

Alameda County  
JUL 0 9 2003  
Environmental Health

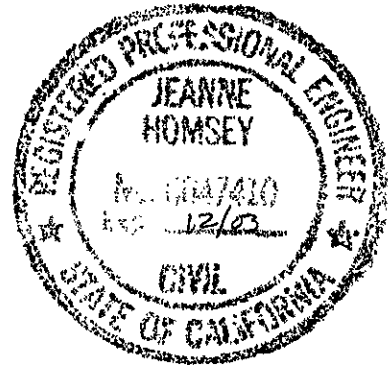
**QUARTERLY GROUNDWATER  
MONITORING REPORT**  
(2<sup>nd</sup> Quarter, 2003)

Former E-Z Serve Location No. 100877  
525 West 'A' Street  
Hayward, California  
STID No. 3580

Submitted to:  
Restructure Petroleum Marketing Services of California, Inc.  
205 S. Hoover Boulevard, Suite 101  
Tampa, Florida 33609

Submitted by  
ATC Associates Inc.  
1117 Lone Palm Avenue, Suite B  
Modesto, California 95351

ATC Work Order No. 100877-C2-17  
ATC Project No. 54.25827.2417  
June 30, 2003



Prepared by:

Todd C. Hafner  
Project Manager

Approved by:

*Jeanne Homsey*  
Jeanne Homsey, P.E.  
CA Registered Civil Engineer C47410

DATE: June 30, 2003

QUARTERLY GROUNDWATER MONITORING REPORT – SECOND QUARTER 2003

Facility: Former E-Z Serve No. 100877	Site Address: 525 West 'A' Street, Hayward, California
Responsible Party / Contact Person:	RPMS-CA / Jeff Burke, Project Manager
Consulting Co. / Contact Person:	ATC Associates Inc. / Todd Hafner, Project Manager (209) 579-2221
ATC Project No.:	54.25827.2417
Regulatory Agency/File No.:	Alameda County Health Care Services and RWQCB

**WORK PERFORMED THIS QUARTER** [April 1, 2003 – June 30, 2003]:

1. Performed second quarter groundwater monitoring and sampling.
2. Prepared second quarter groundwater monitoring report.

**WORK PROPOSED FOR NEXT QUARTER** [July 1, 2003 – September 30, 2003]:

1. Perform third quarter groundwater monitoring and sampling.
2. Submit third quarter groundwater monitoring report.
3. Meet with Alameda County Health Care Services to discuss modifying the groundwater monitoring plan to include monitoring for bioremediation parameters.

Current Phase of Project:	Assessment	(Assessment, Remediation, etc.)
Frequency of Sampling:	Quarterly	(Quarterly, etc.)
Frequency of Monitoring:	Quarterly	(Monthly, etc.)
Liquid Phase Hydrocarbons Present On Site:	No	(Yes/No)
Cumulative PSH Recovered to Date:	Unknown	(Gallons)
PSH Recovered This Quarter:	None	(Gallons)
Purge Water Removed This Quarter:	Approximately 180 gallons	(Gallons)
Permits for Discharge:	None	(NDPES, POTW, etc)
Current Remediation Techniques:	None	(SVES, PSH Recovery)
Approximate Depth to Groundwater:	13.17 to 15.19	(Measured Feet)
Groundwater Gradient:	0.003 ft/ft	(Magnitude)
Groundwater Flow Direction:	Variable	(Direction)

**Discussion:** On May 15, 2003, ATC Associates Inc. (ATC) personnel gauged 11 groundwater monitoring wells and one groundwater extraction well (Figures 1 and 2). Depth to groundwater ranged between 13.17 (MW-13) to 15.19 (MW-2) feet below ground surface (bgs). MW-1A, MW-7 through MW-14, and extraction well EX-1 were not sampled. The wellheads of MW-8 through MW-11 remain inaccessible. The hydraulic gradient was calculated to be 0.003 foot per foot and varied across the site from the southwest to the northwest (Figure 2). No measurable liquid phase hydrocarbons (PSH) were recorded in any of the wells measured during the second quarter monitoring event. Groundwater elevations and contours are illustrated on Figure 2 and historic groundwater and PSH monitoring data are presented in Table 1.

On May 15, 2003, ATC collected groundwater samples from six monitoring wells. ATC utilized the attached purging and sampling procedures described in Appendix A to collect groundwater samples from MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6. Field logs are also included in Appendix A. Groundwater samples collected were analyzed for total petroleum hydrocarbons characterized as gasoline (TPHg); benzene, toluene, ethylbenzene, and total xylenes (BTEX); and fuel oxygenates methyl tert-butyl ether (MTBE), diisopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), and tert-butyl alcohol (TBA) by EPA Method 8260. TPHg concentrations were detected above the laboratory-reported method detection limit in groundwater samples collected from all of the six wells sampled. The highest TPHg, benzene, and MTBE concentrations reported were 24,000 (MW-2), 1,500 (MW-1), and 30 (MW-4) µg/L, respectively. TPHg, benzene, and MTBE concentrations are illustrated on Figure 2 and historic groundwater analytical results are presented in Tables 1 and 2. Hydrographs of groundwater elevations and analytical data are attached in Appendix B and laboratory analytical results and chain-of-custody documentation are attached in Appendix C.

**Recommendations:** Continue quarterly groundwater monitoring and sampling, revise the CAP, and perform a professional electromagnetic subsurface survey to locate the wellheads of MW-8 through MW-11.

**Summary of Unusual Activity:** None.

**Agency Directive Requirements:** Continue quarterly groundwater monitoring and sampling. Additional directives may be issued after the Alameda County Health Care Services has had an opportunity to review actions taken by the State Water Resources Control Board Underground Storage Tank Cleanup Fund regarding the rejection of the CAP.

**ATTACHED:**

- Table 1 - Groundwater Elevations and Sample Analytical Results
- Table 2 - Groundwater Sample Analytical Results for Fuel Oxygenates
- Figure 1 - Vicinity Map
- Figure 2 - Groundwater Summary Map (May 15, 2003)
- Appendix A - ATC Groundwater Monitoring and Sampling Procedures, and Field Logs
- Appendix B - Hydrographs
- Appendix C - Laboratory Report and Chain-of-Custody Record







**Table 1**  
**Groundwater Elevations and Sample Analytical Results**  
Former E-Z Serve Location No. 100877  
525 West 'A' Street, Hayward, California

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE <sup>1</sup> (feet)	PSH (feet)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-6 (15'-29') (Cont.)	12/6/94	42.33	18.33	24.00	0.00	8,600	1,300	87	980	610	--
	3/10/95	42.33	15.35	26.98	0.00	--	--	--	--	--	--
	3/15/95	42.33	14.91	27.42	0.00	9,800	1,600	110	1,000	1,000	--
	9/23/96	42.33	15.50	26.83	0.00	12,000	520	55	930	350	51
	12/4/96	42.33	16.06	26.27	0.00	11,000	390	25	680	170	130
	4/8/97 <sup>NP</sup>	42.33	13.64	28.69	0.00	17,000	700	92	1,400	900	2,700
	6/30/97	42.33	15.08	27.25	0.00	11,000	270	37	590	450	<
	11/25/97	42.33	16.40	25.93	0.00	9,100	130	26	500	150	310
	6/1/98	42.33	10.31	32.02	0.00	14,000	190	50	680	400	160
	6/14/01	42.33	15.46	26.87	0.00	6,400	29	6.3	200	55	<20
	11/7/01 <sup>2</sup>	42.33	16.71	25.62	0.00	7,200	34	8.7	180	31	<5.0
	1/30/02	42.33	14.60	27.73	0.00	6,600	32	7.2	130	28	<5.0
	5/29/02	42.33	14.99	27.34	0.00	5,200	26	7.0	150	27	<5.0
	8/14/02	42.33	16.03	26.30	0.00	5,300	24	6.6	120	22	<2.0
	11/15/02	42.33	16.53	25.80	0.00	5,000	19	4.7	70	38	<0.5
2/13/03	42.33	14.60	27.73	0.00	2,800	22	2.0	<0.5	21	0.9	
5/15/03	42.33	14.07	28.26	0.00	4,600	16	4.4	70	17	0.6	
MW-7 (10'-29')	6/23/93	42.70	17.87	24.83	0.00	29,000	4,200	71	4,400	5,600	--
	9/30/93	42.70	18.94	23.76	0.00	30,000	3,200	71	2,800	3,400	--
	2/6/94	42.70	19.11	23.64	0.06	--	--	--	--	--	--
	5/2/94	42.70	18.11	24.59	0.00	5,700	630	13	660	400	--
	7/1/94	42.70	18.72	23.98	0.00	3,100	180	99	160	520	--
	9/20/94	42.70	21.41	21.29	0.00	6,100	540	6	750	730	--
	12/5/94	42.70	18.66	24.04	0.00	3,700	280	<10	430	350	--
	3/10/95	42.70	15.72	26.98	0.00	3,900	310	<10	540	540	--
	3/14/95	42.70	15.23	27.47	0.00	1,900	290	4	26	296	--
	9/23/96	42.70	15.94	26.76	0.00	6,300	76	<	420	270	15
	12/4/96	42.70	16.43	26.27	0.00	7,800	67	<	600	350	22
	4/8/97 <sup>NP</sup>	42.70	14.10	28.60	0.00	5,600	42	<	240	96	<
	6/30/97	42.70	15.51	27.19	0.00	5,500	<	79	<	44	280
	11/25/97	42.70	16.80	25.90	0.00	2,400	23	5.4	<	54	120
	6/1/98	42.70	10.31	32.39	0.00	14,000	190	50	680	400	160
6/14/01	42.70	15.46	27.24	0.00	6,400	29	6	200	55	<20	
11/7/01 <sup>2</sup>	42.70	--	--	--	--	--	--	--	--	--	
1/30/02	42.70	14.97	27.73	0.00	6,200	1.5	<0.5	96	4.6	<0.5	
5/29/02	42.70	15.49	27.21	0.00	1,600	1.0	<0.5	3.4	1.9	<0.5	
8/14/02	42.70	16.44	26.26	0.00	4,100	1.3	<0.5	74	1.3	<0.5	
11/15/02	42.70	16.91	25.79	0.00	1,000	0.6	<0.5	<0.5	0.6	<0.5	
2/13/03	42.70	14.99	27.71	0.00	1,500	0.8	<0.5	20	<0.5	<0.5	
5/15/03	42.70	14.47	28.23	0.00	--	--	--	--	--	--	
MW-8* (10'-29')	6/23/93	97.61	17.64	79.97	0.00	350	43	9	35	67	--
	9/30/93	97.61	18.85	78.76	0.00	2,700	190	340	170	720	--
	2/6/94	97.61	18.91	78.70	0.00	<100	<1	1	1	2	--
	5/2/94	97.61	18.11	79.50	0.00	<100	<1	3	<1	7	--
	7/1/94	97.61	18.43	79.18	0.00	300	18	48	19	37	--
	9/20/94	97.61	21.43	76.18	0.00	<100	<1	<1	<1	<1	--
	12/5/94	97.61	18.72	78.89	0.00	<50	<0.5	<0.5	<0.5	<0.5	--
	3/10/95	97.61	18.69	78.92	0.00	--	--	--	--	--	--
	3/14/95	97.61	14.83	82.78	0.00	<50	<0.5	<0.5	<0.5	1	--
9/23/96	97.61	15.83	81.78	0.00	<	<	<	<	<	<	
Not Sampled, well inaccessible since 4th Quarter, 1996.											
MW-9* (10'-29')	6/23/93	95.41	15.94	79.47	0.00	45,000	14,000	1,200	2,800	12,000	--
	9/30/93	95.41	17.05	78.36	0.00	86,000	22,000	1,100	3,300	15,000	--
	2/6/94	95.41	17.07	78.34	0.00	43,000	10,000	460	2,100	7,500	--
	5/2/94	95.41	16.24	79.17	0.00	17,000	5,400	270	1,300	4,700	--





**Table 1**  
**Groundwater Elevations and Sample Analytical Results**  
Former E-Z Serve Location No. 100877  
525 West 'A' Street, Hayward, California

Well No.	Sampling Date	TOC (feet)	DTW (feet)	GWE <sup>1</sup> (feet)	PSH (feet)	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-13 (10'-30') (Cont.)	1/30/02	40.97	13.65	27.32	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	5/29/02	40.97	14.10	26.87	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/14/02	40.97	15.13	25.84	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	11/15/02	40.97	--	--	--	--	--	--	--	--	--
	2/13/03	40.97	Not sampled, vehicle parked over well								
	5/15/03	40.97	13.17	27.80	0.00	--	--	--	--	--	--
MW-14 (10'-30')	2/10/95	43.19	16.28	26.91	0.00	12,000	42	8	740	2,100	--
	3/10/95	43.19	16.33	26.86	0.00	--	--	--	--	--	--
	3/14/95	43.19	14.87	28.32	0.00	1,400	6	2	36	298	--
	9/23/96	43.19	16.67	26.52	0.00	6,400	2.8	<	690	96	9.6
	12/4/96	43.19	17.06	26.13	0.00	9,500	6.3	<	1,100	400	30
	4/8/97 <sup>NP</sup>	43.19	14.77	28.42	0.00	2,900	<	2.7	220	21	<
	6/30/97	43.19	16.22	26.97	0.00	74	1.3	<	0.51	0.68	<
	11/25/97	43.19	17.52	25.67	0.00	<	<	<	<	<	<
	6/1/98	43.19	11.46	31.73	0.00	<50	<0.5	<0.5	<0.5	<0.5	<5
	6/14/01	43.19	16.53	26.66	0.00	470	<0.5	<0.5	2.8	1	<5
	11/7/01 <sup>2</sup>	43.19	17.84	25.35	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	1/30/02	43.19	15.55	27.64	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	5/29/02	43.19	16.14	27.05	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/14/02	43.19	17.12	26.07	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	11/15/02	43.19	17.56	25.63	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
2/13/03	43.19	15.69	27.50	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
5/15/03	43.19	15.07	28.12	0.00	--	--	--	--	--	--	
EX-1 (10'-35')	8/14/02	--	16.58	--	0.00	250	31	<0.5	<0.5	4.2	1.4
	11/15/02	--	17.02	--	0.00	67	4.1	<0.5	<0.5	<0.5	0.7
	2/13/03	--	15.10	--	0.00	<50	1.3	<0.5	<0.5	<0.5	0.8
	5/15/03	--	14.57	--	0.00	--	--	--	--	--	--

Notes. No known groundwater monitoring or sampling was conducted between June 1, 1998 and June 14, 2001 and June 14, 2001 and November 7, 2001. Wellhead elevations resurveyed on January 30, 2002.

