BROWN AND CALDWELL

December 19, 1995

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: Third Quarter 1995, Groundwater Monitoring Report
Former E-Z Serve Station #100877
525 West A Street, Hayward, California

Dear Mr. Cobb:

Brown and Caldwell conducted the third quarter 1995 groundwater monitoring event at E-Z Serve Petroleum Marketing Company of California's Former Station #100877, 525 West A Street, Hayward, California on September 21 and 22, 1995. The work performed at the subject site included attempting to collect depth-to-groundwater measurements from 15 groundwater monitoring wells, purging and sampling 14 wells, and submitting the groundwater samples to CKY Inc. (CKY), an analytical laboratory located in Torrance, California and certified by the State of California Department of Health Services for analysis of hazardous materials. Field work was performed following the procedures outlined in Attachment A.

Field Activities

Depth-to-water measurements were collected on September 21, 1995, using an oil-water interface probe and a clear acrylic bailer was used to check for free product. Well MW-9 was inaccessible for groundwater measurement or sampling this quarter. A minimum of three well volumes was purged from each of the 14 monitoring wells prior to sampling. Samples were collected from the monitoring wells, transferred to the appropriate sampling vials, and submitted to CKY under appropriate chain of custody. In addition, a duplicate sample was collected from well MW-7 and a field blank was prepared after sampling well MW-7. A trip blank was prepared by CKY and accompanied the samples during shipping. Samples were analyzed by the laboratory for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylene isomers, following Environmental Protection Agency Methods 8015 modified and 8020.

Environmental Engineering And Consulting • Analytical Services
P.O. Box 8045, Walnut Creek, CA 94596-1220
3480 Buskirk Avenue, Pleasant Hill, CA 94523-4342
(510) 937-9010 Fax (510) 937-9026

Summary of Findings

Field data collected during the sampling event indicate groundwater elevations have decreased in all of the wells except well MW-11 and MW-13, relative to last quarter. The groundwater elevation in wells MW-11 and MW-13 have increased relative to last quarter. Groundwater was identified as flowing to the west under an average gradient of 0.002 feet per foot (well MW-8 to well MW-11). Analytical results indicate that petroleum hydrocarbon constituents have slightly decreased in groundwater monitoring well MW-1A, slightly increased in well MW-13, and remained consistent in the remaining wells when compared to historical data. The laboratory results for the laboratory supplied trip blank and field blank collected near well MW-7 identified low concentrations of benzene, toluene and ethylbenzene. The presence of these constituents could be due to field and/or laboratory procedures. Brown and Caldwell will review these procedures prior to the next sampling event. A summary of the depth-to-water measurements, calculated groundwater elevations, and analytical results are included in Table 1. A groundwater contour map, identifying the approximate groundwater flow direction on September 21, 1995 and the analytical results from each sample, is included as Figure 1. Field notes, the chain-of-custody form and the laboratory data sheets are included in Attachment A.

If you have any question regarding the information presented herein, please contact me at your earliest convenience.

Sincerely,

BROWN AND CALDWELL,

Todd Miller
California Registered Geologist No. 6328

TM/PC:lkg
Attachments

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

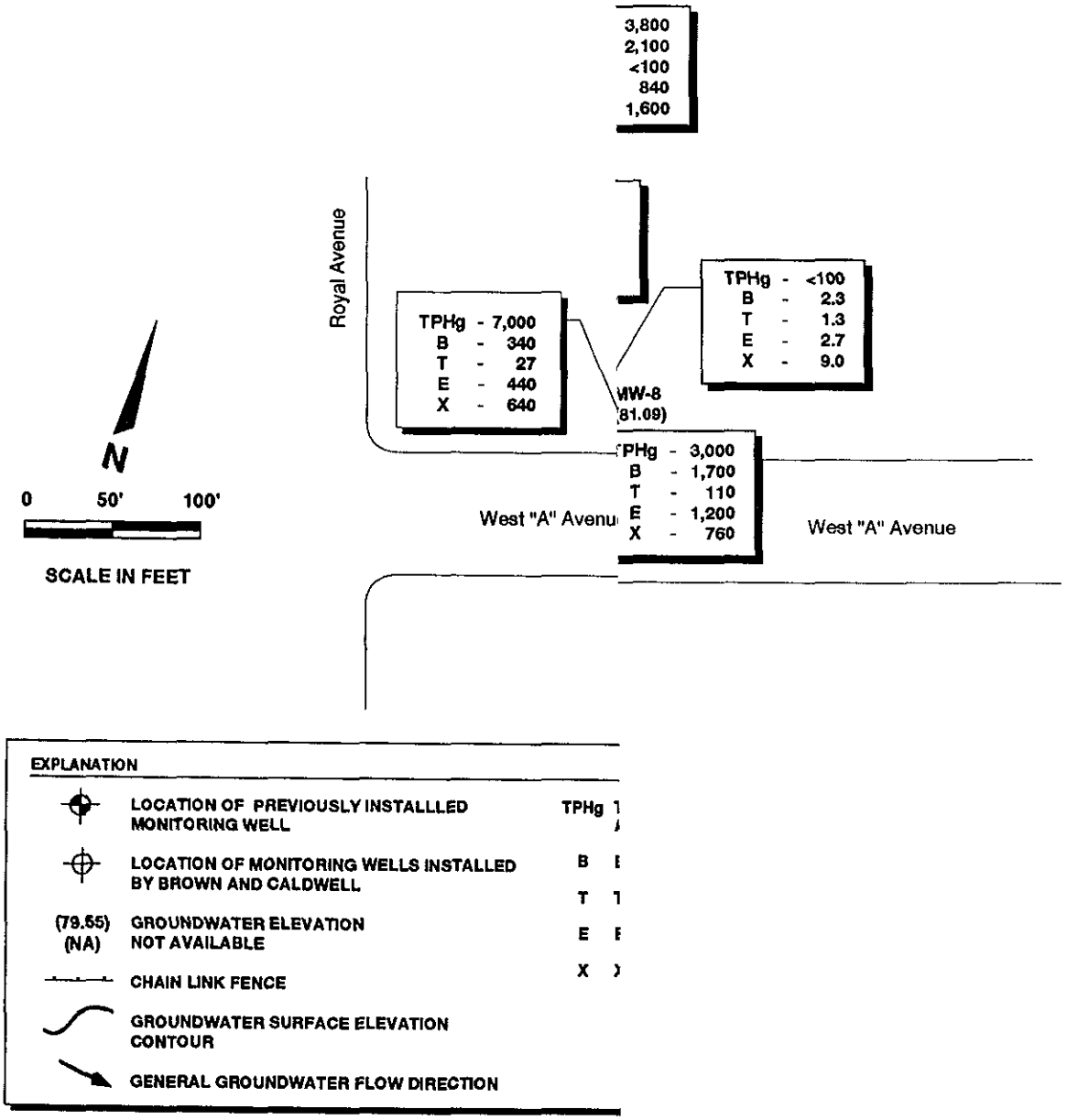

Figure 1 Groun, 1995

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		16.23		83.68	54,000	16,000	1,600	1,900	4,300
	23-Jun-93	96.73	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**
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**

