



ENVIRONMENTAL MANAGEMENT, INC.

February 1, 2001
Project No. C80-001127C1

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Re: Case Closure
Former Texaco Service Station
1127 Lincoln Avenue
Alameda, California
Incident No. 90015162

Dear Mr. Chan:

On behalf of Equiva Services LLC (Equiva), KHM Environmental Management, Inc. (KHM) has prepared this letter in response to your e-mail dated January 25, 2001. KHM understands that questions and comments contained in the e-mail were generated during completion of the Alameda County Health Care Services Agency (ACHCSA) case closure package for the subject site. Questions and comments contained in the e-mail are presented, followed by KHM's response.

The original UST soil samples exhibited very high residual benzene in soil, i.e. BH-9 reported 240 ppm benzene. Likely, these levels no longer exist, however, what concentrations would you use in a risk assessment?

KHM agrees that it is unlikely that benzene exists at any significant concentrations in soils near the former underground storage tanks (USTs), which is the area from which sample BH-9 was collected. On September 11, 1989, Environmental Bio-Systems oversaw the removal of five underground storage tanks (USTs) from beneath the site (Environmental Bio-Systems, September 22, 1989). Soil samples collected during UST removal activities ranged in depth between 8 feet and 11 feet below grade. The highest residual concentrations of total petroleum hydrocarbons as gasoline (TPHG) and benzene were at or near the top of the zone of saturation (approximately 8.5 feet below grade). Sample BH-9, contained the highest concentration of benzene in soil samples from the excavation at 240 parts per million (ppm). Sample BH-9 was collected at approximately 8.5 feet below grade along the eastern edge of the UST excavation (see map in Attachment A).

Operation of a soil vapor extraction (SVE) system was successful in removing TPPH and benzene from soils in the area of the former USTs. The SVE system operated at the site between September 1993 and September 1996 with the exception of the period of March 22 and July 12, 1994, when the SVE system was shut down. SVE wells VW-1 through VW-5 were installed on May 12, 1991 by Applied Geosystems, Inc. (AGI) and were completed at depths of 8 and 9 feet below grade in the zone where the highest residual petroleum hydrocarbons were detected (AGI's *Initial Subsurface Environmental Investigation*, May 7, 1991). Depth to groundwater was approximately 8.5 feet below grade when the SVE wells were installed.

The SVE system operated in conjunction with a groundwater extraction (GWE) system. GWE was performed using Wells MW-1, MW-2, and MW-5 (see figure in Attachment A). GWE resulted in a significant decrease in groundwater levels in the area of the former USTs and soil sample BH-9, exposing the zone of residual hydrocarbons to the SVE system. During operation of the SVE/GWE system, groundwater levels in Well MW-1 (installed near the location of BH-9) were lowered to as much as 15 feet below grade. Historical groundwater analytical data is included in Attachment B.

VW-3 near BH-9
 UW-3
 4' deep
 2' to 9'

The San Francisco Bay Regional Water Quality Control Board (RWQCB) recently issued a final draft of a document titled "*Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater*", dated August 2000. The document presents lookup tables of conservative, Risk-Based Screening Levels (RBSLs) for over 100 chemicals commonly found in impacted soil and groundwater sites. In using the lookup tables, the site is classified as not overlying a source of drinking water. For surface soils (0 to 3 meter depth) overlying shallow groundwater, the residential land use RBSL for benzene is 0.180 milligrams per kilogram (mg/kg). For industrial/commercial land use, the RBSL for benzene is 0.390 mg/kg. The site is currently an auto repair facility.

To avoid requiring confirmation sampling in the areas of concern, please provide an estimation of the mass of gas and benzene removed over time. This should be presented in a table and graph form.

Could not do
 was a very much
 from site

Data from the operation of the SVE system indicates that it was successful in reducing TPPH and benzene concentrations to very low levels in soil. KHM has reviewed Equiva's archived files for the subject site. Although insufficient data is available to produce a mass removal table and curves (incomplete vapor flow rate data), influent TPPH and benzene concentration data was found (CEECON's *Summary Report of Remediation System Restart*, September 29, 1994 and *First Quarter 1994 Summary Report*, April 26, 1994). SVE system influent TPPH and benzene concentrations are shown on Figures 1 and 2 in Attachment C

Figures 1 and 2 show that the SVE system operated until TPPH and benzene concentrations had reached low concentrations. The high degree to which TPPH and benzene were removed from soil is shown by the lack of a concentration "spike" when the SVE system was restarted in July 1994 after it was shut down for approximately 3 months. Normally, an initial "spike" in concentrations is observed after restarting a system if residual petroleum

hydrocarbons remain in the soil. SVE data indicates that site soils were remediated to very low concentrations of TPPH and benzene, and that confirmation sampling is not required.

Please state whether you believe the original soil samples lie within the vadose or saturated zone.

It is assumed that "the original soil samples" refers to soil samples obtained at the time of UST removal activities in September 1989. As discussed above, soil samples from September 1989 were obtained at depths of 8 to 11 feet below grade. Depth to groundwater is not stated in the UST removal report but is assumed to be approximately 8.5 feet below grade based on the vertical distribution of TPPH and benzene. Depth to groundwater in borings drilled in March 1991 was approximately 8.5 feet below grade. GWE in 1995 lowered groundwater levels in the area of the former USTs to over 15 feet below grade (Well MW-1, February 14, 1995, Attachment B). During periods of GWE, the depths of the original soil samples were within the vadose zone and exposed to the SVE system operating in conjunction with GWE. After termination of the SVE/GWE system in September 1996, groundwater levels rose to approximately 6 feet below grade (Well MW-1, November 11, 1996, Attachment B), submerging the depths of the original soil samples.

Please provide an interpretation regarding whether the sanitary sewer identified as running down the middle of Bay Street might act as a preferential migration pathway.

KHM has reviewed Equiva's files regarding the potential of the sanitary sewer to act as a preferential migration pathway. On February 5, 1995, Groundwater Technology, Inc. (GTI) conducted an off-site investigation to determine if the sanitary sewer, which lies approximately 8 feet below grade beneath Bay Street (see figure, Attachment D), has acted as a preferential migration pathway (GTI's *Additional Soil and Groundwater Assessment*, July 25, 1995). On February 7, 1995, GTI drilled 7 soil borings (B-1 through B-7) along Bay Street to depths of approximately 4 to 12 feet below grade (see figure, Attachment D). Soil samples were analyzed for TPPH and benzene, toluene, ethylbenzene, and total xylenes (BTEX) using EPA Methods 8015M/8020. With the exception of 0.018 ppm total xylenes detected in the 10-foot sample from B-1, no TPPH and BTEX were detected in any soil samples submitted for analysis. Soil analytical data from GTI's investigation is included as Attachment D.

To monitor groundwater quality in the vicinity of the sewer line, GTI also installed Well MW-9 in Bay Street on May 17, 1995, which extends approximately 15 feet below grade. Well MW-7, also installed in Bay Street by Resna in June 1992, can be used to monitor groundwater quality in the vicinity of the sewer line. Well MW-7 has been monitored since February 1993 and Well MW-9 has been monitored since August 1995. The maximum concentration of benzene detected in the two wells was 7.5 ppm (MW-9, July 21, 1998, Attachment B). Benzene has been reported below detection limits since July 1998.

February 1, 2001

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Based on the above-described information, KHM concludes that the sanitary sewer has not acted as a preferential pathway for migration of petroleum hydrocarbons.


Please provide a rose diagram for groundwater flow directions to determine the predominant gradient at the site.

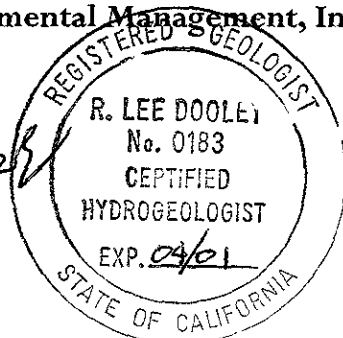
KHM has reviewed available quarterly monitoring reports for the site and has summarized groundwater flow directions (Table 1, Attachment E). Groundwater flow directions are plotted as a rose diagram (Figure 1, Attachment E). The primary groundwater flow directions are toward north and northeast. Groundwater quality is monitored in both of these flow directions by off-site wells.

KHM hopes that the above responses are helpful in completing the case closure package for the site. Should you have any questions, please call me at (408) 224-4724.

Sincerely,

KHM Environmental Management, Inc.