TOC = Top of casing referenced to USGS benchmark [elevation = 48.50 feet above mean sea level].

DTW = Depth to water measured from top of casing.

GWE = Groundwater elevation as referenced to benchmark in feet above mean sea level.

TPHg = Total Petroleum Hydrocarbons as gasoline (EPA Method 8015).

B = Benzene (EPA Method 602 or 8020/1).

T = Toluene (EPA Method 602 or 8020/1).

E = Ethylbenzene (EPA Method 602 or 8020/1).

X = Total Xylenes (EPA Method 602 or 8020/1).

MTBE = Methyl t-Butyl Ether (EPA Method 8020 or 8021).

SHEEN = Discontinuous, non-measurable thickness of PSH.

PSH = Phase Separate Hydrocarbon thickness in feet.

µg/L = Micrograms per liter (~parts per billion).

(15'-29') = Well screen interval (in feet)

< = Sample reported as "not detected," in previous tables, reporting limit not known.

<sup>NP</sup> = No-purge sample collection method implemented and continued, beginning April 8, 1997.

<sup>1</sup> = If PSH present, corrected GWE = TOC - Measured DTW + Corrected PSH

Thickness (PSH Thickness x gas density [0.75 g/cc]).

<sup>2</sup> = All analysis performed by EPA Method 8260 beginning on November 7, 2001.

\* = Wellhead elevation not re-surveyed on January 30, 2002. Previous arbitrary benchmark used as elevation reference.

-- = Not measured, surveyed, sampled, or analyzed.

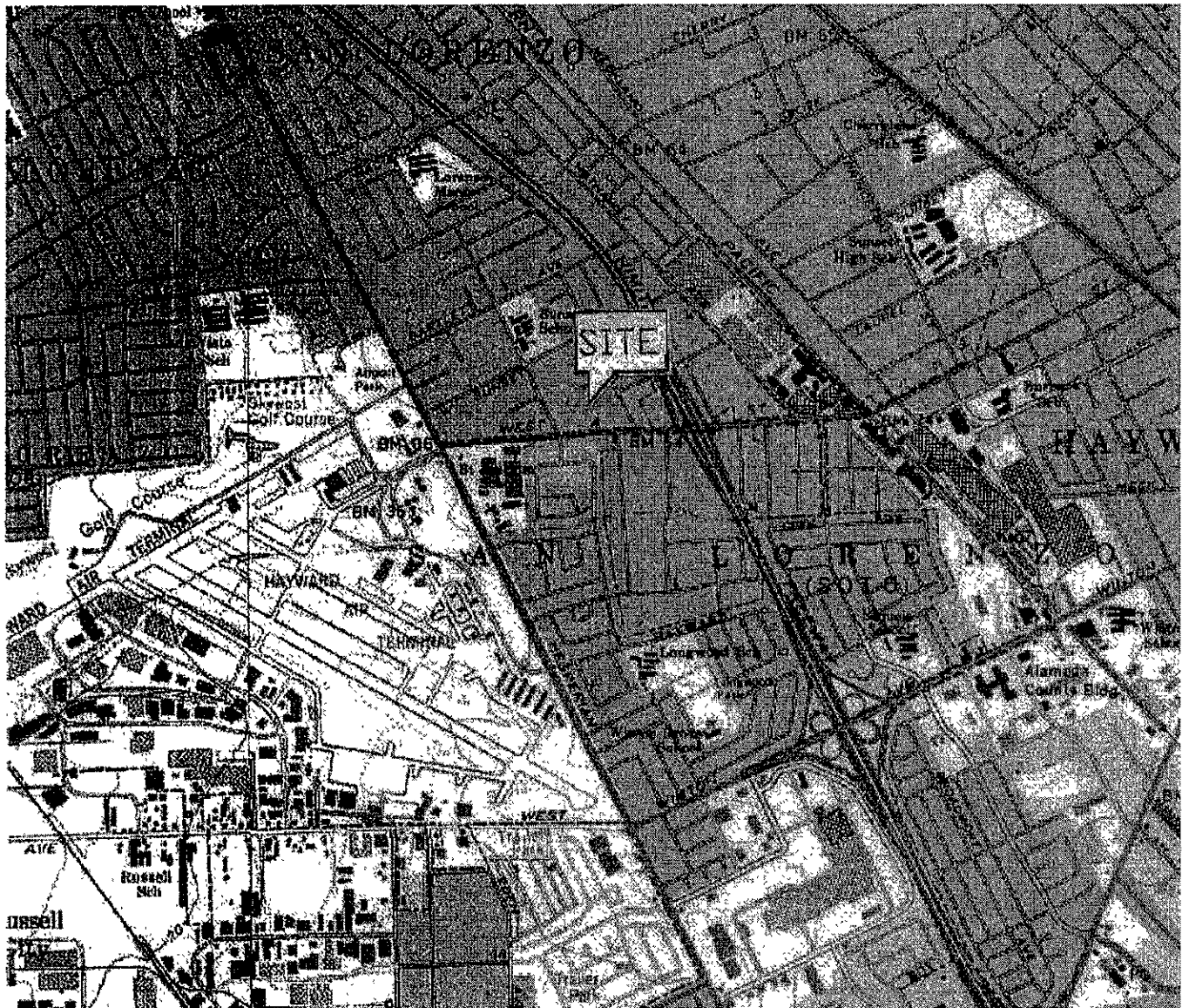
**Table 2**  
**Groundwater Sample Analytical Results for Fuel Oxygenates**  
Former E-Z Serve Location No. 100877  
525 West 'A' Street, Hayward, California

Well No.	Sampling Date	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	MTBE (µg/L)
MW-1 (15'-29')	11/7/01	<5.0	<50	<5.0	<5.0	11
	1/30/02	<5.0	<50	<5.0	<5.0	14
	5/29/02	<2.0	<20	2.5	<2.0	12
	8/14/02	<10	<100	<10	<10	10
	11/15/02	<10	<100	<10	<10	15
	2/13/03	<0.5	<5.0	<0.5	<0.5	0.8
	5/15/03	<20	<200	<20	<20	24
MW-1A (unknown)	11/7/01	<5.0	<50	<5.0	<5.0	<5.0
	1/30/02	<5.0	<50	<5.0	<5.0	<5.0
	5/29/02	<5.0	<50	<5.0	<5.0	<5.0
	8/14/02	<2.0	<20	<2.0	<2.0	<2.0
	11/15/02	<2.0	<20	<2.0	<2.0	<2.0
	2/13/03	<2.0	<20	<2.0	<2.0	<2.0
	5/15/03	--	--	--	--	--
MW-2 (15'-29')	11/7/01	<5.0	<50	<5.0	<5.0	21
	1/30/02	<5.0	<50	<5.0	<5.0	56
	5/29/02	<5.0	<50	<5.0	<5.0	32
	8/14/02	<20	<200	<20	<20	29
	11/15/02	<20	<200	<20	<20	39
	2/13/03	<20	<200	<20	<20	21
	5/15/03	<20	<200	<20	<20	26
MW-3 (15'-29')	11/7/01	<5.0	<50	<5.0	<5.0	<5.0
	1/30/02	<5.0	<50	<5.0	<5.0	<5.0
	5/29/02	<5.0	<50	<5.0	<5.0	<5.0
	8/14/02	<0.5	<5.0	<0.5	<0.5	<0.5
	11/15/02	<0.5	<5.0	<0.5	<0.5	0.5
	2/13/03	<0.5	<5.0	<0.5	<0.5	<0.5
	5/15/03	<0.5	<5.0	<0.5	<0.5	0.6
MW-4 (15'-29')	11/7/01	<5.0	<50	<5.0	<5.0	27
	1/30/02	<5.0	<50	<5.0	<5.0	42
	5/29/02	<20	<200	<20	<20	35
	8/14/02	<2.0	<20	<2.0	<2.0	28
	11/15/02	<2.0	<20	<2.0	<2.0	20
	2/13/03	<2.0	<20	<2.0	<2.0	22
	5/15/03	<2.0	<20	<2.0	<2.0	30
MW-5 (15'-29')	11/7/01	<5.0	<50	<5.0	<5.0	<5.0
	1/30/02	<20	<200	<20	<20	<20
	5/29/02	<0.5	<5.0	2.0	<0.5	0.9
	8/14/02	<0.5	<5.0	<0.5	<0.5	1.1
	11/15/02	<5.0	<50	<5.0	<5.0	<5.0
	2/13/03	<5.0	<50	<5.0	<5.0	<5.0
	5/15/03	<0.5	<5.0	<0.5	<0.5	1.6
MW-6 (15'-29')	11/7/01	<5.0	<50	<5.0	<5.0	<5.0
	1/30/02	<5.0	<50	<5.0	<5.0	<5.0
	5/29/02	<5.0	<50	<5.0	<5.0	<5.0
	8/14/02	<2.0	<20	<2.0	<2.0	<2.0
	11/15/02	<0.5	<5.0	<0.5	<0.5	<0.5
	2/13/03	<0.5	<5.0	<0.5	<0.5	0.9
	5/15/03	<0.5	<5.0	<0.5	<0.5	0.6

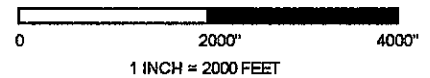
**Table 2**  
**Groundwater Sample Analytical Results for Fuel Oxygenates**  
Former E-Z Serve Location No. 100877  
525 West 'A' Street, Hayward, California

Well No.	Sampling Date	TAME (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	MTBE (µg/L)
MW-7 (10'-29')	11/7/01	--	--	--	--	--
	1/30/02	<5.0	<50	<5.0	<5.0	<5.0
	5/29/02	<0.5	<5.0	<0.5	<0.5	<0.5
	8/14/02	<0.5	<5.0	<0.5	<0.5	<0.5
	11/15/02	<0.5	<5.0	<0.5	<0.5	<0.5
	2/13/03	<0.5	<5.0	<0.5	<0.5	<0.5
	5/15/03	--	--	--	--	--
MW-12 (10'-30')	11/7/01	<0.5	<5.0	<0.5	<0.5	<0.5
	1/30/02	<0.5	<5.0	<0.5	<0.5	<0.5
	5/29/02	<0.5	<5.0	<0.5	<0.5	<0.5
	8/14/02	<0.5	<5.0	<0.5	<0.5	<0.5
	11/15/02	<0.5	<5.0	<0.5	<0.5	<0.5
	2/13/03	<0.5	<5.0	<0.5	<0.5	<0.5
	5/15/03	--	--	--	--	--
MW-13 (10'-30')	11/7/01	<0.5	<5.0	<0.5	<0.5	<0.5
	1/30/02	<0.5	<5.0	<0.5	<0.5	<0.5
	5/29/02	<0.5	<5.0	<0.5	<0.5	<0.5
	8/14/02	<0.5	<5.0	<0.5	<0.5	<0.5
	11/15/02	--	--	--	--	--
	2/13/03	Not sampled, vehicle parked over well				
MW-14 (10'-30')	11/7/01	<0.5	<5.0	<0.5	<0.5	<0.5
	1/30/02	<0.5	<5.0	<0.5	<0.5	<0.5
	5/29/02	<0.5	<5.0	<0.5	<0.5	<0.5
	8/14/02	<0.5	<5.0	<0.5	<0.5	<0.5
	11/15/02	<0.5	<5.0	<0.5	<0.5	<0.5
	2/13/03	<0.5	<5.0	<0.5	<0.5	<0.5
	5/15/03	--	--	--	--	--
EX-1 (10'-30')	8/14/02	<0.5	<5.0	<0.5	<0.5	1.4
	11/15/02	<0.5	<5.0	<0.5	<0.5	0.7
	2/13/03	<0.5	<5.0	<0.5	<0.5	0.8
	5/15/03	--	--	--	--	--

**Notes:** Analytical results performed by utilizing EPA Method 8260.  
DIPE = Di-isopropyl Ether  
ETBE = Ethyl tert-Butyl Ether  
MTBE = Methyl-tert-Butyl Ether (See Table 1 for historic results)  
TAME = tert-Amyl Methyl Ether  
TBA = tert-Butanol  
µg/L = micrograms per liter (~parts per billion)  
(15'-29') = Well screen interval (in feet)  
< = Analytical results below the given PQL.  
-- = Not sampled or analyzed.



REFERENCE: MAPTECH TERRAIN NAVIGATOR 2001, CALIFORNIA.



### VICINITY MAP

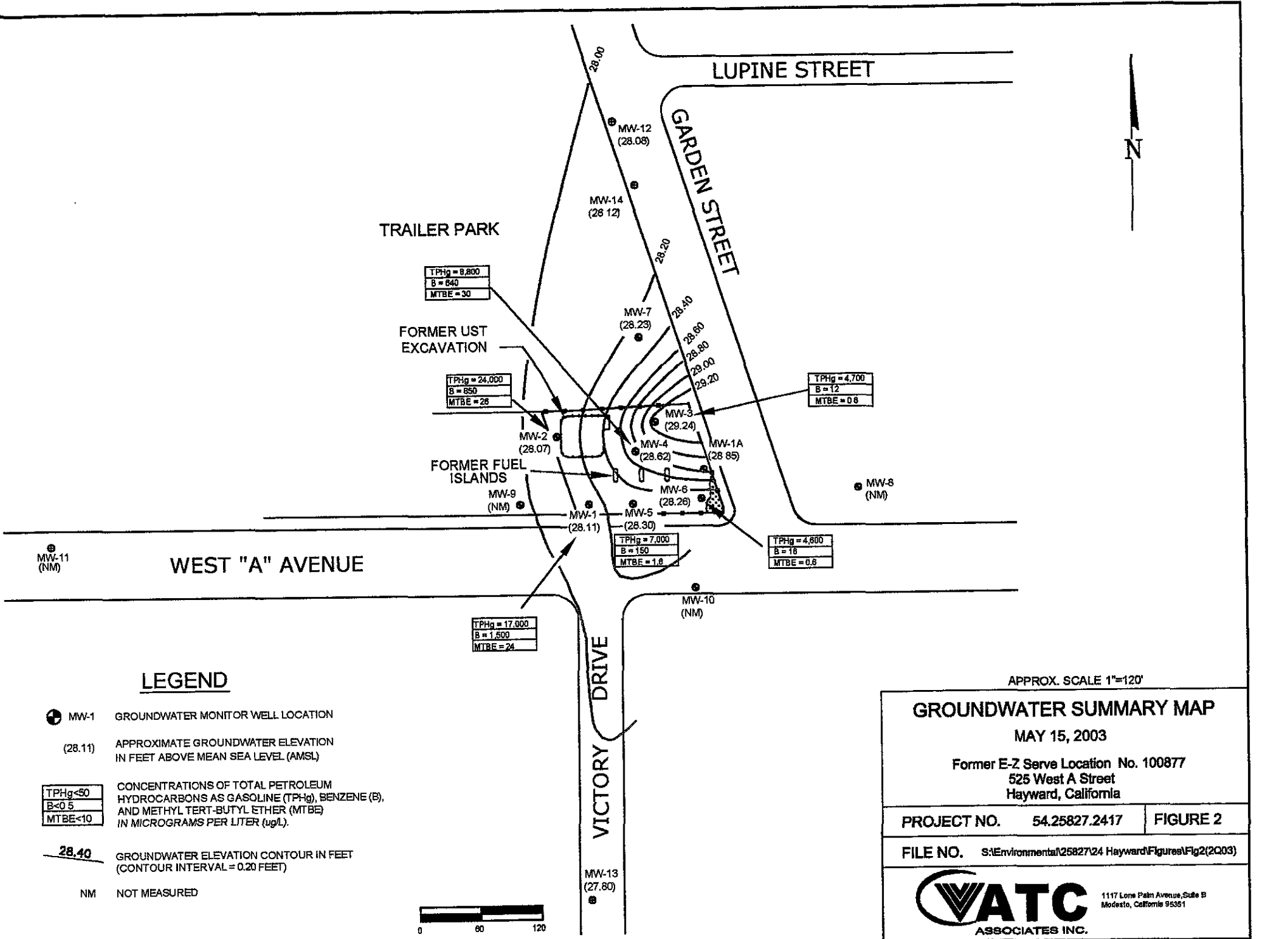
Former E-Z Serve Location No. 100877  
 525 West A Street  
 Hayward, California