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-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	Well Not Sampled				
	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**
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
	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**

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-4	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**
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
	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
duplicate	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	Well Not Sampled				
	15-Mar-95		14.70		82.03	5,300	1,100	11	180	320

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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
	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**
MW-6	5-Feb-92	100.97	21.29		79.68	51,000	5,400	3,500	3,600	10,000
	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	Sample Not Analyzed				
	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	Well Not Sampled				
	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**
MW-7	23-Jun-93	97.44	17.87		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	0.06	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

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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
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
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**
MW-9	23-Jun-93	95.41	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**				
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

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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
	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**
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**
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**
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**
MW-14	10-Feb-95	99.01	16.28		82.73	12,000	42	8	740	2,100
duplicate	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

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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
	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**
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

[1]Relative to lower mean sea level.
[2]Below ground surface.
[3]Total Petroleum Hydrocarbons as gasoline.

ATTACHMENT A

SAMPLING AND ANALYSIS PLAN
FIELD NOTES
LABORATORY DATA SHEETS
CHAIN-OF-CUSTODY

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.

Well Diameter	Gallons/linear foot
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 it's 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: 9-21-95

B&C PERSONNEL: M. STUMAR

JOB No: 1564-04

WEATHER: OVERCAST COOL

LOCK TYPE: DOLPH J

INSTRUMENT: SLOPE INDICATOR

LID TYPE: CHRISTIE 17/16 9/16

WELL ID.	SWL	TD	DIA	TIME	COMMENTS
MW-1	16.05	32.10'	4"x 10"	0826	
MW-1A	17.05	28.40'	2"x 8"	0820	NO PRODUCT DETECTED
MW-2	17.54	32.30'	4"x 10"	0829	
MW-3	17.02	32.10'	4"x 10"	0834	
MW-4	16.60	32.11'	4"x 10"	0832	
MW-5	16.19	32.48'	4"x 10"	0825	
MW-6	16.44	32.10'	4"x 10"	0823	
MW-7	16.83	30.06'	2"x 8"	0838	
MW-8	16.52	32.15'	2"x 8"	0912	
MW-9		31.60'	2"x 8"		NO ACCESS
MW-10	16.48	31.80'	2"x 8"	0908	
MW-11	13.13	25.00'	2"x 8"	0900	
MW-12	17.58	30.00'	2"x 8"	0850	
MW-13	15.50	30.00'	2"x 8"	0905	
MW-14	17.61	30.00'	2"x 8"	0945	

BROWN AND CALDWELL

Well No. MW-1

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-22-95

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

Samplers Name: M. STINAR

Weather Conditions: _____

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

a. Depth to water (ft) = 16.05'

Water Table Elev. _____

b. Total Well Depth = 32.10 ft.

Tape Corr. (TC) _____

c. Length of Water Column = 16.05' (b. – a.)

Well Diameter 4"x 10"

d. Casing Volume = 10.4 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** = 22.5 gAL (d. + f.)

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

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 22.5 gallons per well volume) = 67.5 gAL

c. Field Testing; Equipment Used BECKMAN pH + TEMP, YSI R COND

d. Pump Rate 2.25 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°c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/ Description	SWL	Pump Placemen
7	0915	21.0	6.69	1,143	55.2	FUEL ODOR	17.20	BOTTOM
30	0925	21.5	6.92	1,144	23	CLEAR	17.30	
53	0935	21.5	6.87	1,179	3.1	CLEAR	17.36	
69	0942	21.4	6.85	1,173	2.1	CLEAR	17.38	
SAMPLE	0947	21.1	6.83	1,170	2.0	CLEAR	17.10	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

_____

_____

_____

BROWN AND CALDWELL

Well No. MW-1A

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-22-95

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

Samplers Name: M. STINAR

Weather Conditions: OVERCAST

1. WATER LEVEL DATA: (from TOC)

a. Depth to water (ft) = 17.05'

b. Total Well Depth = 28.40 ft.

c. Length of Water Column = 11.35' (b. – a.)

d. Casing Volume = 1.8 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** = 9.6 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	= 0.78gal/f
	10-in.hole filter pack	= 1.21gal/f
	12-in.hole filter pack	= 1.47gal/f

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 9.6 gallons per well volume) = 28.8 gal

c. Field Testing; Equipment Used BECKMAN pH + TEMP UNIT 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
3	1003				+100	CLOUDY, NO SILTS	18.01	BOTTOM
12	1011	20.9	6.72	1,465	19.6	CLEAR	18.17	
4+21	1018	20.9	6.55	1,392	5.1	CLEAR	18.36	
30	1026	20.9	6.62	1,242	3.7	CLEAR	18.39	
Sample	1032	20.6	6.69	1,278	3.1	CLEAR	17.37	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-2

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-22-95

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

Samplers Name: M. STINAR

Weather Conditions: OVERCAST

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 4"x 10"

a. Depth to water (ft) = 17.54'

b. Total Well Depth = 32.30 ft.

c. Length of Water Column = 14.76' (b. – a.)

d. Casing Volume = 9.5 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** = 21.6 gal (d. + f.)

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

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 21.6 gallons per well volume) = 65.0 gal

c. Field Testing; Equipment Used BECKMAN pH + TEMP YSI 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°c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/ Description	SWL	Pump Placeme
4	1303	21.3	7.64	1,284	14.1	OUTGASSING,	18.29	BOTTOM
24	1313	20.6	7.13	1,286	14.4	SAME	18.33	
44	1323	20.6	6.91	1,284	32.9	SAME	18.37	
66	1335	20.5	6.89	1,278	27.5	SAME	18.41	
SAMPLE	1341	20.4	6.87	1,276	19.1	SAME	18.10	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-3

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9.22.95

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

Samplers Name: M. STINAR

Weather Conditions: OVERCAST

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

a. Depth to water (ft) = 17.02'

Water Table Elev. _____

b. Total Well Depth = 32.10 ft.

Tape Corr. (TC) _____

c. Length of Water Column = 15.08' (b. – a.)

Well Diameter 4"x 10"

d. Casing Volume = 9.8 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** = 21.9 gal (d. + f.)

