

B R O W N A N D
C A L D W E L L

ENVIRONMENTAL
PROTECTION
96 JUN -5 PM 2:05

May 31, 1996

Mr. Brian Cobb
E-Z Serve Petroleum Marketing Company of California
2550 N. Loop West, Suite 600
Houston, Texas 77292-2021

11-3003-02

Subject: First Quarter 1996 Groundwater Monitoring Report
 Former E-Z Serve Station #100877
 525 West A Street, Hayward, California

Dear Mr. Cobb:

This letter report summarizes the first quarter groundwater monitoring activities conducted by Brown and Caldwell at 525 West A Street, Hayward, California (Site), on February 13 and 14, 1996. The work performed at the Site included collecting depth-to-water measurements, purging and sampling 14 of the 15 wells, and submitting the groundwater samples to an analytical laboratory for analysis. Field work was performed following the procedures outlined in Attachment A.

Field and Analytical Methods

Initially, depth-to-water and free product measurements were collected from 14 of the 15 wells by a Brown and Caldwell field technician using an oil-water interface probe. The wells were then purged of a minimum of three well volumes, or until evacuated, using a centrifugal pump. After purging, each monitoring well was sampled by the Brown and Caldwell field technician using a disposal bailer. Samples were then transferred to appropriate laboratory-supplied containers, placed in a cooler containing crushed ice, and submitted under appropriate chain of custody to CKY Incorporated (CKY) for analysis of total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and total xylenes (BTEX) following EPA Methods 8015 Modified and 8020, respectively. CKY is located in Torrance, California and is certified by the State of California Department of Health Services for analysis of hazardous materials. Groundwater sample collection records and chain-of-custody documentation for this quarterly sampling event are included in Attachment A.

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Quarterly Monitoring Results

Depth-to-water measurements and calculated groundwater elevations are summarized in Table 1. Monitoring well MW-9 was inaccessible this quarter for static water level measurement and groundwater sampling. Groundwater elevations have increased in all of the measured monitoring wells, relative to the previous quarter. From the data collected on February 13, 1996, the general groundwater flow direction was determined to be towards the west. The average hydraulic gradient across the site was approximately 0.001 feet per foot (calculated between wells MW-8 and MW-11). Groundwater elevations and flow directions for February 13, 1996 are shown on Figure 1.

TPH_g was identified in 10 of the 14 wells sampled at concentrations ranging from 140 micrograms per liter ($\mu\text{g/L}$) (well MW-1) to 30,500 $\mu\text{g/L}$ (well MW-2). Benzene was detected in 9 of the 14 wells at concentrations ranging from 8.3 $\mu\text{g/L}$ (well MW-1) to 7,200 $\mu\text{g/L}$ (well MW-4). Analytical results of groundwater samples are summarized in Table 1 and illustrated on Figure 1. The analytical laboratory report for the February 13 and 14, 1996 sampling event is included in Attachment A.

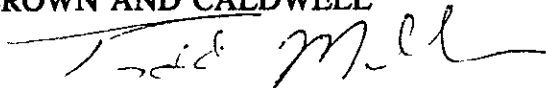
Discussion

The laboratory results for the field blank collected at well MW-2 identified total xylenes slightly above the analytical reporting limit. The presence of this constituent could be due to field and/or laboratory cross-contamination.

If you have any questions regarding this quarterly monitoring report, please contact me at (510) 210-2278.

Sincerely,

BROWN AND CALDWELL



Todd Miller
California Registered Geologist No. 6328

TM:lkg
Attachment

cc: Mr. John Reeves, Attorney at Law
Ms. Madhulla Logan, Alameda County Department of Environmental Health
Mr. Steve Camp, Brown and Root

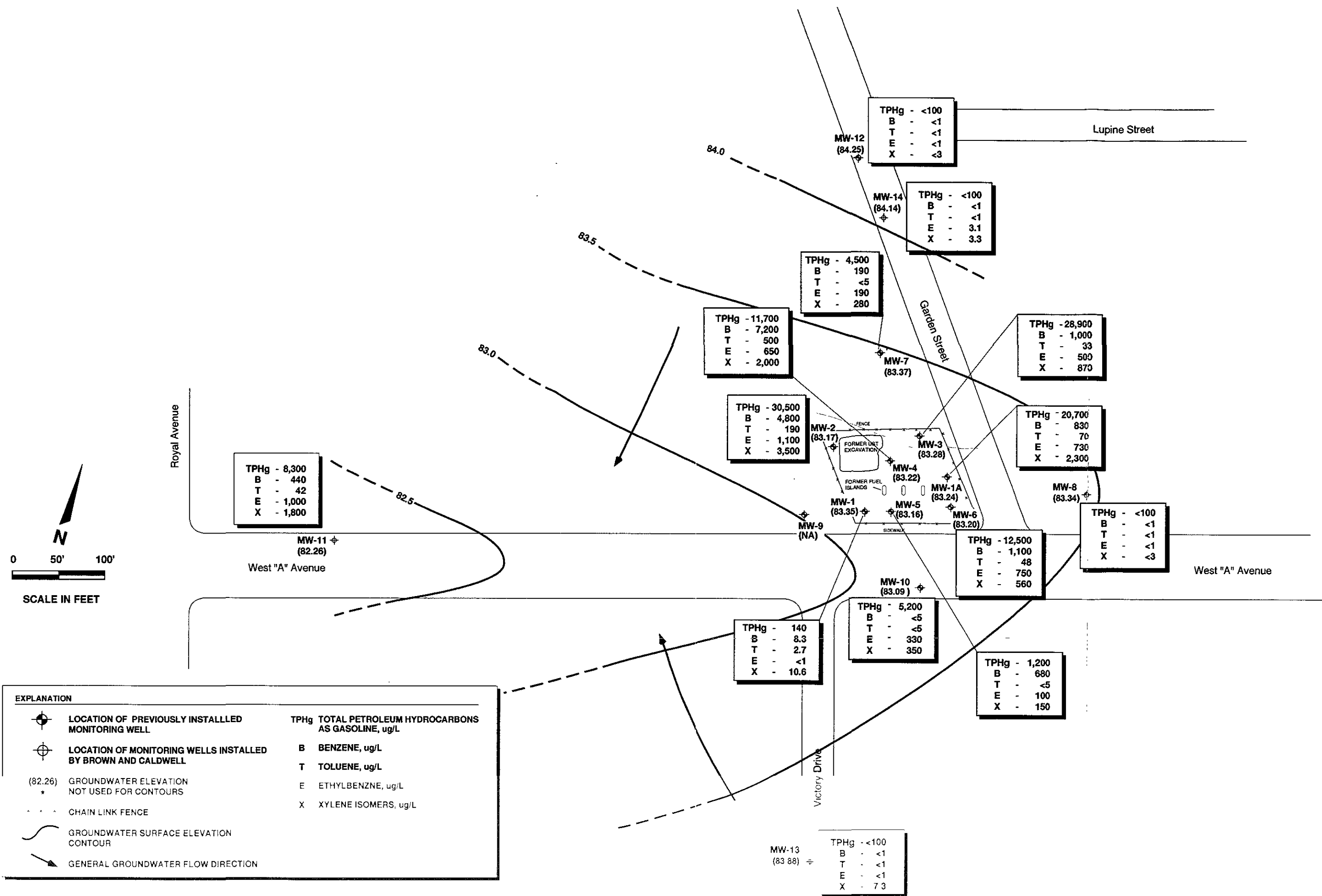


Figure 1 Groundwater Surface Elevation Contour and Petroleum Hydrocarbon Constituent Distribution Map for February 13 and 14, 1996, Former E-Z Serve Station #100877, 525 West A Street, Hayward, California

**Table 1. Summary of Groundwater Elevation Data and Analytical Laboratory Results for
Groundwater Samples Collected at Former E-Z Serve Station # 100877
525 West A Street, Hayward, California**

Well I.D.	Date Sampled	Well Elevation (feet) ¹	Depth to Water (feet) ²	Product Thickness (feet)	Groundwater Elevation (feet) ¹	EPA Methods 8015 and 8020 Concentration (µg/L)					
						TPHg ³	Benzene	Toluene	Ethylbenzene	Xylenes	
MW-1	5-Feb-92	99.91	20.82		79.09	46,000	76,000	23,000	2,400	6,500	
	11-Sep-92		20.08		79.83	48,000	9,000	1,200	1,800	4,600	
	22-Dec-92		19.79		80.12	84,000	22,000	1,600	4,800	17,000	
	3-Mar-93	96.73	16.23		83.68	54,000	16,000	1,600	1,900	4,300	
	23-Jun-93		16.86		79.87	30,000	18,000	1,100	1,400	3,700	
	30-Sep-93		18.04		78.69	33,000	10,000	440	940	1,700	
	6-Feb-94		18.15		78.58	64,000	18,000	1,600	4,700	12,000	
	2-May-94		17.26		79.47	7,200	2,100	29	490	520	
	1-Jul-94		17.60		79.13	13,000	3,700	150	550	12,000	
	20-Sep-94		20.59		76.14	10,000	3,100	75	440	870	
	5-Dec-94		17.83		78.90	8,700	3,700	87	520	950	
	10-Mar-95		14.67		82.06						
	15-Mar-95		14.43		82.30	290	56	2	12	47	
	16-Jun-95	14.56		82.17	2,000	530	12	90	160		
	22-Sep-95	16.05		80.68	1,600	1,400	9.0	75	110		
	11-Dec-95	16.74		79.99	6,330	1,700	<25	183	270		
	13-Feb-96	13.38		83.35	140	8.3	2.7	<1	10.6		
MW-1A	23-Jun-93	97.59	17.80	0.21	80.00		Sample Not Analyzed				
	30-Sep-93		Not Recorded			Well Not Sampled					
	6-Feb-94		18.89		78.70	8,900	1,700	42	1,000	400	
	2-May-94		18.35	0.09	79.33		Well Not Sampled				
	1-Jul-94		18.45		79.14	12,000	1,100	<1	920	1,100	
	20-Sep-94		21.72	0.22	76.09		Well Not Sampled				
	5-Dec-94		18.87	0.07	78.79		Well Not Sampled				
	10-Mar-95		15.83		81.76		Well Not Sampled				
	14-Mar-95		15.55	0.05	82.09		Well Not Sampled				
	15-Jun-95		15.63	0.03	81.99		Well Not Sampled				
	22-Sep-95		17.05		80.54	2,000	180	9.2	130	310	
11-Dec-95		15.72		81.87	10,100	310	26	350	850		