R. Lee Dooley
Senior Geologist



Attachments: Attachment A – Historical Maps
Attachment B – Historical Groundwater Elevation and Analytical Data
Attachment C – Soil Vapor Extraction System
Influent TPPH and Benzene Concentration Graphs
Attachment D – Sanitary Sewer Map, Soil Sampling Locations and Historical
Soil Data (GTI's *Additional Soil and Groundwater Assessment Report*, July 25, 1995)
Attachment E – Rose Diagram

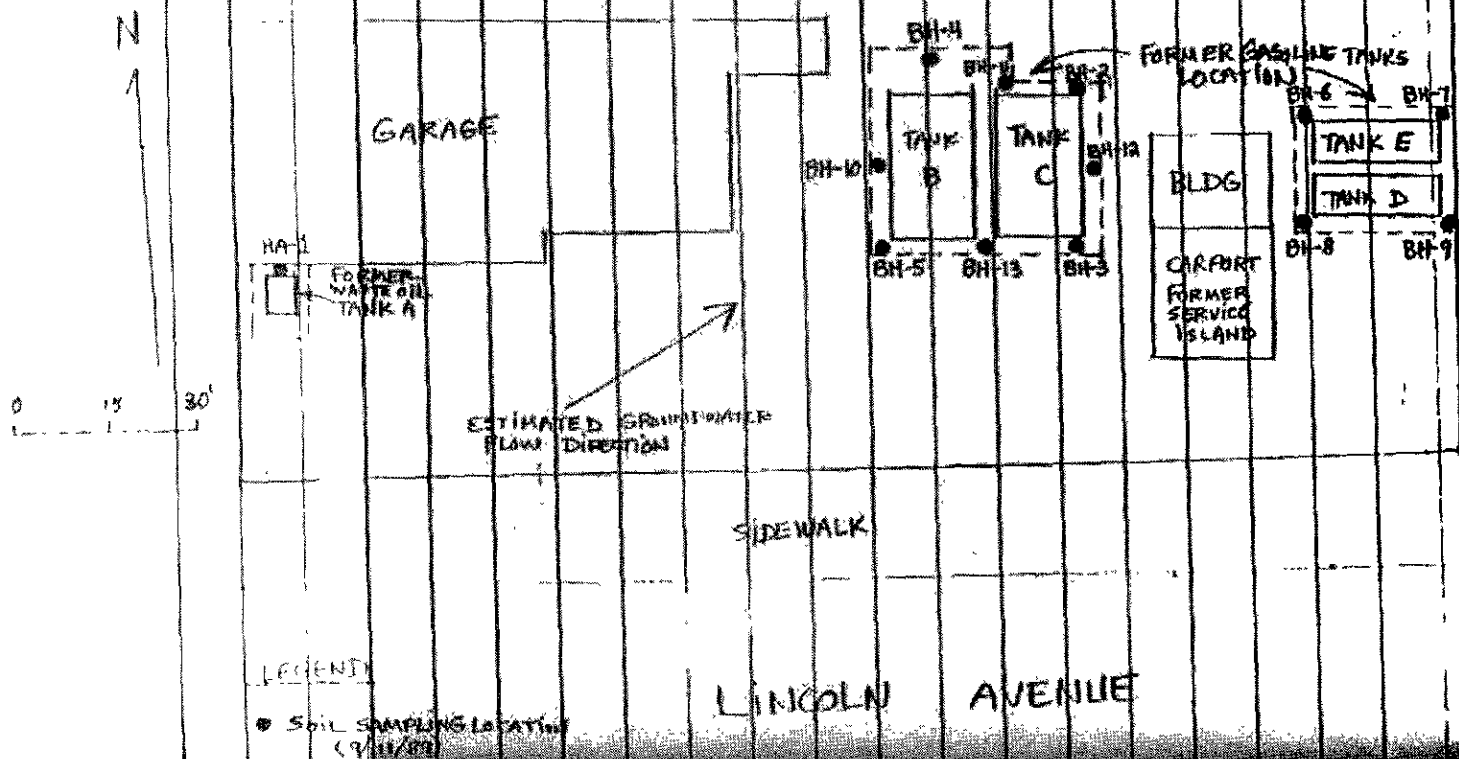
cc: Ms. Karen Petryna, Equiva Services LLC, P.O. Box 7869, Burbank, CA 91510-7869
Mr. Richard Hiatt, California Regional Water Quality Control Board, San Francisco Bay Region,
1515 Clay Street, Suite 1400, Oakland, CA 94612
Mr. Leo Pagano, 1127 Lincoln Avenue, Alameda, CA 94602

ATTACHMENT A

HISTORICAL MAPS

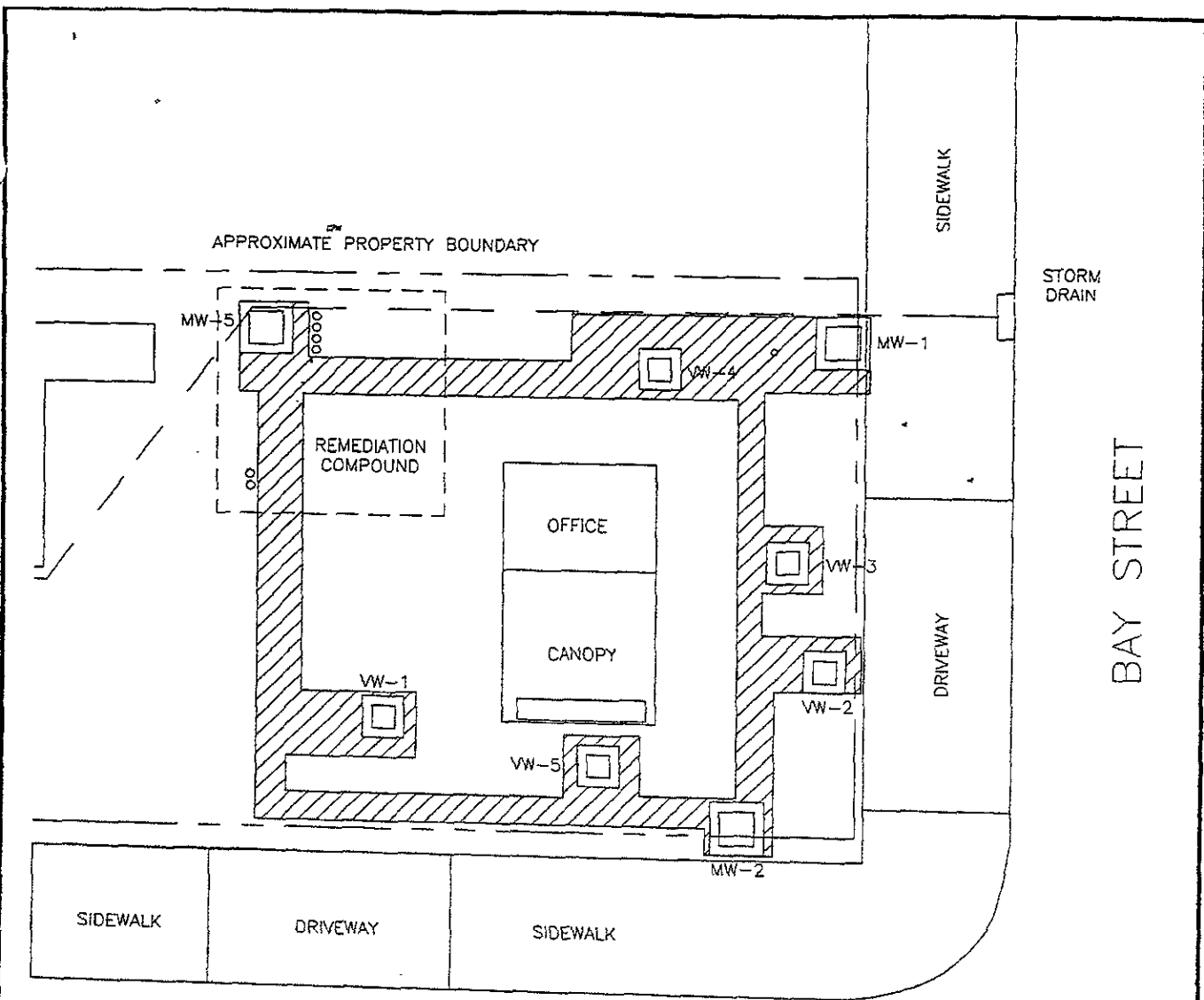
FROM: McLAREN HART'S
"WORK PLAN FOR PHASE I INVESTIGATION"
DATED NOVEMBER 15, 1990

FIGURE 2
SITE MAP
LEWIS BAY SERVICE STATION
1127 LINCOLN AVENUE






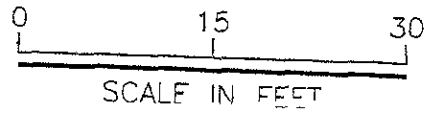
BAY STREET

LINCOLN AVENUE



LINCOLN AVENUE

- EXPLANATION**
- MW-2  Monitoring wellhead cover with 10-inch concrete collar
 - VW-5  Vapor extraction wellhead cover with 10-inch concrete collar
 -  Trench layout



CEECON
CALIFORNIA ENVIRONMENTAL ENGINEERS & CONTRACTORS

Wellhead and Trench Layout
Former Bay Street Texaco Station
1127 Lincoln Avenue
Alameda, California

Drawing

Date: 08/07/93

ATTACHMENT B

HISTORICAL GROUNDWATER ELEVATION AND ANALYTICAL DATA

WELL CONCENTRATIONS
Former Texaco Service Station
1127 Lincoln Avenue
Alameda, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
MW-1	01/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	5.63	10.51	NA
MW-1	02/04/1993	120	NA	22	3.1	3.3	10	NA	NA	16.14	6.02	10.12	NA
MW-1	03/09/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	5.92	10.22	NA
MW-1	05/06/1993	710	NA	320	3.1	4.2	20	NA	NA	16.14	6.76	9.38	NA
MW-1	06/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	6.81	9.33	NA
MW-1	07/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	08/31/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	09/27/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	10/19/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	11/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	12/17/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	02/07/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	05/20/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	08/22/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	11/02/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	16.14	7.78	8.36	NA
MW-1	02/14/1995	350	NA	40	1.6	15	31	NA	NA	16.14	NA	NA	NA
MW-1	05/19/1995	220	NA	35	2.4	7.2	23	NA	NA	16.14	15.16	0.98	NA
MW-1	08/22/1995	330	NA	44	1.2	14	21	<10	NA	16.14	13.90	2.24	NA
MW-1	10/25/1995	<50	NA	1.6	<0.5	<0.5	<0.5	NA	NA	16.14	7.06	9.08	NA
MW-1	02/09/1996	160	NA	3.2	1.5	0.9	2.7	NA	NA	16.14	NA	NA	NA
MW-1	04/11/1996	1,300	NA	300	85	25	110	NA	NA	16.14	NA	NA	NA
MW-1	08/01/1996	3,700	NA	1,100	80	46	210	NA	NA	16.14	NA	NA	NA
MW-1	11/11/1996	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	02/04/1997	NA	NA	NA	NA	NA	NA	NA	NA	16.14	NA	NA	NA
MW-1	05/02/1997	650	NA	63	<3	4.3	2.2	<30	NA	16.14	5.40	10.74	NA
MW-1	07/31/1997	440	NA	99	1.6	2.6	5.8	<30	NA	16.14	6.46	9.68	NA
											6.98	9.16	NA