PROJECT NO. 54.25827.2417      FIGURE 1

FILE NO. S:\Environmental\25827\Hayward\Figures\Figure 1



1117 Lone Palm Avenue  
 Modesto, California 95351



**APPENDICES**

**STANDARD OPERATING PROCEDURE  
GROUNDWATER MONITOR WELL PURGING AND SAMPLING  
(Includes No-Purge Sampling)**

Prior to purging the well, the static water level was measured using an electronic interface probe to evaluate the presence of any phase-separated hydrocarbons. The measurements were obtained from a reference point on the north side of the top of the well casing. Fluid measurements were recorded to the nearest 0.01-foot. Depth to groundwater was measured from all site wells on the same day. The total depth of the well was also recorded. If phase separated hydrocarbons are noted, a measurement of the apparent thickness was obtained and the well was not sampled. To prevent cross-contamination, all monitoring equipment that is in contact with groundwater was washed with Alconox<sup>®</sup> detergent and rinsed with distilled water prior to use in each well.

If well purging was required before collecting a water sample, both the static groundwater level and total depth of the well were used to calculate the volume of water in the well. Based on this data, if free floating hydrocarbons are not present, a minimum of three well volumes of water were purged from the well using a 2-inch Grundfos<sup>®</sup> submersible pump or a PVC bailer. Periodic measurements (at approximate 5-gallon intervals) of temperature, pH, and specific electrical conductivity were collected during purging. When three successive stabilized readings were obtained, the well was sampled. If the well is low yielding and is pumped or bailed dry, the well was allowed to recover at least 80% of the static groundwater level. If the well does not recover 80% within a 24-hour time frame, a sample was collected and recovery noted on the Groundwater Sampling Log. To prevent cross-contamination, equipment was washed with Alconox<sup>®</sup> detergent and rinsed with distilled water prior to use in the well. Groundwater purged from the well was stored on-site in 55-gallon drums pending proper disposition. If no purging before collecting the water samples was required, then the above purging steps were skipped.

Groundwater samples were collected from the well using a disposable polyethylene bailer. Each sample was collected in laboratory-preserved 1-liter glass bottles and in 40-milliliter volatile organic analysis (VOA) vials. Each vial was filled completely with sample and preservatives to eliminate headspace and create a positive meniscus. The vial was capped with convex Teflon<sup>®</sup> septa. Each vial was observed to ensure that no air bubbles are present within the vial. Samples were marked for identification, placed on ice, and transported to a State-certified laboratory for analysis. Chain-of-custody records were maintained and accompany all samples to the analytical laboratory.

# FIELD REPORT/DATA SHEET

Date: 5-15-03

Project Number: 54.25827.2417

Field Technician: P. Arroyo

Day: M Tu W **Th** F

DTW Order	Well ID	Diam	Loc	Exp. Cap	Total Depth	DTW Initial	DTW Final	Time Sampled	Comments		
	MW-1	4"	Good	Good	30.00	13.64	13.64	1040			
	MW-1A	2"	↓	↓	29.00	14.55	<del>18.88</del>	<del>1025</del> NS			
	MW-2	4"			30.10	15.19	15.88	1025			
	MW-3	4"			30.00	14.65	14.65	1000			
	MW-4	4"			30.00	14.14	14.14	1145			
	MW-5	4"			30.30	13.80	13.80	1105			
	MW-6	4"			29.80	14.07	14.07	1125	New Well Cap.		
	MW-7	2"			28.40	14.47	14.47	NS			
	MW-12	2"			29.60	15.17	15.17	NS			
	MW-14	2"			30.00	15.07	15.07	NS	New Well Cap.		
NOTES:	EX-1	6"					35.50	14.57	14.57	NS	
	MW-13	2"					29.70	13.17	13.17	NS	

Number of Drums Onsite

Full	Empty	TOTAL
3	0	3

Estimated Value: \_\_\_\_\_

ARE ALL DRUMS LABELLED WITH THE LABELS FACING OUT



# GROUNDWATER MONITORING WELL PURGE/SAMPLING WORK SHEET

Project Name: Former E-2 SERVE  
 Address: 525 West A St.  
Hayward, CA  
 Well Number: Mw-1  
 Development/Purge/Sampler(s): P. Arroyo

Project Number: 54,25827,2417  
 Date: 5.15.03  
 Well Lock Number: \_\_\_\_\_  
 Well Integrity: Good  
 Ambient Conditions: Cloudy

Pre-Purge DO (mg/L) N/A

Screened at		WELL VOLUME CALCULATION				
Well Casing Diameter (in.)	Total Well Depth (ft.)	Depth to Groundwater (GW)	Linear Feet of GW		Gallons Per Linear Foot	1 Well Volume (gal.)
2		-	=	X	0.17	=
3		-	=	X	0.38	=
<u>4</u>	<u>30.00</u>	<u>13.64</u>	=	<u>16.36</u>	<u>0.66</u>	= <u>10.79</u>
4.5		-	=	X	0.83	=
6		-	=	X	1.5	=

### GROUNDWATER SURFACE INSPECTION (BAILER CHECK)

Floating Product (ft.) (in.): \_\_\_\_\_ Sheen/Iridescence: \_\_\_\_\_ Odor: YES

### GROUNDWATER PURGING PURGE METHOD

Stainless Steel Bailer; Submersible Pump; Air Diaphragm Pump; Honda Pump; Other \_\_\_\_\_

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/cmhos)	Temp. (°C)	Color/Turbidity (other)
0	0	1030	7.5	1077	19.1	Cloudy
1	10.0	1032	7.3	1107	18.3	CLEAR
2	20.0	1034	7.2	1039	18.8	
3	30.0	1036	7.2	1087	18.6	↓
4						
5						
6						
7						
8						
9						
10						

Recovery Rate:

Fast

Medium

Slow

### GROUNDWATER SAMPLING

Water Level Recovery

Depth to GW (ft.)

(I) Initially 13.64

(P) After Purging 16.50

P - 0.8 (P-I) = 14.21 80% Recovery

(S) Before Sampling 13.64

(P-S) / (P-I) X 100 = 100 % Total Recovery

Sampling Equipment: Disposable Bailer

Sample Containers

No. Preservation Method/pH

1 liter (L), amber glass \_\_\_\_\_

40 ml VOA 3 HCL

500 ml polypropylene \_\_\_\_\_

Trip Blank \_\_\_\_\_

Sample Date/Time: 5.15.03 / 1040 Turbidity (NTU): N/A

Calibrate Date/Time: 5.15.03 EH (MEV): N/A

### PURGED WATER CONTAINMENT

Total drums at site: Water \_\_\_\_\_ Soil 0 Water pump through treatment system \_\_\_\_\_

Remarks: \_\_\_\_\_

# GROUNDWATER MONITORING WELL PURGE/SAMPLING WORK SHEET

Project Name: Former E-7 SERVE  
 Address: 525 West A St.  
Hayward, CA  
 Well Number: MW-2  
 Development/Purge/Sampler(s): P. Arroyo

Project Number: 54,25827,2417  
 Date: 5.15.03  
 Well Lock Number: \_\_\_\_\_  
 Well Integrity: Good  
 Ambient Conditions: Cloudy

Pre-Purge DO (mg/L) <u>N/A</u>						
WELL VOLUME CALCULATION						
Screened at Well Casing Diameter (In.)	Total Well Depth (ft.)	Depth to Groundwater (GW)	Linear Feet of GW		Gallons Per Linear Foot	1 Well Volume (gal.)
2	-	-	=	X	0.17	=
3	-	-	=	X	0.38	=
<u>4</u>	<u>30.10</u>	<u>15.19</u>	=	<u>14.91</u>	<u>0.66</u>	= <u>9.84</u>
4.5	-	-	=	X	0.83	=
6	-	-	=	X	1.5	=

### GROUNDWATER SURFACE INSPECTION (BAILER CHECK)

Floating Product (ft.) (in.): None Sheen/Iridescence: None Odor: YES

### GROUNDWATER PURGING PURGE METHOD

Stainless Steel Bailer; Submersible Pump; Air Diaphragm Pump; Honda Pump; Other \_\_\_\_\_

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/cmhos)	Temp. (°C)	Color/Turbidity (other)
0	<u>0</u>	<u>1006</u>	<u>7.8</u>	<u>1045</u>	<u>19.1</u>	<u>Turbid</u>
1	<u>10.0</u>	<u>1009</u>	<u>7.6</u>	<u>1037</u>	<u>18.7</u>	<u>CLEAR</u>
2	<u>20.0</u>	<u>1012</u>	<u>7.5</u>	<u>1058</u>	<u>18.9</u>	↓
3	<u>30.0</u>	<u>1016</u>	<u>7.5</u>	<u>1054</u>	<u>18.4</u>	
4	_____	_____	_____	_____	_____	_____
5	_____	_____	_____	_____	_____	_____
6	_____	_____	_____	_____	_____	_____
7	_____	_____	_____	_____	_____	_____
8	_____	_____	_____	_____	_____	_____
9	_____	_____	_____	_____	_____	_____
10	_____	_____	_____	_____	_____	_____

Recovery Rate:

Fast

Medium

Slow

### GROUNDWATER SAMPLING

Sampling Equipment: Disposable Bailer

#### Water Level Recovery

Depth to GW (ft.)

(I) Initially 15.19

(P) After Purging 18.65

P - 0.8 (P-I) = 15.88 80% Recovery

(S) Before Sampling 15.88

(P-S) / (P-I) X 100 = 80 % Total Recovery

#### Sample Containers

1 liter (L), amber glass

40 ml VOA

500 ml polypropylene

Trip Blank

No. Preservation Method/pH

3 HCL

Sample Date/Time: 5.15.03 / 1025 Turbidity (NTU): N/A

Calibrate Date/Time: 5.15.03 EH (MEV): N/A

### PURGED WATER CONTAINMENT

Total drums at site: Water \_\_\_\_\_ Soil  Water pump through treatment system \_\_\_\_\_

Remarks: \_\_\_\_\_

# GROUNDWATER MONITORING WELL PURGE/SAMPLING WORK SHEET

Project Name: Former E-2 SERVE  
 Address: 525 West A St.  
HAYWARD, CA  
 Well Number: HW-3  
 Development/Purge/Sampler(s): P. Arroyo

Project Number: 54.25827.2412  
 Date: 5.15.03  
 Well Lock Number: \_\_\_\_\_  
 Well Integrity: Good  
 Ambient Conditions: Cloudy

Pre-Purge DO (mg/L) N/A

Screened at		WELL VOLUME CALCULATION					
Well Casing Diameter (in.)	Total Well Depth (ft.)	Depth to Goundwater (GW)	Linear Feet of GW		Gallons Per Linear Foot	1 Well Volume (gal.)	
2		-	=	X	0.17	=	
3		-	=	X	0.38	=	
4	30.00	14.65	=	X	0.66	=	10.13
4.5		-	=	X	0.83	=	
6		-	=	X	1.5	=	

### GROUNDWATER SURFACE INSPECTION (BAILER CHECK)

Floating Product (ft.) (in.): None Sheen/Iridescence: None Odor: YES

### GROUNDWATER PURGING PURGE METHOD

Stainless Steel Bailer;  Submersible Pump;  Air Diaphragm Pump;  Honda Pump; Other \_\_\_\_\_

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/cmhos)	Temp. (°C)	Color/Turbidity (other)
0	0	0946	8.3	1269	19.8	CLEAR
1	10.0	0948	8.2	1115	19.4	↓
2	20.0	0950	8.0	1059	19.2	
3	30.0	0953	7.8	1061	19.2	
4						
5						
6						
7						
8						
9						
10						

Recovery Rate:

Fast

Medium

Slow

### GROUNDWATER SAMPLING

Sampling Equipment: Disposable Bailer

Water Level Recovery		Sample Containers		No.	Preservation Method/pH
(I) Initially	Depth to GW (ft.) <u>14.65</u>	1 liter (L), amber glass			
(P) After Purging	<u>17.70</u>	40 ml VOA		<u>3</u>	<u>HCL</u>
P - 0.8 (P-I) =	<u>15.26</u> 80% Recovery	500 ml polypropylene			
(S) Before Sampling	<u>14.65</u>	Trip Blank			
(P-S) / (P-I) X 100 =	<u>100</u> % Total Recovery				

Sample Date/Time: 5.15.03 / 1000 Turbidity (NTU): N/A

Calibrate Date/Time: 5.15.03 EH (MEV): N/A

### PURGED WATER CONTAINMENT

Total drums at site: Water \_\_\_\_\_ Soil  Water pump through treatment system \_\_\_\_\_

Remarks: \_\_\_\_\_

# GROUNDWATER MONITORING WELL PURGE/SAMPLING WORK SHEET

Project Name: Former E-2 SERVE  
 Address: 525 West A St.  
Hayward, CA  
 Well Number: MW-4  
 Development/Purge/Sampler(s): P. Arroyo

Project Number: 54,25827,2417  
 Date: 5.15.03  
 Well Lock Number: \_\_\_\_\_  
 Well Integrity: Good  
 Ambient Conditions: Cloudy

Pre-Purge DO (mg/L) <u>N/A</u>							
Screened at		WELL VOLUME CALCULATION					
Well Casing Diameter (in.)	Total Well Depth (ft.)	Depth to Groundwater (GW)	Linear Feet of GW		Gallons Per Linear Foot	1 Well Volume (gal.)	
2				X	0.17	=	
3				X	0.38	=	
<u>4</u>	<u>30.00</u>	<u>14.14</u>	<u>15.86</u>	X	<u>0.66</u>	=	<u>10.46</u>
4.5				X	0.83	=	
6				X	1.5	=	

### GROUNDWATER SURFACE INSPECTION (BAILER CHECK)

Floating Product (ft.) (in.): None Sheen/Iridescence: None Odor: YES

### GROUNDWATER PURGING PURGE METHOD

Stainless Steel Bailer; Submersible Pump; Air Diaphragm Pump; Honda Pump; Other \_\_\_\_\_

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/cmhos)	Temp. (°C)	Color/Turbidity (other)
0	<u>0</u>	<u>1130</u>	<u>7.2</u>	<u>1065</u>	<u>19.1</u>	<u>CLEAR</u>
1	<u>10.0</u>	<u>1132</u>	<u>7.1</u>	<u>1050</u>	<u>18.3</u>	↓
2	<u>20.0</u>	<u>1134</u>	<u>7.1</u>	<u>1067</u>	<u>18.7</u>	
3	<u>30.0</u>	<u>1136</u>	<u>7.1</u>	<u>1053</u>	<u>18.3</u>	
4						
5						
6						
7						
8						
9						
10						

Recovery Rate:

Fast

Medium

Slow

### GROUNDWATER SAMPLING

Sampling Equipment: Disposable Bailer

#### Water Level Recovery

Depth to GW (ft.)