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Well I.D.	Date Sampled	Well Elevation (feet) ¹	Depth to Water (feet) ²	Product Thickness (feet)	Groundwater Elevation (feet) ¹	EPA Methods 8015 and 8020 Concentration (µg/L)				
						TPHg ³	Benzene	Toluene	Ethylbenzene	Xylenes
	13-Feb-96		14.35		83.24	20,700	830	70	730	2,300
MW-2	5-Feb-92	101.45	22.35		79.10	67,000	13,000	4,700	820	1,300
	11-Sep-92		21.67		79.78	57,000	9,000	1,400	1,200	8,400
	22-Dec-92		21.39		80.06	31,000	9,900	350	2,000	4,100
	3-Mar-93		17.75		83.70	17,000	5,100	1,300	720	1,900
	23-Jun-93	98.06	18.42		79.64	60,000	23,000	1,500	4,500	17,000
	30-Sep-93		19.63		78.43	38,000	12,000	780	1,500	6,500
	6-Feb-94		19.61		78.45	34,000	8,900	450	2,000	5,500
	2-May-94		19.84		78.22	18,000	3,800	260	1,100	3,500
	1-Jul-94		19.18		78.88	18,000	3,700	510	870	2,600
	20-Sep-94		22.17		75.89	19,000	4,500	300	1,200	4,000
	6-Dec-94		19.37		78.69	22,000	4,700	340	1,400	4,500
	10-Mar-95		16.33		81.73					
	15-Mar-95		16.89		81.17	29,000	5,600	350	1,900	6,300
	16-Jun-95		16.79		81.27	27,000	4,400	270	1,600	4,700
	22-Sep-95		17.54		80.52	3,700	6,700	390	1,800	6,400
	11-Dec-95		17.33		80.73	35,400	3,500	190	1,500	3,700
		13-Feb-96		14.89		83.17	30,500	4,800	190	1,100
duplicate	13-Feb-96					21,700	4,900	200	1,100	3,500
MW-3	5-Feb-92	101.50	21.85		79.65	5,900	1,100	<1	<1	<1
	11-Sep-92		21.13		80.37	9,400	1,200	180	550	1,100
	22-Dec-92		20.88		80.62	12,000	2,800	190	850	1,600
	3-Mar-93		17.29		84.21	11,000	2,200	360	570	900
	23-Jun-93	97.66	17.88		79.78	33,000	12,000	2,700	1,300	3,500
	30-Sep-93		19.18		78.48	4,300	1,100	160	690	670
	6-Feb-94		19.21		78.45	20,000	4,800	430	1,500	2,900
	2-May-94		18.30		79.36	4,200	680	48	310	540
	1-Jul-94		18.63		79.03	4,600	600	63	240	470
	20-Sep-94		21.64		76.02	8,200	2,200	130	670	930

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Well I.D.	Date Sampled	Well Elevation (feet) ¹	Depth to Water (feet) ²	Product Thickness (feet)	Groundwater Elevation (feet) ¹	EPA Methods 8015 and 8020 Concentration (µg/L)				
						TPHg ³	Benzene	Toluene	Ethylbenzene	Xylenes
MW-4	6-Dec-94		19.15		78.51	4,000	640	34	290	480
	10-Mar-95		15.86		81.80		Well Not Sampled			
	15-Mar-95		16.61		81.05	4,300	980	47	370	780
	16-Jun-95		16.58		81.08	3,300	520	20	280	430
	22-Sep-95		17.02		80.64	3,800	2,100	< 100	840	1,600
	11-Dec-95		17.79		79.87	6,920	610	22	350	550
	13-Feb-96		14.38		83.28	28,900	1,000	33	500	870
	5-Feb-92	100.50	21.31		79.19	16,000	2,700	410	< 1	3,400
	11-Sep-92		20.62		79.88	43,000	7,600	1,600	1,400	4,100
	22-Dec-92		20.37		80.13	29,000	8,800	1,200	1,500	3,700
	3-Mar-93		16.78		83.72	17,000	5,000	1,500	680	1,700
	23-Jun-93	97.10	17.45		79.65	5,700	3,000	120	560	790
	30-Sep-93		18.64		78.46	21,000	7,000	2,100	970	2,600
	6-Feb-94		18.59		78.51	24,000	7,200	1,600	990	3,200
	2-May-94		17.81		79.29	10,000	2,200	440	470	1,200
	1-Jul-94		18.13		78.97	8,200	2,000	370	350	930
	20-Sep-94		21.13		75.97	7,200	2,000	360	380	1,000
	6-Dec-94		18.36		78.74	9,000	2,300	400	440	1,100
	10-Mar-95		15.25		81.85		Well Not Sampled			
	15-Mar-95		14.89		82.21	15,000	4,400	600	770	2,660
16-Jun-95		14.68		82.42	19,000	5,600	490	890	2,300	
22-Sep-95		16.60		80.50	3,600	9,300	1,000	1,200	3,600	
11-Dec-95		17.27		79.83	6,720	1,600	57	390	510	
13-Feb-96		13.88		83.22	11,700	7,200	500	650	2,000	
MW-5	5-Feb-92	100.48	20.93		79.55	78,000	7,900	5,000	2,900	1,800
	11-Sep-92		20.27		80.21	49,000	4,700	400	1,400	4,100
	22-Dec-92		19.99		80.49	34,000	8,600	340	2,200	4,800
	3-Mar-93		16.49		83.99	22,000	7,500	640	1,300	3,400
	23-Jun-93	96.73	17.02		79.71	15,000	5,800	120	1,100	2,100

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						TPHg ³	Benzene	Toluene	Ethylbenzene	Xylenes
duplicate	30-Sep-93		18.25		78.48	25,000	7,600	410	1,000	4,400
	6-Feb-94		18.26		78.47	23,000	6,000	180	2,000	5,900
	2-May-94		17.50		79.23	8,000	1,300	29	440	770
	1-Jul-94		17.79		78.94	10,000	1,700	97	600	1,400
	20-Sep-94		20.77		75.96	8,400	1,600	54	650	1,400
	20-Sep-94					9,300	1,700	56	670	1,600
	5-Dec-94		18.02		78.71	10,000	1,800	<50	620	1,400
	10-Mar-95		14.93		81.80					
	15-Mar-95		14.70		82.03	5,300	1,100	11	180	320
	16-Jun-95		14.82		81.91	5,300	1,400	11	180	310
	22-Sep-95		16.19		80.54	4,000	2,800	<100	350	710
	11-Dec-95		16.92		79.81	8,190	1,200	<10	270	360
	13-Feb-96		13.57		83.16	1,200	680	<5	100	150
	MW-6	5-Feb-92	100.97	21.29		79.68	51,000	5,400	3,500	3,600
11-Sep-92			20.56		80.41	24,000	2,500	830	1,400	2,300
22-Dec-92			20.31		80.66	23,000	5,100	630	2,000	3,100
3-Mar-93			16.83		84.14	18,000	4,400	820	1,400	2,400
23-Jun-93		97.09	17.30		79.79	18,000	4,600	850	2,700	3,400
30-Sep-93			19.05	0.03	78.07					
6-Feb-94			18.55		78.54	20,000	4,600	690	2,100	2,500
2-May-94			17.74		79.35	5,300	930	54	610	240
1-Jul-94			18.09		79.00	10,000	1,500	160	850	690
20-Sep-94			21.05		76.04	11,000	2,000	140	1,200	760
6-Dec-94			18.33		78.76	8,600	1,300	87	980	610
10-Mar-95			15.35		81.74					
15-Mar-95			14.91		82.18	9,800	1,600	110	1,000	1,000
16-Jun-95			15.11		81.98	9,200	1,100	78	1,000	550
22-Sep-95			16.44		80.65	3,000	1,700	110	1,200	760
11-Dec-95			17.20		79.89	13,200	990	110	1,000	520
13-Feb-96			13.89		83.20	12,500	1,100	48	750	560

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						TPHg ³	Benzene	Toluene	Ethylbenzene	Xylenes
MW-7	23-Jun-93	97.44	17.87	0.06	79.57	29,000	4,200	71	4,400	5,600
	30-Sep-93		18.94		78.50	30,000	3,200	71	2,800	3,400
	6-Feb-94		19.11		78.39	Sample Not Analyzed				
	2-May-94		18.11		79.33	5,700	630	13	660	400
	1-Jul-94		18.72		78.72	3,100	180	99	160	520
	20-Sep-94		21.41		76.03	6,100	540	6	750	730
	5-Dec-94		18.66		78.78	3,700	280	<10	430	350
	duplicate 5-Dec-94					3,900	310	<10	540	540
	10-Mar-95		15.72		81.72	Well Not Sampled				
	14-Mar-95		15.23		82.21	1,900	290	4	26	296
	duplicate 14-Mar-95					1,000	330	5	30	339
	15-Jun-95		15.17		82.27	5,800	380	5	360	540
	duplicate 15-Jun-95					4,800	330	<2.5	320	470
	21-Sep-95		16.83		80.61	4,020	110	<1	220	220
duplicate 21-Sep-95			4,480	140	<1	270	250			
11-Dec-95	17.61	79.83	3,750	120	31	400	330			
duplicate 11-Dec-95			5,470	120	12	420	310			
14-Feb-96	14.07	83.37	4,500	190	<5	190	280			
MW-8	23-Jun-93	97.61	17.64		79.97	350	43	9	35	67
	30-Sep-93		18.85		78.76	2,700	190	340	170	720
	6-Feb-94		18.91		78.70	<100	<1	1	1	2
	2-May-94		18.11		79.50	<100	<1	3	<1	7
	1-Jul-94		18.43		79.18	300	18	48	19	37
	20-Sep-94		21.43		76.18	<100	<1	<1	<1	<1
	5-Dec-94		18.72		78.89	<50	<0.5	<0.5	<0.5	<0.5
	10-Mar-95		18.69		78.92	Well Not Sampled				
	14-Mar-95		14.83		82.78	<50	<0.5	<0.5	<0.5	1
	15-Jun-95		14.92		82.69	<50	<0.5	<0.5	<0.5	<0.5
	21-Sep-95		16.52		81.09	<100	2.3	1.3	2.7	9.0