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MW-1	10/30/1997	290	NA	48	0.5	0.9	1.9	<30	NA	16.14	8.00	8.14	NA
MW-1	02/04/1998	<50	NA	1.3	<0.5	<0.5	<0.5	NA	NA	16.14	3.40	12.74	NA
MW-1	05/08/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	16.14	5.09	11.05	NA
MW-1	07/21/1998	50	NA	16	<0.5	<0.5	0.7	5.6	NA	16.14	6.50	9.64	NA
MW-1	11/19/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0	NA	16.14	6.79	9.35	NA
MW-1	02/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	16.14	4.40	11.74	NA
MW-1	05/10/1999	<50	NA	8.2	<0.50	<0.50	<0.50	<2.5	NA	16.14	5.87	10.27	NA
MW-1	08/25/1999	558	NA	279	8.17	0.829	<5.00	12.7	NA	16.14	7.16	8.98	NA
MW-1	12/09/1999	<50.0	NA	1.10	0.800	0.801	5.44	<5.00	NA	16.14	6.94	9.20	NA
MW-1	02/14/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.0	16.14	3.92	12.22	NA
MW-1	04/26/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	16.14	5.66	10.48	NA
MW-1	08/08/2000	<50.0	NA	12.7	<0.500	<0.500	<0.500	<2.50	NA	16.14	6.73	9.41	NA
MW-2	01/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	6.29	10.55	NA
MW-2	02/04/1993	430	NA	45	0.5	20	30	NA	NA	16.84	6.60	10.24	NA
MW-2	03/09/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	6.36	10.48	NA
MW-2	05/06/1993	2,000	NA	460	2.4	160	66	NA	NA	16.84	6.37	10.47	NA
MW-2	06/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	7.04	9.80	NA
MW-2	07/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	08/31/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	09/27/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	10/19/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	11/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	12/17/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	02/07/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	05/20/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	08/22/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.84	8.08	8.76	NA

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MW-2	11/02/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	02/14/1995	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	05/19/1995	580	NA	75	19	5.1	30	NA	NA	16.84	11.77	5.07	NA
MW-2	08/22/1995	1,200	NA	130	8.3	84	86	<10	NA	16.84	7.22	9.62	NA
MW-2	10/25/1995	350	NA	79	1.2	55	13	NA	NA	16.84	12.11	4.73	NA
MW-2	02/09/1996	<50	NA	1.5	0.5	1.1	1.5	NA	NA	16.84	NA	NA	NA
MW-2	04/11/1996	80	NA	1.5	<0.5	<0.5	<0.5	NA	NA	16.84	11.20	5.64	NA
MW-2	08/01/1996	330	NA	42	0.6	20	8.1	NA	NA	16.84	7.00	9.84	NA
MW-2	11/11/1996	NA	NA	NA	NA	NA	NA	NA	NA	16.84	NA	NA	NA
MW-2	02/04/1997	NA	NA	NA	NA	NA	NA	NA	NA	16.84	5.48	11.36	NA
MW-2	05/02/1997	<50	NA	1.5	<0.5	<0.5	0.5	<30	NA	16.84	6.93	9.91	NA
MW-2	07/31/1997	50	NA	1.8	<0.5	<0.5	<0.5	74	NA	16.84	9.10	7.74	NA
MW-2	10/30/1997	63	NA	3.1	<0.5	0.6	1.1	34	NA	16.84	8.33	8.51	NA
MW-2	02/04/1998	<50	NA	6.5	<0.5	1.2	<0.5	NA	NA	16.84	4.88	11.96	NA
MW-2	05/08/1998	<50	NA	0.6	<0.5	<0.5	<0.5	<2.5	NA	16.84	6.00	10.84	NA
MW-2	07/21/1998	81	NA	7.2	<0.5	1.1	1.1	6.3	NA	16.84	6.92	9.92	NA
MW-2	11/19/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0	NA	16.84	7.41	9.43	NA
MW-2	02/09/1999	257	NA	16.0	0.760	<0.500	1.07	7.36	NA	16.84	6.60	10.24	NA
MW-2	05/10/1999	91	NA	11	<0.50	5.9	1.8	2.7	NA	16.84	6.52	10.32	NA
MW-2	08/25/1999	<50.0	NA	3.75	<0.500	2.79	1.42	7.43	6.00	16.84	7.23	9.61	NA
MW-2	12/09/1999	178	NA	5.13	2.02	2.25	10.2	<5.00	NA	16.84	7.59	9.25	NA
MW-2	02/14/2000	207	NA	7.78	<0.500	1.78	<0.500	<2.50	<2.0	16.84	6.11	10.73	NA
MW-2	04/26/2000	<50.0	NA	1.82	<0.500	<0.500	<0.500	<2.50	NA	16.84	6.11	10.73	NA
MW-2	08/08/2000	<50.0	NA	1.22	<0.500	<0.500	<0.500	<2.50	NA	16.84	6.81	10.03	NA
MW-3	01/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.86	5.82	11.04	NA
MW-3	02/04/1993	2,900	NA	180	13	210	350	NA	NA	16.86	6.01	10.85	NA

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MW-3	03/09/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.86	5.88	10.98	NA
MW-3	05/06/1993	2,700	NA	270	6.2	300	720	NA	NA	16.86	6.38	10.48	NA
MW-3	06/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.86	NA	NA	NA
MW-3	07/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.86	7.22	9.64	NA
MW-3	08/31/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.86	7.87	8.99	NA
MW-3	09/27/1993	1,800	NA	92	1.7	99	240	NA	NA	16.86	8.58	8.28	NA
MW-3	10/19/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.86	9.13	7.73	NA
MW-3	11/15/1993	1,900	NA	100	2.4	85	280	NA	NA	16.86	8.84	8.02	NA
MW-3	12/17/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.86	7.80	9.06	NA
MW-3	02/07/1994	1,400	NA	69	3.3	100	320	NA	NA	16.86	8.43	8.43	NA
MW-3	05/20/1994	1,100	NA	64	19	120	180	NA	NA	16.86	6.79	10.07	NA
MW-3	08/22/1994	77	NA	4.3	<0.5	2.0	5.6	NA	NA	16.86	8.32	8.54	NA
MW-3	11/02/1994	<50	NA	0.8	<0.5	<0.5	<0.5	NA	NA	16.86	10.98	5.88	NA
MW-3	02/14/1995	1,300	NA	24	5	85	360	NA	NA	16.86	7.93	8.93	NA
MW-3	05/19/1995	5,300	NA	98	28	650	1,700	NA	NA	16.86	8.44	8.42	NA
MW-3	08/22/1995	700	NA	4.1	1.1	50	72	<10	NA	16.86	7.54	9.32	NA
MW-3	10/25/1995	<50	NA	2.4	<0.5	<0.5	1.6	NA	NA	16.86	9.03	7.83	NA
MW-3	02/09/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	16.86	7.05	9.81	NA
MW-3	04/11/1996	2,000	NA	11.0	3.9	190	500	NA	NA	16.86	7.44	9.42	NA
MW-3	08/01/1996	1,500	NA	8.4	<0.5	160	150	NA	NA	16.86	7.08	9.78	NA
MW-3	11/11/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	16.86	7.84	9.02	NA
MW-3	02/04/1997	1,500	NA	12	1.3	210	330	<30	NA	16.86	5.17	11.69	NA
MW-3	05/02/1997	3,100	NA	35	<3	520	540	<30	NA	16.86	6.63	10.23	NA
MW-3	07/31/1997	1,200	NA	11	<0.5	140	100	<30	NA	16.86	7.32	9.54	NA
MW-3	10/30/1997	520	NA	6.1	<0.5	58	46	<30	NA	16.86	7.46	9.40	NA
MW-3	02/04/1998	4,800	NA	25	4.0	660	1,200	NA	NA	16.86	4.18	12.68	NA
MW-3	05/08/1998	5,600	NA	17	6.7	300	590	11	NA	16.86	5.84	11.02	NA