(I) Initially 14.14

(P) After Purging 17.80

P - 0.8 (P-I) = 14.87 80% Recovery

(S) Before Sampling 14.14

(P-S) / (P-I) X 100 = 100 % Total Recovery

#### Sample Containers

1 liter (L), amber glass

40 ml VOA

500 ml polypropylene

Trip Blank

No. Preservation Method/pH

3 HCL

Sample Date/Time: 5.15.03 / 1145 Turbidity (NTU): N/A

Calibrate Date/Time: 5.15.03 EH (MEV): N/A

### PURGED WATER CONTAINMENT

Total drums at site: Water \_\_\_\_\_ Soil ☒ Water pump through treatment system \_\_\_\_\_

Remarks: \_\_\_\_\_

# GROUNDWATER MONITORING WELL PURGE/SAMPLING WORK SHEET

Project Name: Former E-2 SERVE  
 Address: 525 West A St.  
Hayward, CA  
 Well Number: MW-5  
 Development/Purge/Sampler(s): P. Arroyo

Project Number: 54,25827,2417  
 Date: 5.15.03  
 Well Lock Number: \_\_\_\_\_  
 Well Integrity: Good  
 Ambient Conditions: Cloudy

Pre-Purge DO (mg/L) N/A

Screened at		WELL VOLUME CALCULATION				
Well Casing Diameter (in.)	Total Well Depth (ft.)	Depth to Goundwater (GW)	Linear Feet of GW		Gallons Per Linear Foot	1 Well Volume (gal.)
2	-	-	=	X	0.17	=
3	-	-	=	X	0.38	=
<b>4</b>	30.30	13.80	=	X	0.66	= 10.89
4.5	-	-	=	X	0.83	=
6	-	-	=	X	1.5	=

### GROUNDWATER SURFACE INSPECTION (BAILER CHECK)

Floating Product (ft.) (in.): None Sheen/Iridescence: None Odor: YES

### GROUNDWATER PURGING PURGE METHOD

Stainless Steel Bailer; Submersible Pump; Air Diaphragm Pump; Honda Pump; Other \_\_\_\_\_

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/cmhos)	Temp. (°C)	Color/Turbidity (other)
0	0	1048	7.2	1105	18.5	CLEAR
1	10.0	1050	7.1	1143	18.6	↓
2	20.0	1052	7.1	1157	18.7	↓
3	30.0	1054	7.0	1129	18.7	↓
4						
5						
6						
7						
8						
9						
10						

Recovery Rate:

**Fast**

Medium

Slow

### GROUNDWATER SAMPLING

Water Level Recovery

Depth to GW (ft.)

(I) Initially 13.80

(P) After Purging 16.00

P - 0.8 (P-I) = 14.24 80% Recovery

(S) Before Sampling 13.80

(P-S) / (P-I) X 100 = 100 % Total Recovery

Sampling Equipment: Disposable Bailer

Sample Containers

1 liter (L), amber glass

40 ml VOA

500 ml polypropylene

Trip Blank

No. Preservation Method/pH

3 HCL

Sample Date/Time: 5.15.03 / 1105 Turbidity (NTU): N/A

Calibrate Date/Time: 5.15.03 EH (MEV): N/A

### PURGED WATER CONTAINMENT

Total drums at site: Water \_\_\_\_\_ Soil 0 Water pump through treatment system \_\_\_\_\_

Remarks: \_\_\_\_\_

# GROUNDWATER MONITORING WELL PURGE/SAMPLING WORK SHEET

Project Name: Former E-2 SERVE  
 Address: 525 West A St.  
Hayward, CA  
 Well Number: MW-6  
 Development/Purge/Sampler(s): P. Arroyo

Project Number: 5425827.2417  
 Date: 5.15.03  
 Well Lock Number: \_\_\_\_\_  
 Well Integrity: Good  
 Ambient Conditions: Cloudy

Pre-Purge DO (mg/L) N/A

Screened at		WELL VOLUME CALCULATION				
Well Casing Diameter (in.)	Total Well Depth (ft.)	Depth to Groundwater (GW)	Linear Feet of GW		Gallons Per Linear Foot	1 Well Volume (gal.)
2	-	-	=	X	0.17	=
3	-	-	=	X	0.38	=
<u>4</u>	<u>29.80</u>	<u>14.07</u>	=	<u>15.73</u>	<u>0.66</u>	= <u>10.38</u>
4.5	-	-	=	X	0.83	=
6	-	-	=	X	1.5	=

### GROUNDWATER SURFACE INSPECTION (BAILER CHECK)

Floating Product (ft.) (in.): None Sheen/Iridescence: None Odor: YES

### GROUNDWATER PURGING PURGE METHOD

Stainless Steel Bailer; Submersible Pump; Air Diaphragm Pump; Honda Pump; Other \_\_\_\_\_

Stagnant Volumes Purged	Volume Purged (gal.)	Time	pH	Conductivity (µs/cmhos)	Temp. (°C)	Color/Turbidity (other)
0	0	1110	7.2	1132	17.7	Turbid
1	10.0	1113	7.2	1155	18.1	CLEAR
2	20.0	1116	7.1	1160	19.0	
3	30.0	1118	7.0	1137	18.6	↓
4						
5						
6						
7						
8						
9						
10						

Recovery Rate:

Fast

Medium

Slow

### GROUNDWATER SAMPLING

Sampling Equipment: Disposable Bailer

#### Water Level Recovery

Depth to GW (ft.)

(I) Initially 14.07

(P) After Purging 15.00

P - 0.8 (P-I) = 14.25 80% Recovery

(S) Before Sampling 14.07

(P-S) / (P-I) X 100 = 100 % Total Recovery

#### Sample Containers

1 liter (L), amber glass

40 ml VOA

500 ml polypropylene

Trip Blank

No. Preservation Method/pH

3 HCL

Sample Date/Time: 5.15.03 / 1125 Turbidity (NTU): N/A

Calibrate Date/Time: 5.15.03 EH (MEV): N/A

### PURGED WATER CONTAINMENT

Total drums at site: Water \_\_\_\_\_ Soil Ø Water pump through treatment system \_\_\_\_\_

Remarks: New Well Cap.





6602 Owens Drive Suite 100  
 Pleasanton, CA 94588  
 Main Line: (925) 460-5300  
 Facsimile: (925) 463-2559

# CHAIN OF CUSTODY FORM

Project Name: Former G2 Site Client: \_\_\_\_\_  
 Project Number: 0428327-2417 Task: 75004  
 Global I.D.: \_\_\_\_\_  
 Project Address: 525 West A Street Hayward, CA  
 Laboratory: ZyMax Contact: (925) 544-4636  
 Lab Address/Phone: 71 Zaca Lane Danville, CA  
 ATC Project Manager: Jeanne Homsey  
 ATC PM Ph. No: (925) 225-2111 / 579-2221 Email: Homsey.J@atc-enviro.com  
 ATC Sampler: P. Arayo Phone: (925) 225-7713

Turnaround Time: 7 day (working days)  
 10 day 3 day 2-8 hr  
 5 day 2 day other

## Analyses Requested

ATC Sample ID	Sample Information			Container Information			Field Pt. ID - Check if same as Sample ID	TPH/TEX/MTBE (8010M/8021)	Confirm MTBE by GC/MS	Fuel/Oxygens (8260B)	TPHd (8015M)	HVOCs (8010)	SVOC's (8270)	VOCs (8260)	PP Metals (low detect) (7000/8010)	Cyanide Total (335.2)	TPH/TEX/MTBE (8015M/8260B)	TPH/TEX/5 Fuel Oxy's (8260B)	TPH/TEX/5 Fuel Oxy's/2 DCA & EDI (8260B)		
	Date	Time	Matrix			No.														Type	Preservative
			Soils	Water	Vapor																
MW-1	5/15/03	1090	X			3	VOA	HCL											X		
MW-2		1025	X																X		
MW-3		1000	X																X		
MW-4		1145	X																X		
MW-5		1155	X																X		
MW-6		1125	X																X		

Additional Comments: ENT FORM 1

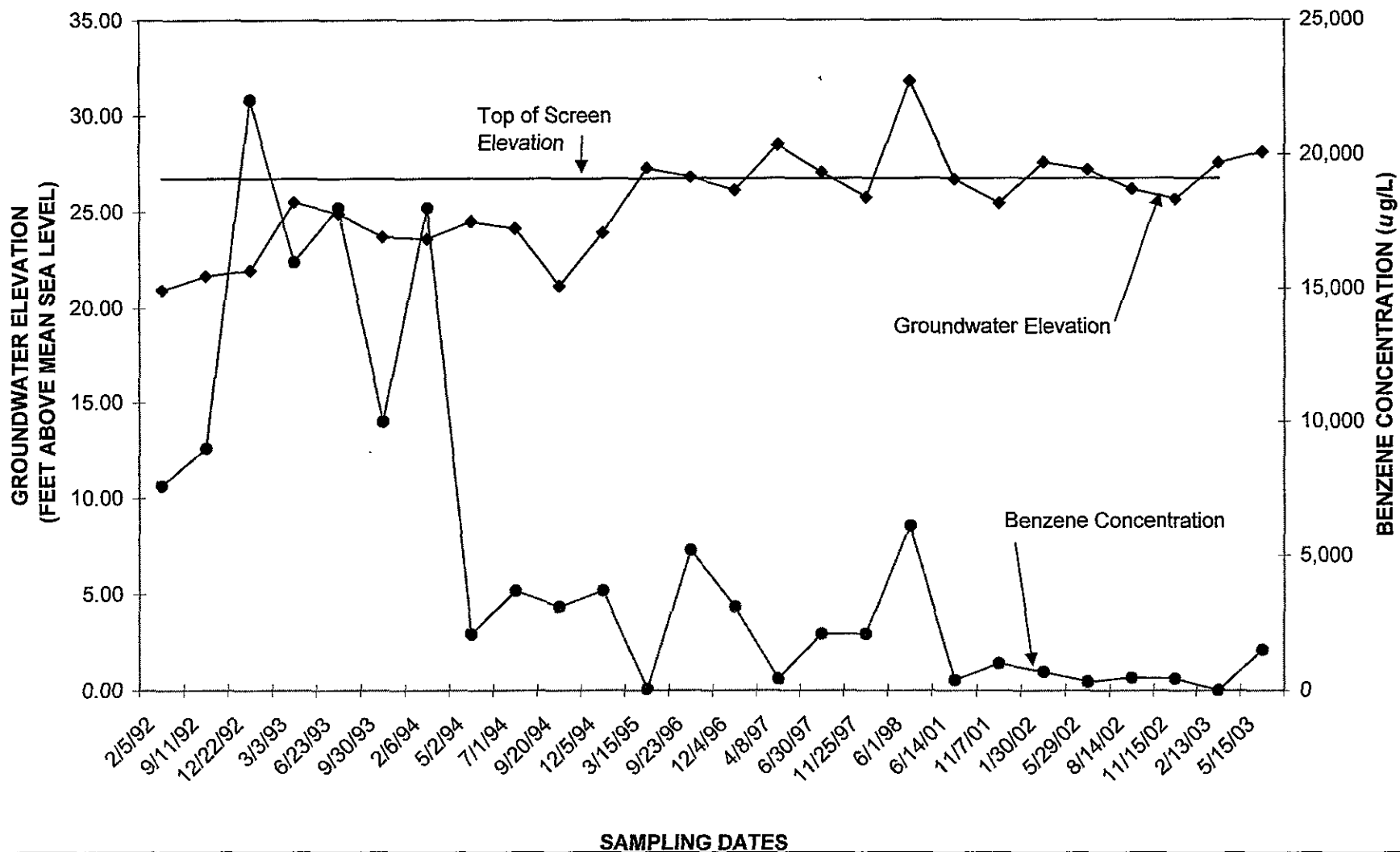
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Relinquished By: [Signature] Date/Time: 5/16/03 10:54 AM Received By: Jim Hugo 12 MAX Date/Time: 5/16/03 10:54 AM  
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 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