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Well I.D.	Date Sampled	Well Elevation (feet) ¹	Depth to Water (feet) ²	Product Thickness (feet)	Groundwater Elevation (feet) ¹	EPA Methods 8015 and 8020 Concentration (µg/L)					
						TPHg ³	Benzene	Toluene	Ethylbenzene	Xylenes	
MW-9	11-Dec-95	95.41	17.52		80.09	< 100	1.3	< 1	< 1	< 3	
	14-Feb-96		14.27		83.34	< 100	< 1	< 1	< 1	< 3	
	23-Jun-93		15.94		79.47	45,000	14,000	1,200	2,800	12,000	
	30-Sep-93		17.05		78.36	86,000	22,000	1,100	3,300	15,000	
	6-Feb-94		17.07		78.34	43,000	10,000	460	2,100	7,500	
	2-May-94		16.24		79.17	17,000	5,400	270	1,300	4,700	
	1-Jul-94		16.59		78.82	10,000	2,100	120	450	1,300	
	20-Sep-94		19.61		75.80	7,500	2,200	97	400	1,200	
	5-Dec-94		16.85		78.56	10,000	2,700	130	530	1,600	
	10-Mar-95		NR				Well Not Sampled				
	14-Mar-95		14.18		81.23	18,000	5,900	270	1,200	3,680	
	15-Jun-95		14.09		81.32	12,000	2,500	130	670	1,800	
	21-Sep-95		No Access				Well Not Sampled				
	11-Dec-95		15.58		79.83	12,200	2,100	140	550	1,600	
	14-Feb-96		No Access				Well Not Sampled				
MW-10	23-Jun-93	97.11	17.39		79.72	35,000	980	640	3,500	12,000	
	30-Sep-93		18.58		78.53	4,000	230	12	100	680	
	6-Feb-94		18.61		78.50	2,000	69	12	220	120	
	2-May-94		17.83		79.28	710	16	6	85	62	
	1-Jul-94		18.17		78.94	2,000	52	43	120	210	
	20-Sep-94		21.15		75.96	2,800	34	16	270	560	
	5-Dec-94		18.43		78.68	2,700	30	13	260	430	
	10-Mar-95		15.37		81.74		Well Not Sampled				
	14-Mar-95		15.93		81.18	1,400	18	6	200	239	
	15-Jun-95		15.97		81.14	1,600	14	4	140	98	
	21-Sep-95		16.48		80.63	4,680	37	17	240	380	
	11-Dec-95		17.30		79.81	670	2.8	1.3	36	19	
	14-Feb-96		14.02		83.09	5,200	< 5	< 5	330	350	

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						TPHg ³	Benzene	Toluene	Ethylbenzene	Xylenes
MW-11	10-Feb-95	92.68	11.80		80.88	7,000	140	22	600	1,000
	10-Mar-95		11.58		81.10		Well Not Sampled			
	14-Mar-95		13.96		78.72	6,000	200	17	750	1,276
	15-Jun-95		13.84		78.84	13,000	450	63	1,600	2,200
	21-Sep-95		13.13		79.55	7,000	340	27	440	640
	11-Dec-95		13.73		78.95	12,600	770	89	1,800	2,500
	14-Feb-96		10.42		82.26	8,300	440	42	1,000	1,800
MW-12	10-Feb-95	99.03	16.30		82.73	<50	<0.5	<0.5	<0.5	<0.5
	10-Mar-95		16.37		82.66		Well Not Sampled			
	14-Mar-95		15.69		83.34	<50	<0.5	<0.5	<0.5	0.9
	15-Jun-95		15.55		83.48	<50	<0.5	<0.5	<0.5	<0.5
	21-Sep-95		17.58		81.45	<100	<1	<1	<1	<3
	11-Dec-95		18.36		80.67	<100	1.0	1.0	1.5	<3
	14-Feb-96		14.78		84.25	<100	<1	<1	<1	<3
MW-13	10-Feb-95	96.80	14.45		82.35	<50	<0.5	<0.5	<0.5	<0.5
	10-Mar-95		14.30		82.50		Well Not Sampled			
	14-Mar-95		15.81		80.99	<50	<0.5	<0.5	<0.5	1
	15-Jun-95		15.79		81.01	<50	<0.5	<0.5	<0.5	<0.5
	21-Sep-95		15.50		81.30	<100	2.6	2.2	<1	9.4
	11-Dec-95		16.60		80.20	<100	<1	<1	1.0	<3
	14-Feb-96		12.92		83.88	<100	<1	<1	<1	7.3
MW-14 duplicate	10-Feb-95	99.01	16.28		82.73	12,000	42	8	740	2,100
	10-Feb-95				12,000	48	<10	800	2,300	
	10-Mar-95		16.33		82.68		Well Not Sampled			
	14-Mar-95		14.87		84.14	1,400	6	2	36	298
	15-Jun-95		14.72		84.29	660	8	<0.5	6	26
	21-Sep-95		17.61		81.40	4,430	25	15	280	310
	11-Dec-95		18.30		80.71	1,330	6.8	1.0	120	150

**Table 1. Summary of Groundwater Elevation Data and Analytical Laboratory Results for
Groundwater Samples Collected at Former E-Z Serve Station # 100877
525 West A Street, Hayward, California**

Well I.D.	Date Sampled	Well Elevation (feet) ¹	Depth to Water (feet) ²	Product Thickness (feet)	Groundwater Elevation (feet) ¹	EPA Methods 8015 and 8020 Concentration (µg/L)				
						TPHg ³	Benzene	Toluene	Ethylbenzene	Xylenes
	14-Feb-96		14.87		84.14	<100	<1	<1	3.1	3.3
QA/QC										
Field Blank	20-Sep-94					<100	<1	<1	<1	<1
Trip Blank	5-Dec-94					<50	<0.5	<0.5	<0.5	<0.5
Field Blank	5-Dec-94					<50	<0.5	<0.5	<0.5	<0.5
Trip Blank	10-Feb-95					<50	<0.5	<0.5	<0.5	<0.5
Field Blank	10-Feb-95					<50	<0.5	<0.5	<0.5	<0.5
Trip Blank	14-Mar-95					<50	<0.5	<0.5	<0.5	<0.5
Field Blank	14-Mar-95					<50	<0.5	<0.5	<0.5	<0.5
Trip Blank	15-Jun-95					<50	<0.5	<0.5	<0.5	<0.5
Field Blank	15-Jun-95					<50	<0.5	<0.5	<0.5	<0.5
Trip Blank	21-Sep-95					<100	4.6	<1	2.5	<3
Field Blank	21-Sep-95					<100	<1	1.3	4.2	<3
Trip Blank	11-Dec-95					<100	<1	<1	<1	<3
Field Blank	11-Dec-95					<100	<1	<1	<1	<3
Trip Blank	13-Feb-96					<100	<1	<1	<1	<3
Field Blank	13-Feb-96					<100	<1	<1	<1	3.6

¹Relative to lower mean sea level.

²Below ground surface.

³Total Petroleum Hydrocarbons as gasoline.

ATTACHMENT A

FIELD SAMPLING PROCEDURES
GROUNDWATER SAMPLE COLLECTION RECORDS
ANALYTICAL LABORATORY DATA SHEETS

**EZ-SERVE PETROLEUM MARKETING COMPANY OF CALIFORNIA
QUARTERLY GROUNDWATER MONITORING PROGRAM
SAMPLING AND ANALYSIS PLAN**

The following sections describe the procedures and protocols followed during this quarterly groundwater monitoring event at the subject site.

Depth-to-Water Measurements

Prior to sampling the groundwater monitoring wells, the wells were opened to the atmosphere for approximately one-quarter of one hour, to allow the static water level to adjust to the open barometric pressure. The depth-to-groundwater was then be measured, using an oil-water interface probe. The interface probe was lowered slowly until free product or water was encountered. At this point, the mark on the interface probe wire was read to the nearest 0.01 feet at the permanent reference point on the top of the well casing. If free product was encountered the probe was lowered until water was encountered. The difference between the two depths corresponds to the thickness of the free product. The total depth of the well was then measured using the same probe. A second check for free-product on top of the water column was made using a disposable bailer. The disposable bailer was lowered into the water to approximately one-half the bailer length. The bailer was then removed from the well and a check for the presence of free petroleum product or a product sheen was made.

In the event that a dedicated bailer or purge tubing existed in the well, the dedicated equipment was removed prior to sampling, and temporarily stored in a clean, plastic garbage bag.

The depth-to-water and bottom of well measurements, and the presence or absence of free product, was recorded on the field sampling form. In addition, comments regarding the condition of the well and/or containment box were also be noted on the field sampling sheet at this time. Wells observed to contain a product sheen or free product on top of the water column were not be purged or sampled.

Groundwater Monitoring Well Purging

The depth-to-water and bottom of well measurements were used to calculate the volume of water contained in one well volume. The following values were used to calculate the volume of water contained in the well casing and filter pack surrounding the well.