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MW-3	07/21/1998	1,400	NA	3.4	<1.0	110	270	<5.0	NA	16.86	6.75	10.11	NA
MW-3	11/19/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0	NA	16.86	7.61	9.25	NA
MW-3	02/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	16.86	6.31	10.55	NA
MW-3	05/10/1999	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	16.86	6.25	10.61	NA
MW-3	08/25/1999	704	NA	1.75	<1.00	76.1	84.3	15.4	NA	16.86	7.32	9.54	NA
MW-3	12/09/1999	81.1	NA	2.62	1.35	0.975	8.88	<5.00	NA	16.86	7.32	9.54	NA
MW-3	02/14/2000	5,340	NA	14.0	<2.50	520	871	<12.5	<2.0	16.86	5.82	11.04	NA
MW-3	04/26/2000	Well inaccessible		NA	NA	NA	NA	NA	NA	16.86	NA	NA	NA
MW-3	08/08/2000	1,870	NA	<5.00	<5.00	237	210	<25.0	NA	16.86	6.63	10.23	NA
MW-4	01/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.13	5.91	11.22	NA
MW-4	02/04/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	17.13	6.14	10.99	NA
MW-4	03/09/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.13	5.81	11.32	NA
MW-4	05/06/1993	<50	NA	1.6	<0.5	1.0	2.1	NA	NA	17.13	6.49	10.64	NA
MW-4	06/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.13	6.34	10.79	NA
MW-4	07/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.13	7.29	9.84	NA
MW-4	08/31/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.13	8.02	9.11	NA
MW-4	09/27/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.13	NA	NA	NA
MW-4	10/19/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.13	9.14	7.99	NA
MW-4	11/15/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	17.13	9.01	8.12	NA
MW-4	12/17/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.13	7.91	9.22	NA
MW-4	02/07/1994	<50	NA	<0.5	<0.5	<0.5	2.6	NA	NA	17.13	8.02	9.11	NA
MW-4	05/20/1994	82	NA	6.2	7.6	3.3	17	NA	NA	17.13	6.85	10.28	NA
MW-4	08/22/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	17.13	8.48	8.65	NA
MW-4	11/02/1994	<50	NA	<0.5	0.6	<0.5	<0.5	NA	NA	17.13	10.52	6.61	NA
MW-4	02/14/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	17.13	6.99	10.14	NA
MW-4	05/19/1995	66	NA	0.8	0.6	0.9	3.6	NA	NA	17.13	7.61	9.52	NA

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MW-4	08/22/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	<10	NA	17.13	7.62	9.51	NA
MW-4	10/25/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	17.13	8.62	8.51	NA
MW-4	02/09/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	17.13	6.60	10.53	NA
MW-4	04/11/1996	NA	NA	NA	NA	NA	NA	NA	NA	17.13	6.54	10.59	NA
MW-4	08/01/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	17.13	7.04	10.09	NA
MW-4	11/11/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	17.13	7.95	9.18	NA
MW-4	02/04/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	17.13	5.24	11.89	NA
MW-4	05/02/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	17.13	6.61	10.52	NA
MW-4	07/31/1997	<50	NA	7.2	<0.5	0.7	2.0	<30	NA	17.13	7.40	9.73	NA
MW-4	10/30/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	17.13	7.52	9.61	NA
MW-4	02/04/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	17.13	4.28	12.85	NA
MW-4	05/08/1998	<100	NA	<1.0	<1.0	<1.0	<1.0	<5.0	NA	17.13	5.74	11.39	NA
MW-4	07/21/1998	<50	NA	2.0	2.2	1.2	6.3	<2.5	NA	17.13	6.75	10.38	NA
MW-4	11/19/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0	NA	17.13	7.51	9.62	NA
MW-4	02/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	17.13	6.45	10.68	NA
MW-4	05/10/1999	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	17.13	6.10	11.03	NA
MW-4	08/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	17.13	7.32	9.81	NA
MW-4	12/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	17.13	7.17	9.96	NA
MW-4	02/14/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.0	17.13	5.97	11.16	NA
MW-4	04/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	17.13	5.77	11.36	NA
MW-4	08/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	17.13	6.64	10.49	NA
MW-5	01/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	02/04/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	03/09/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	5.45	10.14	NA
MW-5	05/06/1993	6,200	NA	460	980	300	1,200	NA	NA	15.59	6.00	9.59	NA
MW-5	06/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	7.81	7.78	NA

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MW-5	07/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	08/31/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	09/27/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	10/19/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	11/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	12/17/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	02/07/1994	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	05/20/1994	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	08/22/1994	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	11/02/1994	5,700	NA	800	400	4.7	600	NA	NA	15.59	7.27	8.32	NA
MW-5	02/14/1995	1,300	NA	290	76	21	140	NA	NA	15.59	NA	NA	NA
MW-5	05/19/1995	600	NA	83	20	5.7	33	NA	NA	15.59	NA	NA	NA
MW-5	08/22/1995	8,100	NA	650	720	54	1,700	<50	NA	15.59	11.55	4.04	NA
MW-5	10/25/1995	1,500	NA	290	85	15	170	NA	NA	15.59	6.02	9.57	NA
MW-5	02/09/1996	1,000	NA	120	49	26	130	NA	NA	15.59	11.05	4.54	NA
MW-5	04/11/1996	210	NA	5.7	<0.5	9.2	22	NA	NA	15.59	6.70	8.89	NA
MW-5	08/01/1996	86	NA	<0.5	<0.5	<0.5	5.3	NA	NA	15.59	12.21	3.38	NA
MW-5	11/11/1996	NA	NA	NA	NA	NA	NA	NA	NA	15.59	2.80	12.79	NA
MW-5	02/04/1997	NA	NA	NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	05/02/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	15.59	NA	NA	NA
MW-5	07/31/1997	110	NA	5.8	3.2	5.8	17	<30	NA	15.59	7.01	8.58	NA
MW-5	10/30/1997	50	NA	0.8	<0.5	0.5	5.2	<30	NA	15.59	6.78	8.81	NA
MW-5	02/04/1998	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	7.69	7.90	NA
MW-5	05/08/1998	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	07/21/1998	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	11/19/1998	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	02/09/1999	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA

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MW-5	03/01/1999	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	05/10/1999	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	08/25/1999	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	02/14/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.0	15.59	3.50	12.09	NA
MW-5	01/26/2000	Well inaccessible		NA	NA	NA	NA	NA	NA	15.59	NA	NA	NA
MW-5	08/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	15.59	5.89	9.70	NA
MW-6	01/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.05	6.63	10.42	NA
MW-6	02/04/1993	2,300	NA	19	5.4	27	220	NA	NA	17.05	6.48	10.57	NA
MW-6	03/09/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.05	6.68	10.37	NA
MW-6	05/06/1993	540	NA	44	0.9	7.0	6.7	NA	NA	17.05	6.93	10.12	NA
MW-6	06/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.05	7.00	10.05	NA
MW-6	07/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.05	7.25	9.80	NA
MW-6	08/31/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.05	7.83	9.22	NA
MW-6	09/27/1993	180	NA	2.7	0.7	6.3	13	NA	NA	17.05	8.38	8.67	NA
MW-6	10/19/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.05	8.76	8.29	NA
MW-6	11/15/1993	180	NA	2.2	0.9	5.4	16	NA	NA	17.05	8.65	8.40	NA
MW-6	12/17/1993	NA	NA	NA	NA	NA	NA	NA	NA	17.05	7.78	9.27	NA
MW-6	02/10/1994	240	NA	2.9	1.2	3.9	7.1	NA	NA	17.05	7.90	9.15	NA
MW-6	05/20/1994	600	NA	4.5	2.2	24	66	NA	NA	17.05	6.95	10.10	NA
MW-6	08/22/1994	400	NA	3.2	1.0	7.9	40	NA	NA	17.05	8.17	8.88	NA
MW-6	11/02/1994	150	NA	1.6	1.3	6.5	27	NA	NA	17.05	10.56	6.49	NA
MW-6	02/14/1995	770	NA	4.0	2.9	42	130	NA	NA	17.05	8.08	8.97	NA
MW-6	05/19/1995	2,400	NA	6.9	11	99	350	NA	NA	17.05	8.51	8.54	NA
MW-6	08/22/1995	190	NA	1.0	1.7	5.2	18	<10	NA	17.05	7.50	9.55	NA
MW-6	10/25/1995	910	NA	5.5	3.3	50	160	NA	NA	17.05	8.61	8.44	NA
MW-6	02/09/1996	4,100	NA	3.8	10	60	270	NA	NA	17.05	7.26	9.79	NA

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MW-6	04/11/1996	NA	NA	NA	NA	NA	NA	NA	NA	17.05	7.41	9.64	NA
MW-6	03/01/1996	2,200	NA	5.1	2.4	160	170	NA	NA	17.05	7.10	9.95	NA
MW-6	11/11/1996	1,000	NA	3.7	1.5	38	1,100	<30	NA	17.05	8.04	9.01	NA
MW-6	02/04/1997	2,500	NA	21	3.1	180	320	<30	NA	17.05	6.10	10.95	NA
MW-6	05/02/1997	1,600	NA	33	1.6	92	180	<30	NA	17.05	7.07	9.98	NA
MW-6	07/31/1997	2,600	NA	8.8	5.8	140	280	<30	NA	17.05	7.43	9.62	NA
MW-6	10/30/1997	1,100	NA	3.5	<0.5	64	97	<30	NA	17.05	7.59	9.46	NA
MW-6	02/04/1998	400	NA	2.0	0.6	3.3	36	NA	NA	17.05	5.86	11.19	NA
MW-6	05/08/1998	2,100	NA	83	11	150	250	110	NA	17.05	5.79	11.26	NA
MW-6	07/21/1998	2,100	NA	65	7.4	180	380	110	NA	17.05	7.11	9.94	NA
MW-6	11/19/1998	120	NA	0.785	<0.5	<0.5	1.51	8.31	NA	17.05	7.49	9.56	NA
MW-6	02/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	17.05	7.07	9.98	NA
MW-6	05/10/1999	190	NA	21	0.80	31	62	2.6	NA	17.05	6.86	10.19	NA
MW-6	08/25/1999	977	NA	26.3	2.29	102	127	27.3	NA	17.05	7.55	9.50	NA
MW-6	12/09/1999	1,210	NA	12.3	<10.0	95.9	58.6	<100	NA	17.05	7.93	9.12	NA
MW-6	02/14/2000	2,430	NA	4.87	0.757	80.3	121	<2.50	<2.0	17.05	6.39	10.66	NA
MW-6	04/26/2000	1,740	NA	57.8	6.48	190	252	63.3	2.04a	17.05	6.71	10.34	NA
MW-6	08/08/2000	487	NA	3.53	2.44	29.0	19.7	<2.50	NA	17.05	6.69	10.36	NA
MW-7	01/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.65	6.53	10.12	NA
MW-7	02/04/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	16.65	6.40	10.25	NA
MW-7	03/09/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.65	6.52	10.13	NA
MW-7	05/06/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	06/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.65	6.69	9.96	NA
MW-7	07/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	08/31/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	09/27/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	16.65	7.97	8.68	NA

