analyzed for chemical parameters. Results of analysis are summarized on the following page(s). Please see quality control report for a summary of QC data pertaining to this project.

Samples will be stored for 30 days after completion of analysis, then disposed of in accordance with State and Federal regulations. Samples may be archived by prior arrangement.

If you have any questions, please contact Client Services at (510) 930-9090.

Larry Klein
Laboratory Director

FLUOR DANIEL GTI

SAMPLE ID: MW-5
AEN LAB NO: 9708299-01
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	ND	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	09/03/97
Methyl t-Butyl Ether	1634-04-4	ND	5	ug/L	09/03/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	ND	0.05	mg/L	09/02/97
TPH as Oil	GC-FID	ND	0.2	mg/L	09/02/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: MW-1
AEN LAB NO: 9708299-02
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	ND	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	3 *	2	ug/L	09/03/97
Purgeable HCs as Gasoline	5030/GCFID	0.22 *	0.05	mg/L	09/03/97
Methyl t-Butyl Ether	1634-04-4	ND	5	ug/L	09/03/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	0.36 *	0.05	mg/L	09/02/97
TPH as Oil	GC-FID	ND	0.2	mg/L	09/02/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: MW-6
AEN LAB NO: 9708299-03
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	1.1 *	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	09/03/97
Methyl t-Butyl Ether	1634-04-4	ND	5	ug/L	09/03/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	ND	0.05	mg/L	09/02/97
TPH as Oil	GC-FID	ND	0.2	mg/L	09/02/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: MW-7
AEN LAB NO: 9708299-04
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	ND	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	09/03/97
Methyl t-Butyl Ether	1634-04-4	ND	5	ug/L	09/03/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	0.13 *	0.05	mg/L	09/02/97
TPH as Oil	GC-FID	ND	0.2	mg/L	09/02/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: MW-8
AEN LAB NO: 9708299-05
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	ND	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97
Purgeable HCs as Gasoline	5030/GCFID	0.07 *	0.05	mg/L	09/03/97
Methyl t-Butyl Ether	1634-04-4	ND	5	ug/L	09/03/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	0.07 *	0.05	mg/L	09/02/97
TPH as Oil	GC-FID	ND	0.2	mg/L	09/02/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: MW-2
AEN LAB NO: 9708299-06
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	ND	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	09/03/97
Methyl t-Butyl Ether	1634-04-4	ND	5	ug/L	09/03/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	0.79 *	0.05	mg/L	09/03/97
TPH as Oil	GC-FID	ND	0.2	mg/L	09/03/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: MW-4
AEN LAB NO: 9708299-07
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	ND	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97
Purgeable HCs as Gasoline	5030/GCFID	ND	0.05	mg/L	09/03/97
Methyl t-Butyl Ether	1634-04-4	ND	5	ug/L	09/03/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	0.10 *	0.05	mg/L	09/03/97
TPH as Oil	GC-FID	ND	0.2	mg/L	09/03/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: MW-9
AEN LAB NO: 9708299-08
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	0.8 *	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97
Purgeable HCs as Gasoline	5030/GCFID	0.11 *	0.05	mg/L	09/03/97
Methyl t-Butyl Ether	1634-04-4	ND	5	ug/L	09/03/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	0.13 *	0.05	mg/L	09/03/97
TPH as Oil	GC-FID	ND	0.2	mg/L	09/03/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: EW-1
AEN LAB NO: 9708299-09
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	7.5 *	0.5	ug/L	09/04/97
Toluene	108-88-3	0.9 *	0.5	ug/L	09/04/97
Ethylbenzene	100-41-4	0.9 *	0.5	ug/L	09/04/97
Xylenes, Total	1330-20-7	2 *	2	ug/L	09/04/97
Purgeable HCs as Gasoline	5030/GCFID	1.4 *	0.05	mg/L	09/04/97
Methyl t-Butyl Ether	1634-04-4	12 *	5	ug/L	09/04/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	ND	0.2	mg/L	09/03/97
TPH as Oil	GC-FID	15 *	1	mg/L	09/03/97