<u>Well Diameter</u>	<u>Gallons/linear foot</u>
2-inch	0.16
4-inch	0.65
8-inch filter pack	0.78
10-inch filter pack	1.21

The minimum purge volume was calculated to be three times the total well volume. Once the minimum purge volume has been calculated purging was started. Purging was conducted using either a centrifugal pump connected to a dedicated Wattera tube, a 2-inch diameter submersible pump, a bladder pump, or a disposable polyethylene bailer. The type of equipment used to purge the well was selected based on depth to water, the anticipated purge rate, and the amount of sediment expected to be contained in the well, and was recorded on the Groundwater Sample Collection Record. Temperature, pH, and specific conductance of the purge water was monitored during the purging process at regular intervals. Purging was ceased when the monitored parameters stabilized (three consecutive readings not varying by more than 10-percent) and a minimum of three well volumes had been purged.

In the event a well dried out during purging, the well was allowed to recover to 80-percent of its original well volume, or for 24-hours, whichever was less, prior to collecting a groundwater sample.

Groundwater Monitoring Well Sampling

Once the well was successfully purged a groundwater sample was collected using a disposable polyethylene bailer connected to clean nylon or polyethylene cord. The bailer was lowered slowly into the water to avoid agitation of the sample. A portion of the sample was placed in a container and the monitoring parameters were recorded. The remaining portion of the sample was transferred from the bailer to the appropriate, laboratory supplied sampling bottles, using a bottom emptying device. The sampling containers were filled completely, leaving a positive meniscus, so no airspace remained in the vial after sealing.

The sample bottles were labeled with the well identification (i.e. MW-1, MW-2, etc), date and time of the sample collection, the field technicians initials, job number, analyses to be performed, and other relevant information. Samples were immediately placed in an insulated cooler containing crushed ice. The samples were maintained at approximately 3 to 4°C until reaching the analytical laboratory.

Laboratory Analysis

Samples were shipped, under appropriate chain-of-custody procedures, to Southern Petroleum Laboratory in Houston, Texas (SPL). SPL Laboratory is certified by the State of California Department of Toxic Substance Control for performing the requested analyses. Samples were shipped via Federal Express to minimize the time the samples remained in the cooler. Samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), and benzene, toluene, ethylbenzene, and xylene isomers (BTEX), following Environmental Protection Agency Methods 5030, 8015 modified, and 8020. Samples were analyzed on a standard two week turn-around time.

QA/QC Procedures

Instrument calibration. Equipment used to monitor groundwater parameters was calibrated prior to beginning purging at the site. Monitoring equipment was calibrated following the manufactures instructions using laboratory grade standards.

Equipment Decontamination. Non-disposable and non-dedicated sampling equipment was cleaned prior to use and between uses in each well. Downhole equipment was cleaned by washing the equipment using a non-phosphate soap solution and rinsing the equipment twice with distilled water.

Duplicate. One duplicate sample was collected from the site from a randomly selected monitoring well. The duplicate sample was collected at the same time as the original sample and was treated in the same manner as the original sample. The duplicate sample was submitted to the laboratory for TPHg and BTEX analysis.

Trip Blank. A trip blank was prepared by the analytical laboratory and accompanied the sample bottles throughout the shipping and sampling events. The trip blank was submitted to the laboratory for TPHg and BTEX analysis.

Field Blank. One field blank was collected in the field by the field technician. The field blank was prepared, prior to sampling, by filling three 40-ml VOAs with distilled water. The field blank was submitted to the laboratory for TPHg and BTEX analysis.

**BROWN & CALDWELL
WELL INFORMATION DATA**

JOB NAME: EZ - Serve, Hayward

DATE: 2-13-96

B&C PERSONNEL: STINAR

JOB No: 3003-02

WEATHER: CLEAR

LOCK TYPE: 2402

INSTRUMENT: OIL/WATER PROBE

LID TYPE: 15/16

WELL ID.	SWL	TD	DIA	TIME	COMMENTS
MW-1	13.38	32.10'	4"x 10"	0824	
MW-1A	14.35'	28.40'	2"x 8"	0812	NO MEASURABLE OIL.
MW-2	14.89	32.30'	4"x 10"	0826	
MW-3	14.38	32.10'	4"x 10"	0815	
MW-4	13.58	32.11'	4"x 10"	0830	
MW-5	13.57	32.48'	4"x 10"	0818	
MW-6	13.89'	32.10'	4"x 10"	0821	
MW-7	14.07	30.06'	2"x 8"	0833	
MW-8	14.27	32.15'	2"x 8"	0840	
MW-9	—	31.60'	2"x 8"	0846	No Access
MW-10	14.02	31.80'	2"x 8"	0843	
MW-11	10.42	25.00'	2"x 8"	0848	
MW-12	14.78	30.00'	2"x 8"	0835	
MW-13	12.92	30.00'	2"x 8"	0839	
MW-14	14.87	30.00'	2"x 8"	0830	

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-13-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STIMAR
 Weather Conditions: CLEAR, WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 13.38'
- b. Total Well Depth = 32.10 ft.
- c. Length of Water Column = 18.72' (b. - a.)
- d. Casing Volume = 12.1 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10.0'
- f. Filter pack volume = 12.1 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 24.2 gal (d. + f.)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 4"x 10"

<input type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input checked="" type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input checked="" type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP/WATERRA
- b. Required Purge Volume (@ 24.2 gallons per well volume) = 72.8 gal
- c. Field Testing; Equipment Used BECKMAN pH + Temp UVR COND.
- d. Pump Rate 2.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
<u>2</u>	<u>1438</u>	<u>21.3</u>	<u>6.87</u>	<u>1,100</u>		<u>CLEAR</u>		<u>BOTTOM</u>
<u>36</u>	<u>1455</u>	<u>20.6</u>	<u>6.91</u>	<u>1,000</u>		<u>CLEAR</u>		
<u>58</u>	<u>1506</u>	<u>20.5</u>	<u>6.95</u>	<u>1,100</u>		<u>CLEAR</u>		
<u>74</u>	<u>1516</u>	<u>20.7</u>	<u>6.93</u>	<u>1,100</u>		<u>CLEAR</u>		
<u>SAMPLE</u>	<u>1523</u>	<u>20.2</u>	<u>6.85</u>	<u>1,200</u>		<u>CLEAR</u>	<u>15.15</u>	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-13-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STINAR
 Weather Conditions: CLEAR

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 14.35'
- b. Total Well Depth = 28.40 ft.
- c. Length of Water Column = 14.05' (b. - a.)
- d. Casing Volume = 2.24 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 7.8 (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 10.04 (d. + f.)

TOC Elevation (from LS) _____
 Water Table Elev. _____
 Tape Corr. (TC) _____
 Well Diameter 2"x 8"

<input checked="" type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input checked="" type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP/WATERRA
- b. Required Purge Volume (@ 10.04 gallons per well volume) = 30.14
- c. Field Testing; Equipment Used BECKMAN pH + TEMP
- d. Pump Rate 1.25 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
<u>2</u>	<u>0925</u>	<u>20.9</u>	<u>6.71</u>	<u>850</u>	<u>-</u>	<u>CLEAR, FUEL ODOR</u>		<u>20'</u>
<u>14</u>	<u>0935</u>	<u>20.8</u>	<u>6.74</u>	<u>800</u>		<u>CLEAR</u>		
<u>26</u>	<u>0945</u>	<u>20.7</u>	<u>6.81</u>	<u>800</u>		<u>CLEAR</u>		
<u>32</u>	<u>0949</u>	<u>20.8</u>	<u>6.84</u>	<u>850</u>		<u>CLEAR</u>		
<u>SAMPLE</u>	<u>0955</u>	<u>20.0</u>	<u>6.77</u>	<u>900</u>		<u>CLEAR</u>	<u>16.11'</u>	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-13-96

Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA

Samplers Name: _____

Weather Conditions: _____

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 14.89'
- b. Total Well Depth = 32.30 ft.
- c. Length of Water Column = 17.41' (b. - a.)
- d. Casing Volume = 11.3 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10
- f. Filter pack volume = 12.1 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 23.4 gal (d. + f.)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 4"x 10"

<input type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input checked="" type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input checked="" type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP / WATER
- b. Required Purge Volume (@ 23.4 gallons per well volume) = 70.2 gal
- c. Field Testing; Equipment Used BECKMAN pH + Temp UVR COND.
- d. Pump Rate 2.0
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
2	1538	21.1	7.03	700	-	CLEAR FUGLORE		BOTTOM
28	1551	20.7	6.95	700	-	CLEAR		↓
56	1605	20.6	6.97	800	-	CLEAR		
72	1613	20.8	6.91	850	-	CLEAR		
SAMPLE	1621	20.1	6.90	800	-	CLEAR	15.92	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

TAKE DUPLICATE MW-2D, MW-FD

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-13-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: JTINAR
 Weather Conditions: CLEAR, WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 14.38
- b. Total Well Depth = 32.10 ft.
- c. Length of Water Column = 17.72 (b. - a.)
- d. Casing Volume = 11.5 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 12.1 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 23.6 gal (d. + f.)

TOC Elevation (from LS) _____
 Water Table Elev. _____
 Tape Corr. (TC) _____
 Well Diameter 4"x 10"

<input type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input checked="" type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input checked="" type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP/WATERRA
- b. Required Purge Volume (@ 23.6 gallons per well volume) = 70.8 gal
- c. Field Testing; Equipment Used BECKMAN PH + TEMP AMBER SCIENTIFIC
- d. Pump Rate 2.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), (Fast) (90% < 10 min)

Volume Removed (gal)	Time	T ^o C	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
10	1219	20.9	6.91	1,200		CLEAR		BOTTOM
10	1228	20.1	6.80	1,100		CLEAR		↓
50	1243	20.3	6.89	1,150		CLEAR		
74	1255	20.4	6.83	1,100		CLEAR		
SAMPLE	1307	20.0	6.70	1,100		CLEAR	14.75	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-13-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STINAR
 Weather Conditions: CLEAR, WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 13.88'
- b. Total Well Depth = 32.11 ft.
- c. Length of Water Column = 18.23' (b. - a.)
- d. Casing Volume = 11.8 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 12.1 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 23.9 gal (d. + f.)