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

2. WELL PURGING DATA:

a. Purge Method TRASH Pump / WATERRA

b. Required Purge Volume (@ 21.9 gallons per well volume) = 65.7

c. Field Testing; Equipment Used BECKMAN pH & TEMP YSI 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°c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/ Description	SWL	Pump Placemer
6	1401	20.6	8.16	1,151	37.4	CLEAR	18.21	Bottom
26	1411	20.5	7.46	1,150	26.3	CLEAR	1827	
46	1421	20.5	7.20	1,147	19.0	CLEAR		
66	1431	20.4	7.11	1,139	12.0	CLEAR		
Sample	1437	20.3	7.09	1,138	10.1	CLEAR		

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-4

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-22-95

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

Samplers Name: M. STINAR

Weather Conditions: OVERCAST

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

a. Depth to water (ft) = 16.60'

Water Table Elev. _____

b. Total Well Depth = 32.11 ft.

Tape Corr. (TC) _____

c. Length of Water Column = 15.51' (b. – a.)

Well Diameter 4"x 10"

d. Casing Volume = 10.08 (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** = 22.1 gal (d. + f.)

	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	= 0.78gal/
●	10-in.hole filter pack	= 1.21gal/
	12-in.hole filter pack	= 1.47gal/

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 22.1 gallons per well volume) = 66.5 gal

c. Field Testing; Equipment Used BECKMAN pH + TEMP, YWR 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°c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/ Description	SWL	Pump Placement
10	1211	20.3	6.87	1,237	+100	CLOUDY, FUEL ODOR	17.71	BOTTOM
29	1221	19.9	6.82	1,230	78.4	CLEARING	17.80	
48	1230	20.1	6.88	1,236	24.9	SAME	17.84	
67	1240	20.0	6.86	1,230	15.7	SAME	17.86	
Sample	1247	20.0	6.84	1,229	14.0	SAME	17.10	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-5

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9.22.95

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

Samplers Name: M. STINAR

Weather Conditions: OVERCAST

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 4"x 10"

a. Depth to water (ft)	= 16.19'	
b. Total Well Depth	= 32.48 ft.	
c. Length of Water Column	= 16.29'	(b. – a.)
d. Casing Volume	= 10.5 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**	= 22.6 gal	(d. + f.)

○ 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	= 0.78gal/
● 10-in.hole filter pack	= 1.21gal/
○ 12-in.hole filter pack	= 1.47gal/

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 22.6 gallons per well volume) = 68.0 gal

c. Field Testing; Equipment Used BECKMAN pH & TEMP VWA COND

d. Pump Rate 2.5 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°c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/ Description	SWL	Pump Placemen
6	1130	20.8	7.22	1,270	+100	CLOUDY, GREY		BOTTOM
28	1139	20.8	7.01	1,205	33	CLEAR	17.93	
49	1148	20.8	6.78	1,204	35.2	CLEAR	18.30	
70	1157	20.9	6.71	1,147	54.3	CLEAR	18.60	
Sample	1201	20.8	6.69	1,139	39.0	CLEAR	18.70	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-6

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-22-95

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

Samplers Name: M. STINAR

Weather Conditions: OVERCAST

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 4"x 10"

a. Depth to water (ft)	= 16.44'	
b. Total Well Depth	= 32.10 ft.	
c. Length of Water Column	= 15.66'	(b. – a.)
d. Casing Volume	= 10.1 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**	= 22.2 gal	(d. + f.)

○	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	= 0.78gal/
●	10-in.hole filter pack	= 1.21gal/
○	12-in.hole filter pack	= 1.47gal/

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 22.2 gallons per well volume) = 66.8 gal

c. Field Testing; Equipment Used BECKMAN pH + TEMP VWR 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°c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/ Description	SWL	Pump Placemer
5	1041	21.4	6.64	1,227	+100	CLOUDY NO SILTS	16.80	
25	1051	21.4	6.56	1,220	31.5	CLEARING	16.84	
45	1101	21.3	6.68	1,221	15.0	CLEAR	16.96	
68	1113	21.1	6.63	1,219	11.0	CLEAR	17.01	
SAMPLE	1117	21.0	6.65	1,227	9.0	CLEAR	16.85	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-7

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-21-95

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

Samplers Name: M. STINAR

Weather Conditions: PARTLY SUNNY

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

a. Depth to water (ft) = 16.83'

Water Table Elev. _____

b. Total Well Depth = 30.06 ft.

Tape Corr. (TC) _____

c. Length of Water Column = 13.23 (b. – a.)

Well Diameter 2"x 8"

d. Casing Volume = 2.1 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** = 9.9 gal (d. + f.)

●	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	= 0.78gal/
	10-in.hole filter pack	= 1.21gal/
	12-in.hole filter pack	= 1.47gal/

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 9.9 gallons per well volume) = 29.7 gals.

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 Placemen
2	1048	19.8	6.82	1,242	+100	Grey, cloudy, FUEL ODOR		BOTTOM
15	1101	21.2	6.81	1,247	+100	CLEARING	24.39	
30	1116	21.9	6.82	1,242	+100	SAME	24.43	
SAMPLE	1120	19.8	6.77	1,225	+100	SAME	18.10	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

ALSO TAKE DUPLICATE, FIELD BLANK

BROWN AND CALDWELL

Well No. MW-8

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-21-95

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

Samplers Name: M. STINAR

Weather Conditions: PARTLY CLOUDY

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 2"x 8"

a. Depth to water (ft)	= 16.52'		
b. Total Well Depth	= 32.15 ft.		
c. Length of Water Column	= 15.63'	(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.)	

●	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	= 0.78gal/
	10-in.hole filter pack	= 1.21gal/
	12-in.hole filter pack	= 1.47gal/

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 10.3 gallons per well volume) = 30.9 gal

c. Field Testing; Equipment Used BECKMAN pH + TEMP YWR 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 Placemen
3	0958	21.9	7.74	1,227	+100	BROWN, CLOUDY, SILTS		BOTTOM
13	1008	21.7	7.30	1,226	63.7	CLEAR	17.20	
23	1018	21.5	7.12	1,227	+100	BROWN, SILTY	17.30	
33	1028	21.6	7.09	1,221	+100	SAME	17.37	
SAMPLE	1034	21.5	7.01	1,219	+100	SAME	17.01	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-9

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-21-95

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

Samplers Name: M. STINAR

Weather Conditions: PARTLY Cloudy

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 2"x 8"

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.)

●	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	= 0.78gal/
	10-in.hole filter pack	= 1.21gal/
	12-in.hole filter pack	= 1.47gal/

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°c	pH	Spec. Conductivity	Turbidity (NTU's)	Color/ Description	SWL	Pump Placemer

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS WELL HEAD COVERED BY TRENCH PLATES & BACK-HOE

BROWN AND CALDWELL

Well No. MW-10

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-21-95

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

Samplers Name: M. STINE

Weather Conditions: PARTLY CLOUDY

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

a. Depth to water (ft) = 16.48'

Water Table Elev. _____

b. Total Well Depth = 31.80 ft.

Tape Corr. (TC) _____

c. Length of Water Column = 15.32' (b. – a.)

Well Diameter 2"x 8"

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.)

