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STID 1082

February 13, 2002

FEB 21 2002

Mr. Amir Gholami
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services Department
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

1082

Subject: Solvent and Gasoline Impacts, STID 1630
Third Quarter 2001, Groundwater Monitoring and Sampling Report
Sears Auto Center No. 1039, 1901-1911 Telegraph Avenue, Oakland, California
IT Corporation Project 803686

Dear Mr. Gholami:

On behalf of Sears, Roebuck and Co., IT Corporation presents the quarterly groundwater monitoring and sampling data collected from the above referenced site on July 24, 2001. Eight of the nine on-site groundwater monitoring wells were gauged to determine depth to groundwater and to check for the presence of separate-phase petroleum hydrocarbons. A parked car prevented access to well MW-1. Separate-phase hydrocarbons were not detected in any of the monitoring wells. A potentiometric surface map is provided in Figure 1 (Attachment 1). A summary of historical groundwater elevation data is provided in Table 1 (Attachment 2).

After measuring depth to water, eight monitoring wells were purged and sampled. Field data sheets and groundwater monitoring and sample collection protocol are provided in Attachment 3. The groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-g), methyl tert-butyl ether (MTBE) and dissolved benzene, toluene, ethylbenzene and total xylenes (BTEX) by Environmental Protection Agency (EPA) Method 8260 and GC/MS Combination, and for purgeable halocarbons by EPA Method 8260. Groundwater samples from monitoring wells MW-4 and MW-6 were additionally analyzed for total recoverable petroleum hydrocarbons as oil and grease by EPA Method 418.1 with silica gel application.

Static groundwater levels for the third quarter 2001 ranged from 76.35 to 79.07 feet above mean sea level (approximately 13 to 17 feet below top of casing). Groundwater elevations have decreased by about 0.3 foot since the previous quarter (April 27, 2001). The apparent groundwater flow is to the east at an average hydraulic gradient of 0.014 foot per foot, and is similar to previous quarterly data.

Results of quarterly sampling indicated detectable concentrations of dissolved petroleum hydrocarbons in monitoring wells MW-2, MW-5, and MW-7, with highest concentrations of TPH-g and benzene found in MW-7. MTBE was detected in samples collected from one well, MW-7, at a concentration of 1.7 micrograms per liter (µg/L). All monitoring wells except MW-4 and MW-5 contained detectable concentrations of various halogenated volatile organics, such as 1,2-dichloroethane (1,2-DCA), cis-1,2-dichloroethene, tetrachloroethene (PCE), and trichloroethene

(TCE). These compounds are not typically found in gasoline or new/used motor oil. A summary of the groundwater analytical results is provided in Table 2. A distribution map of dissolved benzene, TPH-g, and MTBE concentrations is provided in Figure 2.

Hydrographs and detectable concentrations versus time data are illustrated in Graphs 1 through 9 (Attachment 4). Petroleum hydrocarbon concentrations below detection limits are not shown on the graphs. Laboratory reports and chain-of-custody documents are provided in Attachment 5.

Concentrations of dissolved petroleum hydrocarbons and halogenated volatile organics have been generally declining in most wells since monitoring began in 1995; however, in well MW-7, BTEX concentrations since August 1, 2000 remain higher than during previous quarters. Nondetectable levels of dissolved BTEX and TPH-g concentrations in downgradient wells MW-8 and MW-9 indicate that the downgradient limit of the dissolved gasoline plume is within the site's boundaries.

The source of the dissolved chlorinated hydrocarbons at the subject site is not known; however, TCE and some of the other constituents may be breakdown products of PCE. In a recent study performed by Harding ESE, Inc. (Harding) for the Oakland Uptown Development Project as part of a city revitalization effort, a vicinity map was produced that shows that the highest dissolved PCE concentrations (more than 100 µg/L) occur upgradient (west) of the Sears site. A copy of the Harding study map showing approximate PCE plume concentrations across the Sears site (southern portion of Parcels 1 and 2) and the surrounding adjacent area is presented in Attachment 6 of this report. A table accompanying the study map (Attachment 6), also prepared by Harding as part of their study effort, lists sites with known and potential environmental issues, including sites within the PCE groundwater plume. Although the information provided in the study does not indicate a known source of the solvents at this time, it is our opinion, based on the information provided in Attachment 6, that the source of the solvents is upgradient of the Sears site and caused by parties other than Sears.

All site-related monitoring wells will continue to be sampled on a quarterly basis.

If you have comments or questions, please contact David Bero at (925) 288-2024.

Sincerely,
IT CORPORATION
Submitted by:

David A. Bero, P.G., R.G.
West Zone Project Manager

IT CORPORATION
Approved by:

Ed K. Simonis, R.G., #4422
Senior Geologist

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

Attachments:

1. Figures
2. Tables
3. Groundwater Monitoring and Sample Collection Protocol and Field Data Sheets
4. Graphs
5. Laboratory Reports and Chain-of-Custody Documents
6. City of Oakland Study

c: Mr. Scott M. DeMuth, Manager, Environmental Technical Services, Sears, Roebuck and Co.
IT Corporation Central Files
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Attachment 1

Figures

DRAWING NUMBER	803686-B7
APPROVED BY	
CHECKED BY	
DRAWN BY	RB 12/04/00
OFFICE	CONCORD
X-REF	---
IMAGE	---

WILLIAMS STREET

SAN PABLO AVENUE

PARKING GARAGE

TELEGRAPH AVENUE

19th STREET

N

W-11

MW-02 (78.77)

MW-05 (78.63)

MW-04 (78.32)

MW-06 (77.48)

CANOPY

FORMER CHEVRON STATION

FORMER WASTE OIL TANK

P-07/ P-11

MW-01 (--)

i=0.014

MW-09 (76.35)

MW-07 (77.53)

ABOVEGROUND WASTE OIL TANK

SERVICE BAY

SEARS AUTO TIRE CENTER

SHOW ROOM

STOCK ROOM

MW-08 (77.16)

FORMER GASOLINE TANK EXCAVATION

MW-03 (79.67)

USED TIRE STORAGE AREA

LEGEND

- MONITORING WELL
- SOIL PROBE
- (80.77) POTENTIOMETRIC SURFACE ELEVATION (FEET ABOVE MEAN SEA LEVEL)
- (--) NO DATA
- POTENTIOMETRIC SURFACE CONTOUR; INTERVAL = 0.5 FT
- GROUNDWATER FLOW DIRECTION AND
- i=0.015 AVERAGE GRADIENT (ft/ft)

0 FEET 50
SCALE

IT CORPORATION

SEARS, ROEBUCK & CO.
SITE NO. 1039

FIGURE-1
POTENTIOMETRIC SURFACE MAP
(GAUGED 07/24/2001)
1901-1911 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

FORMAT REVISION 2/26/99

DRAWING NUMBER	APPROVED BY	CHECKED BY
803686-33		

DRAWN BY	OFFICE	X-REF	IMAGE
RB 12/06/00	CONCORD	---	---

WILLIAMS STREET

SAN PABLO AVENUE

PARKING GARAGE

MW-05
[3.3]
{<50}
(<0.5)

W-11

MW-04
[<0.5]
{<50}
(<0.5)

MW-02
[130/120]
{480}
(<0.5)

MW-06
[<0.5]
{<50}
(<0.5)

CANOPY

FORMER CHEVRON STATION

FORMER WASTE OIL TANK

P-07/
P-11

MW-09
[<0.5]
{<50}
(1.7)

MW-01
[--]
{--}
(--)

MW-07
[4500]
{6000}
(<2)

FORMER GASOLINE TANK EXCAVATION

ABOVEGROUND WASTE OIL TANK

SERVICE BAY
EMPORIUM CAPWELL
GOODYEAR TIRE CENTER

SHOW ROOM

MW-08
[<0.5]
{<50}
(<0.5)

STOCK ROOM

MW-03
[<0.5]
{<50}
(<0.5)

USED TIRE STORAGE AREA

19th STREET

TELEGRAPH AVENUE

N

LEGEND

- ✦ MONITORING WELL
- ⊕ SOIL PROBE
- [ ] BENZENE CONCENTRATION [ug/L]
- { } TPH AS GASOLINE CONCENTRATIONS {ug/L}
- ( ) METHYL TERT-BUTYL ETHER (MTBE) CONCENTRATIONS (ug/L) (ANALYZED BY EPA 8260 AND GC/MS COMBINATION)
- -- NO DATA
- * DUPLICATE

0 FEET 50
SCALE

IT CORPORATION

SEARS, ROEBUCK & CO.
SITE NO. 1039

FIGURE-2
CONCENTRATIONS OF BENZENE
TPH-AS-GASOLINE & MTBE
IN GROUNDWATER
(SAMPLED 07/24/, 2001)
1901-1911 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

Attachment 2

Tables

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

Sears Store 1039
1911 Telegraph Avenue, Oakland, California

Well ID	Casing Elevation	Date	Depth to Water	Depth to Product	Product Thickness	Groundwater Elevation
MW-1	94.34	06/12/1996	16.21	–	–	78.13
		09/05/1996	16.89	–	–	77.45
		12/03/1996	17.07	–	–	77.27
		02/27/1997	15.55	–	–	78.79
		06/10/1997	16.46	–	–	77.88
		08/27/1997	16.97	–	–	77.37
		11/26/1997	17.24	–	–	77.10
		02/11/1998	16.07	–	–	78.27
		05/19/1998	15.43	–	–	78.91
		08/10/1998	15.98	–	–	78.36
		11/09/1998	16.63	–	–	77.71
		02/11/1999	16.55	–	–	77.79
		05/10/1999	15.50	–	–	78.84
		08/09/1999	15.82	–	–	78.52
		11/05/1999	16.29	–	–	78.05
		02/01/2000	16.02	–	–	78.32
		05/02/2000	14.48	–	–	79.86
		08/01/2000	15.20	–	–	79.14
		11/06/2000	15.63	–	–	78.71
		02/16/2001	15.45	–	–	78.89
		04/27/2001	14.86	–	–	79.48
		07/24/2001	–	–	–	–
MW-2	93.95	06/12/1996	16.01	–	–	77.94
		09/05/1996	16.66	–	–	77.29
		12/03/1996	16.20	–	–	77.75
		02/27/1997	14.46	–	–	79.49
		06/10/1997	14.00	–	–	79.95
		08/27/1997	16.55	–	–	77.40
		11/26/1997	16.86	–	–	77.09
		02/11/1998	15.85	–	–	78.10
		05/19/1998	15.32	–	–	78.63
		08/10/1998	15.82	–	–	78.13
		11/09/1998	16.53	–	–	77.42
		02/11/1999	16.38	–	–	77.57
		05/10/1999	15.19	–	–	78.76
		08/09/1999	16.09	–	–	77.86
		11/05/1999	16.20	–	–	77.75
		02/01/2000	16.00	–	–	77.95
		05/02/2000	14.90	–	–	79.05
		08/01/2000	15.25	–	–	78.70
		11/06/2000	15.45	–	–	78.50
		02/16/2001	15.50	–	–	78.45
		04/27/2001	14.83	–	–	79.12
		07/24/2001	15.18	–	–	78.77
MW-3	96.15	06/12/1996	17.56	–	–	78.59
		09/05/1996	18.32	–	–	77.83
		12/03/1996	18.57	–	–	77.58
		02/27/1997	17.43	–	–	78.72
		06/10/1997	18.12	–	–	78.03
		08/27/1997	18.47	–	–	77.68
		11/26/1997	18.70	–	–	77.45
		02/11/1998	17.76	–	–	78.39
		05/19/1998	16.99	–	–	79.16
		08/10/1998	17.51	–	–	78.64
		11/09/1998	18.07	–	–	78.08
		02/11/1999	18.07	–	–	78.08
		05/10/1999	17.04	–	–	79.11
		08/09/1999	17.77	–	–	78.38
		11/05/1999	18.00	–	–	78.15
		02/01/2000	17.95	–	–	78.20
		05/02/2000	16.83	–	–	79.32