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MW-7	10/19/1993	NA	NA	NA	NA	NA	NA	NA	NA	16.65	8.24	8.41	NA
MW-7	11/15/1993	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	16.65	8.22	8.43	NA
MW-7	12/17/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	02/07/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	05/20/1994	NA	NA	NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	08/22/1994	130	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	16.65	NA	NA	NA
MW-7	11/02/1994	73	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	16.65	7.78	8.87	NA
MW-7	02/14/1995	NA	NA	NA	NA	NA	NA	NA	NA	16.65	9.70	6.95	NA
MW-7	05/19/1995	<50	NA	<0.5	<0.5	<0.5	2.3	NA	NA	16.65	NA	NA	NA
MW-7	08/22/1995	400	NA	<0.5	<0.5	<0.5	0.8	<10	NA	16.65	7.33	9.32	NA
MW-7	10/25/1995	NA	NA	NA	NA	NA	NA	NA	NA	16.65	6.72	9.93	NA
MW-7	02/09/1996	NA	NA	NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	04/11/1996	NA	NA	NA	NA	NA	NA	NA	NA	16.65	7.06	9.59	NA
MW-7	08/01/1996	460	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	16.65	NA	NA	NA
MW-7	11/11/1996	NA	NA	NA	NA	NA	NA	NA	NA	16.65	6.94	9.71	NA
MW-7	02/04/1997	NA	NA	NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	05/02/1997	150	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	16.65	NA	NA	NA
MW-7	07/31/1997	100	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	16.65	6.58	10.07	NA
MW-7	10/30/1997	74	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	16.65	7.04	9.61	NA
MW-7	02/04/1998	Well inaccessible		NA	NA	NA	NA	NA	NA	16.65	7.02	9.63	NA
MW-7	05/08/1998	65	NA	<0.5	<0.5	<0.5	1.0	<2.5	NA	16.65	NA	NA	NA
MW-7	07/21/1998	50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	16.65	6.22	10.43	NA
MW-7	11/19/1998	Well inaccessible		NA	NA	NA	NA	NA	NA	16.65	7.01	9.64	NA
MW-7	02/09/1999	Well inaccessible		NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	05/10/1999	55	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	16.65	NA	NA	NA
MW-7	08/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	16.65	6.82	9.83	NA
MW-7	12/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	16.65	7.54	9.11	NA
										16.65	7.89	8.76	NA

WELL CONCENTRATIONS
Former Texaco Service Station
1127 Lincoln Avenue
Alameda, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
MW-7	02/14/2000	Well inaccessible		NA	NA	NA	NA	NA	NA	16.65	NA	NA	NA
MW-7	04/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	16.65	5.39	11.26	NA
MW-7	08/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	2.61	<1.00a	16.65	6.89	9.76	NA
MW-8	01/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.87	5.30	10.57	NA
MW-8	02/04/1993	540	NA	150	3.7	5.2	10.0	NA	NA	15.87	5.62	10.25	NA
MW-8	03/09/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.87	5.56	10.31	NA
MW-8	05/06/1993	22,000	NA	9,400	46	390	520	NA	NA	15.87	5.99	9.88	NA
MW-8	06/15/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.87	6.32	9.55	NA
MW-8	07/26/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.87	6.75	9.12	NA
MW-8	08/31/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.87	7.35	8.52	NA
MW-8	09/27/1993	8,000	NA	1,700	22	30	75	NA	NA	15.87	7.86	8.01	NA
MW-8	10/19/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.87	8.27	7.60	NA
MW-8	11/15/1993	2,000	NA	840	8.8	15	42	NA	NA	15.87	8.17	7.70	NA
MW-8	12/17/1993	NA	NA	NA	NA	NA	NA	NA	NA	15.87	7.14	8.73	NA
MW-8	02/07/1994	1,700	NA	460	0.6	13	5.0	NA	NA	15.87	7.26	8.61	NA
MW-8	05/20/1994	110	NA	98	1.4	1.3	3.4	NA	NA	15.87	6.17	9.70	NA
MW-8	08/22/1994	51	NA	16	<0.5	<0.5	<0.5	NA	NA	15.87	7.63	8.24	NA
MW-8	11/02/1994	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.87	10.16	5.71	NA
MW-8	02/14/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.87	7.32	8.55	NA
MW-8	05/19/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.87	7.83	8.04	NA
MW-8	08/22/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	<10	NA	15.87	6.98	8.89	NA
MW-8	10/25/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.87	8.16	7.71	NA
MW-8	02/09/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.87	4.89	10.98	NA
MW-8	04/11/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.87	8.48	7.39	NA
MW-8	08/01/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.87	6.60	9.27	NA
MW-8	11/11/1996	<50	NA	1.3	<0.5	<0.5	0.67	<30	NA	15.87	7.28	8.59	NA

WELL CONCENTRATIONS
Former Texaco Service Station
1127 Lincoln Avenue
Alameda, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
MW-8	02/04/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	15.87	5.39	10.48	NA
MW-8	05/07/1997	<50	NA	1.6	<0.5	<0.5	<0.5	<30	NA	15.87	6.28	9.59	NA
MW-8	07/31/1997	960	NA	520	<0.5	2.3	6.4	<30	NA	15.87	6.84	9.03	NA
MW-8	10/30/1997	150	NA	51	<0.5	2.5	<0.5	<30	NA	15.87	6.66	9.21	NA
MW-8	02/04/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.87	3.76	12.11	NA
MW-8	05/08/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	5.4	NA	15.87	5.48	10.39	NA
MW-8	07/21/1998	58	NA	6.8	2.5	1.2	6.6	<2.5	NA	15.87	6.50	9.37	NA
MW-8	11/19/1998	<50	NA	1.20	<0.5	<0.5	<0.5	<2.0	NA	15.87	6.81	9.06	NA
MW-8	02/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	15.87	5.75	10.12	NA
MW-8	05/10/1999	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	15.87	6.03	9.84	NA
MW-8	08/25/1999	82.5	NA	16.3	<0.500	<0.500	<0.500	<2.50	NA	15.87	7.03	8.84	NA
MW-8	12/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	15.87	7.10	8.77	NA
MW-8	02/14/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.0	15.87	4.92	10.95	NA
MW-8	01/26/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	15.87	5.73	10.14	NA
MW-8	08/08/2000	<50.0	NA	6.02	<0.500	<0.500	0.716	<2.50	NA	15.87	6.62	9.25	NA
MW-9	08/22/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	<10	NA	14.44	6.00	8.44	NA
MW-9	10/25/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	14.44	6.71	7.73	NA
MW-9	02/09/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	14.44	4.87	9.57	NA
MW-9	04/11/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	14.44	5.40	9.04	NA
MW-9	08/01/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	14.44	5.69	8.75	NA
MW-9	11/11/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	14.44	6.44	8.00	NA
MW-9	02/04/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	14.44	4.30	10.14	NA
MW-9	05/02/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	14.44	5.34	9.10	NA
MW-9	07/31/1997	120	NA	4.3	3.0	3.2	10	<30	NA	14.44	5.97	8.47	NA
MW-9	10/30/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	14.44	6.15	8.29	NA
MW-9	02/04/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	14.44	3.30	11.14	NA

WELL CONCENTRATIONS
Former Texaco Service Station
1127 Lincoln Avenue
Alameda, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
MW 9	05/08/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	14.44	4.70	9.74	NA
MW-9	07/21/1998	75	NA	7.5	6.1	2.3	12	<2.5	NA	14.44	5.53	8.91	NA
MW-9	11/19/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0	NA	14.44	6.15	8.29	NA
MW-9	02/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	14.44	5.08	9.36	NA
MW-9	05/10/1999	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	14.44	5.15	9.29	NA
MW 9	08/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	14.44	6.16	8.28	NA
MW 9	12/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	14.44	6.22	8.22	NA
MW-9	02/14/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.0	14.44	4.29	10.15	NA
MW-9	04/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	14.44	4.84	9.60	NA
MW-9	08/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	14.44	5.70	8.74	NA

MW 10	08/22/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	<10	NA	15.04	6.86	8.18	NA
MW-10	10/25/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.04	7.91	7.13	NA
MW 10	02/09/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.04	4.45	10.59	NA
MW-10	04/11/1996	<50	NA	0.7	1.8	1.3	7.7	NA	NA	15.04	4.61	10.43	NA
MW-10	08/01/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.04	6.25	8.79	NA
MW-10	11/11/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	15.04	7.42	7.62	NA
MW-10	02/04/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	15.04	4.00	11.04	NA
MW-10	05/02/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	15.04	5.52	9.52	NA
MW-10	07/31/1997	85	NA	2.6	1.4	2.3	6.8	<30	NA	15.04	6.68	8.36	NA
MW-10	10/30/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	15.04	6.92	8.12	NA
MW-10	02/04/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	15.04	1.90	13.14	NA
MW-10	05/08/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	15.04	4.29	10.75	NA
MW-10	07/21/1998	87	NA	8.9	7.1	2.7	14	<2.5	NA	15.04	5.65	9.39	NA
MW-10	11/19/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0	NA	15.04	6.69	8.35	NA
MW-10	02/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	15.04	4.80	10.24	NA
MW-10	05/10/1999	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	15.04	4.77	10.27	NA

