JAMES RIVER CORPORATION
PACKAGING BUSINESS
2101 Williams St., San Leandro, CA 94577-3200 510-614-2300 Fax 510-614-2301
Mailing Address: P.O. Box 5088, San Leandro, CA 94577-0552

Mr. Robert Weston
Hazardous Materials Specialist
Alameda County Health Agency
Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Rm. 200
Oakland, CA 94621

Subject: Amended Groundwater Monitoring Program/Frequency
James River Corporation, Flexible Packaging Group
2101 Williams Street, San Leandro, California.

Dear Mr. Weston:

In response to our meeting on September 21, 1992, and on behalf of James River Corporation, San Leandro Plant, I'm sending you this letter with the attached amended groundwater monitoring program, for your consideration.

This program has been developed with sufficient data collected over the past two years, from on-site monitoring wells and off-site samples taken by Brown and Caldwell Consultants and Project Managers for the site.

Mr. Weston, during our meeting we discussed several issues that support our position in this matter and we believe that our request is practical, unbiased and it represents savings in overhead expenditures to the Company.

We, at James River Corporation, San Leandro Plant, thank you for the support, understanding and prompt consideration of this matter. If you have any questions, please contact me at your convenience.

Very truly yours,

Walter Gonzalez
Government Regulation Coordinator

cc: Mr. Lester Feldman
San Francisco Bay Regional Water Quality Control Board
Mr. Michael Bakaldin
San Leandro Fire Department

FEBRUARY 1992 QUARTERLY SELF-MONITORING REPORT JAMES RIVER CORPORATION, FLEXIBLE PACKAGING GROUP SAN LEANDRO, CALIFORNIA

Prepared by Brown and Caldwell
Pleasant Hill, California

March 24, 1992

Brown and Caldwell
Consultants

3480 Buskirk Avenue
Pleasant Hill, CA 94523-4342
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March 24, 1992

Mr. Larry Seto
Alameda County Department of
Health Services
Hazardous Materials Program
80 Swan Way, Suite 200
Oakland, California 94621

11-6238-01/1

Subject: February 1992 Quarterly Self-Monitoring Report
James River Corporation, Flexible Packaging Group
San Leandro, California

Dear Mr. Seto:

Enclosed is a copy of the February 1992 Quarterly Self-Monitoring Report for the subject site.

If you have any questions regarding this report, please call me at (510) 210-2203 or Mr. Thomas Wheeler at (510) 210-2227.

Very truly yours,

BROWN AND CALDWELL

Anthony Mongero
Principal Hydrogeologist

Thomas K. Wheeler
California Registered Geologist
Number 3925

JL:AM:TW:lp
Enclosures

cc: Mr. Robert L. Wenning, James River Corporation

E:\LRE\6238\6238-FEB.4

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FEBRUARY 1992 QUARTERLY SELF-MONITORING REPORT
JAMES RIVER CORPORATION, FLEXIBLE PACKAGING GROUP
SAN LEANDRO, CALIFORNIA

March 24, 1992

Introduction

This report presents the depth to water measurements and groundwater quality analytical results of the quarterly monitoring activities performed by Brown and Caldwell Consultants (BCC) on February 13, 1992, at the James River Corporation (JRC) Flexible Packaging Group Facility, located at 2101 Williams Street in San Leandro, California. The location of the JRC facility is shown on Figure 1. This work was performed at the behest of the JRC in accordance with the quarterly self-monitoring requirements of the San Francisco Bay Area Regional Water Quality Control Board (RWQCB). The purpose of this report is to summarize the methods used and present the results of the field activities and groundwater sample analyses performed during the February 1992 quarterly monitoring round. All work completed during February was performed in accordance with the terms and conditions of our Task Order Agreement between JRC and BCC, dated July 18, 1991.

Scope of Current Investigation

The February 1992 quarterly self-monitoring activities conducted by BCC personnel, consisted of the following work: measurement of depth to water in 11 groundwater monitoring wells; purging a minimum of three volumes of well water from all wells except W-2 prior to sample collection; collection of groundwater samples from 11 wells; and the transport of all samples under chain-of-custody procedures to BC Analytical (BCA), a state of California hazardous waste certified (Certificate Number 1353) laboratory located in Emeryville, California. An obstruction in Monitoring Well W-2 just below the measured groundwater surface inhibited complete purging of the well in a reasonable time period. A detailed description of the groundwater monitoring field methods employed is presented in Appendix A. The 11 groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA Methods 8010 and 8020.