TABLE 1
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(All measurements are in feet; all elevations are in feet above mean sea level)

Sears Store 1039
1911 Telegraph Avenue, Oakland, California

Well ID	Casing Elevation	Date	Depth to Water	Depth to Product	Product Thickness	Groundwater Elevation
MW-3 (continued)		08/01/2000	17.13	–	–	79.02
		11/06/2000	17.54	–	–	78.61
		02/16/2001	17.42	–	–	78.73
		04/27/2001	16.80	–	–	79.35
		07/24/2001	17.08	–	–	79.07
MW-4	92.01	06/12/1996	14.21	–	–	77.80
		09/05/1996	14.83	–	–	77.18
		12/03/1996	13.99	–	–	78.02
		02/27/1997	12.44	–	–	79.57
		06/10/1997	14.20	–	–	77.81
		08/27/1997	14.62	–	–	77.39
		11/26/1997	15.00	–	–	77.01
		02/11/1998	14.10	–	–	77.91
		05/19/1998	13.57	–	–	78.44
		08/10/1998	14.10	–	–	77.91
		11/09/1998	14.75	–	–	77.26
		02/11/1999	14.57	–	–	77.44
		05/10/1999	13.46	–	–	78.55
		08/09/1999	14.15	–	–	77.86
		11/05/1999	14.62	–	–	77.39
		02/01/2000	14.50	–	–	77.51
		05/02/2000	13.40	–	–	78.61
		08/01/2000	13.70	–	–	78.31
		11/06/2000	14.00	–	–	78.01
		02/16/2001	13.65	–	–	78.36
		04/27/2001	13.40	–	–	78.61
		07/24/2001	13.69	–	–	78.32
MW-5	92.09	06/12/1996	14.13	–	–	77.96
		09/05/1996	14.77	–	–	77.32
		12/03/1996	13.99	–	–	78.10
		02/27/1997	12.08	–	–	80.01
		06/10/1997	16.00	–	–	76.09
		08/27/1997	14.55	–	–	77.54
		11/26/1997	14.95	–	–	77.14
		02/11/1998	13.97	–	–	78.12
		05/19/1998	13.52	–	–	78.57
		08/10/1998	13.97	–	–	78.12
		11/09/1998	14.67	–	–	77.42
		02/11/1999	14.50	–	–	77.59
		05/10/1999	13.23	–	–	78.86
		08/09/1999	13.90	–	–	78.19
		11/05/1999	14.40	–	–	77.69
		02/01/2000	14.15	–	–	77.94
		05/02/2000	13.10	–	–	78.99
		08/01/2000	13.52	–	–	78.57
		11/06/2000	13.93	–	–	78.16
		02/16/2001	13.75	–	–	78.34
		04/27/2001	12.95	–	–	79.14
		07/24/2001	13.46	–	–	78.63
MW-6	92.16	06/12/1996	14.99	–	–	77.17
		09/05/1996	15.50	–	–	76.66
		12/03/1996	15.07	–	–	77.09
		02/27/1997	14.14	–	–	78.02
		06/10/1997	15.30	–	–	76.86
		08/27/1997	15.42	–	–	76.74
		11/26/1997	15.70	–	–	76.46
		02/11/1998	14.87	–	–	77.29
		05/19/1998	14.32	–	–	77.84
		08/10/1998	14.90	–	–	77.26
		11/09/1998	15.39	–	–	76.77
		02/11/1999	15.21	–	–	76.95
		05/10/1999	14.12	–	–	78.04

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

Sears Store 1039
1911 Telegraph Avenue, Oakland, California

Well ID	Casing Elevation	Date	Depth to Water	Depth to Product	Product Thickness	Groundwater Elevation
MW-6 (continued)		08/09/1999	15.00	–	–	77.16
		11/05/1999	15.55	–	–	76.61
		02/01/2000	15.40	–	–	76.76
		05/02/2000	14.55	–	–	77.61
		08/01/2000	14.85	–	–	77.31
		11/06/2000	15.10	–	–	77.06
		02/16/2001	14.93	–	–	77.23
		04/27/2001	14.40	–	–	77.76
		07/24/2001	14.68	–	–	77.48
MW-7	93.80	06/12/1996	16.56	–	–	77.24
		09/05/1996	17.10	–	–	76.70
		12/03/1996	17.12	–	–	76.68
		02/27/1997	16.20	–	–	77.60
		06/10/1997	17.00	–	–	76.80
		08/27/1997	17.18	–	–	76.62
		11/26/1997	17.40	–	–	76.40
		02/11/1998	16.65	–	–	77.15
		05/19/1998	15.96	–	–	77.84
		08/10/1998	16.48	–	–	77.32
		11/09/1998	16.98	–	–	76.82
		02/11/1999	16.94	–	–	76.86
		05/10/1999	15.87	–	–	77.93
		08/09/1999	16.60	–	–	77.20
		11/05/1999	17.01	–	–	76.79
		02/01/2000	17.00	–	–	76.80
		05/02/2000	16.00	-	-	77.80
		08/01/2000	16.40	-	-	77.40
		11/06/2000	16.67	-	-	77.13
		02/16/2001	16.60	-	-	77.20
		04/27/2001	16.00	-	-	77.80
		07/24/2001	16.22	-	-	77.58
MW-8	94.49	11/05/1999	18.15	–	–	76.34
		02/01/2000	18.10	–	–	76.39
		05/02/2000	17.26	–	–	77.23
		08/01/2000	17.52	–	–	76.97
		11/06/2000	17.83	–	–	76.66
		02/16/2001	17.74	–	–	76.75
		04/27/2001	17.10	–	–	77.39
		07/24/2001	17.33	–	–	77.16
MW-9	92.54	11/05/1999	16.86	–	–	75.68
		02/01/2000	16.70	–	–	75.84
		05/02/2000	16.02	–	–	76.52
		08/01/2000	16.34	–	–	76.20
		11/06/2000	16.55	–	–	75.99
		02/16/2001	16.31	–	–	76.23
		04/27/2001	15.90	–	–	76.64
		07/24/2001	16.19	–	–	76.35

Notes:
– = No data for the cell, including "product not detected"

TABLE 2
Summary of Historical Groundwater Analyses
(All results expressed in micrograms per liter)

Sears Store 1039
1911 Telegraph Avenue, Oakland, California

Well ID	Date Sampled	MTBE	Benzene	Toulene	Ethyl-benzene	Total Xylenes	TPH as Gasoline	PCE	TCE	1,2-DCA	cis-1,2 DCE	1,1-DCE	OIL/ GREASE
MW-1	10/01/1995	–	ND	ND	ND	ND	<50	9.9	ND	ND	–	–	–
	01/01/1996	–	ND	ND	ND	ND	<50	9 9	14	ND	–	–	–
	06/12/1996	–	<0.5	1.4	<0.5	<2	<50	12	<0.5	<0.5	–	–	–
	09/05/1996	<5.0	<0 5	<0.5	<0 5	<2	<50	12	<0.5	<0.5	–	–	–
	12/03/1996	<5.0	<0.5	<0.5	<0.5	<2	<50	<0.5	<0.5	<0 5	<0.5	<0.5	–
	02/27/1997	<5 0	<0.5	<0.5	<0.5	<2	<50	31	1.3	<0.5	<0.5	<0.5	–
	06/10/1997	<5.0	<0 5	<0.5	<0 5	<2	<50	19	<0.5	<0.5	<0 5	<0 5	–
	08/27/1997	<5.0	<0.5	<0.5	<0.5	<2	<50	16	<0.5	<0 5	<0.5	<0.5	–
	11/26/1997	<5 0	<0 5	<0.5	<0 5	<2	<50	17	<0.5	<0.5	<0.5	<0.5	–
	02/11/1998	<5.0	<0.5	<0.5	<0.5	<3	<50	20	<0 5	<0 5	<0.5	<0.5	–
	05/19/1998	<5.0	<0.5	<0.5	<0.5	<4	<50	14	<0.5	<0.5	<0.5	<0.5	–
	08/10/1998	<2.5	<0.5	<0.5	<0 5	<5	<50	14	<0.5	<0.5	<0 5	<0 5	–
	11/09/1998	3 1	<0.5	<0.5	<0.5	<0.5	<50	16	<0.5	<0.5	<0.5	<0.5	–
	02/08/1999	<2.5	<0.5	<0 5	<0 5	<5	<50	<0.5	20	<0.5	<0 5	<0 5	–
	05/10/1999	<2.5	<0 5	<0.5	<0.5	<0.5	<50	14	<0.5	<0.5	<0.5	<0.5	–
	08/09/1999	<2.5	<0.5	<0.5	<0.5	<0 5	<50	14	<0 5	<0.5	<0.5	<0.5	–
	11/05/1999	<2 5	<0.5	<0.5	<0.5	<0.5	<50	20	<0.5	<0 5	<0.5	<0.5	–
	02/01/2000	<0 5	<0 5	<0.5	<0.5	<0.5	<50	24	<0.5	<0.5	<0 5	<0.5	–
	05/02/2000	<0.5	<0.5	<0 5	<0.5	<0 5	<50	23	<0 5	<0 5	<0.5	<0 5	–
	08/01/2000	<0 5	<0 5	<0.5	<0.5	<0.5	<50	21	0.5	<0.5	<0.5	<0.5	–
	11/06/2000	<0 5	<0.5	<0 5	<0 5	<0.5	<50	31	<0 5	<0 5	<0 5	<0 5	–
	02/16/2001	<0.5	<0 5	<0.5	<0 5	<0.5	<50	32	0 7	<0 5	<0 5	<0 5	–
	04/27/2001	<0 5	<0 5	<0.5	<0.5	<0.5	<50	33	<0.5	<0.5	<0.5	<0.5	–
	07/24/2001	–	–	–	–	–	–	–	–	–	–	–	–
MW-2	10/01/1995	–	1,200	5 4	41	5.9	2,900	ND	40	280	–	–	–
	01/01/1996	–	1,100	11.0	100	6.9	780	ND	38	270	–	–	–
	06/12/1996	–	890	7.0	56	10	3,600	<3	40	160	–	–	–
	09/05/1996	<5.0	350	3 0	17	10	2,100	<0 5	29	55	1.9	55	–
	12/03/1996	40	230	2.4	7 8	7	1,100	<0.5	20	86	7	<0 5	–
	02/27/1997	12	210	2 2	6	3	1,000	1	25	43	<0.5	<0 5	–
	06/10/1997	<30	510	3.0	6	<10	1.8	1	19	47	4.9	<0.5	–
	08/27/1997	11	51	<0.5	1 4	<2	450	0 5	16	29	4.2	<0 5	–
	11/26/1997	<30	380	5 0	9	12	1,200	1	13	29	3.1	<0 5	–
	02/11/1998	8	310	4.0	9.8	9	1,100	<0 5	16	<0.5	2.6	0 6	–
	05/19/1998	20	320	2 1	9.9	8	1,200	1	14	47	1.6	<0.5	–
	08/10/1998	40	37	1 0	1.2	0.9	300	<0 5	11	30	2 4	<0 5	–
	11/09/1998	<2.5	57	<0.5	1.7	<0.5	440	<0 5	12	25	2.3	<0.5	–
	02/08/1999	11	240	2 3	8 9	5	480	<0.5	11	36	1.4	<0.5	–
	05/10/1999	24/<2 0	260	2.2	7.9	4.2	260	<0 5	7	24	3 4	<0.5	–
	08/09/1999	14/<2 0	43	0 79	0 54	<0 5	250	<0 5	11	33	2.6	<0.5	–
	11/05/1999	11/<2.0	63	0.68	0 65	1 1	320	<0 5	13	41	1 3	<0 5	–
	02/01/2000	<0.5	610/ 590*	4.4/ 6 3*	63/ 65*	5 9/ 7 1*	1200	<0 5	15	73	2	<0.5	–
	05/02/2000	<0 5	540/600*	3 7/<5.0*	15/14*	14/11*	930	<0.5	8 4	32	4 5	<0 5	–
	08/01/2000	<0 5	110	1 2	4 8	1 6	410	<0 5	9 4	23	2.9	<0.5	–
	11/06/2000	20	150/130*	.09/.09*	4 1/3 7*	1 1/1.0*	450	<0.5	10	20	1 6	<0 5	–
	02/16/2001	<0.5	360/390*	4 4/4 1*	19/17*	8.6/8.1*	640	<0.5	11	19	2.5	<0 5	–
	04/27/2001	<0 5	450/510	3 3/3 5	8.4/10	6 3/7 2	770	<0 5	4 4	11	4.0	<0.5	–
	07/24/2001	<0 5	130/120	1.7/1 6	8.8/8.1	6.5/5.8	480	<0.5	7.2	15	3 0	<0 5	–
MW-3	10/01/1995	–	ND		ND	ND	<50	ND	ND	ND	–	–	–
	01/01/1996	–	ND	ND	ND	ND	ND	ND	ND	ND	–	–	–
	06/12/1996	–	<0.5	<0.5	<0 5	<2	<50	<0 5	<0.5	<0 5	–	–	<0 5
	09/05/1996	<5 0	<0 5	<0.5	<0.5	<2	<50	<0.5	<0 5	<0.5	–	–	<0.5
	12/03/1996	<5.0	<0.5	<0 5	<0 5	<2	<50	2 3	<0 5	<0.5	<0.5	<0.5	–
	02/27/1997	<5.0	<0 5	<0 5	<0 5	<2	<50	6.3	<0 5	<0 5	<0 5	<0 5	–
	06/10/1997	<5.0	<0 5	<0.5	<0.5	<2	<50	5 9	<0 5	<0.5	<0.5	<0.5	–
	08/27/1997	<5 0	<0.5	<0 5	<0.5	<2	<50	5.8	<0.5	<0 5	<0.5	<0.5	–
	11/26/1997	<5.0	<0 5	<0.5	<0.5	<2	<50	7.9	<0 5	<0.5	<0 5	<0 5	–
	02/11/1998	<5.0	<0 5	<0.5	<0.5	<2	<50	7.9	<0.5	<0.5	<0.5	<0 5	–
	05/19/1998	<5 0	<0.5	<0 5	<0.5	<2	<50	5.5	<0.5	<0 5	<0.5	<0.5	–
	08/10/1998	<2.5	<0 5	<0.5	<0 5	<0.5	<50	<0 5	<0 5	<0.5	<0 5	<0.5	–
	11/09/1998	<2.5	<0 5	<0.5	<0.5	<0.5	<50	5 5	<0 5	<0.5	<0.5	<0.5	–
	02/08/1999	<2.5	<0.5	<0 5	<0.5	<0 5	<50	6.4	<0.5	<0 5	<0.5	<0.5	–
	05/10/1999	<2.5	<0 5	<0.5	<0 5	<0 5	<50	5.1	<0.5	<0.5	<0.5	<0.5	–
	08/09/1999	<2.5	<0 5	<0.5	<0.5	<0.5	<50	4.8	<0 5	<0.5	<0 5	<0 5	–
	11/05/1999	<2 5	<0.5	<0 5	<0.5	<0.5	<50	7 2	<0.5	<0 5	<0.5	<0.5	–
	02/01/2000	<0 5	<0 5	<0.5	<0 5	<0 5	<50	6.9	<0.5	<0.5	<0 5	<0.5	–
	05/02/2000	<0.5	<0.5	<0 5	<0.5	<0.5	<50	6 4	<0 5	<0.5	<0.5	<0.5	–
	08/01/2000	<0.5	<0.5	<0 5	<0.5	<0 5	<50	5 6	<0.5	<0 5	<0.5	<0.5	–
	11/06/2000	<0.5	<0 5	<0.5	<0 5	<0.5	<50	7.9	<0.5	<0.5	<0.5	<0 5	–
	02/16/2001	<0.5	<0 5	<0.5	<0.5	<0.5	<50	8 9	<0 5	<0 5	<0.5	<0.5	–
	04/27/2001	<0.5	<0.5	<0 5	<0.5	<0 5	<50	8 1	<0.5	<0 5	<0.5	<0 5	–
	07/24/2001	<0 5	<0.5	<0.5	<0 5	<0.5	<50	11	<0 5	<0.5	<0 5	<0 5	–