●	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	= 0.78gal/f
	10-in.hole filter pack	= 1.21gal/f
	12-in.hole filter pack	= 1.47gal/f

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 10.2 gallons per well volume) = 30.7 gal

c. Field Testing; Equipment Used BECKMAN pH + TEMP

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	1134	21.5	7.62	987	+100	CLOUDY, FUEL ODOR	17.71	BOTTOM
12	1144	21.5	7.56	984	+100	SAME	17.76	
21	1153	21.0	7.34	981	73.1	CLEARING	17.87	
32	1204	21.0	7.26	979	36.4	CLEAR	17.93	
SAMPLE	1209	20.5	7.17	971	30.4	CLEAR	16.69	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-11

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9.21.95

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

Samplers Name: M. STINAR

Weather Conditions:

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS)

Water Table Elev.

Tape Corr. (TC)

Well Diameter 2"x 8"

a. Depth to water (ft)	= 13.13'	
b. Total Well Depth	= 25.00 ft.	
c. Length of Water Column	= 11.87'	(b. – a.)
d. Casing Volume	= 1.89 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**	= 9.6 gal	(d. + f.)

●	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	= 0.78gal/
	10-in.hole filter pack	= 1.21gal/
	12-in.hole filter pack	= 1.47gal/

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 9.6 gallons per well volume) = 29.0 gal

c. Field Testing; Equipment Used BECKMAN pH + TEMP YWR 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 Placemen
3	1359	21.9	7.10	1,144	+100	CLOUDY, GREY	17.70	BOTTOM
11	1407	21.8	6.59	1,134	+100	SAME	17.75	
21	1417	21.9	6.64	1,124	+100	SAME	17.83	
30	1428	22.0	6.68	1,130	+100	SAME	17.86	
SAMPLE	1437							

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-12

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-21-95

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

Samplers Name: M. STINAR

Weather Conditions: PARTLY Cloudy

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 2"x 8"

a. Depth to water (ft)	= 17.58'	
b. Total Well Depth	= 30.00 ft.	
c. Length of Water Column	= 12.42'	(b. – a.)
d. Casing Volume	= 1.98 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**	= 9.7 gal	(d. + f.)

●	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	= 0.78gal/f
	10-in.hole filter pack	= 1.21gal/f
	12-in.hole filter pack	= 1.47gal/f

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 9.7 gallons per well volume) = 29.3 gal

c. Field Testing; Equipment Used BECKMAN pH & TEMP YWR 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 Placemen:
2	1221	20.6	5.72	982	+100	Cloudy, FINE SILTS		
10	1229	20.6	5.81	983	+100	SAME	18.4	
21	1240	20.4	6.45	846	+100	CLEARING	18.19	
31	1250	20.4	6.54	961	91.5	CLEARING	18.21	
SAMPLE	1259	19.5	6.47	989	+100	SAME	16.10	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

BROWN AND CALDWELL

Well No. MW-13

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-21-95

Location: Station No. 100877, 523 "A" Street @ Garden Ave., Hayward, CA 21997 Victory St

Samplers Name: M. STINAR

Weather Conditions: CLEAR

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

Water Table Elev. _____

Tape Corr. (TC) _____

Well Diameter 2"x 8"

a. Depth to water (ft)	= 15.50	
b. Total Well Depth	= 30.00 ft.	
c. Length of Water Column	= 14.50'	(b. – a.)
d. Casing Volume	= 2.32 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**	= 10.1 gal	(d. + f.)

● 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	= 0.78gal/
10-in.hole filter pack	= 1.21gal/
12-in.hole filter pack	= 1.47gal/

2. WELL PURGING DATA:

a. Purge Method TRASH Pump / WATERRA

b. Required Purge Volume (@ 10-1 gallons per well volume) = 30.3 gal

c. Field Testing; Equipment Used BECKMAN pH & TEMP HACH 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 Placemen
2	1451	22.0	7.52	1,114	+100	BROWN, CLOUDY SILTS		
12	1501	22.0	7.69	1,107	+100	SAME	22.12	
23	1512	21.8	7.53	1,114	+100	SAME	22.25	
31	1520	22.6	7.54	1,129	+100	SAME	22.36	
SAMPLE	1532	21.7	7.51	1,130	69.2	CLEAR	18.61	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

ASSIST PURGING BY HAND PUMPING WATERRA

BROWN AND CALDWELL

Well No. MW-14

GROUNDWATER SAMPLE COLLECTION RECORD

Project Name: EZ - Serve, Hayward Job No.: 1564-04 Date: 9-21-95

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

Samplers Name: M. STINAR

Weather Conditions: PARTLY CLOUDY

1. WATER LEVEL DATA: (from TOC)

TOC Elevation (from LS) _____

a. Depth to water (ft) = 17.61'

Water Table Elev. _____

b. Total Well Depth = 30.00 ft.

Tape Corr. (TC) _____

c. Length of Water Column = 12.39' (b. – a.)

Well Diameter 2"x 8"

d. Casing Volume = 1.9 gal (c. x [gal/ft casing])

e. Length of filter pack = 10'

f. Filter pack volume = 7.4 gal (e. x [gal/ft filter pack])

g. **TOTAL WELL VOLUME** = 9.7 gal (d. + f.)

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

2. WELL PURGING DATA:

a. Purge Method TRASH PUMP / WATERRA

b. Required Purge Volume (@ 9.7 gallons per well volume) = 29.3 gal

c. Field Testing; Equipment Used BECKMAN pH, TEMP YSI 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 Placemer
3	1311	19.9	6.83	1,142	+100	GREY, CLOUDY, FINE SILTS		BOTTOM
12	1320	19.6	6.69	1,177	+100	SAME	19.76'	
24	1332	19.7	6.69	1,157	+100	SAME	19.95'	
31	1339	19.7	6.66	1,154	+100	SAME	20.23'	
SAMPLE	1348	19.8	6.72	1,104	+100	SAME	19.79'	

3. SAMPLE COLLECTION: Method Disposable Bailer Container 3 x 40 ml VOA Preservation HCL

Analysis TPH (gas) 8015, BTEX 8020

COMMENTS, REMARKS

CHAIN OF CUSTODY RECORD

BCA Log Number ______________

Client name: Brown & Caldwell	Project or PO#: 3003-02
Address: 3480 Buskirk	Phone #: 939-9010
City, State, Zip: ~~Hayward Ca~~ Pleasant Hill, CA	Report attention: Todd Miller

Sampled by: M. Stmar

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	TPH G 8015	BTEX 8020						Hazardous sample Special handling required	Remarks
	9-22-95	0947	GW	MW-1	3	X	X							
		1032		MW-1A										
		1117		MW-6										
		1201		MW-5										
		1247		MW-4										
		1341		MW-2										
	↓	1437	↓	MW-3	↓	↓	↓							

	Signature	Print Name	Company	Date	Time
Relinquished by	M. Stmar	Michael Stmar	BCC	9-22-95	1655
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894

☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737

☐ 1300 ...