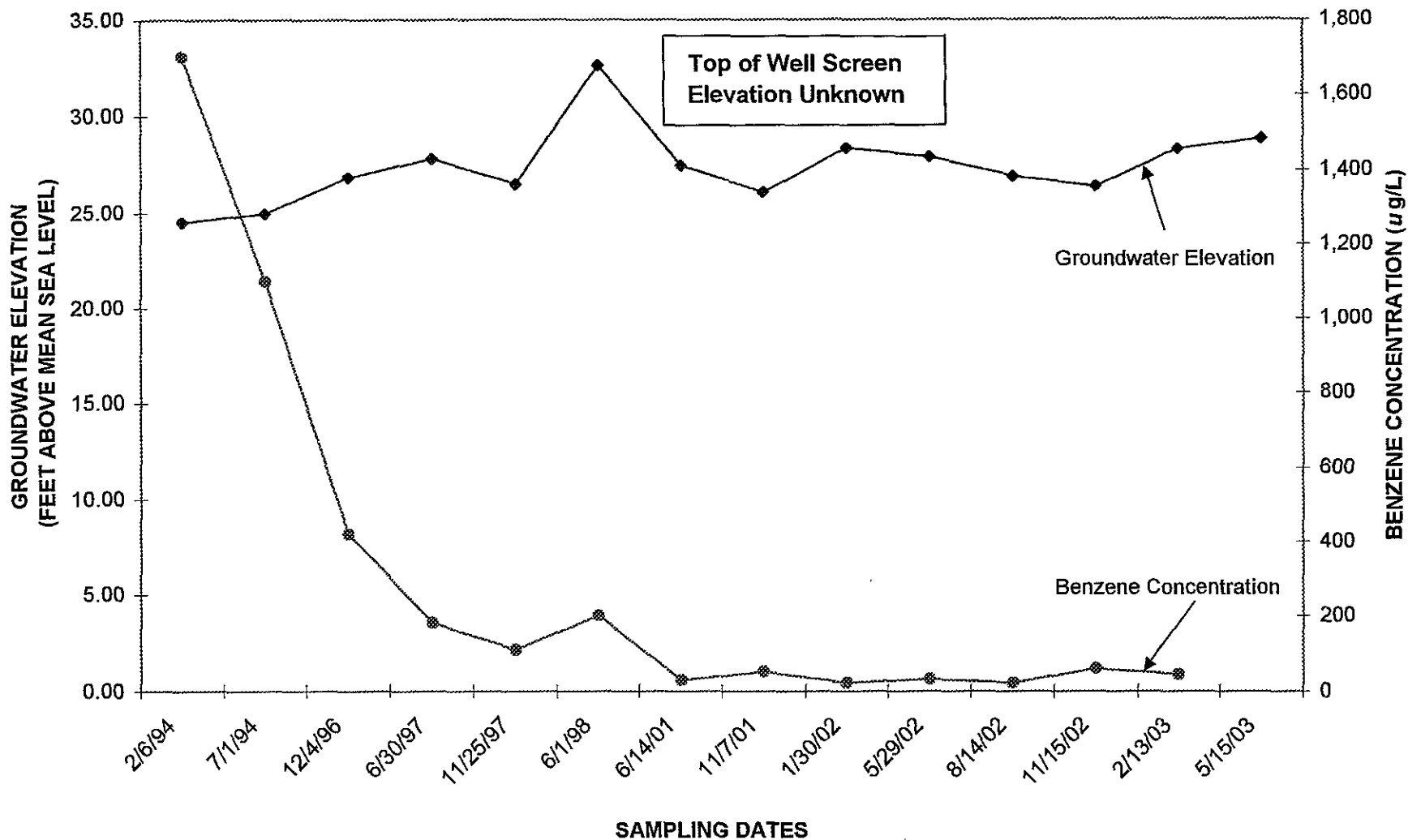
Sample Condition: Good? Yes  No  On Ice? Yes  No  Cooler Temp: \_\_\_\_\_ Transportation Method: \_\_\_\_\_ Page 2 of 2



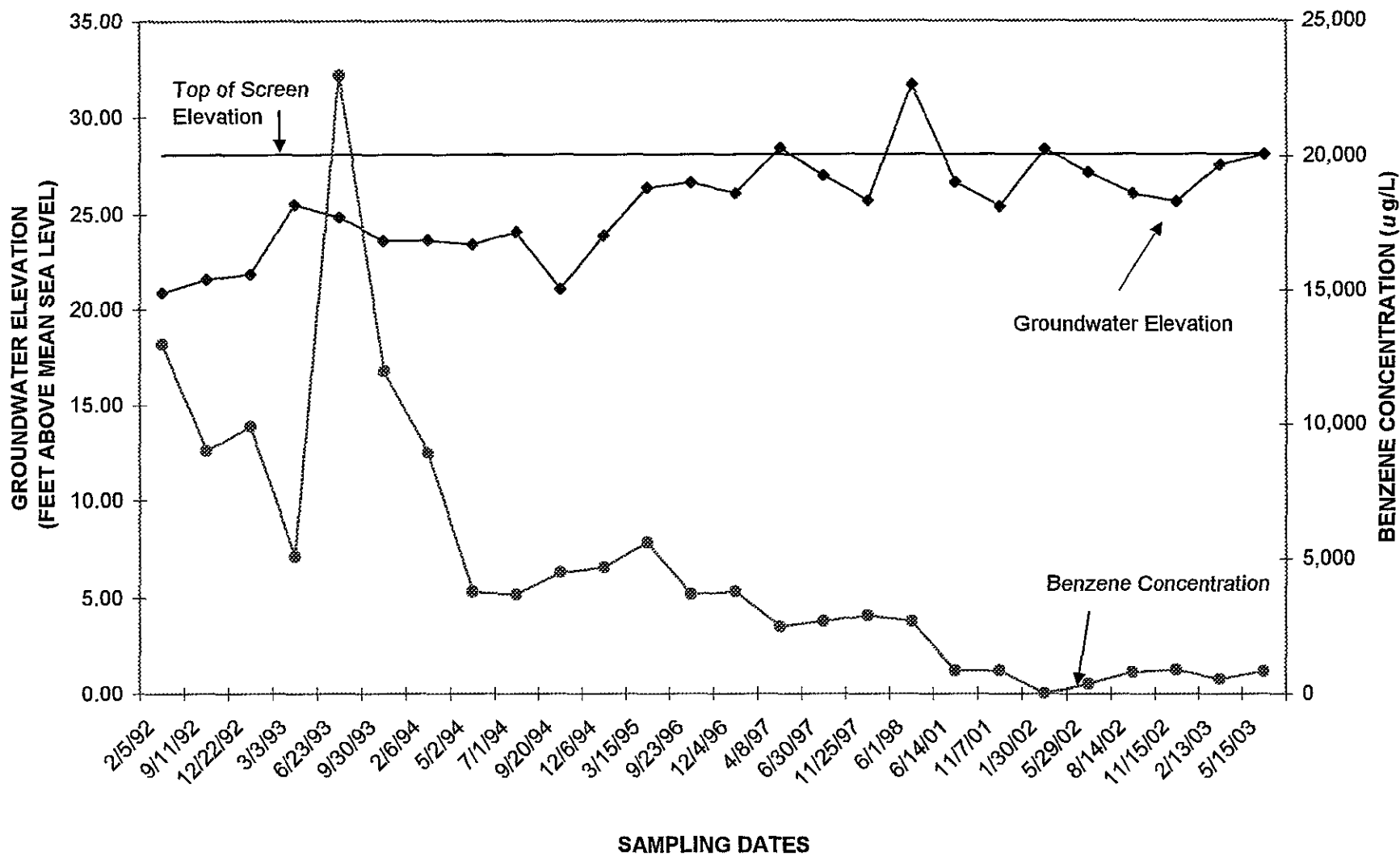
**GROUNDWATER HYDROGRAPH FOR MW-1  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**



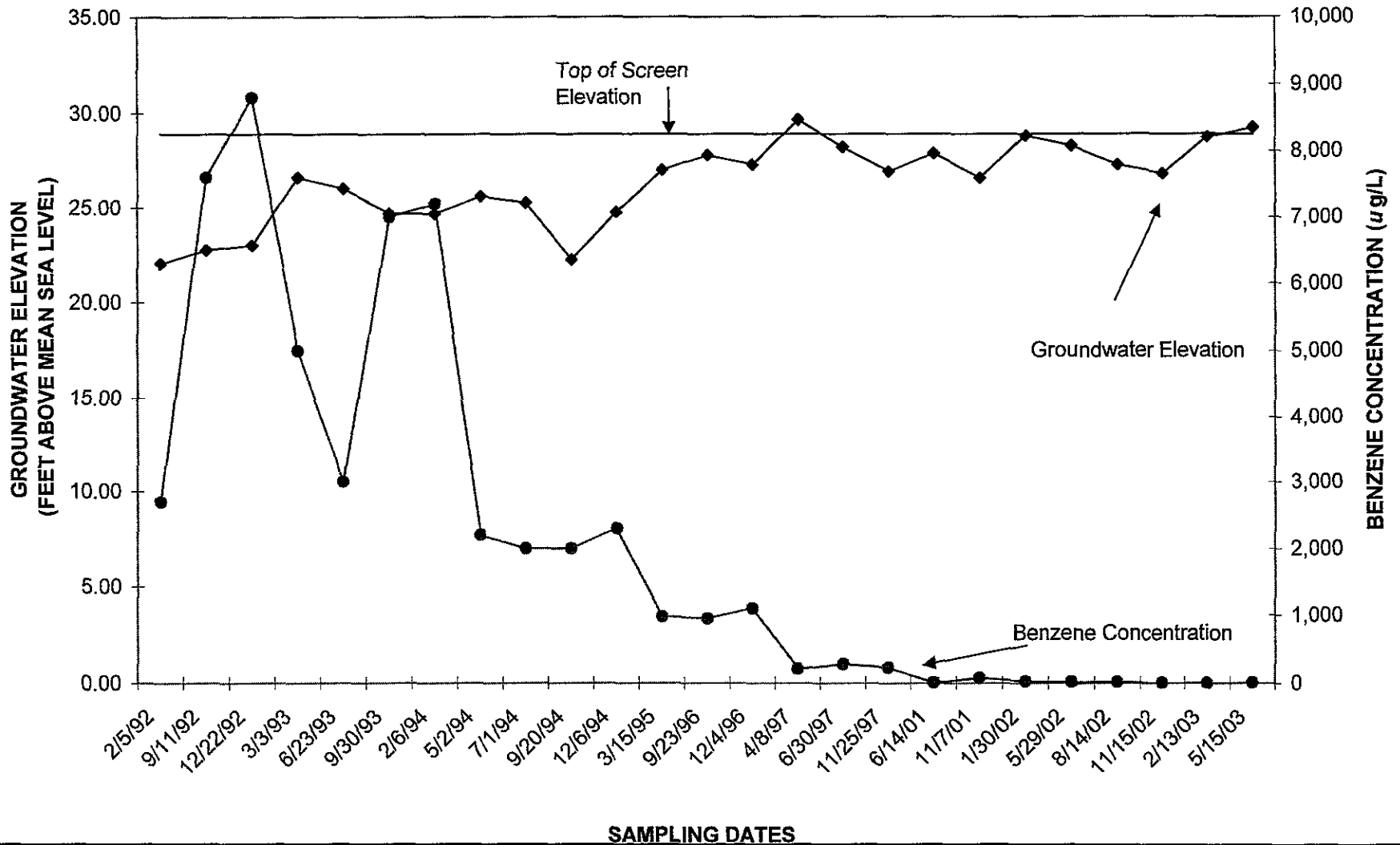
**GROUNDWATER HYDROGRAPH FOR MW-1A  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**



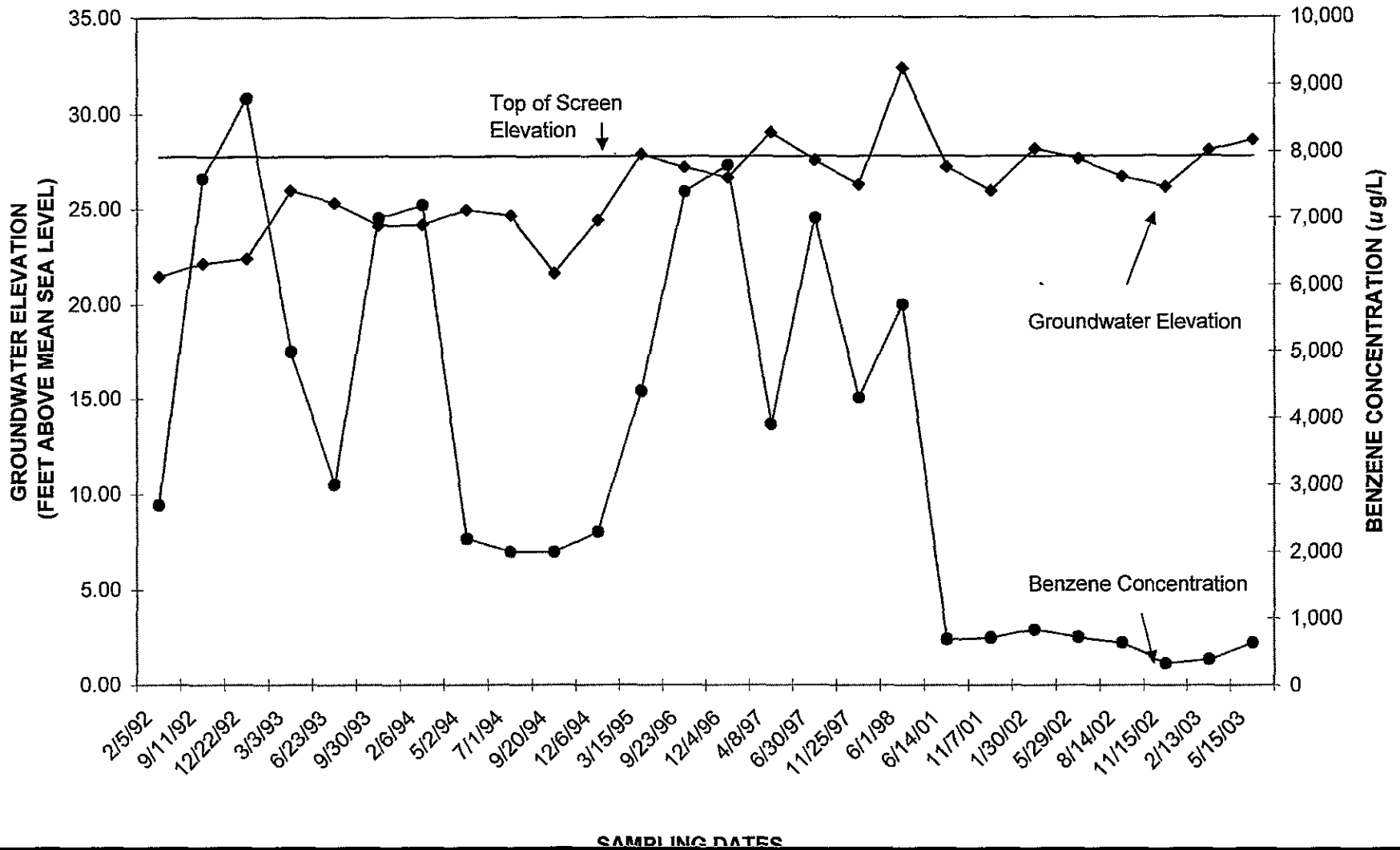
**GROUNDWATER HYDROGRAPH FOR MW-2  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**