TABLE 2
Summary of Historical Groundwater Analyses
(All results expressed in micrograms per liter)

Sears Store 1039
1911 Telegraph Avenue, Oakland, California

Well ID	Date Sampled	MTBE	Benzene	Toulene	Ethyl-benzene	Total Xylenes	TPH as Gasoline	PCE	TCE	1,2-DCA	cis-1,2 DCE	1,1-DCE	OIL/ GREASE
MW-4	10/01/1995	–	41	ND	ND	ND	<50	ND	ND	ND	–	–	–
	01/01/1996	–	58	ND	ND	ND	<50	ND	ND	ND	–	–	–
	06/12/1996	–	11	<0.5	<0.5	<2	320	<0.5	<0.5	<0.5	–	–	–
	09/05/1996	–	5.6	<0.5	<0.5	<2	70	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	12/03/1996	15	11	<0.5	<0.5	<2	270	<0.5	<0.5	0.9	<0.5	<0.5	<0.5
	02/27/1997	<5.0	3.1	<0.5	<0.5	<2	190	<0.5	<0.5	<0.5	<0.5	<0.5	<500
	06/10/1997	<5.0	11	<0.5	<0.5	<2	200	<0.5	<0.5	<0.5	<0.5	<0.5	–
	08/27/1997	<5.0	9.6	<0.5	<0.5	<2	170	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
	11/26/1997	<5.0	6.7	<0.5	<0.5	<2	100	<0.5	<0.5	<0.5	<0.5	<0.5	<500
	02/11/1998	<5.0	8.4	<0.5	<0.5	<2	110	<0.5	<0.5	<0.5	<0.5	<0.5	<500
	05/19/1998	7	4.6	<0.5	<0.5	<2	110	<0.5	<0.5	<0.5	<0.5	<0.5	<500
	08/10/1998	11	4.1	<0.5	<0.5	<0.5	110	<0.5	<0.5	<0.5	<0.5	<0.5	9,600
	11/09/1998	<2.5	7.5	<0.5	<0.5	<0.5	130	<0.5	<0.5	<0.5	<0.5	<0.5	<500
	02/08/1999	<2.5	6.8	<0.5	<0.5	<0.5	60	<0.5	<0.5	<0.5	<0.5	<0.5	<500
	05/10/1999	<2.0	1.3	<0.5	<0.5	<0.5	61	<0.5	<0.5	<0.5	<0.5	<0.5	<5000
	08/09/1999	3.9/<2.0*	7.9	<0.5	<0.5	<0.5	94	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	11/05/1999	<2.5	9.0	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	–
	02/01/2000	<0.5	18	<0.5	<0.5	<0.5	150	<0.5	<0.5	<0.5	<0.5	<0.5	800
	05/02/2000	<0.5	8.5	<0.5	<0.5	<0.5	55	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	08/01/2000	<0.5	0.9	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	11/06/2000	<0.5	22	<0.5	<0.5	<0.5	88	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	02/16/2001	<0.5	16	<0.5	<0.5	<0.5	55	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	04/27/2001	<0.5	0.7	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
	07/24/2001	<0.5	0.7	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<1000
MW-5	10/01/1995	–	86	ND	ND	ND	260	ND	ND	ND	–	–	–
	01/01/1996	–	160	3.6	ND	ND	180	ND	ND	ND	–	–	–
	06/12/1996	–	54	1.1	<0.5	<2	260	<0.5	<0.5	<0.5	–	–	–
	09/05/1996	<5.0	22	1.0	<0.5	<2	160	<0.5	<0.5	<0.5	–	–	–
	12/03/1996	6	18	0.6	<0.5	<2	170	<0.5	<0.5	<0.5	<0.5	<0.5	–
	02/27/1997	<5	74	2.0	<0.5	<2	230	<0.5	<0.5	<0.5	<0.5	<0.5	–
	06/10/1997	<30	490	19.0	<3.0	<10	1,200	<0.5	<0.5	<0.5	<0.5	<0.5	–
	08/27/1997	<5.0	100	4.6	<0.5	<2	340	<0.5	<0.5	<0.5	<0.5	<0.5	–
	11/26/1997	<5.0	78	4.5	0.6	<2	400	<0.5	<0.5	<0.5	<0.5	<0.5	–
	02/11/1998	<5.0	62	2.9	<0.5	<2	320	<0.5	<0.5	<0.5	<0.5	<0.5	–
	05/19/1998	<5.0	97	2.6	<0.5	<2	330	<0.5	<0.5	<0.5	<0.5	<0.5	–
	08/10/1998	11	48	1.9	<0.5	<0.5	190	<0.5	<0.5	<0.5	<0.5	<0.5	–
	11/09/1998	<2.5	3.8	<0.5	<0.5	<0.5	81	<0.5	<0.5	<0.5	<0.5	<0.5	–
	02/08/1999	3.8	3	<0.5	<0.5	<0.5	82	<0.5	<0.5	<0.5	<0.5	<0.5	–
	05/10/1999	2.6/<2.0*	8.8	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	–
	08/09/1999	5.6<2.0*	25	<0.5	<0.5	<0.5	150	<0.5	<0.5	<0.5	<0.5	<0.5	–
	11/05/1999	4.3/<2.0*	20	<0.5	<0.5	0.76	160	<0.5	<0.5	<0.5	<0.5	<0.5	–
	02/01/2000	<0.5	42	1.2	<0.5	<0.5	180	<0.5	<0.5	<0.5	<0.5	<0.5	–
	05/02/2000	<0.5	12	0.7	<0.5	<0.5	120	<0.5	<0.5	<0.5	<0.5	<0.5	–
	08/01/2000	<0.5	11	<0.5	<0.5	<0.5	69	<0.5	<0.5	<0.5	<0.5	<0.5	–
	11/06/2000	<0.5	7.0	<0.5	<0.5	<0.5	72	<0.5	<0.5	<0.5	<0.5	<0.5	–
	02/16/2001	<0.5	1.6	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	–
	04/27/2001	<0.5	3.1	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	–
	07/24/2001	<0.5	3.8	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	–
MW-6	10/01/1995	–	ND	ND	ND	ND	<50	6.2	11	33	–	–	–
	01/01/1996	–	ND	ND	ND	ND	<50	7.2	12	5.3	–	–	–
	06/12/1996	–	<0.5	<0.5	<0.5	<2	<50	3.6	5	7.9	–	–	–
	09/05/1996	<5	0.8	<0.5	<0.5	<2	<50	5.4	5.2	7.5	–	–	<0.5
	12/03/1996	<5	<0.5	<0.5	<0.5	<2	<50	0.9	0.6	0.5	<0.5	<0.5	<0.5
	02/27/1997	<5	<0.5	<0.5	<0.5	<2	<50	1.3	0.5	<0.5	<0.5	<0.5	<500
	06/10/1997	<5	0.9	<0.5	<0.5	<2	<50	1	<0.5	<0.5	<0.5	<0.5	–
	08/27/1997	<5	<0.5	<0.5	<0.5	<2	<50	0.9	<0.5	<0.5	<0.5	<0.5	<0.5
	11/26/1997	7.6	15	0.9	9.1	<2	320	1.2	0.6	0.8	<0.5	<0.5	<500
	02/11/1998	<5	<0.5	<0.5	<0.5	<2	<50	0.7	<0.5	0.5	<0.5	<0.5	<500
	05/19/1998	<5	0.6	<0.5	<0.5	<2	<50	0.6	<0.5	<0.5	<0.5	<0.5	<500
	08/10/1998	<2.5	<0.5	<0.5	<0.5	<0.5	<50	0.5	0.59	1.3	<0.5	<0.5	9,000
	11/09/1998	<2.5	<0.5	<0.5	<0.5	<0.5	<50	1.2	0.92	1.7	<0.5	<0.5	<500
	02/08/1999	<2.5	<0.5	<0.5	<0.5	<0.5	<50	0.86	<0.5	1.2	<0.5	<0.5	<500
	05/10/1999	<2.5	<0.5	<0.5	<0.5	<0.5	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5000
	08/09/1999	<2.5	<0.5	<0.5	<0.5	<0.5	<50	0.52	<0.5	<0.5	<0.5	<0.5	<1000
	11/05/1999	<2.5	<0.5	<0.5	<0.5	<0.5	<50	0.89	0.89	1.2	<0.5	<0.5	–
	02/01/2000	<0.5	<0.5	<0.5	<0.5	<0.5	<50	1.2	0.9	2.2	<0.5	<0.5	<1000
	05/02/2000	<0.5	<0.5	<0.5	<0.5	<0.5	<50	2.6	0.8	1.3	<0.5	<0.5	<1000
	08/01/2000	<0.5	<0.5	<0.5	<0.5	– <0.5	<50	0.8	0.9	2.3	<0.5	<0.5	<1000
	11/06/2000	<0.5	<0.5	<0.5	<0.5	<0.5	<50	0.9	0.9	3.3	<0.5	<0.5	<1000
	02/16/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<50	0.9	1.1	6.2	<0.5	<0.5	<1000
	04/27/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<50	0.7	0.7	3.9	<0.5	<0.5	<1000
	07/24/2001	<0.5	<0.5	<0.5	<0.5	<0.5	<50	0.6	1	4.8	<0.5	<0.5	<1000