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

CHAIN OF CUSTODY RECORD

BCA Log Number _____

Client name: Brown + Caldwell	Project or PO#: 3003-02
Address: 2140 Bushkirk	Phone #: 510 933-9000
City, State, Zip: Pleasant Hill CA	Report attention: Todd Miller

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by: M Stmar / Sample description	Number of containers	Analyses required: TPH G 8015	Analyses required: BTEX 8020	Hazardous sample Special handling required	Remarks
	9.21.95	1034	GW	MW-6	3	X	X		
		1120		MW-7					
		1122		MW-7D					
		1124		MW-7FB					
		1209		MW-10					
		1259		MW-12					
		1348		MW-14					
		1437		MW-11					
		1533		MW-13					
			BW	TRIP BLANK	2				

	Signature	Print Name	Company	Date	Time
Relinquished by	M. Stmar	Michael Stmar	BCC	9.22.95	1105
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL
☐ 1085 Shary Circle, Concord, CA 94518 (510) 825-3894
☐ 801 Western Avenue, Glendale, CA 91201 (818) 247-5737

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

FEDERAL EXPRESS

COMPLETE PURPLE AREAS. SEE BACK OF AIRBILL FOR MORE INSTRUCTIONS.
QUESTIONS? CALL 800-238-5355 TOLL FREE.

309465246 6

323 70548M

DATE 9/22/95

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8008

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Sender's Federal Express Account Number: 0941-1052-1

AIRBILL NUMBER: 309465246 6

1 From (Your Name): Steve Hinman

Your Phone Number (Very Important): 510 825-3707

Company: BROWN AND CALDWELL

Department/Floor No.:

Street Address: 3480 BUSKIRK AVE

City: PLEASANT HILL State: CA ZIP Required For Correct Invoicing: 9 4 5 9 6

2 To (Recipient's Name): Sample Control

Recipient's Phone Number (Very Important): ( )

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 Charges.): 630 Maple Ave

City: Torrence State: CA ZIP Street Address Zip Required: 90503

3 YOUR BILLING REFERENCE INFORMATION (FIRST 24 CHARACTERS WILL APPEAR ON INVOICE): 3003-02, 04, 06, & 10

PAYMENT: [X] Bill Sender [ ] Cash [ ] Bill Recipient's FedEx Acct. No. Fill in Account Number below [ ] Bill 3rd Party FedEx Acct. No. Fill in Account Number below [ ] Bill Credit Card Fill in Credit Card Number below

4 SERVICES CHECK ONLY ONE BOX

1 [X] PRIORITY 1 Overnight Delivery Using Your Packaging
6 [ ] OVERNIGHT LETTER* (Our Packaging) Not to exceed 1/2 lb.

OVERNIGHT DELIVERY USING OUR PACKAGING
2 [ ] Courier-Pak Overnight Envelope† 12"x 15½"
3 [ ] Overnight Box 12½"x 17½"x 3" A [ ]
4 [ ] Overnight Tube 38"x 6"x 6" B [ ]
*Declared Value Limit $100.

STANDARD AIR
5 [ ] 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 (Fill in Section H at right)
2 [ ] DELIVER WEEKDAY
3 [X] DELIVER SATURDAY (Extra charge)
4 [ ] DANGEROUS GOODS (PI and Standard Air Packages only. Extra charge)
5 [ ] CONSTANT SURVEILLANCE SERVICE (CSS) (Extra charge) (Do Not Complete Section II)
6 [ ] DRY ICE _____ Lbs.
7 [ ] OTHER SPECIAL SERVICE _____
8 [ ]
9 [ ] SATURDAY PICK-UP (Extra charge)
10 [ ]

PACKAGES	WEIGHT	YOUR DECLARED VALUE (See right)	OVER SIZE
	LBS		
	LBS		
	LBS		
	LBS		
Total	Total	Total	

Received At
1 [ ] Regular Stop
2 [ ] On-Call Stop
3 [ ] Drop Box 4 [ ] B.S.C. 5 [ ] Station

Federal Express Corp Employee No

Date/Time For Federal Express Use

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:

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

City State

ZIP *Zip Code of Street Address Required

YOUR DECLARED VALUE

DAMAGE OR LOSS
We are liable for no more than $100 per package in the event of physical loss or damage, unless you fill in a higher Declared Value to the left and document higher actual loss in the event of a claim. We charge 30¢ for each additional $100 of declared value up to the maximum shown in our Service Guide. Declared value restrictions are shown on the back of the Sender's Copy of this airbill. We make no expressed or implied warranties.

DELAY
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Analytical Services

INVOICE NUMBER: 0237385-IN
INVOICE DATE: 09/28/95
CUSTOMER NO: 02-BB2045
PROJECT #/NAME: NA
CONTROL #: 95I096

BROWN & ROOT ENVIRONMENTAL
2300 BUENA VISTA, SUITE 110
ALBUQUERQUE NM 87106

CONTACT: ACCOUNTS PAYABLE

TERMS: NET 30

SALES CD	DESCRIPTION		QUANTITY	PRICE	AMOUNT
	PROJECT MANAGER: STEVE CAMP				
O	EPA 5030/M8015/8020	EACH	17.000	120.000	2,040.00
O	LESS 15% DISCOUNT	EACH	1.000	306.000-	306.00

NET INVOICE:	1,734.00
FREIGHT:	.00
SALES TAX:	.00
INVOICE TOTAL:	1,734.00

3480 Torrance Blvd., Suite 100, Torrance, CA 90503 • Telephone 310-792-3728 • Fax 310-792-3726

C K Y incorporated
Analytical Services

INVOICE NUMBER: 0237385-IN
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INVOICE TOTAL:	1,734.00

3480 Torrance Blvd., Suite 100, Torrance, CA 90503 • Telephone 310-792-3728 • Fax 310-792-3726

C K Y incorporated
Analytical Laboratories

Date: 10-17-1995
CKY Batch No.: 95I096

Attn.: Steve Camp

Brown & Root Environmental
2300 Buena Vista, Suite 110
Albuquerque, NM 87106

Subject: Laboratory Report
Project: NA

Enclosed is the Laboratory report for samples received on 09/23/95. 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-8	I096-01	Water	EPA 5030/M8015 EPA 8020
100877-MW-7	I096-02	Water	EPA 5030/M8015 EPA 8020
100877-MW-7D	I096-03	Water	EPA 5030/M8015 EPA 8020
100877-MW-7FB	I096-04	Water	EPA 5030/M8015 EPA 8020
100877-MW-10	I096-05	Water	EPA 5030/M8015 EPA 8020
100877-MW-12	I096-06	Water	EPA 5030/M8015 EPA 8020
100877-MW-14	I096-07	Water	EPA 5030/M8015 EPA 8020
100877-MW-11	I096-08	Water	EPA 5030/M8015 EPA 8020
100877-MW-13	I096-09	Water	EPA 5030/M8015 EPA 8020
TRIPBLANK	I096-10	Water	EPA 5030/M8015 EPA 8020
100877-MW-1	I096-11	Water	EPA 5030/M8015 EPA 8020
100877-MW-1A	I096-12	Water	EPA 5030/M8015 EPA 8020
100877-MW-6	I096-13	Water	EPA 5030/M8015 EPA 8020
100877-MW-5	I096-14	Water	EPA 5030/M8015 EPA 8020
100877-MW-4	I096-15	Water	EPA 5030/M8015 EPA 8020