TOC Elevation (from LS) _____
 Water Table Elev. _____
 Tape Corr. (TC) _____
 Well Diameter 4"x 10"

<input type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input checked="" type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input checked="" type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRABA PUMP/WATERRA
- b. Required Purge Volume (@ 23.9 gallons per well volume) = 71.8 gal
- c. Field Testing; Equipment Used BECKMAN pH & TEMP UVR COND.
- d. Pump Rate GPM 2.0 gal
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), (Fast) (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
<u>2</u>	<u>1338</u>	<u>21.1</u>	<u>7.40</u>	<u>1,300</u>		<u>CLEAR</u>		<u>BOTTOM</u>
<u>32</u>	<u>1353</u>	<u>20.8</u>	<u>7.11</u>	<u>1,200</u>		<u>CLEAR</u>		
<u>60</u>	<u>1407</u>	<u>20.7</u>	<u>7.09</u>	<u>1,250</u>		<u>CLEAR</u>		
<u>74</u>	<u>1414</u>	<u>20.1</u>	<u>7.05</u>	<u>1,200</u>		<u>CLEAR</u>		
<u>SAMPLE</u>	<u>1420</u>	<u>20.2</u>	<u>7.01</u>	<u>1,000</u>		<u>CLEAR</u>	<u>14.41</u>	<u>✓</u>

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-13-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STINAR
 Weather Conditions: _____

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 13.57'
- b. Total Well Depth = 32.48 ft.
- c. Length of Water Column = 18.91 (b. - a.)
- d. Casing Volume = 12.2 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 12.1 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 24.3 gal (d. + f.)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 4"x 10"

<input type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input checked="" type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input checked="" type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP/WATERAA
- b. Required Purge Volume (@ 24.3 gallons per well volume) = 73.1 gal
- c. Field Testing; Equipment Used BECKMAN pH & TEMP AMER SCIENTIFIC COND. METER
- d. Pump Rate 2.0
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
2	1111	21.9	7.31	900	-	CLEAR		BOTTOM
20	1120	26.4	7.24	800	-	CLEAR		↓
48	1132	20.6	7.17	850	-	CLEAR		
78	1147	20.1	7.13	850	-	CLEAR		
SAMPLE	1158	19.9	7.12	850	-	CLEAR	14.70	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-13-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STINAR
 Weather Conditions: CLEAR WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 13.89
- b. Total Well Depth = 32.10 ft.
- c. Length of Water Column = 18.21' (b. - a.)
- d. Casing Volume = 11.8 GAL (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 12.1 GAL (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 23.9 GAL (d. + f.)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 4"x 10"

<input type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input checked="" type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input checked="" type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP
- b. Required Purge Volume (@ 23.9 gallons per well volume) = 71.8 GAL
- c. Field Testing; Equipment Used BECKMAN PH + AMBER SCIENTIFIC COND. METER
- d. Pump Rate 2.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
3	1014	21.1	7.01	1,300		CLEAR		BOTTOM
23	1024	20.9	6.93	1,200		CLEAR		↓
45	1035	20.6	6.87	1,250		CLEAR		
75	1050	20.5	6.87	1,200		CLEAR		
SAMPLE	1056	20.0	6.85	1,200		CLEAR	14.40	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-14-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STWAR
 Weather Conditions: CLAR

1. WATER LEVEL DATA: (from TOC)

a. Depth to water (ft) = 14.07'
 b. Total Well Depth = 30.06 ft.
 c. Length of Water Column = 15.99' (b. - a.)
 d. Casing Volume = 2.5 gal (c. x [gal/ft casing])
 e. Length of filter pack = 10'
 f. Filter pack volume = 7.8 gal (e. x [gal/ft filter pack])
 g. **TOTAL WELL VOLUME** = 10.3 gal (d. + f.)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 2"x 8"

<input checked="" type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input checked="" type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA
 b. Required Purge Volume (@ 10.3 gallons per well volume) = 31.0 gal
 c. Field Testing; Equipment Used BECKMAN pH Auber SCIENTIFIC COND. METER
 d. Pump Rate < 1.0 gpm
 e. Method of GW Disposal 55 gallon drum
 f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
2	1225	21.8	7.41	800	> 100	CLOUDY SILTS		BOTTOM
12	1236	21.6	7.11	840	> 100	SAME		
25	1250	21.1	6.92	830	79.3	CLEARING		
32	1258	21.4	6.95	850	62.1	SAME	18.11	
Sample	1305	21.0	6.96	840	41.1	CLEAR	15.96	↓

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-14-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STINAR
 Weather Conditions: CLEAR WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 14.27'
- b. Total Well Depth = 32.15 ft.
- c. Length of Water Column = 17.88' (b. - a.)
- d. Casing Volume = 2.8 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 7.8 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 10.6 gal (d. + f.)

TOC Elevation (from LS) _____
 Water Table Elev. _____
 Tape Corr. (TC) _____
 Well Diameter 2"x 8"

● 2-in. casing	= 0.16 gal/ft
4-in. casing	= 0.65 gal/ft
6-in. casing	= 1.47 gal/ft
6.5-in. casing	= 1.70 gal/ft
8-in. casing	= 2.60 gal/ft
10-in. casing	= 4.10 gal/ft
12-in. casing	= 5.00 gal/ft
● 8-in. hole filter pack	= 0.78 gal/ft
10-in. hole filter pack	= 1.21 gal/ft
12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP/WATER
- b. Required Purge Volume (@ 10.6 gallons per well volume) = 21.9 gal
- c. Field Testing; Equipment Used Beckman pH+Temp VWR COND.
- d. Pump Rate 1.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T°c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
1	0939	20.9	7.39	1,100	±100	CLOUDY SLOTS		BOTTOM
12	0951	21.7	7.03	1,100	19.6	CLEAR		↓
26	0904	21.6	6.90	1,100	13.8	CLEAR		
33	0911	21.5	6.87	1,100	12.7	CLEAR		
Sample	0915	21.2	6.80	1,100	9.6	CLEAR	15.79	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-14-96

Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA

Samplers Name: _____

Weather Conditions: _____

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = _____
- b. Total Well Depth = 31.60 ft.
- c. Length of Water Column = _____ (b. - a.)
- d. Casing Volume = _____ (c. x [gal/ft casing])
- e. Length of filter pack = _____
- f. Filter pack volume = _____ (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = _____ (d. + f.)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 2"x 8"

<input checked="" type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input checked="" type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method _____
- b. Required Purge Volume (@ _____ gallons per well volume) = _____
- c. Field Testing; Equipment Used _____
- d. Pump Rate _____
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min) _____

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

UNABLE TO ACCESS WELL AT 533 A STREET
DUE TO CONSTRUCTION.

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-14-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: M. STINAR
 Weather Conditions: CLEAR WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 14.02'
- b. Total Well Depth = 31.80 ft.
- c. Length of Water Column = 17.78 (b. - a.)
- d. Casing Volume = 2.84 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 7.8 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 10.6 gal (d. + f.)

TOC Elevation (from LS) _____
 Water Table Elev. _____
 Tape Corr. (TC) _____
 Well Diameter 2"x 8"

<input checked="" type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input checked="" type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP / WATER
- b. Required Purge Volume (@ 10.6 gallons per well volume) = 31.9
- c. Field Testing; Equipment Used BECKMAN pH + Temp, Amber Scientific Cond Meter, Hatch Tubs Kit
- d. Pump Rate 1.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), (Fast) (90% < 10 min)

Volume Removed (gal)	Time	T°C	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
5	1215	21.5	7.26	830	21.3	CLEAR		BOTTOM
20	1232	21.3	6.85	810	11.8	CLEAR	15.10	
35	1250	21.3	6.88	820	11.5	CLEAR	15.55	
SAMPLE	1259	20.9	6.81	810	11.3	CLEAR	14.87	↓

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-14-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STINAR
 Weather Conditions: _____

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 10.42'
- b. Total Well Depth = 25.00 ft.
- c. Length of Water Column = 14.58' (b. - a.)
- d. Casing Volume = 2.3 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 7.8 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 10.1 gal (d. + f.)

TOC Elevation (from LS) _____
 Water Table Elev. _____
 Tape Corr. (TC) _____
 Well Diameter 2"x 8"

<input checked="" type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input checked="" type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP/WATERRA
- b. Required Purge Volume (@ 10-1 gallons per well volume) = 30.3
- c. Field Testing; Equipment Used Beckman pH + Temp Amber Scientific Cond Meter
- d. Pump Rate 1.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T°C	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
2	0933	21.1	6.67	950	+100	CLOUDY SILTS		Bottom
15	0944	21.1	6.56	900	+100	CLEARING		
32	1001	20.9	6.60	900	68.7	CLEAR		
Sample	1005	20.9	6.52	900	50.3	CLEAR	11.16	↓

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

HACH TURB KIT

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-14-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: M. STIWAR
 Weather Conditions: CLEAR WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 14.78'
- b. Total Well Depth = 30.00 ft.
- c. Length of Water Column = 15.22' (b. - a.)
- d. Casing Volume = 2.4 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 7.8 gal (e. x [gal/ft filter pack])
- g. TOTAL WELL VOLUME = 10.2 gal (d. + f.)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 2"x 8"

<input checked="" type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input checked="" type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP/WATERPUMP
- b. Required Purge Volume (@ 10.2 gallons per well volume) = 30.7 gal
- c. Field Testing; Equipment Used BECKMAN pH + TEMP Amber Scientific Cond Meter, AACT Tires Kit
- d. Pump Rate 4.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
2	1333	21.3	7.01	1,000	+100	CLOUDY, SILTS		Bottom
16	1349	21.2	6.97	900	+100	CLEARING		↓
32	1408	21.6	6.95	950	79.1	CLEARING	17.29	↓
Sample	1417	21.1	6.93	900	58.3	CLEAR	15.88	↓

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-14-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STWAR
 Weather Conditions: CLEAR WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 12.92'
- b. Total Well Depth = 30.00 ft.
- c. Length of Water Column = 17.08' (b. - a.)
- d. Casing Volume = 2.7 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 7.8 gal (e. x [gal/ft filter pack])
- g. **TOTAL WELL VOLUME** = 10.5 gal (d. + f.)