TABLE 2
Summary of Historical Groundwater Analyses
(All results expressed in micrograms per liter)

Sears Store 1039
1911 Telegraph Avenue, Oakland, California

Well ID	Date Sampled	MTBE	Benzene	Toulene	Ethyl-benzene	Total Xylenes	TPH as Gasoline	PCE	TCE	1,2-DCA	cis-1 2 DCE	1,1-DCE	OIL/ GREASE
MW-7	10/01/1995	--	ND	ND	ND	ND	<50	5 3	3 5	8.3	--	--	--
	01/01/1996	--	ND	ND	ND	ND	<50	9 3	4 8	5.7	--	--	--
	06/12/1996	--	0.6	<0.5	<0.5	<2	<50	6.1	3.4	2.9	--	--	--
	09/05/1996	<5	1 2	<0 5	<0.5	<2	<50	8.3	4.2	5 9	--	--	--
	12/03/1996	<5	850	<5	<5	30	120	4	4	75	<3	<3	<0 5
	02/27/1997	<30	1500	3.0	23	<10	2,500	2	4	65	<0.5	<0.5	--
	06/10/1997	<50	1700	<5	59	<20	3,200	2	4.2	85	<0 5	<0 5	--
	08/27/1997	90	1700	8 0	200	40	3,900	<3	5	93	<3	<3	--
	11/26/1997	90	3,100	15 0	190	30	5,600	3	5 9	120	1	<0 5	--
	02/11/1998	90	3,800	25.0	250	80	8,500	4	8 9	93	1 2	<0.5	--
	05/19/1998	300	2,100	440.0	150	220	5,000	2	3.8	74	0 6	<0 5	--
	08/10/1998	<50	690	<10	13	<10	1,600	<2.5	3.3	100	<2.5	<2 5	--
	11/09/1998	8.7	295	5.5	4 3	1 5	930	4 2	6 5	110	<2.5	<2.5	--
	02/08/1999	<50	670	<10	14	<10	1,500	6	3 4	74	<1.2	<1.2	--
	05/10/1999	63/<2 0*	1,800	16.0	81	130	2,800	1	2.6	65	0.63	<0 5	--
	08/09/1999	300/6 5*	570	5.1	28	30	1,500	<0.5	1.2	95	0.57	<0 5	--
	11/05/1999	150/11*	1,200	<5	61	25	2,100	4	7 8	95	1.6	<0.5	--
	02/01/2000	6 6	2,600	16.0	140	210	4,600	3	6	110	1.7	<0.5	--
	05/02/2000	<5 0	2,700	25	80	270	4,200	<5 0	<5 0	84	<5 0	<5 0	--
	08/01/2000	<10	5,500	27	300	390	5,600	<10	<10	85	<10	<10	--
	11/06/2000	<10	3,400	29	230	330	6,000	<10	<10	66	<10	<10	--
	02/16/2001	3.1	3,400	27	200	290	4,400	<2	<2	60	<2	<2	--
	04/27/2001	2 7	6,000	44	390	620	6,100	<2.5	<2 5	37	<2.5	<2.5	--
	07/24/2001	<2 0	4,500	16	390	840	6,000	<2 0	<2.0	39	<2 0	<2 0	--
MW-8	11/05/1999	<2.5	<0 5	<0 5	<0 5	<0.5	<50	6 2	<0 5	<0 5	<0 5	<0.5	--
	02/01/2000	<0.5*	0 6	<0.5	<0 5	<0 5	<50	7.8	<0 5	<0.5	<0.5	<0 5	--
	05/02/2000	<0 5*	1 1	<0.5	<0.5	<0.5	<50	5 9	<0 5	<0 5	<0.5	<0 5	--
	08/01/2000	<0.5	<0 5	<0 5	<0 5	<0 5	<50	5 6	<0.5	<0.5	<0 5	<0.5	--
	11/06/2000	<0 5	1 3	<0.5	<0 5	<0 5	<50	5.5	<0 5	<0 5	<0 5	<0 5	--
	02/16/2001	<0 5	<0.5	<0.5	<0 5	<0.5	<50	6 0	<0 5	<0 5	<0.5	<0 5	--
	04/27/2001	<0.5	<0 5	<0 5	<0 5	<0.5	<50	4 2	<0 5	<0 5	<0 5	<0 5	--
	07/24/2001	<0 5	<0.5	<0 5	<0.5	<0.5	<50	4.9	<0.5	<0.5	<0.5	<0 5	--
MW-9	11/05/1999	3/2 4*	<0 5	<0 5	<0 5	<0 5	<50	65	29	32	<0 5	<0.5	--
	02/01/2000	3.0*	2.6	<0 5	<0.5	<0.5	<50	60	22	36	0 7	<0 5	--
	05/02/2000	2 0*	0.6	<0 5	<0 5	<0 5	77	39	19	30	0.5	<0 5	--
	08/01/2000	2 7	<0 5	<0 5	<0 5	<0 5	70	41	19	37	0.7	<0 5	--
	11/06/2000	3 2	0 6	<0.5	<0.5	<0.5	74	31	15	34	0 8	<0.5	--
	02/16/2001	3.4	<0.5	<0.5	<0 5	<0 5	52	26	14	33	0.9	<0.5	--
	04/27/2001	1 9	<0 5	<0 5	<0 5	<0 5	64	42	16	38	0.6	<0.5	--
	07/24/2001	1 7	<0.5	<0.5	<0 5	<0.5	<50	31	12	34	0 7	<0.5	--

Notes: Historical data before June 1996 as reported by previous consultants

--	=	No datum for the cell, including "not analyzed for this constituent"
<	=	Compound was not detected above the laboratory reporting limits
TPH	=	Total petroleum hydrocarbons
ND	=	Non-detectable
PCE	=	Tetrachloroethene
1,2-DCA	=	1,2-Dichloroethane
TCE	=	Trichloroethene
MTBE	=	Methyl tert-Butyl ether (Prior to 5/99 analyzed using EPA Method 8020, '99 duplicates and all post-'99 samples analyzed using EPA Method 8260)
*	=	Duplicate
cis-1,2-DC	=	CIS-1,2-Dichloroethene
1,1-DCE	=	1,1 Dichloroethene

Attachment 3

Groundwater Monitoring and Sample Collection Protocol and Field Data Sheets

Groundwater Monitoring

Groundwater monitoring is accomplished using an 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 utilized 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 triple 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 samples and the parameters have stabilized. If the well is low yielding, it may be purged dry and sampled before three 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, xylenes, and total petroleum hydrocarbons 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 then 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.

Monday
7/23/01

SITE VISIT FORM
IT Corporation - Concord, California

roject: 823289.03054300
Site: SEARS/1039/Oakland, CA
Project Manager: David Bero

Techician: LLMerino
Schedule:
Site Mgr: Brad Wooland

PREPARATORY COMMENTS

Visit Date: 7/24/01 Time of: 8:00 Arrival 14:00 Departure

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

Called PM? (Y)N Time: 12:00 Who/Topic: DBERO Material inventory

Are you in possesssion of a health and safety plan? (Y)N

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

GROUNDWATER SAMPLING - Task Nr: 03054300 [Quarterly]

SITE ADDRESS: 1911 Telegraph Avenue, Oakland, CA

cc: David Bero

Notify: Fuji 48 hrs. in advance (510) 444-7662. (He will insure that wells are not covered). called 7/19/01 @ 1041 JK

Notify Don Whang 72 hrs. in advance (510) 567-6746 DONE: left message 7/19/01 @ 1x VC

During any sampling activities, a minimum work zone will be defined by a 10ft by 10-ft 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 permeter of the cones and caution tape at all times.

1) Monitor and sample nine (9) wells in the following order: MW-3, MW-1, MW-6, MW-4, MW-5, MW-2, MW-8, MW-9, and MW-7. USE DISPOSABLE BAILERS. Collect two (2) 40ml, HCL-preserved VOAs from on site wells.

2) Purge each well of 3 well volumes or until dry. Record DTW, DTP, pH, temperature, conductivity and dissolved oxygen data.

3) Collect one trip blank and one duplicate from MW-2 and submit for BTEX-(EPA 8260). Must use lab trip blank (Zymax).

SITE VISIT FORM
IT Corporation - Concord, California

roject: 823289.03054300 **Techician: AMerino**
Site: SEARS/1039/Oakland, CA **Schedule:**
Project Manager: David Bero **Site Mgr: Brad Wooland**

GROUNDWATER SAMPLING (Continued) - Task Nr. 03054300 (Quarterly)

4) Make a complete drum count and note the general condition of the site, wells and drums. Keep drum area tidy. Label drums properly.

5) Submit samples to Zymax, ph# (805) 544-4696, to be analyzed for BTEX/MTBE/TPH-G (EPA 8260 and GC/MS combination), and Chlorinated hydrocarbons (EPA 8260 - GC/MS). Well MW-4 and MW-6 additionally analyze for Oil and Grease (C/F).

6) COMPLETED ALL THREE PAGES OF DRUM/WASTE INVENTORY FORM? Yes. IF NO EXPAIN _____.

Hours Estimated Hours Used

FINAL CHECKS

SITE SECURITY: wells/covers/gates ... secure? Y/N - If No, explain.

WASTE COMPLIANCE: # of drums: Water 6, Soil _____, Empty _____, Other _____.

Drums labeled? NA/Y/N Gen. Date: _____ Label Type: NON HAZ

SOIL pile? Y/N size: NO cu. yds. SITE LEFT CLEAN? (Y)/N

Travel Time Estimated: Travel Time Used:

On Site Time Estimated: On Site Time Used:

SITE VISIT FORM
IT Corporation

Project: Sears/1039/Oakland
Store #: 1039, 1911 Telegraph Ave.
Project Manager: David Bero

Technician: J Merino
Schedule:
Job No 823289.03054300

WELL WATER SAMPLING - TASK Nr: 030543 00 [QUARTERLY]
Gauge wells for volume of water & bail 3 well Vol,s DECON
all equipment & change gloves, string, etc. between each well

Well ID				
MW-1:	DTB_24.25	DTW ~~~~	SAT. THICK ___	#GAL. BAILED_____
MW-2:	DTB_24 10	DTW 15.18	SAT THICK___	#GAL. BAILED_____
MW-3:	DTB_27.75	DTW 17.08	SAT. THICK___	#GAL. BAILED_____
MW-4:	DTB_23.55	DTW 13.69	SAT. THICK___	#GAL. BAILED_____
MW-5:	DTB_25 10	DTW 13.46	SAT. THICK___	#GAL. BAILED_____
MW-6:	DTB_26.75	DTW 14.68	SAT. THICK___	#GAL. BAILED_____
MW-7:	DTB_26.20	DTW 16.22	SAT. THICK___	#GAL. BAILED_____
MW-8:	DTB_25.00	DTW 17.33	SAT. THICK___	#GAL. BAILED_____
MW-9:	DTB_25.00	DTW 16.19	SAT. THICK___	#GAL. BAILED_____

NOTES: CAR ON TOP OF MW-1 NO SAMPLE TAKEN
D.O. METER WILL NOT CALABRATE NO READINGS
TAKEN. 6 DRUMS TOTAL IN GARAGE 1ST, 2ND, 3RD QUARTER

HOURS ESTIMATED: HOURS USED

FINAL CHECKS

Are Wells Locked? (YES) NO Why Not?