630 Maple Ave., Torrance. Calif. 90503 • Telephone 310-618-8889 • Fax: 310-618-0818

Sample ID	Control No.	Matrix	Analysis
100877-MW-2	I096-16	Water	EPA 5030/M8015 EPA 8020
100877-MW-3	I096-17	Water	EPA 5030/M8015 EPA 8020

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:	09/21/
PROJECT:	NA	DATE RECEIVED:	09/23/
BATCH NO.:	95I096	DATE EXTRACTED:	NA
MATRIX:	WATER	DATE ANALYZED:	09/29/

SAMPLE ID	CONTROL NO	RESULT (mg/L)	% RECOVERY SURR	DILUTION FACTOR	MDL (mg/L)
100877-MW-8	I096-01	ND	86	1	.1
100877-MW-7	I096-02	4.02	127	1	.1
100877-MW-7D	I096-03	4.48	158+	1	.1
100877-MW-7FB	I096-04	ND	84	1	.1
100877-MW-10	I096-05	4.68	146+	1	.1
100877-MW-12	I096-06	ND	82	1	.1
100877-MW-14	I096-07	4.43	166+	1	.1
100877-MW-11	I096-08	7.00	574+	1	.1
100877-MW-13	I096-09	ND	81	1	.1
TRIPBLANK	I096-10*	ND	83	1	.1
100877-MW-1	I096-11	1.6	132	1	.1
100877-MW-1A	I096-12	2.0	137+	1	.1
100877-MW-6	I096-13	3.0	118	1	.1
100877-MW-5	I096-14	4.0	127	1	.1
100877-MW-4	I096-15	3.6	92	1	.1
100877-MW-2	I096-16	3.7	204+	1	.1
100877-MW-3	I096-17	3.8	102	1	.1
MBLK1W	VAI2914B	ND	103	1	.1
MBLK2W	VAJ1314B	ND	102	1	.1
QC LIMIT:			65-135		

SURR : Bromofluorobenzene
MDL : Method Detection Limit
* : Collection date - NA
+ : Out of QC limits due to matrix interference

Collection Date: 09/22/95 for I096-11 to I096-17

Date Analyzed: 10/13/95 for I096-11 to I096-17, VAJ1314B

Samples I096-11 to I096-17 were analyzed outside 14-day holding time criteria.

CKY QUALITY CONTROL DATA
SPIKE/SPIKE DUPLICATE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA M8015G
MATRIX: WATER

==========

BATCH NO.: 95I096
SAMPLE ID: 100877-MW-7FB
CONTROL NO.: I096-04

DATE RECEIVED: 09/23/95
DATE EXTRACTED: NA
DATE ANALYZED: 09/29/95

ACCESSION: 95I092 95I096

Parameter	SAMPLE CONC (mg/L)	SPIKE ADDED (mg/L)	MS CONC (mg/L)	MS % REC	SPIKE ADDED (mg/L)	MSD CONC (mg/L)	MSD % REC	% RPD
Gasoline	ND	2.00	1.86	93	2.00	1.81	90	
QC LIMIT:				65-135			65-135	3

CKY QUALITY CONTROL DATA
SPIKE/SPIKE DUPLICATE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA M8015G
MATRIX: WATER

BATCH NO.: 95I096
SAMPLE ID: 100877-MW-1
CONTROL NO.: I096-11

DATE RECEIVED: 09/23/95
DATE EXTRACTED: NA
DATE ANALYZED: 10/13/95

ACCESSION: 95I096

Parameter	SAMPLE CONC (mg/L)	SPIKE ADDED (mg/L)	MS CONC (mg/L)	% REC	SPIKE ADDED (mg/L)	MSD CONC (mg/L)	% REC	% RPD
Gasoline	1.59	2.00	3.46	94	2.00	3.30	86	
QC LIMIT:				65-135			65-135	3(

CKY QUALITY CONTROL DATA
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA M8015G
MATRIX: WATER

BATCH NO.: 95I096
SAMPLE ID: LCS1W/LCS1WD
CONTROL NO.: VAI2914L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 09/29/95

ACCESSION: 95I092 95I096

Parameter	SAMPLE CONC (mg/L)	SPIKE ADDED (mg/L)	LCS CONC (mg/L)	LCS % REC	SPIKE ADDED (mg/L)	LCSD CONC (mg/L)	LCSD % REC	% RPD
Gasoline	ND	2.00	1.74	87	2.00	1.83	92	
QC LIMIT:				70-125			70-125	3(

CKY QUALITY CONTROL DATA
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA M8015G
MATRIX: WATER

BATCH NO.: 95I096
SAMPLE ID: LCS2W/LCS2WD
CONTROL NO.: VAJ1314L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 10/13/95

ACCESSION: 95I096

Parameter	SAMPLE CONC (mg/L)	SPIKE ADDED (mg/L)	LCS CONC (mg/L)	LCS % REC	SPIKE ADDED (mg/L)	LCSD CONC (mg/L)	LCSD % REC	% RPI
Gasoline	ND	2.00	2.15	107	2.00	2.04	102	
QC LIMIT:				70-125			70-125	3

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-8	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-01	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	2.3	1
Toluene	1.3	1
Ethylbenzene	2.7	1
Total Xylenes	9.0	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	76	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-7	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-02	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	110	1
Toluene	ND	1
Ethylbenzene	220	1
Total Xylenes	220	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	75	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-7D	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-03	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	140	1
Toluene	ND	1
Ethylbenzene	270	1
Total Xylenes	250	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	80	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-7FB	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-04	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	ND	1
Toluene	1.3	1
Ethylbenzene	4.2	1
Total Xylenes	ND	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	72	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-10	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-05	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	37	1
Toluene	17	1
Ethylbenzene	240	1
Total Xylenes	380	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	81	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-12	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-06	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	ND	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	74	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-14	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-07	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	25	1
Toluene	15	1
Ethylbenzene	280	1
Total Xylenes	310	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	78	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-11	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-08	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	340	1
Toluene	27	1
Ethylbenzene	440	1
Total Xylenes	640	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	66	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/21/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-13	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-09	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	2.6	1
Toluene	2.2	1
Ethylbenzene	ND	1
Total Xylenes	9.4	3

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	69	65-135

MDL: Method Detection Limit

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	NA
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	TRIPBLANK	DATE ANALYZED:	09/29/95
CONTROL NO.:	I096-10	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	1

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	4.6	1
Toluene	ND	1
Ethylbenzene	2.5	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:	09/22/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-1	DATE ANALYZED:	10/13/95
CONTROL NO.:	I096-11	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	5

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	1400	5
Toluene	9.0	5
Ethylbenzene	75	5
Total Xylenes	110	15

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	82	65-135

MDL: Method Detection Limit

The sample was analyzed outside the 14-day holding time criteria.