Site Hydrogeologic Conditions

The depth to groundwater was measured to $\pm$ 0.01 foot in all 11 on-site monitoring wells on February 13, 1992, prior to sampling, using an electric water level sounder. Measured depths to groundwater ranged from approximately 10.5 to 12.5 feet below grade. Groundwater surface elevations relative to mean sea level (MSL), were calculated using the top-of-casing elevations surveyed by prior investigators and ranged from 8.64 to 10.17 feet above MSL. Depth-to-water measurements and calculated groundwater surface elevations at the JRC facility for February 13, 1992, plus the four prior sounding rounds, are summarized in Table 1.

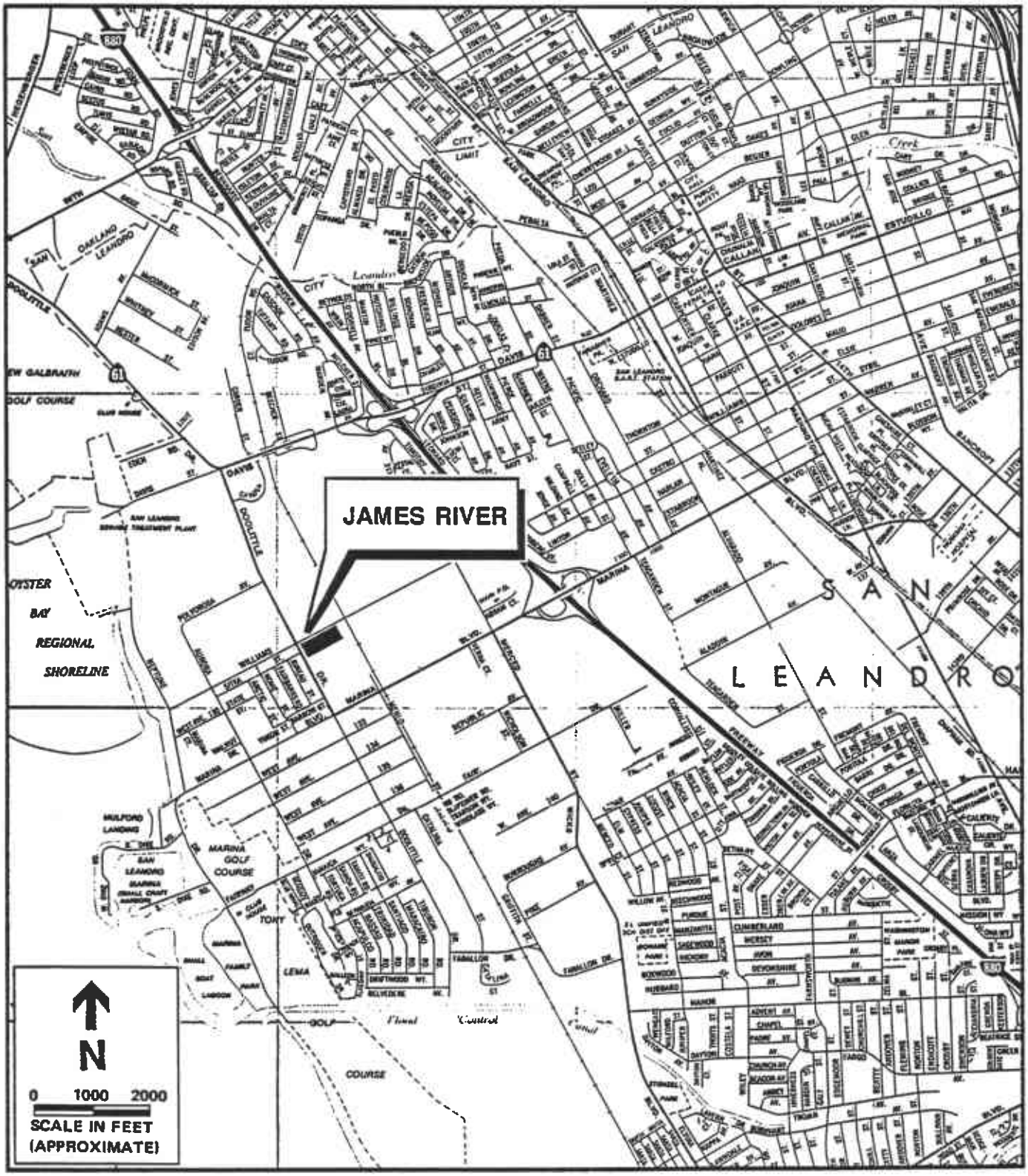

Figure 1 Site Location Map

Table 1
Summary of Groundwater Surface Elevations

Well Designation	Top-of-Casing Elevation (MSL)	Depth to Water 2-13-92 (Feet)	Groundwater Surface Elevations (MSL)				
			9-6-90	12-27-90	8-27-91	11-19-91	2-13-92
W-1	20.67	10.54	7.52	8.00	7.69	7.64	10.13
W-2	20.02	11.38	6.20	-	6.40	6.31	8.64
W-3	20.80	10.84	7.43	7.91	7.80	7.55	9.96
W-4	21.00	10.92	7.50	7.93	7.66	7.65	10.08
W-5	21.64	12.68	7.42	8.02	7.61	7.60	8.96
W-6	21.05	10.88	7.52	8.01	7.71	7.68	10.17
W-7	20.41	11.28	6.94	7.33	7.09	7.07	9.13
W-8	20.50	10.60	7.52	7.92	7.72	7.69	9.90
W-9	20.16	10.78	7.16	7.60	7.32	7.32	9.38
W-10	20.22	11.06	-	-	-	6.64	9.16
B-1	20.59	10.72	7.47	7.91	7.64	7.64	9.87

- = Not measured

Groundwater elevations increased in all 11 monitoring wells compared to the elevations measured during the prior sounding round conducted on November 19, 1991. The increase in groundwater elevations ranged from 1.36 feet in Monitoring Well W-5 to 2.52 feet in Monitoring Well W-10. This increase in groundwater elevations is likely due to recent rainfall occurring in Northern California.