TOC Elevation (from LS) _____
 Water Table Elev. _____
 Tape Corr. (TC) _____
 Well Diameter 2"x 8"

<input checked="" type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input checked="" type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP / WATERRA
- b. Required Purge Volume (@ 10.5 gallons per well volume) = 31.5
- c. Field Testing; Equipment Used BECKMAN pH + TEMP Amber Scientific COND. METER
- d. Pump Rate < 1.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min) _____

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/Description	SWL	Pump Placement
2	1036	21.7	6.99	940	74.7	CLEAR NO SILTS		BOTTOM
9	1048	21.1	6.88	940	+100	ACQUINIST + SILTS	21.50	↓
16	1058	21.8	6.86	950	+100	SAME	23.75	
23	1109	21.4	6.82	950	34.4	CLEAR	24.15	
32	1119	21.7	6.83	950	19.2	CLEAR	24.30	
Sample	1125	21.2	6.79	940	18.0	CLEAR	19.10	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

21997 VICTORY AVE FIRST TIME WELL PUMPS thru.

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 3003-02 Date: 2-14-96
 Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA
 Samplers Name: STUAR
 Weather Conditions: CLEAR WARM

1. WATER LEVEL DATA: (from TOC)

- a. Depth to water (ft) = 14.87'
- b. Total Well Depth = 30.00 ft.
- c. Length of Water Column = 15.13' (b. - a.)
- d. Casing Volume = 2.4 gal (c. x [gal/ft casing])
- e. Length of filter pack = 10'
- f. Filter pack volume = 7.8 gal (e. x [gal/ft filter pack])
- g. TOTAL WELL VOLUME = 10.2 gal (d. + f.)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 2"x 8"

<input checked="" type="checkbox"/>	2-in. casing	= 0.16 gal/ft
<input type="checkbox"/>	4-in. casing	= 0.65 gal/ft
<input type="checkbox"/>	6-in. casing	= 1.47 gal/ft
<input type="checkbox"/>	6.5-in. casing	= 1.70 gal/ft
<input type="checkbox"/>	8-in. casing	= 2.60 gal/ft
<input type="checkbox"/>	10-in. casing	= 4.10 gal/ft
<input type="checkbox"/>	12-in. casing	= 5.00 gal/ft
<input checked="" type="checkbox"/>	8-in. hole filter pack	= 0.78 gal/ft
<input type="checkbox"/>	10-in. hole filter pack	= 1.21 gal/ft
<input type="checkbox"/>	12-in. hole filter pack	= 1.47 gal/ft

2. WELL PURGING DATA:

- a. Purge Method TRASH PUMP / WATERBAR
- b. Required Purge Volume (@ 10.2 gallons per well volume) = 30.6
- c. Field Testing; Equipment Used BECKMAN pH, Amber Scientific Cond. Meter
- d. Pump Rate 2.0 gpm
- e. Method of GW Disposal 55 gallon drum
- f. Recovery Rate: Slow (90% > 60min), Medium (90% 30-60 min), Fast (90% < 10 min)

Volume Removed (gal)	Time	T ^o c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/ Description	SWL	Pump Placement
<u>2</u>	<u>1440</u>	<u>21.9</u>	<u>7.11</u>	<u>1,100</u>	<u>+100</u>	<u>CLOUDY SILTS</u>		<u>BOTTOM</u>
<u>14</u>	<u>1455</u>	<u>21.6</u>	<u>7.28</u>	<u>1,100</u>	<u>+100</u>	<u>CLEARING</u>		
<u>32</u>	<u>1515</u>	<u>21.4</u>	<u>7.09</u>	<u>1,100</u>	<u>86.1</u>	<u>CLEARING</u>	<u>17.71</u>	
<u>Sample</u>	<u>1522</u>	<u>20.8</u>	<u>7.06</u>	<u>1,000</u>	<u>80.7</u>	<u>SAME</u>	<u>15.28</u>	<u>✓</u>

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL
 Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS



CKY incorporated Analytical Laboratories

Date: 02-29-1996
CKY Batch No.: 96B058

Attn.: Todd Miller

Brown & Root Environmental
3480 Buskirk Avenue
Pleasant Hill, CA 94523

Subject: Laboratory Report
Project: EZ Serve Hayward #100877

Enclosed is the Laboratory report for samples received on 02/14/96. The samples were received in coolers with ice and intact; the chain-of-custody forms were properly filled out. The data reported include :

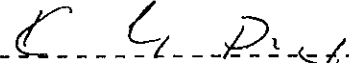
Sample ID	Control No.	Matrix	Analysis
100877-MW-7	B058-01	Water	EPA 5030/M8015 EPA 8020
100877-MW-8	B058-02	Water	EPA 5030/M8015 EPA 8020
100877-MW-10	B058-03	Water	EPA 5030/M8015 EPA 8020
100877-MW-11	B058-04	Water	EPA 5030/M8015 EPA 8020
100877-MW-12	B058-05	Water	EPA 5030/M8015 EPA 8020
100877-MW-13	B058-06	Water	EPA 5030/M8015 EPA 8020
100877-MW-14	B058-07	Water	EPA 5030/M8015 EPA 8020
100877-MW-1	B058-08	Water	EPA 5030/M8015 EPA 8020
100877-MW-1A	B058-09	Water	EPA 5030/M8015 EPA 8020
100877-MW-2	B058-10	Water	EPA 5030/M8015

Sample ID	Control No.	Matrix	Analysis
100877-MW-2D	B058-11	Water	EPA 8020 EPA 5030/M8015
100877-MW-2FB	B058-12	Water	EPA 8020 EPA 5030/M8015
100877-MW-3	B058-13	Water	EPA 8020 EPA 5030/M8015
100877-MW-4	B058-14	Water	EPA 8020 EPA 5030/M8015
100877-MW-5	B058-15	Water	EPA 8020 EPA 5030/M8015
100877-MW-6	B058-16	Water	EPA 8020 EPA 5030/M8015
TRIP BLANK	B058-17	Water	EPA 8020 EPA 5030/M8015

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning these results.

Sincerely yours,



 Kam Y. Pang, Ph.D.
 Laboratory Director

P.S. - All analyses requested for the above referenced project have been completed. Therefore, unless instructed, the remaining portions of the samples will be disposed after fifteen (15) days from the date of this report.

EPA 5030/M8015
TOTAL PETROLEUM HYDROCARBONS BY PURGE & TRAP

```

=====
CLIENT:      Brown & Root Environmental          DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877          DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                            DATE EXTRACTED: NA
MATRIX:     WATER                               DATE ANALYZED:  02/19/96
=====
  
```

SAMPLE ID	CONTROL NO	RESULT (mg/L)	% RECOVERY SURR	DILUTION FACTOR	MDL (mg/L)
100877-MW-7	B058-01	4.5	115	2	.2
100877-MW-8	B058-02	ND	89	1	.1
100877-MW-10	B058-03	5.2	118	2	.2
100877-MW-11	B058-04	8.3	135	2	.2
100877-MW-12	B058-05	ND	84	1	.1
100877-MW-13	B058-06	ND	95	1	.1
100877-MW-14	B058-07	ND	98	1	.1
100877-MW-1	B058-08	0.14	95	1	.1
100877-MW-1A	B058-09	20.7	121	10	1
100877-MW-2	B058-10	30.5	108	50	5
100877-MW-2D	B058-11	21.7	122	10	1
100877-MW-2FB	B058-12	ND	103	1	.1
100877-MW-3	B058-13	28.9	134	2	.2
100877-MW-4	B058-14	11.7	134	5	.5
100877-MW-5	B058-15	1.2	114	1	.1
100877-MW-6	B058-16	12.5	97	50	5
TRIP BLANK	B058-17	ND	103	1	.1
MBLK1W	VAB1514B	ND	104	1	.1
MBLK2W	VAB1614B	ND	100	1	.1
MBLK3W	VAB1714B	ND	95	1	.1

QC LIMIT: 65-135

SURR : Bromofluorobenzene
MDL : Method Detection Limit

Collection Date: 02/14/96 for B058-01 to B058-07

Date Analyzed: 02/20/96 for B058-06 to B058-09, B058-12 to B058-15
and VAB1614B
02/21/96 for B058-10, B058-11, B058-16 and VAB1714B

CKY QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: EZ Serve Hayward #100877
METHOD: EPA M8015G
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 96B058
SAMPLE ID: 100877-MW-2FB
CONTROL NO.: B058-12

DATE RECEIVED: 02/14/96
DATE EXTRACTED: NA
DATE ANALYZED: 02/20/96

ACCESSION: 96B058

PARAMETER	SMPL RSLT (mg/L)	SPIKE AMT (mg/L)	MS RSLT (mg/L)	MS % REC	SPIKE AMT (mg/L)	MSD RSLT (mg/L)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
Gasoline	ND	1.00	1.09	109	1.00	1.04	104	5	65-135	30



CKY QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: EZ Serve Hayward #100877
METHOD: EPA M8015G
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 96B058
SAMPLE ID: LCS1W/LCS1WD
CONTROL NO.: VAB1514L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 02/19/96

ACCESSION: 96B057 96B058 96B065 96B073

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
Gasoline	ND	1.00	.98	98	1.00	1.00	100	2	70-125	30



CKY QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: EZ Serve Hayward #100877
METHOD: EPA M8015G
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 968058
SAMPLE ID: LCS2W/LCS2WD
CONTROL NO.: VAB1614L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 02/20/96

ACCESSION: 968058

PARAMETER	BLNK RSLT (mg/L)	SPIKE AMT (mg/L)	BS RSLT (mg/L)	BS % REC	SPIKE AMT (mg/L)	BSD RSLT (mg/L)	BSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
Gasoline	ND	1.00	1.04	104	1.00	.95	95	9	70-125	30



EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/14/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-7                 DATE ANALYZED:  02/27/96
CONTROL NO.: B058-01                     MATRIX:         WATER
% MOISTURE:  NA                           DILUTION FACTOR: 5
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	190	5
Toluene	ND	5
Ethylbenzene	190	5
Total Xylenes	280	15