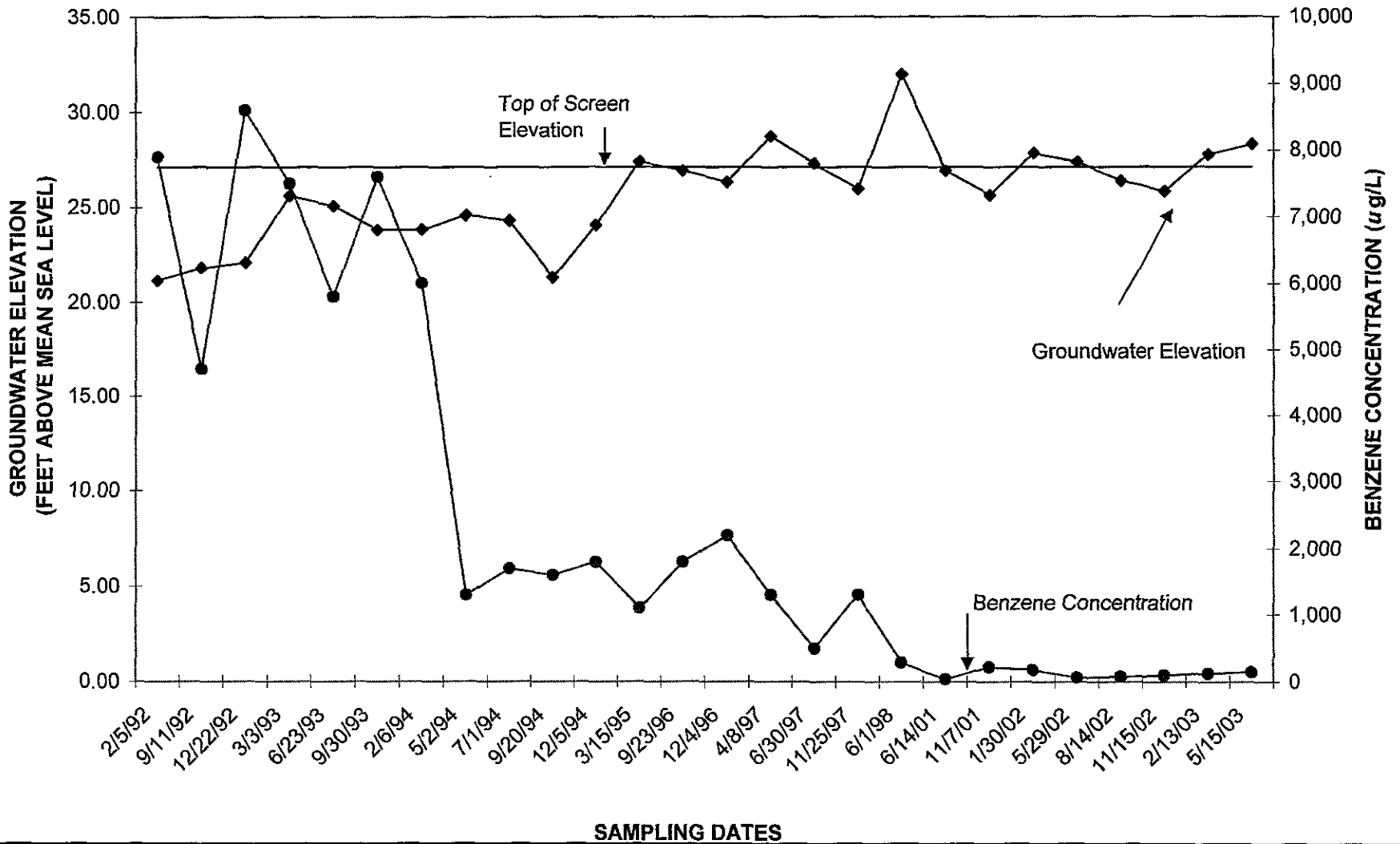
**GROUNDWATER HYDROGRAPH FOR MW-3  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**



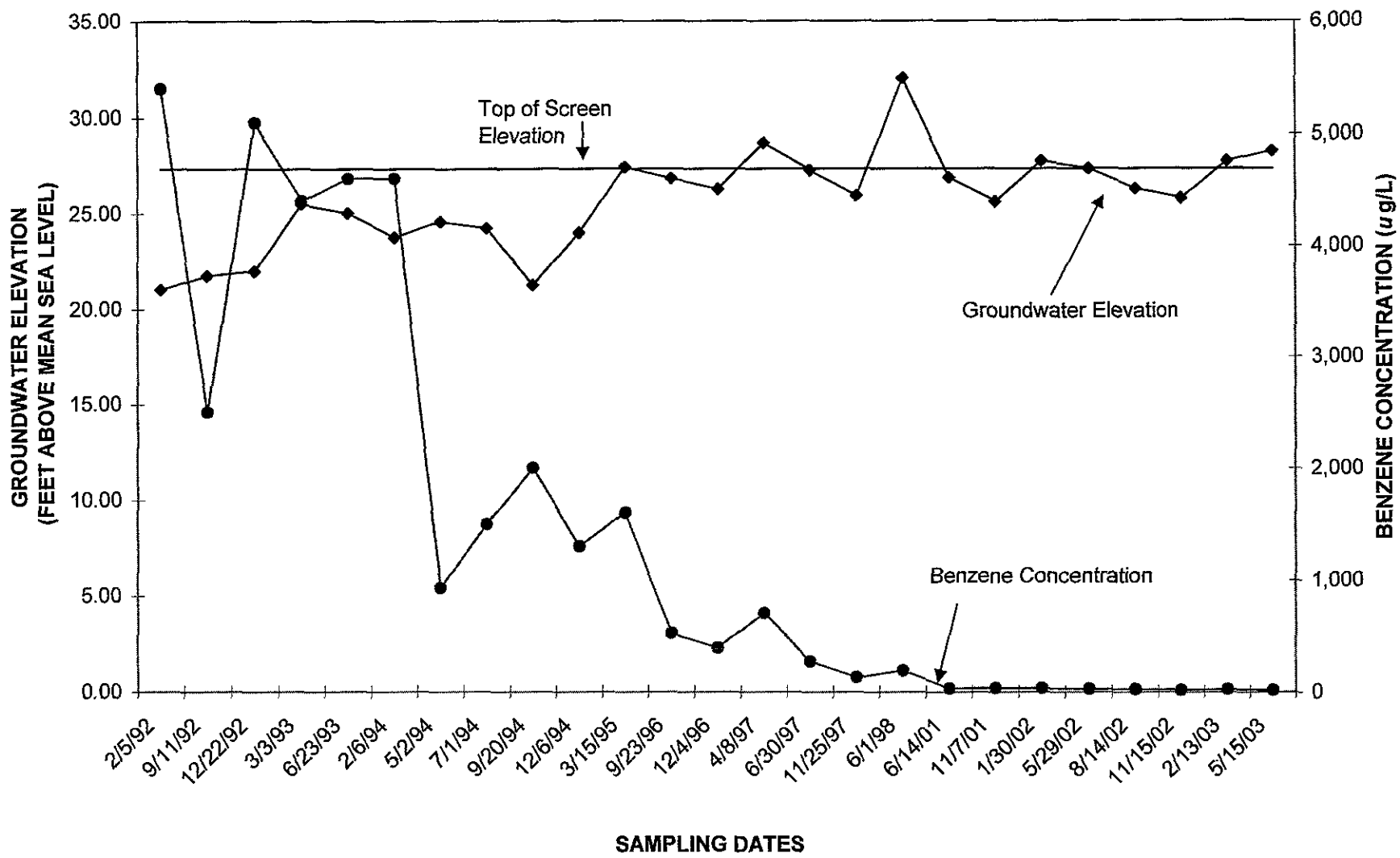
**GROUNDWATER HYDROGRAPH FOR MW-4  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**



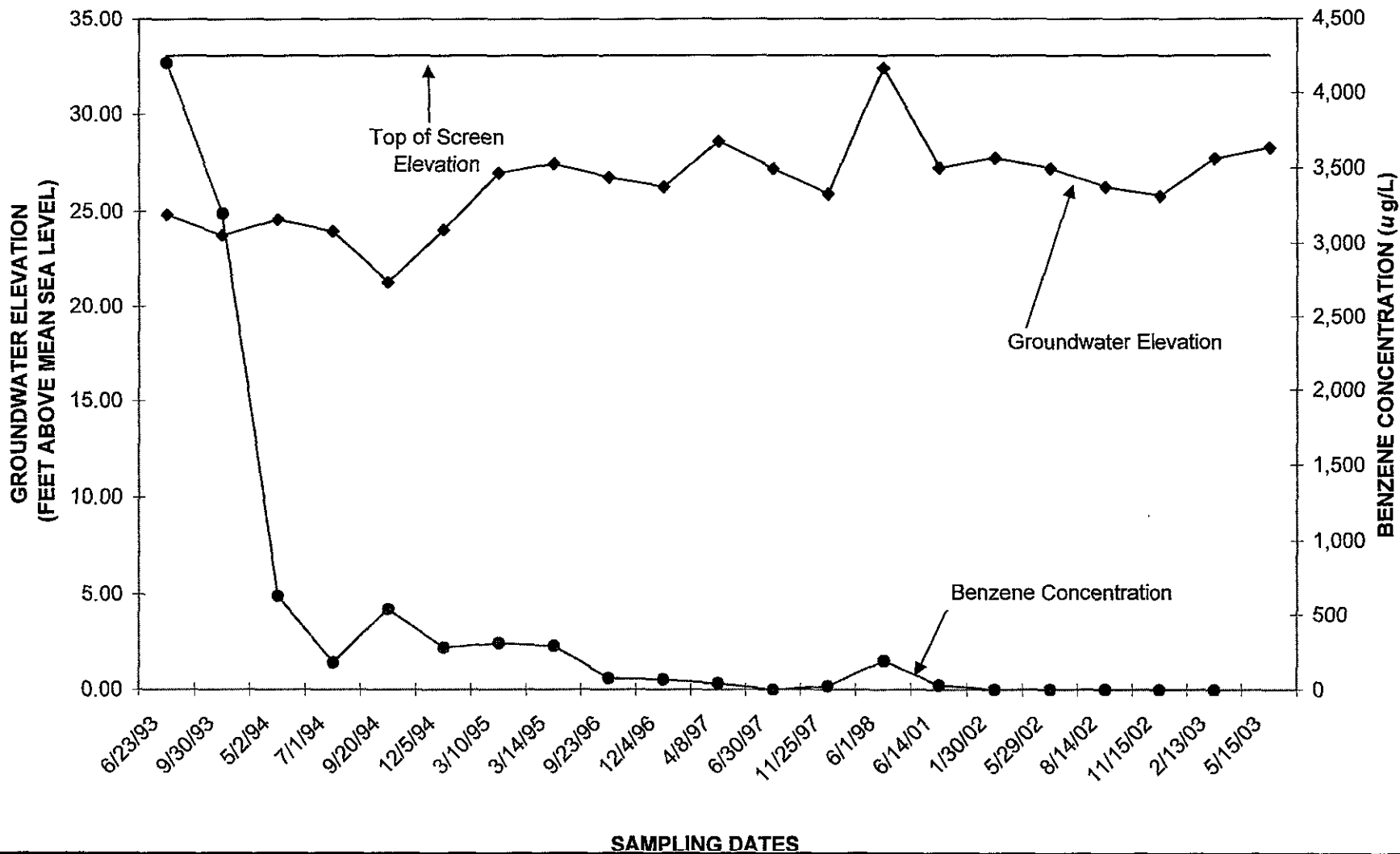
**GROUNDWATER HYDROGRAPH FOR MW-5  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**