WELL CONCENTRATIONS
Former Texaco Service Station
1127 Lincoln Avenue
Alameda, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
MW-10	08/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	15.04	6.44	8.60	NA
MW-10	12/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	15.04	5.84	9.20	NA
MW-10	02/14/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.0	15.04	3.47	11.57	NA
MW-10	04/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	15.04	4.83	10.21	NA
MW-10	08/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	15.04	5.95	9.09	NA

MW-11	03/22/1995	<50	NA	<0.5	<0.5	<0.5	<0.5	<10	NA	10.61	5.12	5.49	NA
MW-11	10/25/1995	NA	NA	NA	NA	NA	NA	NA	NA	10.61	NA	NA	NA
MW-11	02/09/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	10.61	2.73	7.88	NA
MW-11	04/11/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	10.61	3.00	7.61	NA
MW-11	08/01/1996	76	NA	6.8	5.3	2.7	9.1	NA	NA	10.61	4.66	5.95	NA
MW-11	11/11/1996	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	10.61	5.85	4.76	NA
MW-11	02/04/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	10.61	2.20	8.41	NA
MW-11	05/02/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	10.61	3.95	6.66	NA
MW-11	07/31/1997	170	NA	11	4.5	6.4	19	<30	NA	10.61	5.33	5.28	NA
MW-11	10/30/1997	<50	NA	<0.5	<0.5	<0.5	<0.5	<30	NA	10.61	5.76	4.85	NA
MW-11	02/04/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	10.61	1.60	9.01	NA
MW-11	05/08/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.5	NA	10.61	2.66	7.95	NA
MW-11	07/21/1998	160	NA	16	12	4.6	24	<2.5	NA	10.61	3.99	6.62	NA
MW-11	11/19/1998	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0	NA	10.61	5.96	4.65	NA
MW-11	02/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.00	NA	10.61	3.27	7.34	NA
MW-11	05/10/1999	<50	NA	<0.50	<0.50	<0.50	<0.50	<2.5	NA	10.61	3.35	7.26	NA
MW-11	08/25/1999	NA	NA	NA	NA	NA	NA	NA	NA	10.61	5.14	5.47	NA
MW-11	12/09/1999	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<5.00	NA	10.61	4.42	6.19	NA
MW-11	02/14/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	<2.0	10.61	2.55	8.06	NA
MW-11	04/26/2000	NA	NA	NA	NA	NA	NA	NA	NA	10.61	2.99	7.62	NA
MW-11	08/08/2000	<50.0	NA	<0.500	<0.500	<0.500	<0.500	<2.50	NA	10.61	4.60	6.01	NA

WELL CONCENTRATIONS
Former Texaco Service Station
1127 Lincoln Avenue
Alameda, CA

Well ID	Date	TPPH (ug/L)	TEPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
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Abbreviations.

TPPH = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

TEPH = Total petroleum hydrocarbons as diesel by modified EPA Method 8015

BTEX = benzene, toluene, ethylbenzene, xylenes

MTBE = methyl-tertiary-butyl ether by EPA Method 8020

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

ug/L = parts per billion

msl = Mean sea level

ft = Foot

<n = Below detection limit

NA = Not applicable

Notes

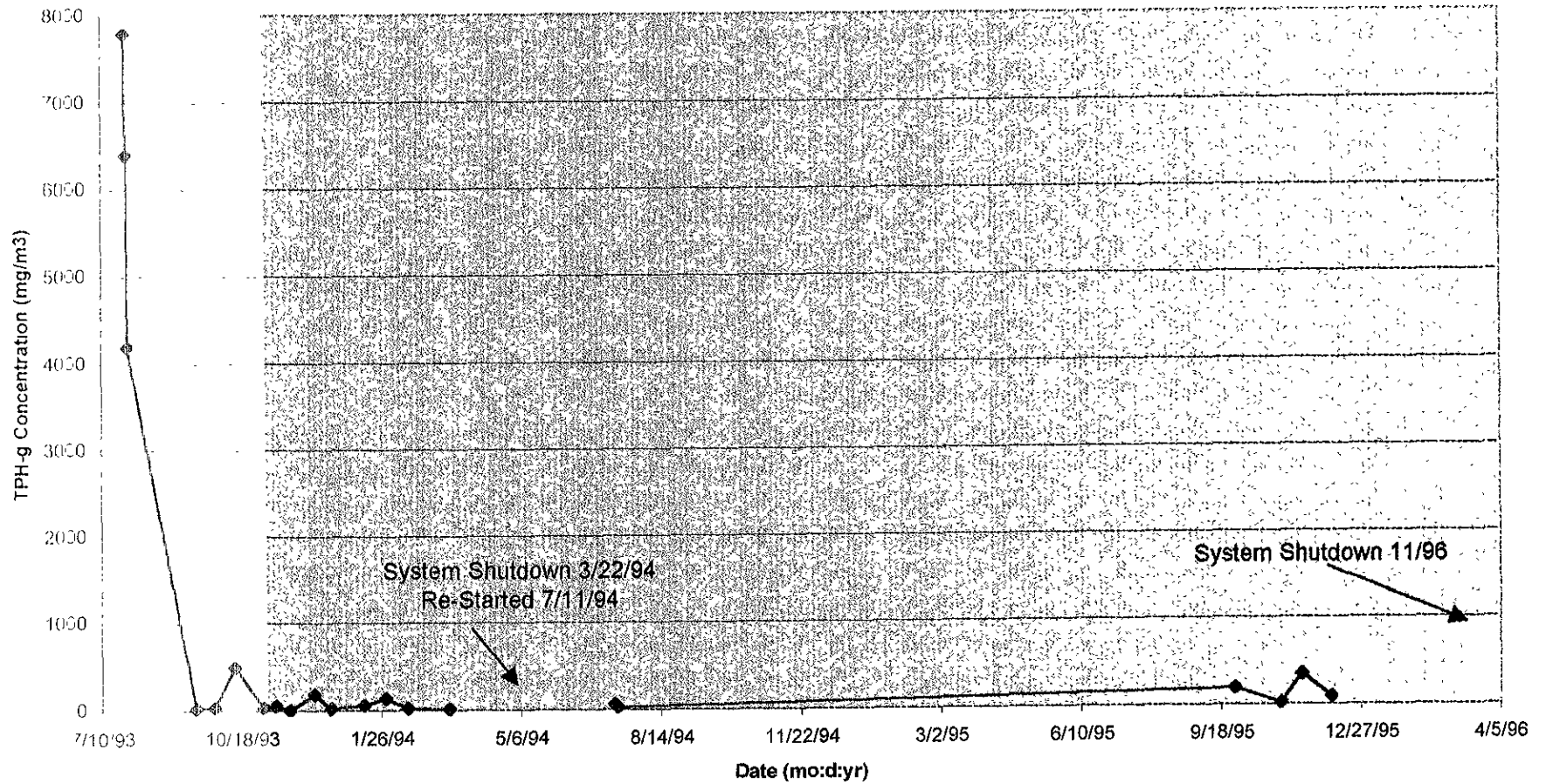
a - Analyzed outside of EPA recommended hold time.

ATTACHMENT C

**SOIL VAPOR EXTRACTION SYSTEM
INFLUENT TPPH AND BENZENE CONCENTRATION GRAPHS**

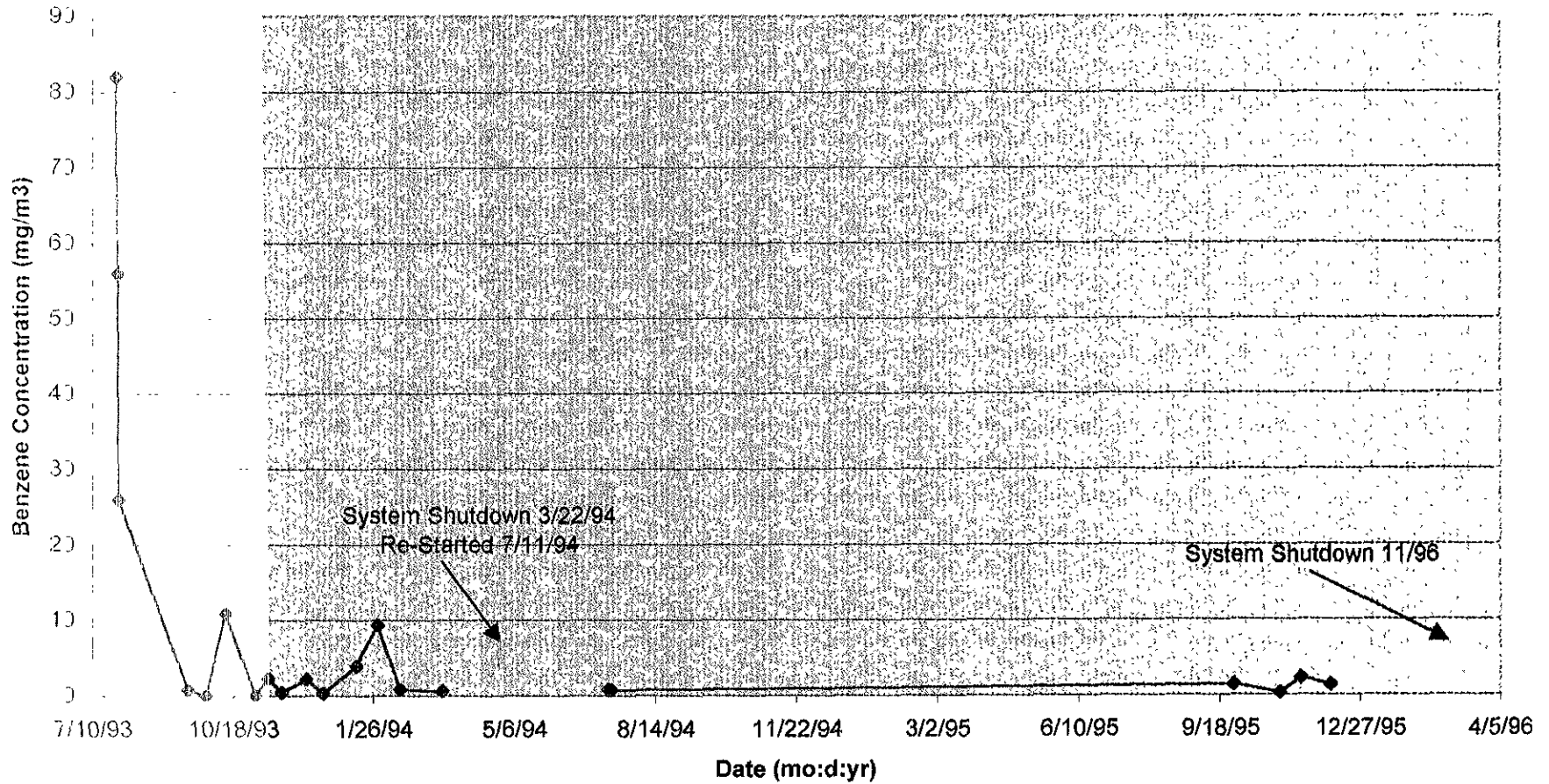
**Figure 1 - TPH-g Influent Concentrations
Soil Vapor Extraction System**