Are Manholes Bolted Down? (YES) NO Why Not?

DRUMMED MATERIAL INVENTORY FORM

Store Number 1039 City/State Oakland CA.

IT Corporation Representative Hector Marine

THERE SHOULD NEVER BE 2 DRUMS WITH THE SAME DRUM ID PRESENT AT A SITE AT THE SAME TIME

DRUM ID	ACCUMU-LATION START DATE	CONTENTS (as on label) VOLUME (if mixed waste)	SOURCE (be specific)	SLUDGE PRESENT Y/N	VOLUME (gallon)
A	2/14/01	Purgewater	Groundwater	N	55
B	2/14/01	Purge water	"	"	55
C	4/27/01	Purge water	"	"	55
D	4/27/01	Purge water	"	"	55
E	7/24/01	Purge water	"	"	55
F	7/24/01	Purge water	"	"	55

EXAMPLE

A	6/24/94	diesel(3)/water(8)	diesel lines, flush water	no	11

NOTE: There should *NEVER* be 2 drums with the same ID present at a site at the same time!

BULK MATERIAL INVENTORY FORM

Store Number 1039 Address/City/State/ZIP 1911 TELEGRAPH AVE. OAKLAND CA.

Sears Facility Contact and Phone # HERB MCINTYRE (510) 428-8425

IT Corporation Representative Hector Mejia

Accumulation Start Date 7/24/01 Completion Date 7/24/01

Exact Bulk Storage Location INSIDE GARAGE (FORMER)

CONTAMINANTS	SOIL (Cu Yds)	DEBRIS (Cu Yds)	LIQUID (Gallons)
GASOLINE			
FUEL OIL			
HYDRAULIC FLUID			
USED OIL			
CHLORINATED SOLVENT.			
NON-CHLORINATED SOLVENT			
OTHER			
OTHER			

SOIL PILE CALCULATIONS

Calculation for a tent shaped soil pile:

Length _____ X Width _____ X Height _____ ÷ 2 ÷ 27 = _____ Ycs^3

Calculation for a rectangular or square shaped soil pile:

Length _____ X Width _____ X Height _____ ÷ 27 = _____ Yds^3

Calculation for a conical (cone) shaped soil pile:

.04 X Radius _____ X Radius _____ X Height _____ = _____ Yds^3

DRUMMED MATERIAL INVENTORY FORM

Store Number 1039 Address/City/State/ZIP 1911 TELEGRAPH AVE OAKLAND CA.

Sears Facility Contact and Phone # HERB McINTYRE (510)628-8425

IT Corporation Representative Hector Marino

Accumulation Start Date 7/24/01 Completion Date 7/24/01

Exact Drum Storage Location INSIDE GARAGE (FORMER)

CONTENTS	# OF DRUMS	DRUM ID (A,B,C...) OR (1,2,3...)	LID TYPE (OPEN OR BUNG)	LABEL TYPE: HAZARDOUS, NON-HAZARDOUS, UNCLASSIFIED	DRUM DESCRIPTION: COLOR, CONDITION, MARKINGS
~~GASOLINE~~	~~6~~	~~ABCDEF~~	~~O or B~~	~~H / N / U~~	~~Black/White~~
GASOLINE/WATER MIXTURE			O or B	H / N / U	
GASOLINE IMPACTED PURGE WATER	6	ABCDEF	O or (B)	H / (N) / U	Black/White
GASOLINE TANK BOTTOMS/SLUDGE			O or B	H / N / U	
GASOLINE IMPACTED DEBRIS			O or B	H / N / U	
GASOLINE IMPACTED SOIL			O or B	H / N / U	
FUEL OIL (INC. DIESEL & HEATING OIL)			O or B	H / N / U	
FUEL OIL/WATER MIXTURE			O or B	H / N / U	
FUEL OIL IMPACTED PURGE WATER			O or B	H / N / U	
FUEL OIL TANKS BOTTOMS/SLUDGE			O or B	H / N / U	
FUEL OIL IMPACTED DEBRIS			O or B	H / N / U	
FUEL OIL IMPACTED SOIL			O or B	H / N / U	
HYDRAULIC FLUID			O or B	H / N / U	
HYDRAULIC FLUID/WATER MIXTURE			O or B	H / N / U	
HYDRAULIC FLUID IMPACTED PURGE WATER			O or B	H / N / U	
HYDRAULIC FLUID IMPACTED SLUDGE			O or B	H / N / U	
HYDRAULIC FLUID IMPACTED DEBRIS			O or B	H / N / U	
HYDRAULIC FLUID IMPACTED SOIL			O or B	H / N / U	
USED OIL			O or B	H / N / U	
USED OIL/WATER MIXTURE			O or B	H / N / U	
USED OIL IMPACTED PURGE WATER			O or B	H / N / U	
USED OIL TANK BOTTOMS/SLUDGE			O or B	H / N / U	
USED OIL IMPACTED DEBRIS			O or B	H / N / U	
USED OIL IMPACTED SOIL			O or B	H / N / U	
CHLORINATED SOLVENT:			O or B	H / N / U	
NON-CHLORINATED SOLVENT:			O or B	H / N / U	
OTHER:			O or B	H / N / U	
OTHER:			O or B	H / N / U	
OTHER:			O or B	H / N / U	

NOTE: There should *NEVER* be 2 drums with the same ID present at a site at the same time!

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page ____ **of** ____
Project Manager: David Bero

Well ID: MW-1
Well Diameter: 2

DTW Measurements:
Initial: ____
Recharge: ____
DTB: 29.25

Calc Well Volume: ____ gal
Well Volume: x3 ____ 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 X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments

CAR ON WELL NO
Samples Taken

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page ____ **of** ____
Project Manager: David Bero

Well ID: MW-2
Well Diameter: 4

DTW Measurements:
Initial: 15.18
Recharge: ____
DTB: 24.10

Calc Well Volume: 58 gal
Well Volume: X3 174 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 X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments
	21.2	1.56	6.41	—	5	cloudy	
	21.6	1.59	6.35	—	10		
	21.4	1.60	6.35		15 12	↓	DRY @ 12 GALLONS
					18		
							Dup Taken on This well

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page ____ of ____
Project Manager: David Bero

Well ID. MW-3
Well Diameter: 4

DTW Measurements:
Initial: 17.08
Recharge: ____
DTB: 27.75

Calc Well Volume: 6.9 gal
Well Volume: X3 20.9 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 X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments
	20.6	0.65	6.46	—	5	cloudy	
	21.0	0.66	6.35	—	10	)	
	21.0	0.73	6.30	—	15	)	Dry @ 16 GALLONS
				—	20		

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page ____ **of** ____
Project Manager: David Bero

Well ID. MW-4
Well Diameter: 4

DTW Measurements
Initial. 13.69
Recharge: ____
DTB: 23.55

Calc Well Volume: 6.4 gal
Well Volume: x3 19.3 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 X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments
	21.4	1.82	6.47	—	5	Cloudy	
	21.8	1.86	6.48	—	10	1	
	21.5	1.94	6.49		13 ~~15~~	1	DRY @ 13 GALLONS
					20		

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page _____ **of** _____
Project Manager: David Bero

Well ID: MW-5
Well Diameter: 2

DTW Measurements:
Initial: 13.46
Recharge: _____
DTB: 25.10

Calc Well Volume: 1.8 gal
Well Volume: X3 3.5 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 X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments
	22.6	1.88	6.52	—	1	cloudy	
	22.5	1.91	6.58	—	2		
	21.7	1.94	6.58	—	3		
	21.6	1.96	6.62	—	4	↓	DRY @ 4 GALLONS

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page _____ **of** _____
Project Manager: David Bero

Well ID: MW-6
Well Diameter: 2

DTW Measurements:
Initial: 14.68
Recharge: _____
DTB: 26.75

Calc Well Volume: 1.9 gal
Well Volume: X3 6.0 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 X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments
	21.0	1.86	6.43	—	1	cloudy	
	20.9	1.87	6.40	—	2	↓	
	20.9	1.85	6.41	—	3		
	21.2	1.91	6.39	—	4		
	21.2	1.96	6.39	—	5		
	21.1	1.97	6.40	—	6		

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page _____ **of** _____
Project Manager: David Bero

Well ID: MW-7
Well Diameter: 2

DTW Measurements:
Initial: 16.72
Recharge: _____
DTB: 26.70

Calc Well Volume: 1.6 gal
Well Volume X3 5.0 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 X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments
	23.4	1.33	6.37	—	1	cloudy	
	23.0	1.23	6.44	—	2	↓	
	22.0	1.23	6.44	—	3		
	21.6	1.14	6.44	—	4		
	21.5	1.16	6.44		5	↓	DRY @ 5 GALLONS

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page _____ **of** _____
Project Manager: David Bero

Well ID: MW-8
Well Diameter: 2

DTW Measurements:
Initial: 17.33
Recharge: _____
DTB: 25.08

Calc Well Volume: 1.2 gal
Well Volume X3 4.0 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 X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments
	21.1	0.87	6.24	—	1	cloudy	
	20.8	0.88	6.26	—	2		
	20.7	0.85	6.31	—	3		Dry @ 3 GALLONS
					4		
					5		

Project Name: Sears/1039/Oakland
Site Address: 1911 Telegraph Ave., Oakland
Project Number: 823289.03054300

Date: 7/24/01
Page ____ of ____
Project Manager: David Bero

Well ID: MW-9
Well Diameter: 2

DTW Measurements:
Initial: 16.19
Recharge: ____
DTB: 25.00

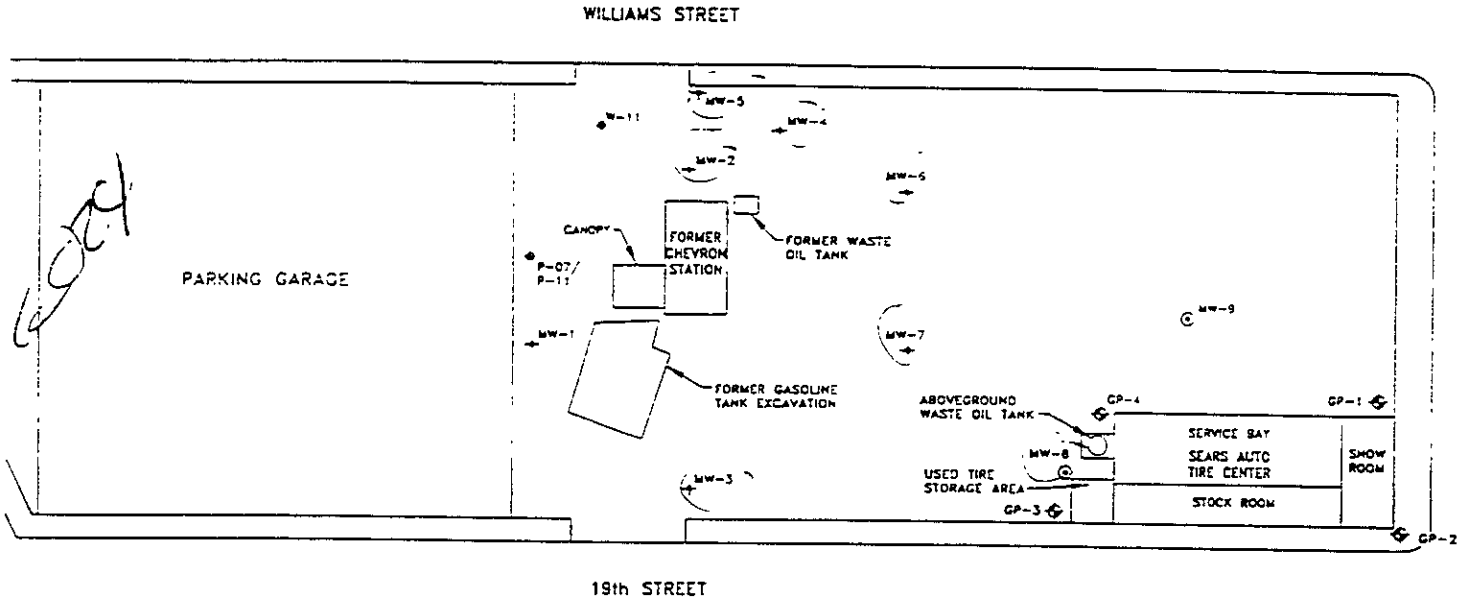
Calc Well Volume: 1.4 gal
Well Volume: X3 4.3 gal