**GROUNDWATER HYDROGRAPH FOR MW-6  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**

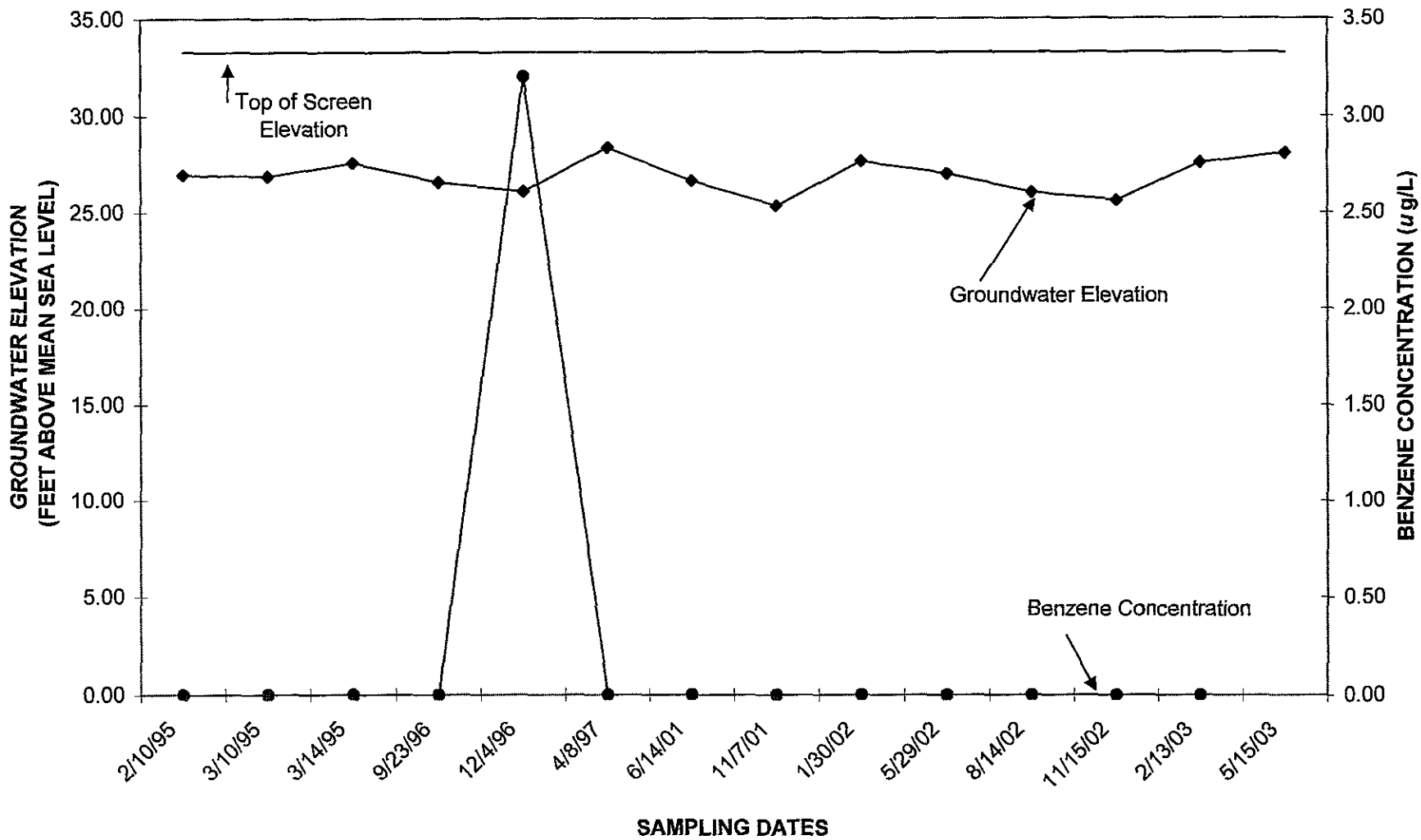


**GROUNDWATER HYDROGRAPH FOR MW-7  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**

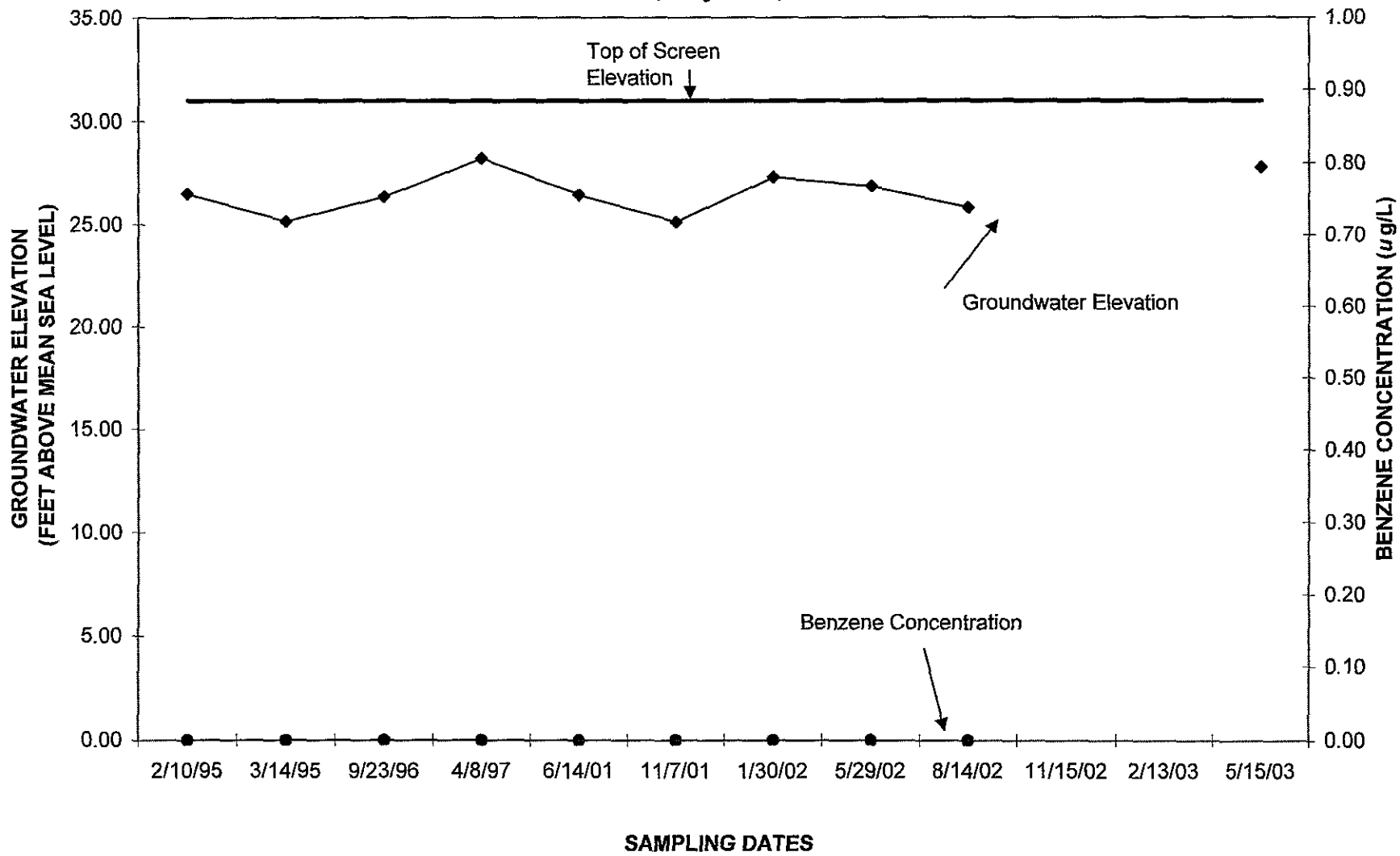




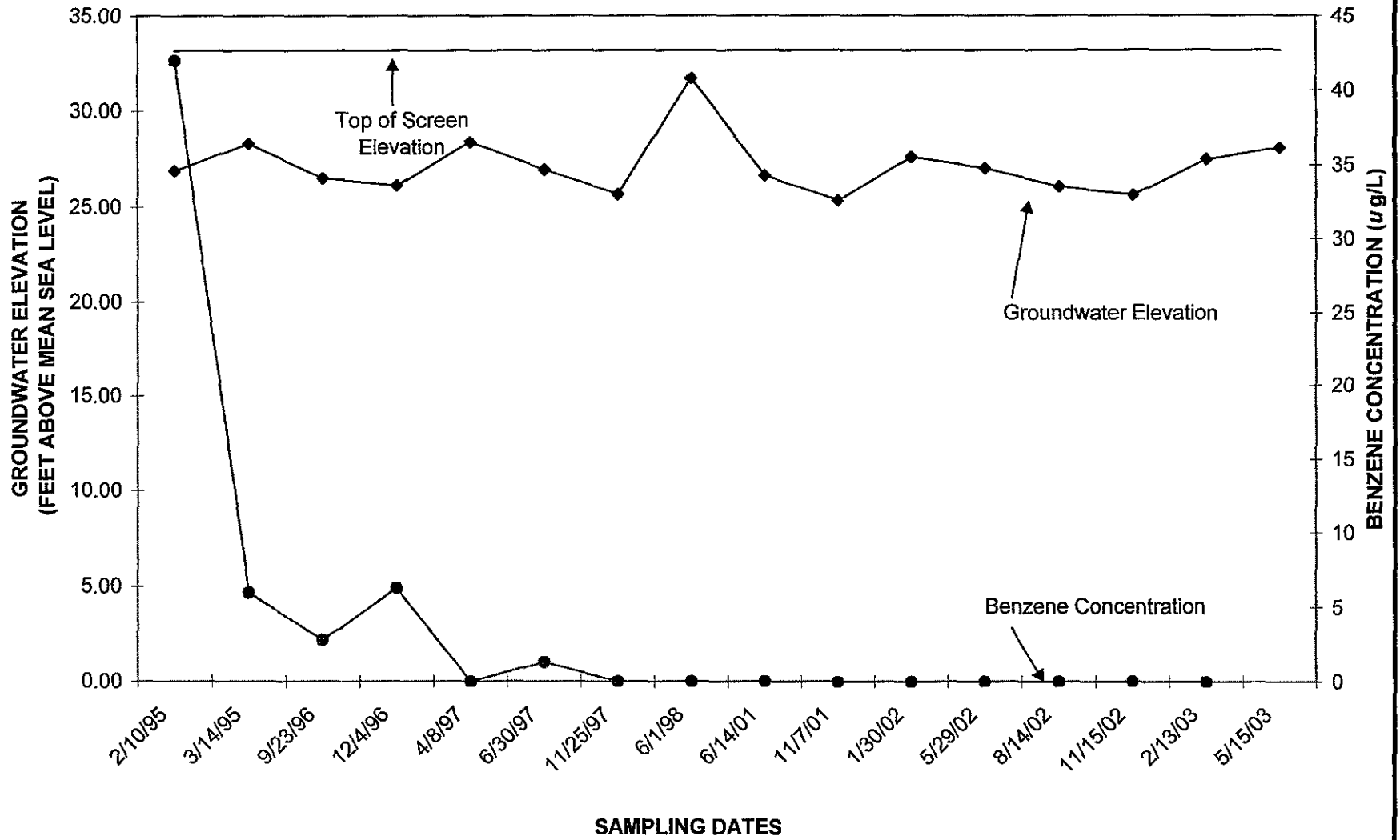
**GROUNDWATER HYDROGRAPH FOR MW-12  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California**



GROUNDWATER HYDROGRAPH FOR MW-13  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California



GROUNDWATER HYDROGRAPH FOR MW-14  
FORMER E-Z SERVE LOCATION NO. 100877  
525 W. 'A' Street, Hayward, California



**Client:** Jeanne Homsey  
 ATC Associates, Inc.  
 1117 Lone Palm Ave., Ste. B  
 Modesto, CA 95351

**Lab Number:** 31729-1  
**Collected:** 05/15/03  
**Received:** 05/16/03  
**Matrix:** Aqueous

**Project:** EZ Serve #100877  
**Project Number:** EZS2417  
**Collected by:** P. Arroyo

**Sample Description:**  
 MW-1  
**Analyzed:** 05/21/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	20.	1500.
Toluene	20.	42.
Ethylbenzene	20.	1400.
Xylenes	20.	900.
t-Amyl Methyl Ether (TAME)	20.	ND
t-Butyl Alcohol (TBA)	200.	ND
Diisopropyl Ether (DIPE)	20.	ND
Ethyl-t-Butyl Ether (ETBE)	20.	ND
Methyl-t-Butyl Ether (MTBE)	20.	24.
Percent Surrogate Recovery		95

**TOTAL PETROLEUM HYDROCARBONS**

Total Petroleum Hydrocarbons	2000.	17000.
BTX as a Percent of Fuel		14

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

Note: Analytical range is C4-C12.

Note: TPH quantitated against gasoline.

Note: Oxygenates not included in TPH result.

VA80521  
 MSD #8  
 31729-1.xls  
 ES/ash/pv/ses/dk

Submitted by,  
 ZymaX envirotechnology, inc.

  
 Erin Stagaard  
 Project Manager



REPORT OF ANALYTICAL RESULTS

Client: Jeanne Homsey  
ATC Associates, Inc.  
1117 Lone Palm Ave., Ste. B  
Modesto, CA 95351

Lab Number: 31729-2  
Collected: 05/15/03  
Received: 05/16/03  
Matrix: Aqueous

Project: EZ Serve #100877  
Project Number: EZS2417  
Collected by: P. Arroyo

Sample Description:  
MW-2  
Analyzed: 05/21/03  
Method: See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	20.	850.
Toluene	20.	22.
Ethylbenzene	20.	1600.
Xylenes	20.	3000.
t-Amyl Methyl Ether (TAME)	20.	ND
t-Butyl Alcohol (TBA)	200.	ND
Diisopropyl Ether (DIPE)	20.	ND
Ethyl-t-Butyl Ether (ETBE)	20.	ND
Methyl-t-Butyl Ether (MTBE)	20.	26.
Percent Surrogate Recovery		93

TOTAL PETROLEUM HYDROCARBONS

Total Petroleum Hydrocarbons	2000.	24000.
BTX as a Percent of Fuel		16

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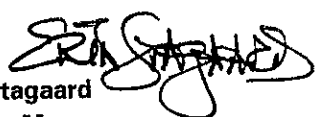
\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

- Note: Analyzed by EPA 8260 and GC/MS Combination.
- Note: Analytical range is C4-C12.
- Note: TPH quantitated against gasoline.
- Note: Oxygenates not included in TPH result.

VA80521  
MSD #8  
31729-2.xls  
ES/ash/pv/ses/dk

Submitted by,  
ZymaX envirotechnology, inc.

  
Erin Stagaard  
Project Manager

**Client:** Jeanne Homsey  
 ATC Associates, Inc.  
 1117 Lone Palm Ave., Ste. B  
 Modesto, CA 95351

**Lab Number:** 31729-3  
**Collected:** 05/15/03  
**Received:** 05/16/03  
**Matrix:** Aqueous

**Project:** EZ Serve #100877  
**Project Number:** EZS2417  
**Collected by:** P. Arroyo

**Sample Description:**  
 MW-3  
**Analyzed:** 05/27/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	0.5	12.
Toluene	0.5	ND
Ethylbenzene	0.5	200.
Xylenes	0.5	83.
t-Amyl Methyl Ether (TAME)	0.5	ND
t-Butyl Alcohol (TBA)	5.0	ND
Diisopropyl Ether (DIPE)	0.5	ND
Ethyl-t-Butyl Ether (ETBE)	0.5	ND
Methyl-t-Butyl Ether (MTBE)	0.5	0.6
Percent Surrogate Recovery		101

**TOTAL PETROLEUM HYDROCARBONS**

Total Petroleum Hydrocarbons	50.	4700.
BTX as a Percent of Fuel		2

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

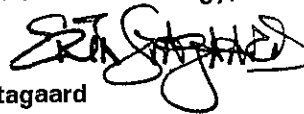
Note: Analytical range is C4-C12.

Note: TPH quantitated against gasoline.

Note: Oxygenates not included in TPH result.

VAA60527  
 MSD #6  
 31729-3.xls  
 ES/ash/pv/ses/jp

Submitted by,  
 ZymaX envirotechnology, inc.



Erin Stagaard  
 Project Manager

**Client:** Jeanne Homsey  
 ATC Associates, Inc.  
 1117 Lone Palm Ave., Ste. B  
 Modesto, CA 95351

**Lab Number:** 31729-4  
**Collected:** 05/15/03  
**Received:** 05/16/03  
**Matrix:** Aqueous

**Project:** EZ Serve #100877  
**Project Number:** EZS2417  
**Collected by:** P. Arroyo

**Sample Description:** MW-4  
**Analyzed:** 05/23/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	2.0	640.
Toluene	2.0	49.
Ethylbenzene	2.0	580.
Xylenes	2.0	620.
t-Amyl Methyl Ether (TAME)	2.0	ND
t-Butyl Alcohol (TBA)	20.	ND
Diisopropyl Ether (DIPE)	2.0	ND
Ethyl-t-Butyl Ether (ETBE)	2.0	ND
Methyl-t-Butyl Ether (MTBE)	2.0	30.
Percent Surrogate Recovery		101

**TOTAL PETROLEUM HYDROCARBONS**

Total Petroleum Hydrocarbons	200.	8800.
BTX as a Percent of Fuel		15

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

Note: Analytical range is C4-C12.

Note: TPH quantitated against gasoline.

Note: Oxygenates not included in TPH result.

VAI60523  
 MSD #6  
 31729-4.xls  
 ES/ash/pv/jp

Submitted by,  
 ZymaX envirotechnology, inc.