Former Texaco Service Station
1127 Lincoln Avenue
Alameda, California



**Figure 2 - Benzene Influent Concentrations
Soil Vapor Extraction System**

Former Texaco Service Station
1127 Lincoln Avenue
Alameda, California

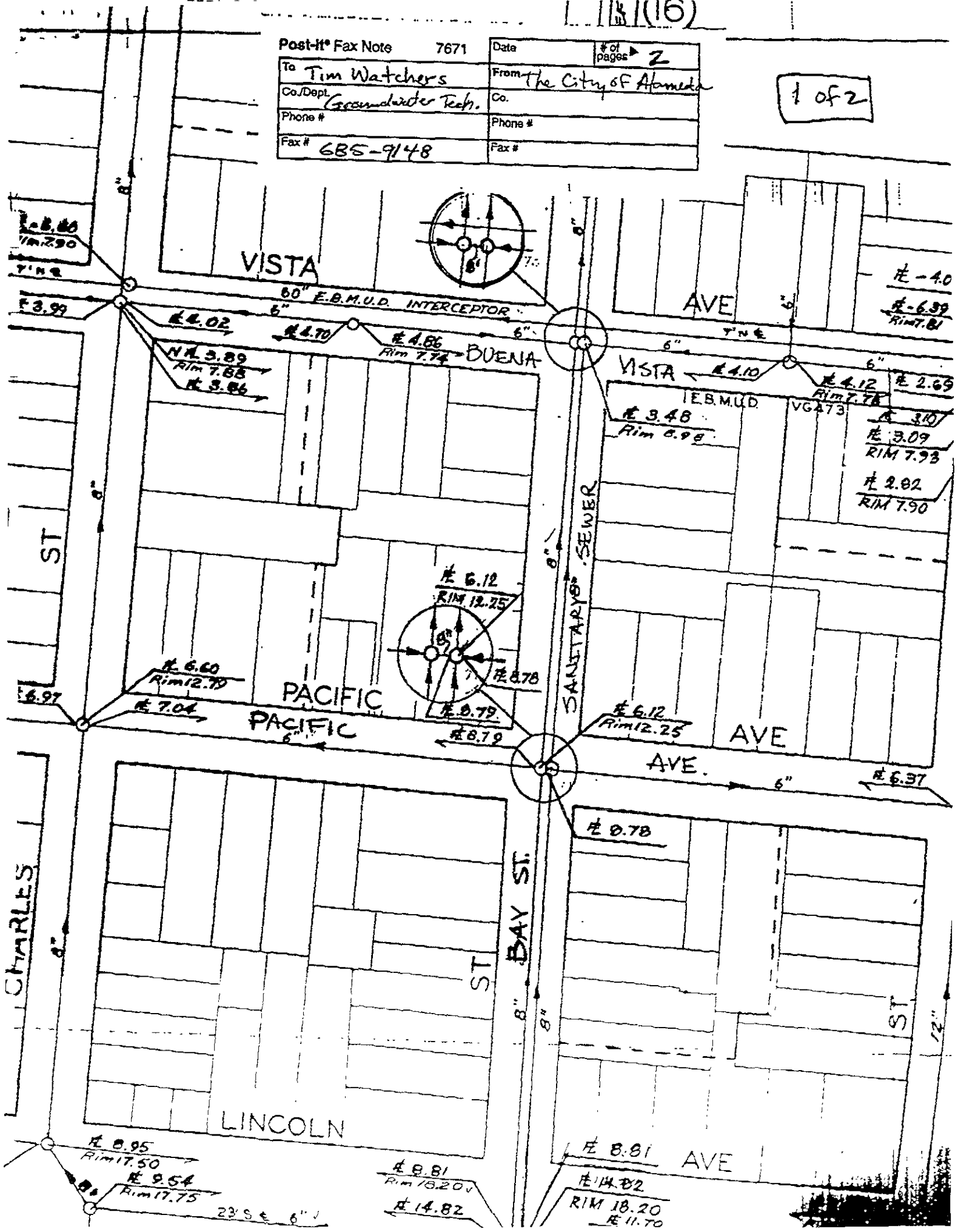


ATTACHMENT D

**SANITARY SEWER MAP, SOIL SAMPLING LOCATIONS AND HISTORICAL
SOIL DATA
(GTP'S *ADDITIONAL SOIL AND GROUNDWATER ASSESSMENT REPORT*,
JULY 25, 1995)**

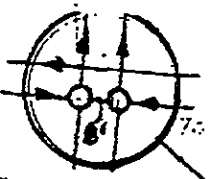
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To	Tim Watchers	From	The City of Alameda
Co./Dept.	Groundwater Tech.	Co.	
Phone #		Phone #	
Fax #	685-9148	Fax #	

1 of 2



VISTA

AVE



1-8.86
1-12.90
TINE

E 3.99

60" E.B.M.U.D. INTERCEPTOR

E 4.02

E 4.70

E 4.86
Rim 7.74

BUENA

VISTA

E 4.10

E 4.12
Rim 7.74

E 2.69

N 3.89
Rim 7.88
E 3.86

E.B.M.U.D.
E 3.48
Rim 8.98

VG473
E 3.10
E 3.09
RIM 7.93
E 2.82
RIM 7.90

ST

E 6.12
RIM 12.25



SANITARY SEWER

E 6.60
Rim 12.70

PACIFIC

E 8.78

E 8.79

E 6.12
Rim 12.25

AVE

E 6.97

E 7.04

PACIFIC

AVE

E 6.37

CHARLES

ST

BAY ST

ST

LINCOLN

E 8.95
Rim 17.50

E 9.54
Rim 17.75

23' S x 6"