Purge Method
Peristaltic ____
Gear Drive ____
Submersible X

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

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

Time	Temp X C / F	Conductivity (mmhos/cm)	pH	Dissolved Oxygen	Purge Volume Gallons	Turbidity	Comments
	20.8	0.28	6.30	—	1	cloudy	
	20.6	1.40	6.16	—	2		
	20.9	1.49	6.22	—	3		
					4		
					5		



ICATION
DRING WELL

TORING WELL

IT CORPORATION			0 FEET SCALE
SITE PLAN			
CLIENT: SEARS, ROEBUCK & CO. SITE NO. 1039			
LOCATION: 1901-1911 TELEGRAPH AVEN OAKLAND, CALIFORNIA			
ACAD FILE: SITEPLAN		PROJECT NO.: 800458	
REV.: 1			
DES.: DP	DET.: RDB	DATE: 10/18/99	
PM		PE/RG.	

ZymaX

71 Zaca Lane San Luis Obispo CA 93401 tel 805.544.4696 fax 805.544.8226

CHAIN of CUSTODY

report to	DAVID BERO
company	4005 Port Chicago Hwy/Concord
address	IT CORP
phone	[illegible]
fax	[illegible]
project	SEARS #1039
project #	823769.02031500
sampler	Hector Merino

Turnaround Time: ASAP ☐ 48 hr ☐ 12 hr ☐ 72 hr ☐ 24 hr ☐ std ☑

ANALYSIS REQUESTED

ZymaX use only	SAMPLE DESCRIPTION	Date Sampled	Time	Matrix	Preserve	[illegible]	[illegible]	BTEX (8260)	[illegible]	# of containers	Remarks
	MW-3	7/24/01	10:00	GW	[illegible]	X	X			2	
	MW-8	↓	10:19	↓	Hcl	X	X			2	
	MW-9		10:32		Hcl	X	X			2	
	MW-6		11:00		Hcl [illegible]	X	X	X	X	3	
	MW-4		11:18		Hcl [illegible]	X	X	X	X	3	
	MW-5		11:26		Hcl	X	X			2	
	MW-2		11:56		Hcl	X	X			2	
	MW-7		12:16		Hcl	X	X			2	
	DUP		11:56		Hcl			X		2	
	TBLB		—		Hcl			X		1	

Comments

Relinquished by:		Received by:	
Signature	[signature]	Signature	[signature]
Print	HECTOR MERINO	Print	[illegible]
Company	IT CORP	Company	ZymaX
Date	Time	Date 7-30-01	Time 11:50 AM

Sample integrity upon receipt:
- Samples received intact ☐
- Samples received cold ☐
- Custody seals ☐
- Correct container types ☐

Bill 3rd Party:

PO# ______

Quote: yes no

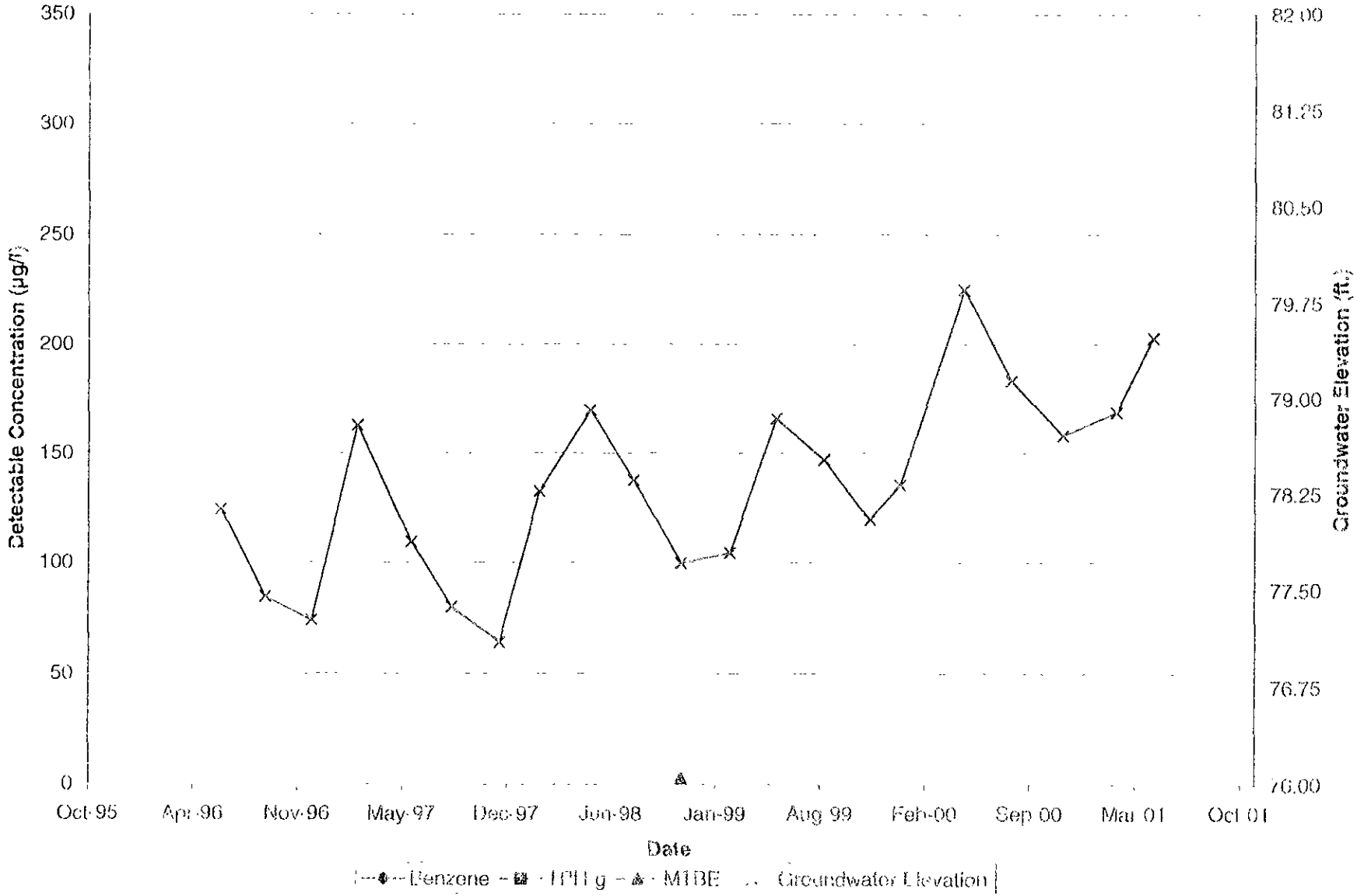
Relinquished by:		Received by ZymaX envirotechnology inc:	
Signature		Signature	
Print		Print	
Company		Company	
Date	Time	Date	Time

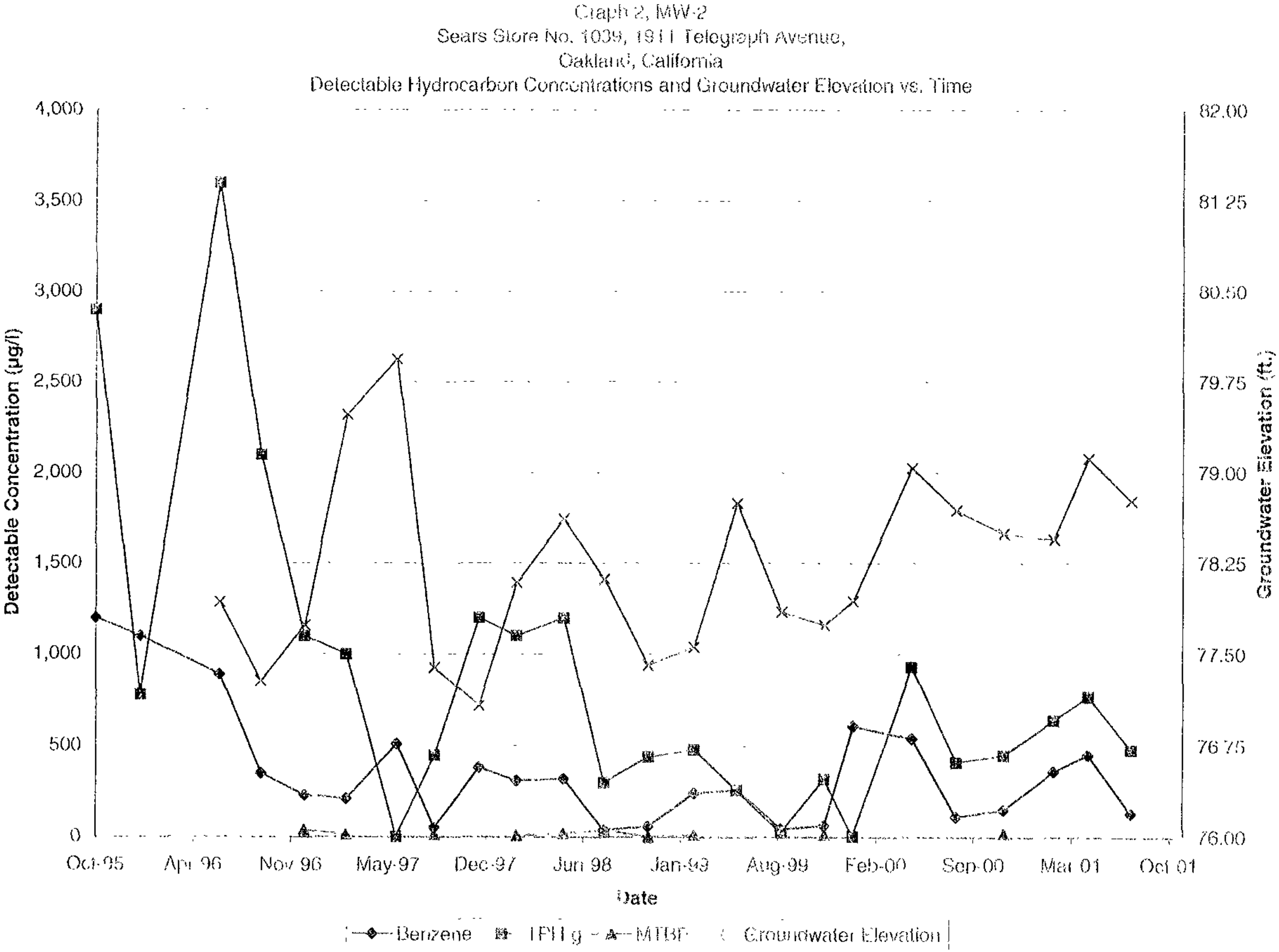
email: zymax@ZymaXusa.com

Attachment 4

Graphs

Graph 1, MW-1
Sears Store No. 1039, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time