RLs for gas/BTEX and diesel elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: MW-3
AEN LAB NO: 9708299-10
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	5 *	3	ug/L	09/04/97
Toluene	108-88-3	6 *	3	ug/L	09/04/97
Ethylbenzene	100-41-4	5 *	3	ug/L	09/04/97
Xylenes, Total	1330-20-7	16 *	10	ug/L	09/04/97
Purgeable HCs as Gasoline	5030/GCFID	5.6 *	0.3	mg/L	09/04/97
Methyl t-Butyl Ether	1634-04-4	ND	30	ug/L	09/04/97
#Extraction for TPH	EPA 3510	-		Extrn Date	09/02/97
TPH as Diesel	GC-FID	ND	1	mg/L	09/03/97
TPH as Oil	GC-FID	110 *	4	mg/L	09/03/97

RLs for gas/BTEX and diesel elevated due to high levels of target compounds. Sample run at dilution.

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: DUP MW4
AEN LAB NO: 9708299-11
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	ND	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

FLUOR DANIEL GTI

SAMPLE ID: TBLB
AEN LAB NO: 9708299-12
AEN WORK ORDER: 9708299
CLIENT PROJ. ID: 020200281

DATE SAMPLED: 08/25/97
DATE RECEIVED: 08/26/97
REPORT DATE: 09/11/97

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
EPA 8020 for BTEX	EPA 8020				
Benzene	71-43-2	ND	0.5	ug/L	09/03/97
Toluene	108-88-3	ND	0.5	ug/L	09/03/97
Ethylbenzene	100-41-4	ND	0.5	ug/L	09/03/97
Xylenes, Total	1330-20-7	ND	2	ug/L	09/03/97

ND = Not detected at or above the reporting limit
* = Value at or above reporting limit

AEN (CALIFORNIA)
QUALITY CONTROL REPORT

AEN JOB NUMBER: 9708299

CLIENT PROJECT ID: 020200281

Quality Control Summary

All laboratory quality control parameters were found to be within established limits.

Definitions

Laboratory Control Sample (LCS)/Method Spike(s): Control samples of known composition. LCS and Method Spike data are used to validate batch analytical results.

Matrix Spike(s): Aliquot of a sample (aqueous or solid) with added quantities of specific compounds and subjected to the entire analytical procedure. Matrix spike and matrix spike duplicate QC data are advisory.

Method Blank: An analytical control consisting of all reagents, internal standards, and surrogate standards carried through the entire analytical process. Used to monitor laboratory background and reagent contamination.

Not Detected (ND): Not detected at or above the reporting limit.

Relative Percent Difference (RPD): An indication of method precision based on duplicate analysis.

Reporting Limit (RL): The lowest concentration routinely determined during laboratory operations. The RL is generally 1 to 10 times the Method Detection Limit (MDL). Reporting limits are matrix, method, and analyte dependent and take into account any dilutions performed as part of the analysis.

Surrogates: Organic compounds which are similar to analytes of interest in chemical behavior, but are not found in environmental samples. Surrogates are added to all blanks, calibration and check standards, samples, and spiked samples. Surrogate recovery is monitored as an indication of acceptable sample preparation and instrumental performance.

D: Surrogates diluted out.

#: Indicates result outside of established laboratory QC limits.

QUALITY CONTROL DATA
METHOD: EPA 3510 GCFID

AEN JOB NO: 9708299
DATE EXTRACTED: 09/02/97
INSTRUMENT: C
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery n-Pentacosane
09/02/97	MW-5	01	87
09/02/97	MW-1	02	89
09/02/97	MW-6	03	91
09/02/97	MW-7	04	92
09/02/97	MW-8	05	93
09/03/97	MW-2	06	92
09/03/97	MW-4	07	88
09/03/97	MW-9	08	95
09/03/97	EW-1	09	103
09/03/97	MW-3	10	D
QC Limits:			65-125

D: Surrogate diluted out.