  
 Erin Stagaard  
 Project Manager

**Client:** Jeanne Homsey  
 ATC Associates, Inc.  
 1117 Lone Palm Ave., Ste. B  
 Modesto, CA 95351

**Lab Number:** 31729-5  
**Collected:** 05/15/03  
**Received:** 05/16/03  
**Matrix:** Aqueous

**Project:** EZ Serve #100877  
**Project Number:** EZS2417  
**Collected by:** P. Arroyo

**Sample Description:**  
 MW-5  
**Analyzed:** 05/28/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	0.5	150.
Toluene	0.5	1.3
Ethylbenzene	0.5	300.
Xylenes	0.5	150.
t-Amyl Methyl Ether (TAME)	0.5	ND
t-Butyl Alcohol (TBA)	5.0	ND
Diisopropyl Ether (DIPE)	0.5	ND
Ethyl-t-Butyl Ether (ETBE)	0.5	ND
Methyl-t-Butyl Ether (MTBE)	0.5	1.6
Percent Surrogate Recovery		105

**TOTAL PETROLEUM HYDROCARBONS**

Total Petroleum Hydrocarbons	50.	7000.
BTX as a Percent of Fuel		4

ZyMaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

Note: Analytical range is C4-C12.

Note: TPH quantitated against gasoline.

Note: Oxygenates not included in TPH result.

VAI60528  
 MSD #6  
 31729-5.xls  
 ES/ash/pv/ses/ra

Submitted by,  
 ZyMaX envirotechnology, inc.



Erin Stagaard  
 Project Manager



**Client:** Jeanne Homsey  
 ATC Associates, Inc.  
 1117 Lone Palm Ave., Ste. B  
 Modesto, CA 95351

**Lab Number:** 31729-6  
**Collected:** 05/15/03  
**Received:** 05/16/03  
**Matrix:** Aqueous

**Project:** EZ Serve #100877  
**Project Number:** EZS2417  
**Collected by:** P. Arroyo

**Sample Description:**  
 MW-6  
**Analyzed:** 05/27/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	0.5	16.
Toluene	0.5	4.4
Ethylbenzene	0.5	70.
Xylenes	0.5	17.
t-Amyl Methyl Ether (TAME)	0.5	ND
t-Butyl Alcohol (TBA)	5.0	ND
Diisopropyl Ether (DIPE)	0.5	ND
Ethyl-t-Butyl Ether (ETBE)	0.5	ND
Methyl-t-Butyl Ether (MTBE)	0.5	0.6
Percent Surrogate Recovery		110

**TOTAL PETROLEUM HYDROCARBONS**

Total Petroleum Hydrocarbons	50.	4600.
BTX as a Percent of Fuel		<1

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

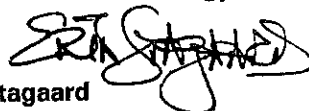
Note: Analytical range is C4-C12.

Note: TPH quantitated against gasoline.

Note: Oxygenates not included in TPH result.

VAI60527  
 MSD #6  
 31729-6.xls  
 ES/ash/pv/ses/jp

Submitted by,  
 ZymaX envirotechnology, inc.



Erin Stagaard  
 Project Manager

**Client:**  
ZymaX envirotechnology, inc.  
71 Zaca Lane, Suite 110  
San Luis Obispo, CA 93401

**Lab Number:** BLK VA80521  
**Collected:**  
**Received:**  
**Matrix:** Aqueous

**Project:**  
**Project Number:**  
**Collected by:**

**Sample Description:** Instrument Blank  
**Analyzed:** 05/21/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	0.5	ND
Toluene	0.5	ND
Ethylbenzene	0.5	ND
Xylenes	0.5	ND
t-Amyl Methyl Ether (TAME)	0.5	ND
t-Butyl Alcohol (TBA)	5.0	ND
Diisopropyl Ether (DIPE)	0.5	ND
Ethyl-t-Butyl Ether (ETBE)	0.5	ND
Methyl-t-Butyl Ether (MTBE)	0.5	ND
Percent Surrogate Recovery		96

**TOTAL PETROLEUM HYDROCARBONS**

Gasoline	50.	ND
BTX as a Percent of Fuel		N/A

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

Submitted by,  
ZymaX envirotechnology, inc.



Erin Stagaard  
Project Manager

VA80521  
MSD #8  
VA80521b.xls  
ES/ash/pv/dk

**Client:**  
ZymaX envirotechnology, inc.  
71 Zaca Lane, Suite 110  
San Luis Obispo, CA 93401

**Lab Number:** BLK VAI60523  
**Collected:**  
**Received:**  
**Matrix:** Aqueous

**Project:**  
**Project Number:**  
**Collected by:**

**Sample Description:** Instrument Blank  
**Analyzed:** 05/23/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	0.5	ND
Toluene	0.5	ND
Ethylbenzene	0.5	ND
Xylenes	0.5	ND
t-Amyl Methyl Ether (TAME)	0.5	ND
t-Butyl Alcohol (TBA)	5.0	ND
Diisopropyl Ether (DIPE)	0.5	ND
Ethyl-t-Butyl Ether (ETBE)	0.5	ND
Methyl-t-Butyl Ether (MTBE)	0.5	ND
Percent Surrogate Recovery		97

**TOTAL PETROLEUM HYDROCARBONS**

Gasoline	50.	ND
BTX as a Percent of Fuel		N/A

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

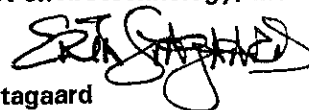
\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

VAI60523  
MSD #6  
AI60523b.xls  
ES/ash/pv/ra

Submitted by,  
ZymaX envirotechnology, inc.



Erin Stagaard  
Project Manager

**Client:**  
ZymaX envirotechnology, inc.  
71 Zaca Lane, Suite 110  
San Luis Obispo, CA 93401

**Lab Number:** BLK VAA60527  
**Collected:**  
**Received:**  
**Matrix:** Aqueous

**Project:**  
  
**Project Number:**  
**Collected by:**

**Sample Description:** Instrument Blank  
**Analyzed:** 05/27/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	0.5	ND
Toluene	0.5	ND
Ethylbenzene	0.5	ND
Xylenes	0.5	ND
t-Amyl Methyl Ether (TAME)	0.5	ND
t-Butyl Alcohol (TBA)	5.0	ND
Diisopropyl Ether (DIPE)	0.5	ND
Ethyl-t-Butyl Ether (ETBE)	0.5	ND
Methyl-t-Butyl Ether (MTBE)	0.5	ND
Percent Surrogate Recovery		101

TOTAL PETROLEUM HYDROCARBONS

Gasoline	50.	ND
BTX as a Percent of Fuel		N/A

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

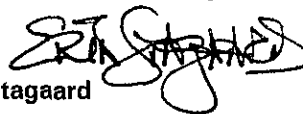
\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

VAA60527  
MSD #6  
AA60527b.xls  
ES/ash/pv/ra

Submitted by,  
ZymaX envirotechnology, inc.



Erin Stagaard  
Project Manager



QUALITY ASSURANCE REPORT  
BLANK RESULTS

**Client:**  
ZymaX envirotechnology, inc.  
71 Zaca Lane, Suite 110  
San Luis Obispo, CA 93401

**Lab Number:** BLK VAI60527  
**Collected:**  
**Received:**  
**Matrix:** Aqueous

**Project:**  
**Project Number:**  
**Collected by:**

**Sample Description:** Instrument Blank  
**Analyzed:** 05/27/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	0.5	ND
Toluene	0.5	ND
Ethylbenzene	0.5	ND
Xylenes	0.5	ND
t-Amyl Methyl Ether (TAME)	0.5	ND
t-Butyl Alcohol (TBA)	5.0	ND
Diisopropyl Ether (DIPE)	0.5	ND
Ethyl-t-Butyl Ether (ETBE)	0.5	ND
Methyl-t-Butyl Ether (MTBE)	0.5	ND
Percent Surrogate Recovery		102

TOTAL PETROLEUM HYDROCARBONS

Gasoline	50.	ND
BTX as a Percent of Fuel		N/A

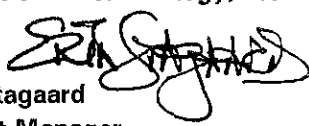
ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

VAI60527  
MSD #6  
AI60527b.xls  
ES/ash/pv/ra

Submitted by,  
ZymaX envirotechnology, inc.  
  
Erin Stagaard  
Project Manager

**Client:**  
ZyMaX envirotechnology, inc.  
71 Zaca Lane, Suite 110  
San Luis Obispo, CA 93401

**Lab Number:** BLK VAI60528  
**Collected:**  
**Received:**  
**Matrix:** Aqueous

**Project:**  
**Project Number:**  
**Collected by:**

**Sample Description:** Instrument Blank  
**Analyzed:** 05/28/03  
**Method:** See Below

CONSTITUENT	PQL* ug/L	RESULT** ug/L
Benzene	0.5	ND
Toluene	0.5	ND
Ethylbenzene	0.5	ND
Xylenes	0.5	ND
t-Amyl Methyl Ether (TAME)	0.5	ND
t-Butyl Alcohol (TBA)	5.0	ND
Diisopropyl Ether (DIPE)	0.5	ND
Ethyl-t-Butyl Ether (ETBE)	0.5	ND
Methyl-t-Butyl Ether (MTBE)	0.5	ND
Percent Surrogate Recovery		102

**TOTAL PETROLEUM HYDROCARBONS**

Gasoline	50.	ND
BTX as a Percent of Fuel		N/A

ZyMaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*PQL - Practical Quantitation Limit

\*\*Results listed as ND would have been reported if present at or above the listed PQL.

Note: Analyzed by EPA 8260 and GC/MS Combination.

VAI60528  
MSD #6  
A160528b.xls  
ES/ash/pv/ra

Submitted by,  
ZyMaX envirotechnology, inc.

  
Erin Stagaard  
Project Manager

**Client:**  
ZymaX envirotechnology, inc.  
71 Zaca Lane, Suite 110  
San Luis Obispo, CA 93401

**Lab Number:** QS VAI60528  
**Collected:**  
**Received:**  
**Matrix:** Aqueous

**Project:**  
  
**Project Number:**  
**Collected by:**

**Sample Description:** Quality Assurance Spike  
**Analyzed:** 05/28/03  
**Method:** See Below

CONSTITUENT	Amount Spiked ug/L	Amount Recovered ug/L	Percent Recovery
Benzene	11.3	9.4	83
Toluene	17.9	18.4	103
Ethylbenzene	12.1	10.7	88
Xylenes	27.9	23.6	85
Methyl t-Butyl Ether (MTBE)	21.1	19.3	91
Percent Surrogate Recovery			104

TOTAL PETROLEUM HYDROCARBONS

Gasoline	500.	500.	100
BTX as a Percent of Fuel	11	10	

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

Note: Analyzed by EPA 8260 and GC/MS Combination.

VAI60528  
MSD #6  
AI60528q.xls  
ES/ash/pv/jp

Submitted by,  
ZymaX envirotechnology, inc.

  
Erin Stagaard  
Project Manager

**Client:**  
ZymaX envirotechnology, inc.  
71 Zaca Lane, Suite 110  
San Luis Obispo, CA 93401

**Lab Number:** QSD VAI60528  
**Collected:**  
**Received:**  
**Matrix:** Aqueous

**Project:**  
  
**Project Number:**  
**Collected by:**

**Sample Description:**  
Quality Assurance Spike Duplicate  
**Analyzed:** 05/28/03  
**Method:** See Below

CONSTITUENT	Amount Spiked ug/L	Amount Recovered ug/L	Percent Recovery	Relative Percent Difference*
Benzene	11.3	10.4	92	10
Toluene	17.9	21.4	120	15
Ethylbenzene	12.1	11.5	95	7
Xylenes	27.9	27.8	100	16
Methyl t-Butyl Ether (MTBE)	21.1	23.5	111	20
Percent Surrogate Recovery			105	

**TOTAL PETROLEUM HYDROCARBONS**

Gasoline	500.	570.	114	13
BTX as a Percent of Fuel	11	10		

ZymaX envirotechnology, inc. is certified by CA Department of Health Services: Laboratory #1717

\*Relative Percent Difference of the spike and spike duplicate

Note: Analyzed by EPA 8260 and GC/MS Combination.

VAI60528  
MSD #6  
AI60528q.xls  
ES/ash/pv/jp

Submitted by,  
ZymaX envirotechnology, inc.

  
Erin Stagaard  
Project Manager





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 Pleasanton, CA 94588  
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 Facsimile: (925) 463-2559

# CHAIN OF CUSTODY FORM

Project Name: Former E-2 Serve Client: \_\_\_\_\_  
 Project Number: 54.25827.2417 Task: 75004  
 Global I.D.: \_\_\_\_\_  
 Project Address: 525 West A Street, Hayward, CA  
 Laboratory: ZyMAX Contact: (805) 544-4696  
 Lab Address/Phone: 71 ZACA Lane San Luis Obispo, CA  
 ATC Project Manager: Jeanne Homsey  
 ATC PM Ph. No.: (925) 225-209/579-2221 Email: Homsey54@atc-enviro.com  
 ATC Sampler: P. Arroyo Phone: (925) 225-7813

Turnaround 10 day  3 day  2-8 hr\*   
 Time:  7 day  2 day  other: \_\_\_\_\_  
 (working days)  5 day  24 hr

### Analyses Requested

TPHg/BTEX/MTBE (8015M/8021)	Confirm MTBE by GC/MS	Fuel Oxygenates (8260B)	TPHd (8015M)	HVOCs (8010)	SVOC's (8270)	VOCs (8260)	PP Metals (low detect) (7000/6010)	Cyanide, Total (335.2)	TPHg/BTEX/MTBE (8015M/8260B)	TPHg/BTEX/5 Fuel Oxy's (8260B)	TPHg/BTEX/5 Fuel Oxy's/1,2 DCA & EDB (8260B)
										X	
										X	
										X	
										X	
										X	
										X	

ATC Sample ID	Sample Information			Container Information			Field Pt. I.D.- Check if same as Sample I.D.
	Date	Time	Matrix Soil Water Vapor	No.	Type	Preservative	
MW-1	5-15-03	1040	X	3	VOA	HCL	31729-1
MW-2	↓	1025	X	↓	↓	↓	-2
MW-3	↓	1000	X	↓	↓	↓	-3
MW-4	↓	1145	X	↓	↓	↓	-4
MW-5	↓	1105	X	↓	↓	↓	-5
MW-6	↓	1125	X	↓	↓	↓	-6

Additional Comments: EDF, FORMAT

EDF Format

Relinquished By: [Signature] Date/Time: 5/16/03-10:43 AM Received By: Jim Arves / ZyMAX Date/Time: 5/16/03-10:43 AM  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received By: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Sample Condition: Good? Yes  No  On Ice? Yes  No  Cooler Temp \_\_\_\_\_ Transportation Method: \_\_\_\_\_

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