EPA METHOD 8020
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/22/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-1A	DATE ANALYZED:	10/13/95
CONTROL NO.:	I096-12	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	5

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	180	5
Toluene	9.2	5
Ethylbenzene	130	5
Total Xylenes	310	15

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	92	65-135

MDL: Method Detection Limit

The sample was analyzed outside the 14-day holding time criteria.

EPA METHOD 8020
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/22/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-6	DATE ANALYZED:	10/16/95
CONTROL NO.:	I096-13	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	100

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	1700	100
Toluene	110	100
Ethylbenzene	1200	100
Total Xylenes	760	300

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	74	65-135

MDL: Method Detection Limit

The sample was analyzed outside the 14-day holding time criteria.

EPA METHOD 8020
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/22/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-5	DATE ANALYZED:	10/16/95
CONTROL NO.:	I096-14	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	100

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	2800	100
Toluene	ND	100
Ethylbenzene	350	100
Total Xylenes	710	300

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	73	65-135

MDL: Method Detection Limit

The sample was analyzed outside the 14-day holding time criteria.

EPA METHOD 8020
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/22/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-4	DATE ANALYZED:	10/16/95
CONTROL NO.:	I096-15	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	100

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	9300	100
Toluene	1000	100
Ethylbenzene	1200	100
Total Xylenes	3600	300

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	81	65-135

MDL: Method Detection Limit

The sample was analyzed outside the 14-day holding time criteria.

EPA METHOD 8020
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/22/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-2	DATE ANALYZED:	10/16/95
CONTROL NO.:	I096-16	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	100

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	6700	100
Toluene	390	100
Ethylbenzene	1800	100
Total Xylenes	6400	300

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	90	65-135

MDL: Method Detection Limit

The sample was analyzed outside the 14-day holding time criteria.

EPA METHOD 8020
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	09/22/95
PROJECT:	NA	DATE RECEIVED:	09/23/95
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	100877-MW-3	DATE ANALYZED:	10/16/95
CONTROL NO.:	I096-17	MATRIX:	WATER
% MOISTURE:	NA	DILUTION FACTOR:	100

PARAMETERS	RESULTS (ug/L)	MDL (ug/L)
Benzene	2100	100
Toluene	ND	100
Ethylbenzene	840	100
Total Xylenes	1600	300

SURROGATE PARAMETER	% RECOVERY	QC LIMIT
Bromofluorobenzene	73	65-135

MDL: Method Detection Limit

The sample was analyzed outside the 14-day holding time criteria.

EPA METHOD 602
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	NA
PROJECT:	NA	DATE RECEIVED:	NA
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	MBLK1W	DATE ANALYZED:	09/29/95
CONTROL NO.:	VAI2914B	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	90	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	NA
PROJECT:	NA	DATE RECEIVED:	NA
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	MBLK2W	DATE ANALYZED:	10/13/95
CONTROL NO.:	VAJ127B	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	82	65-135

MDL: Method Detection Limit

EPA METHOD 8020
BTEX

CLIENT:	Brown & Root Environmental	DATE COLLECTED:	NA
PROJECT:	NA	DATE RECEIVED:	NA
BATCH NO.:	95I096	DATE EXTRACTED:	NA
SAMPLE ID:	MBLK3W	DATE ANALYZED:	10/16/95
CONTROL NO.:	VAJ137B	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	83	65-135

MDL: Method Detection Limit

CKY QUALITY CONTROL DATA
SPIKE/SPIKE DUPLICATE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA 8020
MATRIX: WATER

BATCH NO.: 95I096
SAMPLE ID: 100877-MW-7FB
CONTROL NO.: I096-04

DATE RECEIVED: 09/23/95
DATE EXTRACTED: NA
DATE ANALYZED: 09/29/95

ACCESSION: 95I092 95I096

Parameter	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	MS CONC (ug/L)	MS % REC	SPIKE ADDED (ug/L)	MSD CONC (ug/L)	MSD % REC	% RPD
Benzene	ND	15.00	17.00	113	15.00	17.00	113	
Toluene	1.30	49.00	46.00	91	49.00	50.00	99	
Ethylbenzene	4.20	15.00	16.00	79	15.00	16.00	79	
Total Xylenes	ND	64.00	59.00	92	64.00	65.00	102	1
QC LIMIT:				65-135			65-135	3

CKY QUALITY CONTROL DATA
SPIKE/SPIKE DUPLICATE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA 8020
MATRIX: WATER

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BATCH NO.: 95I096
SAMPLE ID: SANTEE MW-11
CONTROL NO.: J012-05

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 10/13/95

ACCESSION: 95I096 95J012

Parameter	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	MS CONC (ug/L)	MS % REC	SPIKE ADDED (ug/L)	MSD CONC (ug/L)	MSD % REC	% RPI
Benzene	65	500	550	97	500	540	95	
Toluene	68	500	614	109	500	619	110	
Ethylbenzene	ND	500	522	104	500	498	100	
Total Xylenes	44	1500	1657	107	1500	1602	104	
QC LIMIT:				65-135			65-135	[illegible]

CKY QUALITY CONTROL DATA
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA 8020
MATRIX: WATER

BATCH NO.: 95I096 DATE RECEIVED: NA
SAMPLE ID: LCS1W/LCS1WD DATE EXTRACTED: NA
CONTROL NO.: VAI2914L/C DATE ANALYZED: 09/29/95

ACCESSION: 95I092 95I096

Parameter	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	LCS CONC (ug/L)	LCS % REC	SPIKE ADDED (ug/L)	LCSD CONC (ug/L)	LCSD % REC	% RPD
Benzene	ND	15.00	16.00	107	15.00	15.00	100	
Toluene	ND	49.00	51.00	104	49.00	51.00	104	
Ethylbenzene	ND	15.00	15.00	100	15.00	16.00	107	
Total Xylenes	ND	64.00	66.00	103	64.00	68.00	106	
QC LIMIT:				70-125			70-125	3

CKY QUALITY CONTROL DATA
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA 8020
MATRIX: WATER

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BATCH NO.: 95I096
SAMPLE ID: LCS2W/LCS2WD
CONTROL NO.: VAJ127L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 10/13/95