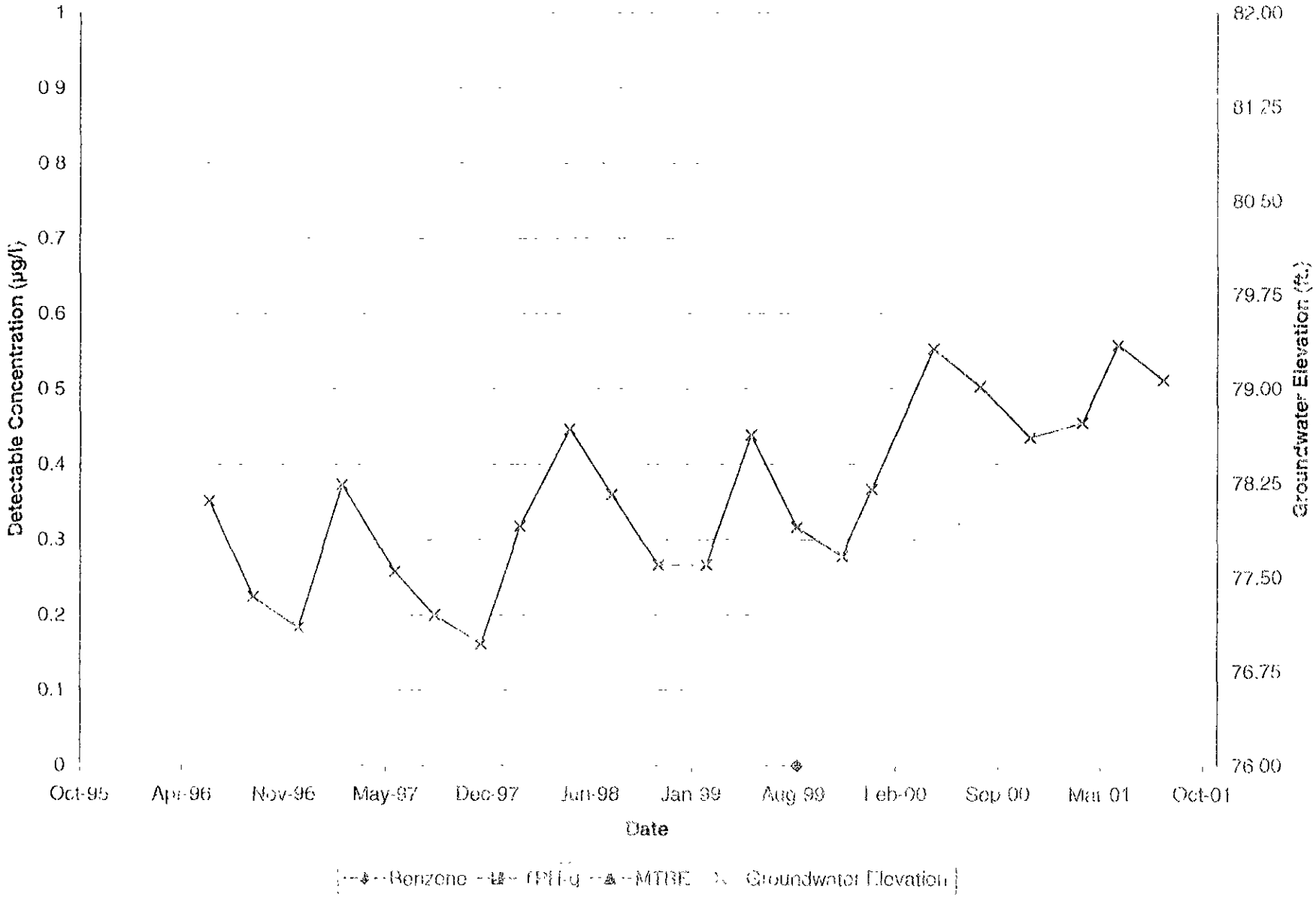

Graph 2, MW-2
Sears Store No. 1039, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time
Detectable Concentration (µg/l)
Groundwater Elevation (ft.)
4,000
3,500
3,000
2,500
2,000
1,500
1,000
500
0
82.00
81.25
80.50
79.75
79.00
78.25
77.50
76.75
76.00
Oct-95
Apr-96
Nov-96
May-97
Dec-97
Jun-98
Jan-99
Aug-99
Feb-00
Sep-00
Mar-01
Oct-01
Date
Benzene
TPH-g
MTBE
Groundwater Elevation

1039Q301HYD.XLS

IT CORPORATION

[redacted]

Graph 3, MW-3
Sears Store No. 1039, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time