DATE EXTRACTED: 09/02/97
DATE ANALYZED: 09/02/97
SAMPLE SPIKED: LCS
INSTRUMENT: C

Laboratory Control Sample Recovery

Analyte	Spike Added (mg/L)	Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Diesel	2.00	86	2	60-110	15

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

QUALITY CONTROL DATA
METHOD: EPA 8020, 5030 GCFID

AEN JOB NO: 9708299
INSTRUMENT: H
MATRIX: WATER

Surrogate Standard Recovery Summary

Date Analyzed	Client Id.	Lab Id.	Percent Recovery Fluorobenzene
09/03/97	MW-5	01	105
09/03/97	MW-1	02	99
09/03/97	MW-6	03	106
09/03/97	MW-7	04	104
09/03/97	MW-8	05	103
09/03/97	MW-2	06	105
09/03/97	MW-4	07	104
09/03/97	MW-9	08	96
09/04/97	EW-1	09	98
09/04/97	MW-3	10	96
09/03/97	DUP MW4	11	104
09/03/97	TBLB	12	106
QC Limits:			70-130

DATE ANALYZED: 09/03/97
SAMPLE SPIKED: 9708299-01
INSTRUMENT: H

Matrix Spike Recovery Summary

Analyte	Spike Added (ug/L)	Percent Recovery	RPD	QC Limits Percent Recovery	QC Limits RPD
Benzene	100	93	9	70-130	20
Toluene	100	96	9	70-130	20
Ethylbenzene	100	96	9	70-130	20
Total Xylenes	300	100	9	70-130	20

Daily method blanks for all associated analytical runs showed no contamination at or above the reporting limit.

*** END OF REPORT ***

1. Client: FLUOR DANIEL GTI
Address: 75 ARNOLD DR. SUITE D
MARTINEZ CA.
Contact: BOB BUTLER
Alt. Contact: ELLEEN BARMEN

American Environmental Network
3440 Vincent Road, Pleasant Hill, CA 94523
Phone (510) 930-9090
FAX (510) 930-0256

AEN

Page 1 of 1

REQUEST FOR ANALYSIS / CHAIN OF CUSTODY

Lab Job Number: 9708299
Lab Destination:
Date Samples Shipped:
Lab Contact:
Date Results Required:
Date Report Required:
Client Phone No.: (510) 370.3990
Client FAX No.: (510) 370-3991

Address Report To:
2. SAME as 1

Send Invoice To:
3. →

Send Report To: 1 or 2 (Circle one)

Client P.O. No.:

Client Project I.D. No.: Store # 1058 02020281.030543

Sample Team Member (s): ~~ELLEEN BARMEN~~ / BOB BUTLER

Lab Number	Client Sample Identification	Air Volume	Date/ Time Collected	Sample Type*	Pres.	No. of Cont.	Type of Cont.	ANALYSIS: TPH Motor Oil (8015)	ANALYSIS: BTEX + MTBE TPH-G (EPA 8020)	Comments / Hazards
01A-E	MW-5		8/14:00		HCl/NONE	5	TOM LL	X	X	STANDARD T.A.T
02A-E	MW-1	320	8/13:20			5		X	X	
03A-E	MW-6		13:34			5		X	X	
04A-E	MW-7		14:10			5		X	X	
05A-E	MW-8		14:30			5		X	X	
06A-E	MW-2	25	14:12			5		X	X	
07A-E	MW-4		14:24			5		X	X	
08A-E	MW-9	NO	12 8/13:51			5		X	X	
09A-E	EW-1		14:34 MW			5		X	X	
10A-E	MW-3		8/14:58			5		X	X	
11A	DUP MW4		14:25			2				X
12A	TB-B					2				X

Relinquished by: (Signature)	DATE 8/26/97	TIME 0937	Received by: (Signature) DATE 8/26/97 TIME 1137
Relinquished by: (Signature)	DATE 8/26/97	TIME 1133	Received by: (Signature) DATE 8/26/97 TIME 11:55
Relinquished by: (Signature)	DATE	TIME	Received by: (Signature) DATE TIME
Method of Shipment			Lab Comments

*Sample type (Specify): 1) 37mm 0.8 µm MCEF 2) 25mm 0.8 µm MCEF 3) 25mm 0.4 µm polycarb. filter
4) PVC filter, diam. ____ pore size ____ 5) Charcoal tube 6) Silica gel tube 7) Water 8) Soil 9) Bulk Sample
10) Other ____ 11) Other ____

COPIES: WHITE - JOB FILE YELLOW - PROJECT FILE PINK - CLIENT