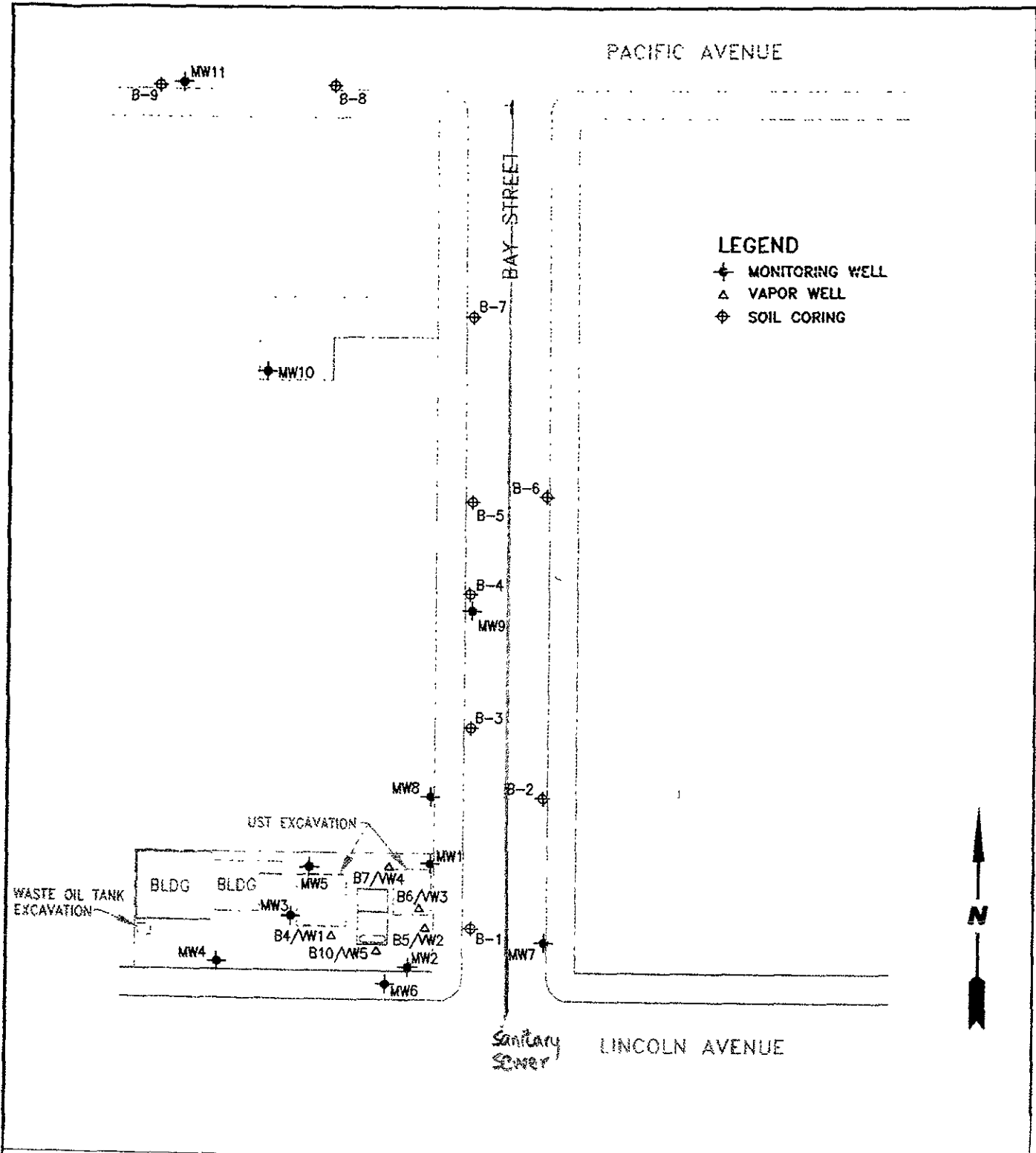
E 8.81
Rim 18.20

E 14.82

E 8.81 AVE

E 14.82

RIM 18.20
E 11.70



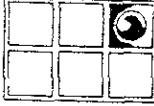

 GROUNDWATER TECHNOLOGY				SITE PLAN	
CLIENT: TEXACO REFINING & MARKETING, INC.		FILE: SP695		PROJECT NO: 020200049	
LOCATION: 1127 LINCOLN AVENUE ALAMEDA, CALIFORNIA		REV: 1		PM: <i>[Signature]</i>	
		DES: TW		DET: ML	
		DATE: 6/14/95		FIGURE: 2	

TABLE 1
Analytical Results of Soil Samples
Former Texaco Service Station
1127 Lincoln Avenue, Alameda, California
(parts per million)

Date	Sample ID	Sample Depth (ft)	Benzene	Toluene	Ethyl benzene	Total Xylenes	TPH-g
02/07/95	B1/5	5	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B1/10	10	<0.005	<0.005	<0.005	0.018	<1
02/07/95	B2/4	4	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B2/10	10	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B3/5	5	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B3/10	10	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B4/5	5	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B5/3	3	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B6/3	3	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B7/3	3	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B8/3	3	<0.005	<0.005	<0.005	<0.005	<1
02/07/95	B9/3	3	<0.005	<0.005	<0.005	<0.005	<1
05/17/95	MW-9-5	5	<0.005	<0.005	<0.005	<0.005	<1
05/17/95	MW-9-15	15	<0.005	<0.005	<0.005	<0.005	<1
05/17/95	MW-10-5	5	<0.005	<0.005	<0.005	<0.005	<1
05/17/95	MW-10-15	15	<0.005	<0.005	<0.005	<0.005	<1
05/18/95	MW-11-5	5	<0.005	<0.005	<0.005	<0.005	<1
05/18/95	MW-11-15	15	<0.005	<0.005	<0.005	<0.005	<1

ft = feet

TPH-g = Total Petroleum Hydrocarbons as gasoline

ATTACHMENT E

ROSE DIAGRAM

TABLE 1
HISTORICAL GROUNDWATER FLOW DIRECTION

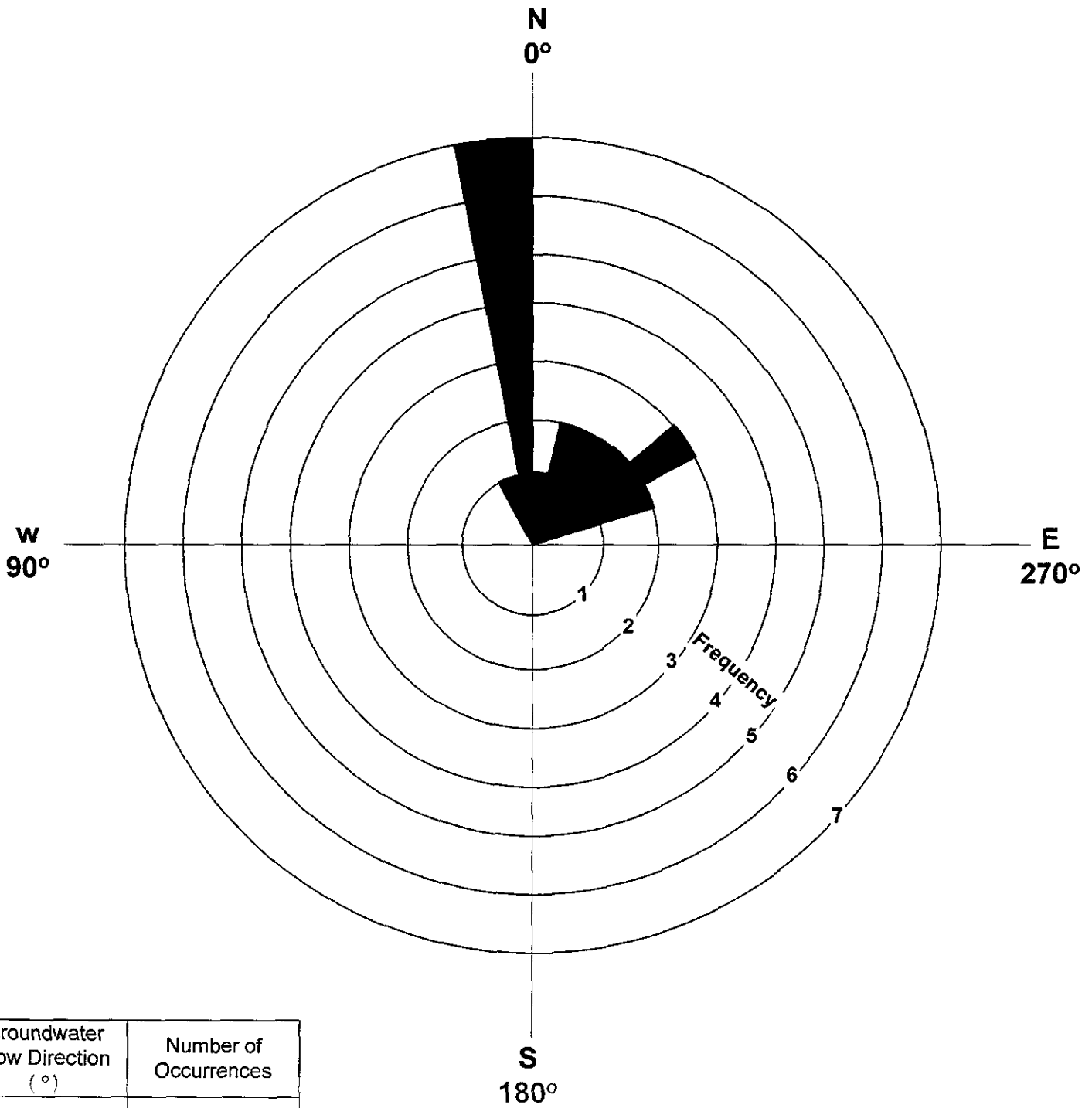
Former Texaco Service Station
1127 Lincoln Avenue at Bay Street
Alameda, California

Quarter	Date	Groundwater Flow Direction (0° - 360°)
1Q91	NA	NA
2Q91	04/04/91	10
3Q91	NA	NA
4Q91	11/14/91	7
1Q92	NA	NA
2Q92	06/25/92	340
3Q92	NA	NA
4Q92	NA	NA
1Q93	02/04/93	290
2Q93	05/06/93	305
3Q93	09/27/93	GWE
4Q93	11/15/93	10
1Q94	02/07/94	20
2Q94	05/20/94	320
3Q94	08/22/94	GWE
4Q94	11/02/94	GWE
1Q95	02/14/95	GWE
2Q95	05/19/95	GWE
3Q95	08/22/95	5
4Q95	10/25/95	355
1Q96	02/09/96	GWE
2Q96	04/11/96	GWE
3Q96	08/01/96	GWE
4Q96	11/01/96	330
1Q97	02/04/97	0
2Q97	05/02/97	10
3Q97	NA	NA
4Q97	NA	NA
1Q98	NA	NA
2Q98	NA	NA
3Q98	07/21/98	300
4Q98	11/19/98	315

TABLE 1
HISTORICAL GROUNDWATER FLOW DIRECTION

Former Texaco Service Station
1127 Lincoln Avenue at Bay Street
Alameda, California

Quarter	Date	Groundwater Flow Direction (0° - 360°)
1Q99	02/09/99	Complex
2Q99	05/10/99	305
3Q99	08/25/99	330
4Q99	12/09/99	310
1Q00	02/14/00	0
2Q00	04/26/00	320
3Q00	08/08/00	335
GWE = Groundwater extraction system running; groundwater flow direction toward GWE wells. Complex = No distinct groundwater flow direction NA = Not Available		



Groundwater Flow Direction (°)	Number of Occurrences
0 - 10	7
11 - 20	1
290 - 300	2
301 - 310	3
311 - 320	2
321 - 330	2
331 - 340	2
341 - 350	0
351 - 360	1
Total	20

KHM ENVIRONMENTAL MANAGEMENT INC.	Groundwater Flow Direction Rose Diagram		
	Former Texaco Service Station 1127 Lincoln Avenue at Bay Street Alameda, California		
	1/31/01	C80-001127C1	1