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	100	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/14/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:  96B058                       DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-8                 DATE ANALYZED:  02/27/96
CONTROL NO.: B058-02                     MATRIX:         WATER
% MOISTURE:  NA                           DILUTION FACTOR: 1
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	66	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental    DATE COLLECTED: 02/14/96
PROJECT:     EZ Serve Hayward #100877     DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                       DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-10                 DATE ANALYZED:  02/27/96
CONTROL NO.: B058-03                      MATRIX:         WATER
% MOISTURE:  NA                           DILUTION FACTOR: 5
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	5
Toluene	ND	5
Ethylbenzene	330	5
Total Xylenes	350	15

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	115	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/14/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-11                DATE ANALYZED:  02/28/96
CONTROL NO.: B058-04                     MATRIX:         WATER
% MOISTURE:  NA                           DILUTION FACTOR: 25
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	440	25
Toluene	42	25
Ethylbenzene	1000	25
Total Xylenes	1800	75

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	76	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental    DATE COLLECTED: 02/14/96
PROJECT:     EZ Serve Hayward #100877     DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                       DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-12                 DATE ANALYZED:  02/27/96
CONTROL NO.: B058-05                      MATRIX:         WATER
% MOISTURE:  NA                           DILUTION FACTOR: 1
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	65	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/14/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-13                DATE ANALYZED:  02/27/96
CONTROL NO.: B058-06                     MATRIX:         WATER
% MOISTURE:  NA                           DILUTION FACTOR: 1
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene	ND	1
Total Xylenes	7.3	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	74	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental    DATE COLLECTED: 02/14/96
PROJECT:     EZ Serve Hayward #100877     DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                       DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-14                 DATE ANALYZED:  02/27/96
CONTROL NO.: B058-07                       MATRIX:         WATER
% MOISTURE:  NA                            DILUTION FACTOR: 1
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene	3.1	1
Total Xylenes	3.3	3
SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	86	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-1                 DATE ANALYZED:  02/28/96
CONTROL NO.: B058-08                     MATRIX:         WATER
% MOISTURE:  NA                          DILUTION FACTOR: 1
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	8.3	1
Toluene	2.7	1
Ethylbenzene	ND	1
Total Xylenes	10.6	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	80	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental    DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877     DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                       DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-1A                 DATE ANALYZED:  02/28/96
CONTROL NO.: B058-09                       MATRIX:         WATER
% MOISTURE:  NA                            DILUTION FACTOR: 25
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	830	25
Toluene	70	25
Ethylbenzene	730	25
Total Xylenes	2300	75

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	89	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-2                 DATE ANALYZED:  02/28/96
CONTROL NO.: B058-10                     MATRIX:         WATER
% MOISTURE:  NA                          DILUTION FACTOR: 50
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	4800	50
Toluene	190	50
Ethylbenzene	1100	50
Total Xylenes	3500	150

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	77	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

=====
CLIENT: Brown & Root Environmental DATE COLLECTED: 02/13/96
PROJECT: EZ Serve Hayward #100877 DATE RECEIVED: 02/14/96
BATCH NO.: 96B058 DATE EXTRACTED: NA
SAMPLE ID: 100877-MW-2D DATE ANALYZED: 02/28/96
CONTROL NO.: B058-11 MATRIX: WATER
% MOISTURE: NA DILUTION FACTOR: 50
=====

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	4900	50
Toluene	200	50
Ethylbenzene	1100	50
Total Xylenes	3500	150

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	80	65-135

=====
MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-2FB              DATE ANALYZED:  02/27/96
CONTROL NO.: B058-12                    MATRIX:         WATER
% MOISTURE:  NA                          DILUTION FACTOR: 1
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene	ND	1
Total Xylenes	3.6	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	69	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

=====
CLIENT: Brown & Root Environmental DATE COLLECTED: 02/13/96
PROJECT: EZ Serve Hayward #100877 DATE RECEIVED: 02/14/96
BATCH NO.: 96B058 DATE EXTRACTED: NA
SAMPLE ID: 100877-MW-3 DATE ANALYZED: 02/27/96
CONTROL NO.: B058-13 MATRIX: WATER
% MOISTURE: NA DILUTION FACTOR: 10
=====

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	1000	10
Toluene	33	10
Ethylbenzene	500	10
Total Xylenes	870	30

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	88	65-135

=====
MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-4                 DATE ANALYZED:  02/27/96
CONTROL NO.: B058-14                     MATRIX:         WATER
% MOISTURE:  NA                           DILUTION FACTOR: 50
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	7200	50
Toluene	500	50
Ethylbenzene	650	50
Total Xylenes	2000	150

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	65	65-135

```
=====
MDL: Method Detection Limit
```

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-5                 DATE ANALYZED:  02/28/96
CONTROL NO.: B058-15                    MATRIX:         WATER
% MOISTURE:  NA                          DILUTION FACTOR: 5
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	680	5
Toluene	ND	5
Ethylbenzene	100	5
Total Xylenes	150	15

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	85	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:   96B058                      DATE EXTRACTED: NA
SAMPLE ID:   100877-MW-6                 DATE ANALYZED:  02/27/96
CONTROL NO.: B058-16                    MATRIX:         WATER
% MOISTURE:  NA                          DILUTION FACTOR: 20
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	1100	20
Toluene	48	20
Ethylbenzene	750	20
Total Xylenes	560	60

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	80	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental   DATE COLLECTED: 02/13/96
PROJECT:     EZ Serve Hayward #100877    DATE RECEIVED:  02/14/96
BATCH NO.:  96B058                       DATE EXTRACTED: NA
SAMPLE ID:   TRIP BLANK                   DATE ANALYZED:  02/27/96
CONTROL NO.: B058-17                     MATRIX:         WATER
% MOISTURE:  NA                           DILUTION FACTOR: 1
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	.1
Toluene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	76	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

=====
CLIENT: Brown & Root Environmental DATE COLLECTED: NA
PROJECT: EZ Serve Hayward #100877 DATE RECEIVED: NA
BATCH NO.: 96B058 DATE EXTRACTED: NA
SAMPLE ID: MBLK1W DATE ANALYZED: 02/27/96
CONTROL NO.: VAL647B MATRIX: WATER
% MOISTURE: NA DILUTION FACTOR: 1
=====

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	67	65-135

=====
MDL: Method Detection Limit

EPA METHOD 8020
BTEX

```
=====
CLIENT:      Brown & Root Environmental    DATE COLLECTED:  NA
PROJECT:     EZ Serve Hayward #100877     DATE RECEIVED:   NA
BATCH NO.:   96B058                       DATE EXTRACTED:  NA
SAMPLE ID:   MBLK2W                        DATE ANALYZED:   02/28/96
CONTROL NO.: VAL647B2                     MATRIX:          WATER
% MOISTURE:  NA                           DILUTION FACTOR: 1
=====
```

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	1
Toluene	ND	1
Ethylbenzene	ND	1
Total Xylenes	ND	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	66	65-135

MDL: Method Detection Limit

CKY QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: EZ Serve Hayward #100877
METHOD: EPA 8020
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 968058
SAMPLE ID: 100877-MW-12
CONTROL NO.: B058-05

DATE RECEIVED: 02/14/96
DATE EXTRACTED: NA
DATE ANALYZED: 02/28/96

ACCESSION: 968058

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
Benzene	ND	50.00	46.10	92	50.00	48.30	97	5	65-135	30
Toluene	ND	50.00	46.70	93	50.00	45.00	90	4	65-135	30
Ethylbenzene	ND	50.00	44.40	89	50.00	44.80	90	1	65-135	30
Total Xylenes	ND	150.00	132.00	88	150.00	133.00	89	1	65-135	30

CKY QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: EZ Serve Hayward #100877
METHOD: EPA 8020
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 96B058
SAMPLE ID: LCS1W/LCS1WD
CONTROL NO.: VAL647L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 02/27/96

ACCESSION: 96B058

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
Benzene	ND	20.00	20.20	101	20.00	20.60	103	2	70-125	30
Toluene	ND	20.00	18.30	92	20.00	19.00	95	4	70-125	30
Ethylbenzene	ND	20.00	16.90	84	20.00	17.50	88	3	70-125	30
Total Xylenes	ND	60.00	52.70	88	60.00	54.00	90	2	70-125	30

CKY

CKY QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: EZ Serve Hayward #100877
METHOD: EPA 8020
MATRIX: WATER
% MOISTURE: NA

BATCH NO.: 968058
SAMPLE ID: LCS2W/LCS2WD
CONTROL NO.: VAL647L2R/2C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 02/28/96

ACCESSION: 968058

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD %	QC LIMIT %	RPD LIMIT %
Benzene	ND	20.00	19.40	97	20.00	24.70	124	24	70-125	30
Toluene	ND	20.00	17.60	88	20.00	21.50	108	20	70-125	30
Ethylbenzene	ND	20.00	16.90	84	20.00	20.00	100	17	70-125	30
Total Xylenes	ND	60.00	49.80	83	60.00	58.40	97	16	70-125	30



9613058
 B058 R6B2

CHAIN OF CUSTODY RECORD

Hayward Sta # 100877

2 of 2

BCA Log Number

Client name **BROWN + CALDWELL HAYWARD** Project or PO# **3003-02**
 Address **3480 BUSKIRK AVE** Phone # **510-937-9010** FAX **937-9026**
 City, State, Zip **Pleasant Hill, Ca 94523** Report attention **TODD MILLER**

Analyses required									
TPH.6	BTEX								

Hazardous sample special handling required
 T=3' CA

Lab Sample number*	Date sampled	Time sampled	Type* See key below	Sampled by	Number of containers
				M. STINAR	
				Sample description	
8	2/13/96	1523	GW	100877-MW-1	3
9		0955		- MW-1A	
10		1621		- MW-2	
11		1622		- MW-2D	
12		1624	BW	- MW-2FB	
13		1307	GW	- MW-3	
14		1420		- MW-4	
15		1158		- MW-5	
16		1056		- MW-6	
17				TRIP BLANK	