ACCESSION: 95I096 95J012

Parameter	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	LCS CONC (ug/L)	LCS % REC	SPIKE ADDED (ug/L)	LCSD CONC (ug/L)	LCSD % REC	% RPD
Benzene	ND	20.00	19.50	98	20.00	19.40	97	
Toluene	ND	20.00	20.50	103	20.00	19.70	99	
Ethylbenzene	ND	20.00	20.10	101	20.00	19.50	98	
Total Xylenes	ND	60.00	64.00	107	60.00	61.50	103	
QC LIMIT:				70-125			70-125	3

CKY QUALITY CONTROL DATA
LABORATORY CONTROL SAMPLE ANALYSIS

CLIENT: Brown & Root Environmental
PROJECT: NA
METHOD: EPA 8020
MATRIX: WATER

BATCH NO.: 95I096
SAMPLE ID: LCS3W/LCS3WD
CONTROL NO.: VAJ137L/C

DATE RECEIVED: NA
DATE EXTRACTED: NA
DATE ANALYZED: 10/16/95

ACCESSION: 95I096 95J012

Parameter	SAMPLE CONC (ug/L)	SPIKE ADDED (ug/L)	LCS CONC (ug/L)	LCS % REC	SPIKE ADDED (ug/L)	LCSD CONC (ug/L)	LCSD % REC	% RPD
Benzene	ND	20.00	20.60	103	20.00	21.70	109	5
Toluene	ND	20.00	21.80	109	20.00	22.70	114	4
Ethylbenzene	ND	20.00	21.10	106	20.00	22.10	111	5
Total Xylenes	ND	60.00	68.10	114	60.00	70.20	117	3
QC LIMIT:				70-125			70-125	30

CHAIN OF CUSTODY RECORD 95 I096 R6A2 1/2 BCA Log Number

Client name	BROWN + CALDWELL	Project or PO#	3003-02
Address	3480 BUSKIRK	Phone #	510 937 9010
City, State, Zip	PLEASANT HILL, CA	Report attention	TODD MILLER

Sampled by: M. STINAR

Analyses required: TPH G 8015, BTEX 8020, Hazardous sample / Special handling required

T=2°C ✓

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sample description	Number of containers	TPH G 8015	BTEX 8020						Hazardous sample Special handling required	Remarks
1	9.21.95	1034	GW	MW-8	3	X	X							
2	↓	1120	↓	MW-7	↓	↓	↓							
3	↓	1122	↓	MW-7D	↓	↓	↓							
4	↓	1124	↓	MW-7FB	↓	↓	↓							
5	↓	1209	↓	MW-10	↓	↓	↓							
6	↓	1259	↓	MW-12	↓	↓	↓							
7	↓	1348	↓	MW-14	↓	↓	↓							
8	↓	1437	↓	MW-11	↓	↓	↓							
9	↓	1533	↓	MW-13	↓	↓	↓							
10			BW	TRIP BLANK	2	↓	↓							

	Signature	Print Name	Company	Date	Time
Relinquished by	M. Stinar	MICHAEL STINAR	BCC	9.22.95	1655
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory	I. G. Patel	I. G. PATEL	cky	9-23-95	10:15

B C ANALYTICAL

[ ] 1085 Shary Circle, Concord, CA 94518 (510) 825-3894

[ ] 801 Western Ave... [illegible]

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

CHAIN OF CUSTODY RECORD

95 I096 RGA2 2/2

BCA Log Number

Client name	Project or PO#
BROWN & CALDWELL	3003-02
Address 3480 BUSKIRK	**Phone #** 937.9010
City, State, Zip ~~HAYWARD CA~~ PLEASANT HILL, CA	**Report attention** TODD MILLER

T=2°C ice

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by: M. STINAR / Sample description	Number of containers	TPH.G 8015	BTEX 8020	Hazardous sample / Special handling required	Remarks
11	9-22-95	0947	GW	MW-1	3	X	X		
12		1032		MW-1A					
13		1117		MW-6					
14		1201		MW-5					
15		1247		MW-4					
16		1341		MW-2					
17	↓	1437	↓	MW-3	↓	↓	↓		

	Signature	Print Name	Company	Date	Time
Relinquished by	M. Stinar	MICHAEL STINAR	BCC	9-22-95	1655
Received by					
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory		I & PATEL	CKY	9-23-95	10:15

B C ANALYTICAL
1085 Shary Circle, Concord, CA 94518 (510) 825-3894
1801 Western Avenue, Glendale, CA 91201 (818) 247-5737

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

FAXED to client 9/25

SAMPLE RECEIPT FORM

CONTROL NO.	951096
CLIENT	BROWN & ROOT
PROJECT	3003-02

DATE	09-23-95
TIME	10:15
RECIPIENT	I. PATEL

SAMPLE TRANSPORTATION TO CKY LABORATORY:	BY	ON(DATE)	AT(TIME)	FROM(SITE/CO.)	COMMENTS
PICKED-UP BY CKY COURIER					
DELIVERED BY CLIENT					
SHIPPED/AIRBILL NO: FEDEX APTN: 309465246 6	SEE AIRBILL				

SAMPLE BATCH PACKAGING/SEALING UPON RECEIPT:	NO CONTAINER	✓ INTACT	DAMAGED	✓ NOT SEALED	SEALED

CONTAINER:	INSIDE TEMPERATURE: 2° C			CUSTODY SEAL /OTHER SEAL		LOCATION	NUMBER
✓ COOLER	PACKAGING	TYPE	SUFFICIENCY	INTACT	DAMAGED		
BOX	INSULATION:		OK	NAME:			
OTHER:	ICE/COOLANT:	REGULAR	↓	DATE:			
	PACKING MATERIAL:	BUBBLEPAK	↓	TIME:			

SAMPLE DOCUMENTATION/CHAIN-OF-CUSTODY(COC)	NONE	HANDCARRIED	✓ ENCLOSED	FAXED	SEALED

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 ✓	CONTAINER ✓
INDIVIDUAL SAMPLE CONTAINER:		NONE	✓ PLASTIC BAG	CAN	OTHER(SPECIFY): BUBBLE BAG		SEALED

SAMPLE NUMBER	CLIENT ID	DISCREPANCY	ACTION
ALL		SAMPLES REC'D W/ PREFIX (100877) ON THE LABEL OF CONTAINERS BUT COC SAYS NOTHING	All samples should be logged in this prefix. client will be able to identify locations.
-10		ONE VIAL HAS BUBBLES	
-11		TWO VIALS HAVE BUBBLES	

CLIENT SERVICES COPY RECEIVED BY		DATE		TIME	
	Anita 9/25				

CKY INC., ANALYTICAL LABORATORIES, 630 Maple Ave., Torrance, Calif. 90503 Tel. (310) 618-8889 Fax: (310) 618-C