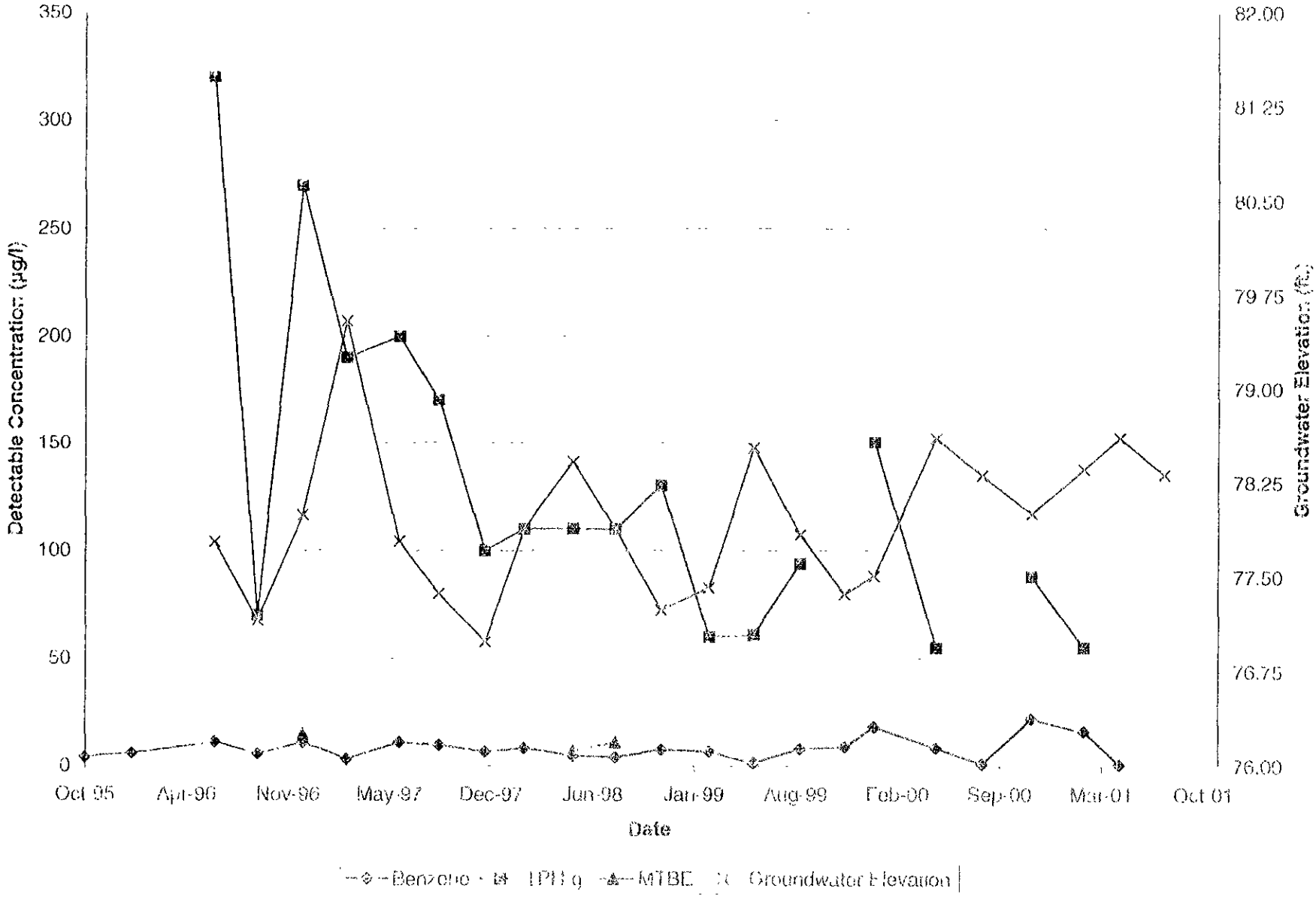


NOTE:
No detectable Benzene, TPH-g or MTBE

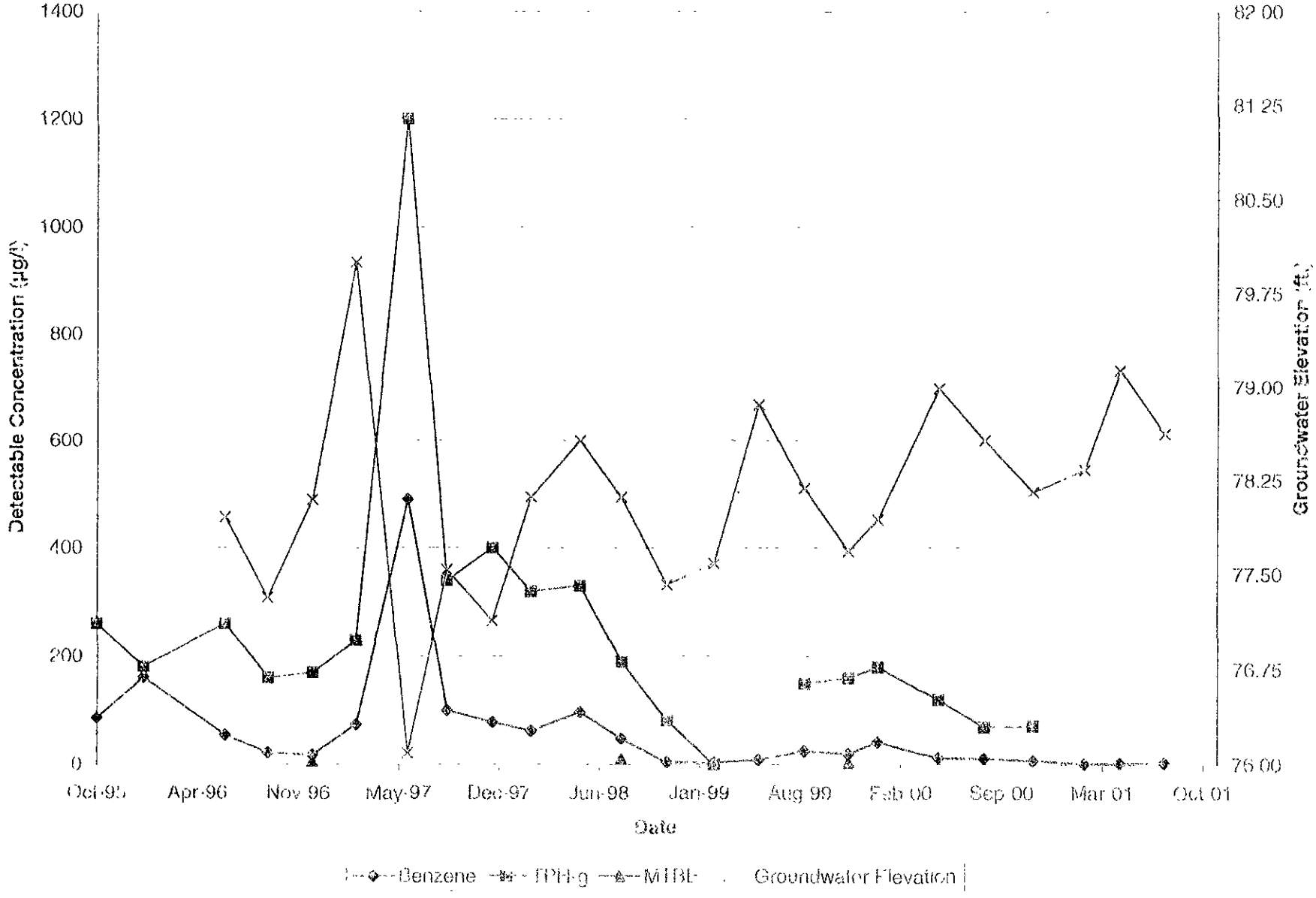
1039Q3QTR.XLS

ITI CORPORATION

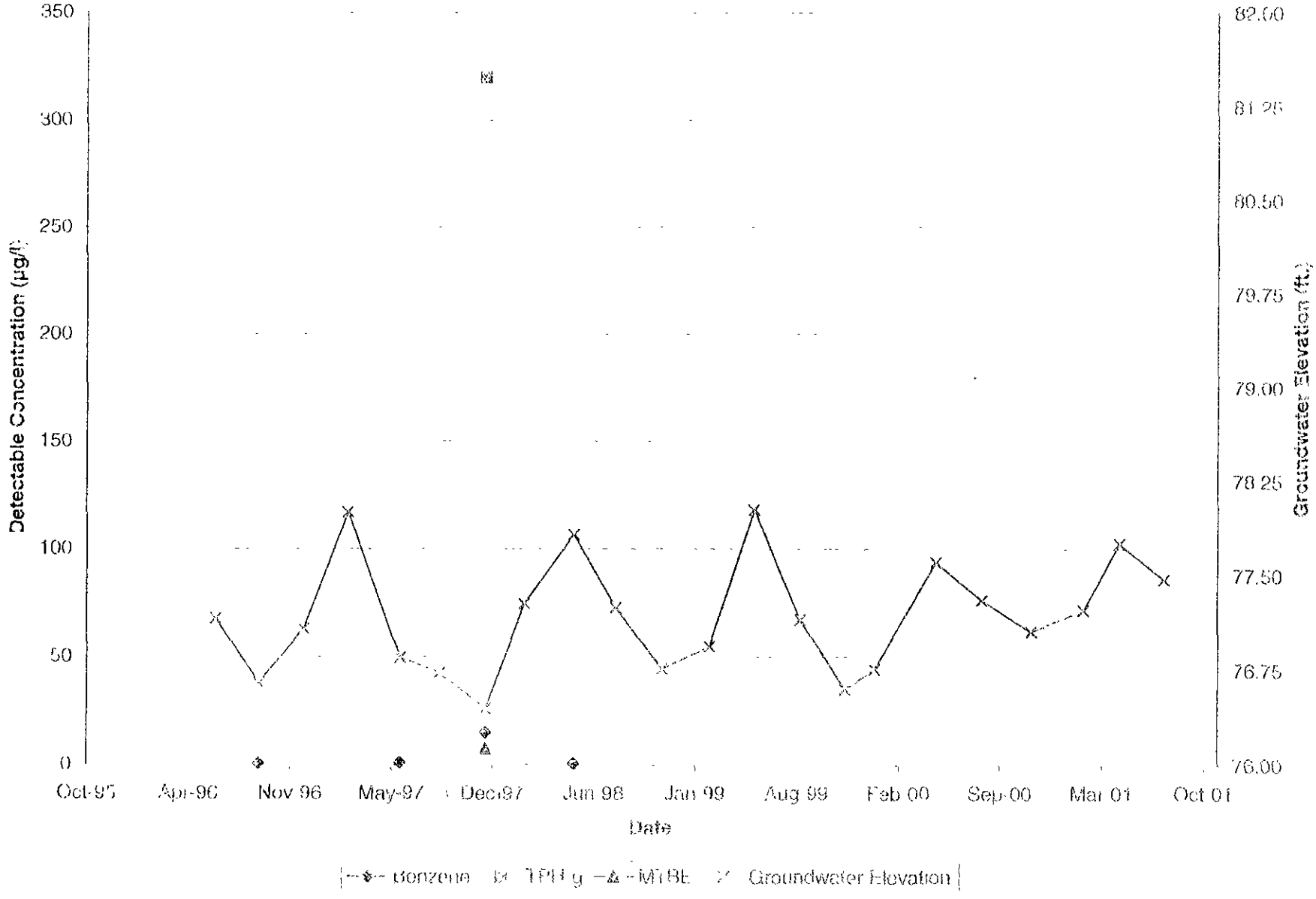
Graph 4, MW-4
Sears Store No. 1039, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time



Graph 5, MW-5
Sears Store No. 1933, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time



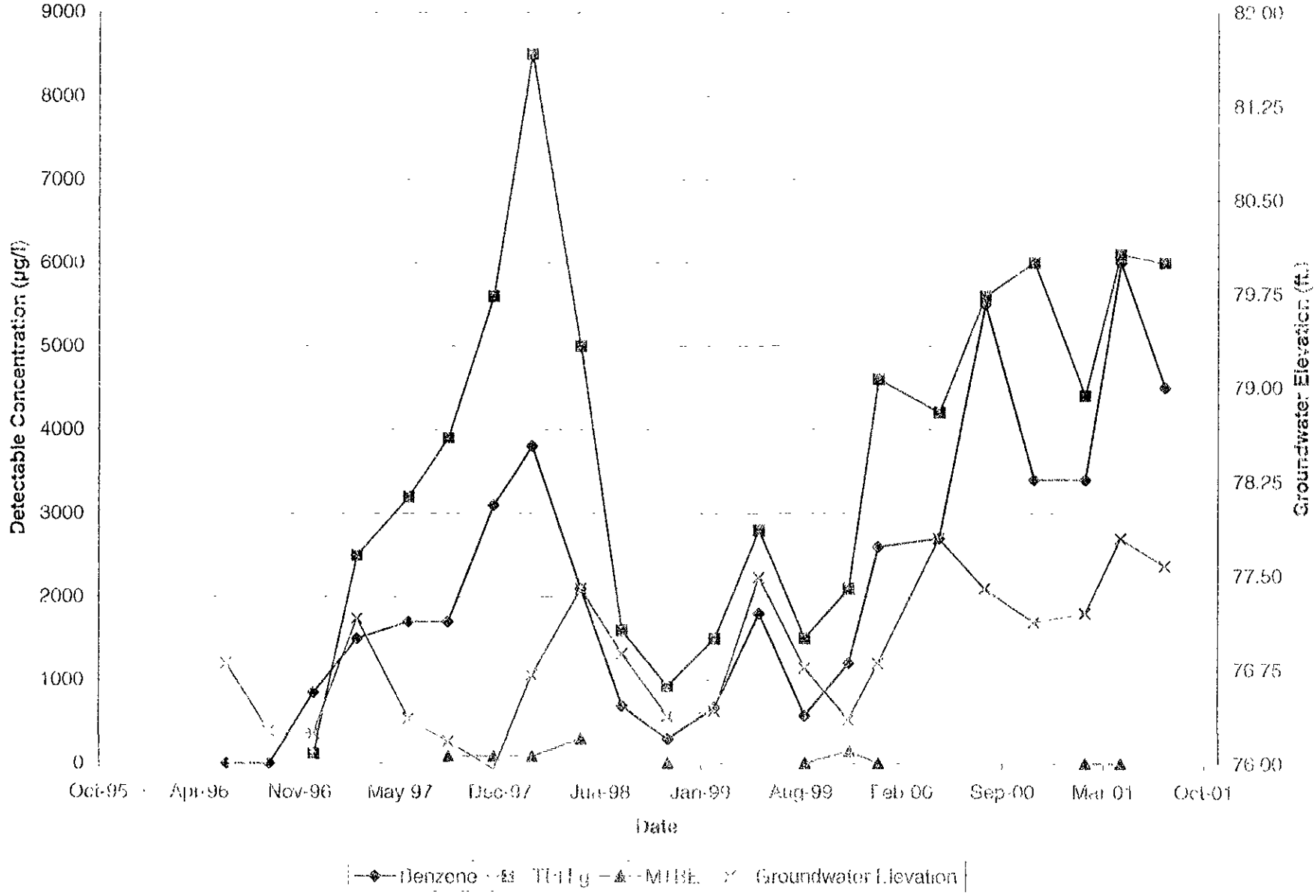
Graph 6, MW-6
Sears Store No. 1039, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time



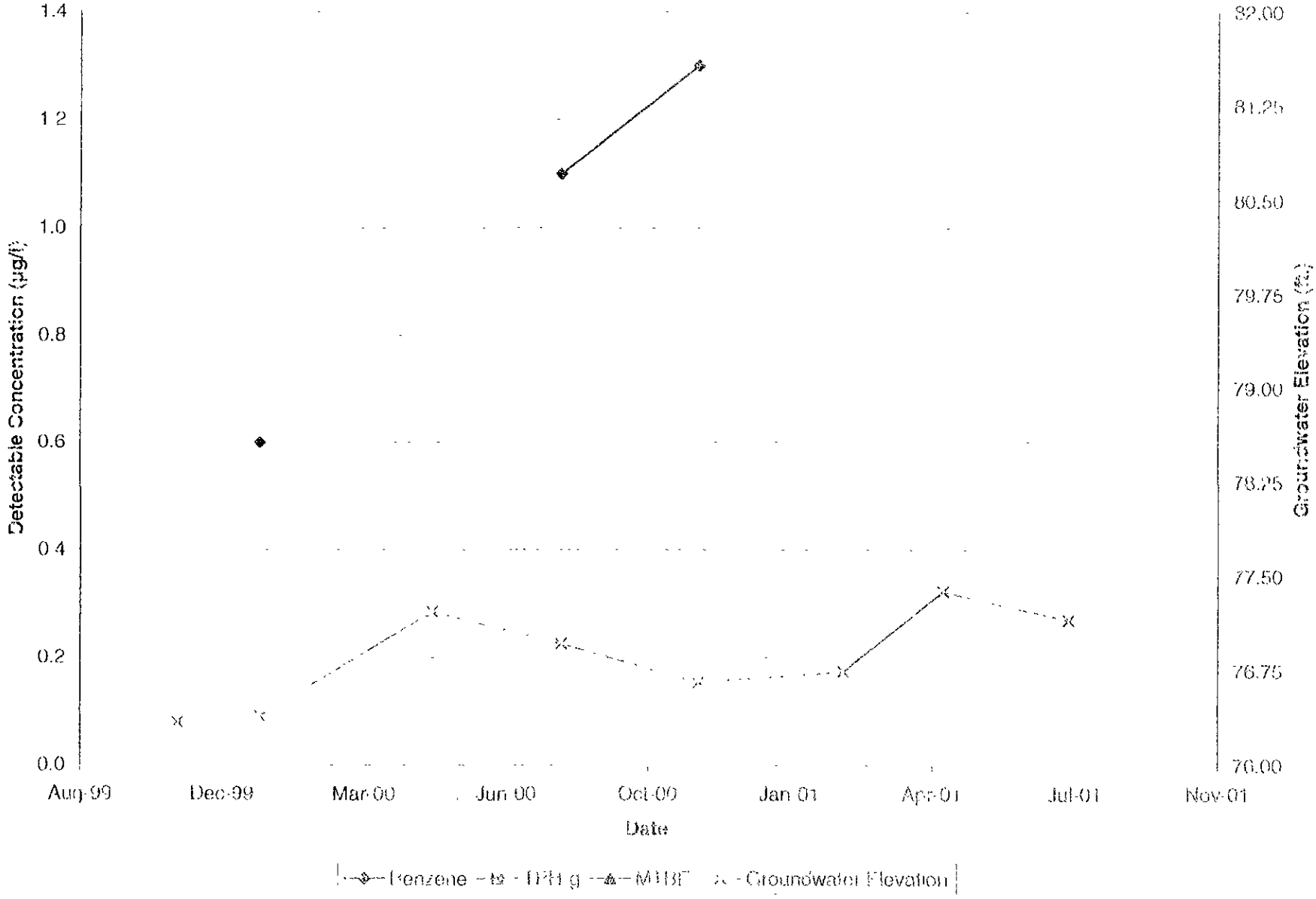
1039O301HYD.XLS

ETCORPORATION

Graph 7, MW-7
Sears Store No. 1039, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time



Graph 8, MW 8
Sears Store No. 1039, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time



Graph 9, MW-9
Sears Store No. 1039, 1911 Telegraph Avenue,
Oakland, California
Detectable Hydrocarbon Concentrations and Groundwater Elevation vs. Time