Remarks									
REPORTING LIMITS: TPH.6 (50µg/L) BTEX (0.5 µg/L)									

Signature	Print Name	Company	Date	Time
<i>M. Stinar</i>	M. STINAR	BROWN + CALDWELL	2-14-96	1600
<i>S. Hinman</i>	S. Hinman	Brown + Caldwell	2-14-96	1600
<i>S. Hinman</i>	S. Hinman	Brown + Caldwell	2	
Received by Laboratory <i>J. Patel</i>	J. PATEL	CKY INC	2/14/96	10:00 AM

BC ANALYTICAL
 1085 Shary Circle, Concord, CA 94518 (510) 825-3894
 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
 2000 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.
 Disposal arrangements: _____

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge
 GW—Groundwater SO—Soil PE—Petroleum
 WW—Wastewater

9613058

BOS8 R6B2

CHAIN OF CUSTODY RECORD

Hayward Sta # 100877

1052

BCA Log Number

Client name BROWN + CALDWELL			EZ-SERV HAYWARD		Project of PO# 3003-02		Analyses required									
Address 3480 BUSKIRK AVE					Phone # 510-9010 937-9026		<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">Hazardous sample Special handling required</div> <div style="text-align: center;">T=3C9</div> </div>									
City, State, Zip Pleasant Hill, CA 94523				Report attention TODD MILLER												
Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by M. STUAR	Number of containers											
Sample description							Remarks									
1	2-14-96	1305	GW	100877 + MW-7	3	REPORTING LIMITS: TPH.6 (50 µg/l) BTEX (0.5 µg/l)										
2		0915		- MW-8												
3		1155		- MW-10												
4		1005		- MW-11												
5		1417		- MW-12												
6		1125		- MW-13												
7		1522		- MW-14												

Signature	Print Name	Company	Date	Time
Relinquished by <i>M. Stuar</i>	M. STUAR	Brown + Caldwell	2-14-96	1600
Received by <i>Steve Harmon</i>	S. Harmon	Brown + Caldwell	2-14-96	1600
Relinquished by <i>Steve Harmon</i>	S. Harmon	Brown + Caldwell		
Received by				
Relinquished by				
Received by Laboratory <i>J. Patel</i>	J. PATEL	CKY INC	2-14-96	10:00 AM

BC ANALYTICAL
 1085 Shary Circle, Concord, CA 94518 (510) 825-3894
 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
 200 Gene Autry Way, Anaheim, CA 92805 (714) 978-0113

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client's expense.

*KEY: AQ—Aqueous NA—Nonaqueous SL—Sludge
 GW—Groundwater SO—Soil PE—Petroleum
 WW—Wastewater

Disposal arrangements: _____

SAMPLE RECEIPT FORM

CONTROL NO.	96B058	DATE	02-15-96
CLIENT	BROWN & COLOWELL	TIME	10:00 AM
PROJECT	ELSERVE # 100877	RECIPIENT	J. PATEL

SAMPLE TRANSPORTATION TO CKY LABORATORY:	BY	ON (DATE)	AT (TIME)	FROM (SITE/CO.)	COMMENTS
PICKED-UP BY CKY COURIER					
DELIVERED BY CLIENT	<input checked="" type="checkbox"/>				
SHIPPED/AIRBILL NO	FEDEX: 309 4653 472	SEE AIRBILL			

SAMPLE BATCH PACKAGING/SEALING UPON RECEIPT:	NO CONTAINER	<input checked="" type="checkbox"/> INTACT	<input type="checkbox"/> DAMAGED	<input checked="" type="checkbox"/> NOT SEALED	<input type="checkbox"/> SEALED	
CONTAINER:	INSIDE TEMPERATURE: 3° C			CUSTODY SEAL / OTHER SEAL	LOCATION	NUMBER
<input checked="" type="checkbox"/> COOLER	PACKAGING	TYPE	SUFFICIENCY	INTACT	DAMAGED	
<input type="checkbox"/> BOX	INSULATION:		OK	NAME:		
<input type="checkbox"/> OTHER:	ICE/COOLANT: REGULAR			DATE:		
	PACKING MATERIAL: BUBBLEPAK			TIME:		

SAMPLE DOCUMENTATION/CHAIN-OF-CUSTODY(COC)	NONE	HANDCARRIED	<input checked="" type="checkbox"/> ENCLOSED	<input type="checkbox"/> FAXED	<input type="checkbox"/> SEALED
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SAMPLE LOG-IN:	CRITERIA	COMMENTS	DISCREPANCY				
SAMPLE CUSTODY SEAL	EVERY SAMPLE	NONE	/				
CONTAINER TYPE/MATERIAL	APPROPRIATE	OK					
SAMPLE AMOUNT	ENOUGH						
SAMPLE PRESERVATION/HOLDING TIME	SUFFICIENT						
HEADSPACE/BUBBLES	ZERO/NONE	* SEE BELOW					
SAMPLE LABEL INFORMATION	SUFFICIENT	} SEE BELOW					
CHAIN-OF-CUSTODY INFORMATION	SUFFICIENT						
SAMPLE INFO.:	SAMPLE ID	DATE		TIME	SIGNATURE	ANALYSES	PRESERVATIVE
INDIVIDUAL SAMPLE CONTAINER:	NONE	PLASTIC BAG	CAN	OTHER (SPECIFY): BUBBLEPAK	SEALED		

SAMPLE NUMBER	CLIENT ID	DISCREPANCY	ACTION
1, 2, 3, 4, 10, 14 15, 16, 17		ALL THESE SAMPLES RECD W/ ONE (OF THREE) VIAL HAVING BUBBLES	inf. client about this issue.
-3		S. TIME IS 12:59 ON THE LABELS	Follow info in the COC.
-15		S. TIME IS 1155 ON THE LABELS	

CLIENT SERVICES COPY RECEIVED BY	<i>celia 2/15</i>	DATE		TIME	
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CKY INC., ANALYTICAL LABORATORIES, 630 Maple Ave., Torrance, Calif. 90503 Tel. (310) 618-8889 Fax: (310) 618-0818

FEDERAL EXPRESS

QUESTIONS? CALL 800-238-5355 TOLL FREE.

AIRBILL NUMBER

3094653472

124
1F
500

70548M

DATE
2/14/96

96B057 (B058)
2-1596
10:00 AM J.

AIRBILL NUMBER
3094653472

From (Your Name) **Steve Hinman** Your Phone Number (Very Important) **(510) 825-3707**

Company **BROWN AND CALDWELL** Department/Floor No. **(510) 937-9010**

Street Address **3480 BUSKIRK AVE**

City **PLEASANT HILL** State **CA** ZIP Required For Correct Invoicing **94596**

To (Recipient's Name) **Kam Peng, Sample Control** Recipient's Phone Number (Very Important) **(310) 648-8889**

Company **CKY, Inc.** Department/Floor No.

Exact Street Address (Use of P.O. Boxes or P.O. Zip Codes Will Delay Delivery And Result In Extra Charge.) **630 Maple Ave**

City **Torrance** State **CA** ZIP Street Address Zip Required **70503**

YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE)
3003-02 and 3003-09

HOLD FOR PICK-UP AT THIS FEDERAL EXPRESS LOCATION:
Street Address (See Service Guide or Call 800-238-5355)

PAYMENT Bill Sender Bill Recipient's FedEx Acct. No. Bill 3rd Party FedEx Acct. No. Bill Credit Card
 Cash

City State

SERVICES CHECK ONLY ONE BOX

1 **PRIORITY 1** Overnight Delivery Using Your Packaging
 OVERNIGHT LETTER* (Our Packaging 9 1/2" x 12 1/2")

2 **Courier-Pak Overnight Envelope*** 12" x 15 1/2"

3 **Overnight Box** 12 1/2" x 17 1/2" x 3" A

4 **Overnight Tube** 38" x 6" x 6" B

5 **STANDARD AIR** Delivery not later than second business day

SERVICE COMMITMENT
 PRIORITY 1 - Delivery is scheduled early next business morning in most locations. It may take two or more business days if the destination is outside our primary service areas.
 STANDARD AIR - Delivery is generally next business day or not later than second business day. It may take three or more business days if the destination is outside our primary service areas.

DELIVERY AND SPECIAL HANDLING CHECK SERVICES REQUIRED

1 **HOLD FOR PICK-UP** (See Section 14 at right)

2 **DELIVER WEEKDAY**

3 **DELIVER SATURDAY** (Extra charge)

4 **DANGEROUS GOODS** (P-1 and Standard Air Packages only. Extra charge)

5 **CONSTANT SURVEILLANCE SERVICE (CSS)** (Extra charge. See Section 9)

6 **DRY ICE** _____ lbs.

7 **OTHER SPECIAL SERVICE** _____

8

9 **SATURDAY PICK-UP** (Extra charge)

10

PACKAGES	WEIGHT	YOUR DECLARED VALUE	OVER SIZE
	1.83		
	1.83		
	1.83		
	1.83		
Total	Total	Total	

Received At
 1 Regular Stop
 2 On-Call Stop
 3 Drop Box
 4 BSC
 5 Station
 Federal Express Corp. Employee No.

ZIP * Zip Code of Street Address Required

Emp. No. Date

Cash Received
 Return Shipment
 Third Party Chg. To Del. Chg. To Hold

Street Address

City State Zip

Received By: **X**

Date/Time Received FedEx Employee Number

5 Sender authorizes Federal Express to deliver this shipment without obtaining a delivery signature and shall indemnify and hold harmless Federal Express from any claims resulting therefrom.
 Release
 Signature: _____

Date/Time For Federal Express Use

Federal Express Use

Base Charges

Declared Value Charge

Origin Agent Charge

Other

Total Charges

PART #108001
 FEC-S-75+1000
 REVISION DATE 10/86
 PRINTED U.S.A. WCSE

RECIPIENT'S COPY