Depth to water measurements were used to construct the groundwater surface elevation contour map presented on Figure 2. These contours are based upon the observed groundwater elevations in only those wells perforated from approximately 0 feet MSL to 15 feet below MSL. This interval is comprised of poorly sorted sands to sandy gravels which extend beneath the entire JRC site. This water-bearing unit (the "B Zone") is separated from a shallower water-bearing-unit (the "A Zone") and a deeper water-bearing unit (the "C Zone") by approximately 4 to 10 feet of clays, silty clays, and clayey silts. Consequently, shallow Monitoring Well W-10 completed in the A Zone, and the deep Monitoring Well B-1 completed in the C Zone were not used to construct the contours presented in Figure 2. In addition, because of the partial obstruction in Monitoring Well W-2 depth to water level measurements in this well are not considered reliable.

Figure 2 shows that the gradient of the groundwater surface beneath the investigated portion of the JRC site is nearly flat. The horizontal direction of groundwater flow beneath the site on February 13, 1992 was radially outward to the north, west, and south from a small groundwater mound in the vicinity of the former underground storage tanks (USTs), and to the west in the vicinity of Monitoring Wells W-7, W-8, and W-9. The direction of flow near the former USTs has historically been toward the southwest; however, it has varied from south to north. The recurring changes in the direction of groundwater flow beneath this portion of the site appears to be due to both the recent fluctuations in groundwater levels (resulting from 6 years of drought and the recent heavy rains) and the nearly flat gradient. The direction of flow near Monitoring Wells W-7, W-8, and W-9 is consistent with historic results. The horizontal hydraulic gradient of groundwater in the B Zone was calculated to be approximately 0.006 feet per foot in the vicinity of Monitoring Wells W-7 and W-8. This gradient is roughly equivalent to that calculated for the three prior sounding rounds.

Comparison of groundwater elevations in the shallow Monitoring Well W-10 and the near by deep Monitoring Well B-1 indicate that an upward hydraulic gradient exists beneath the site.

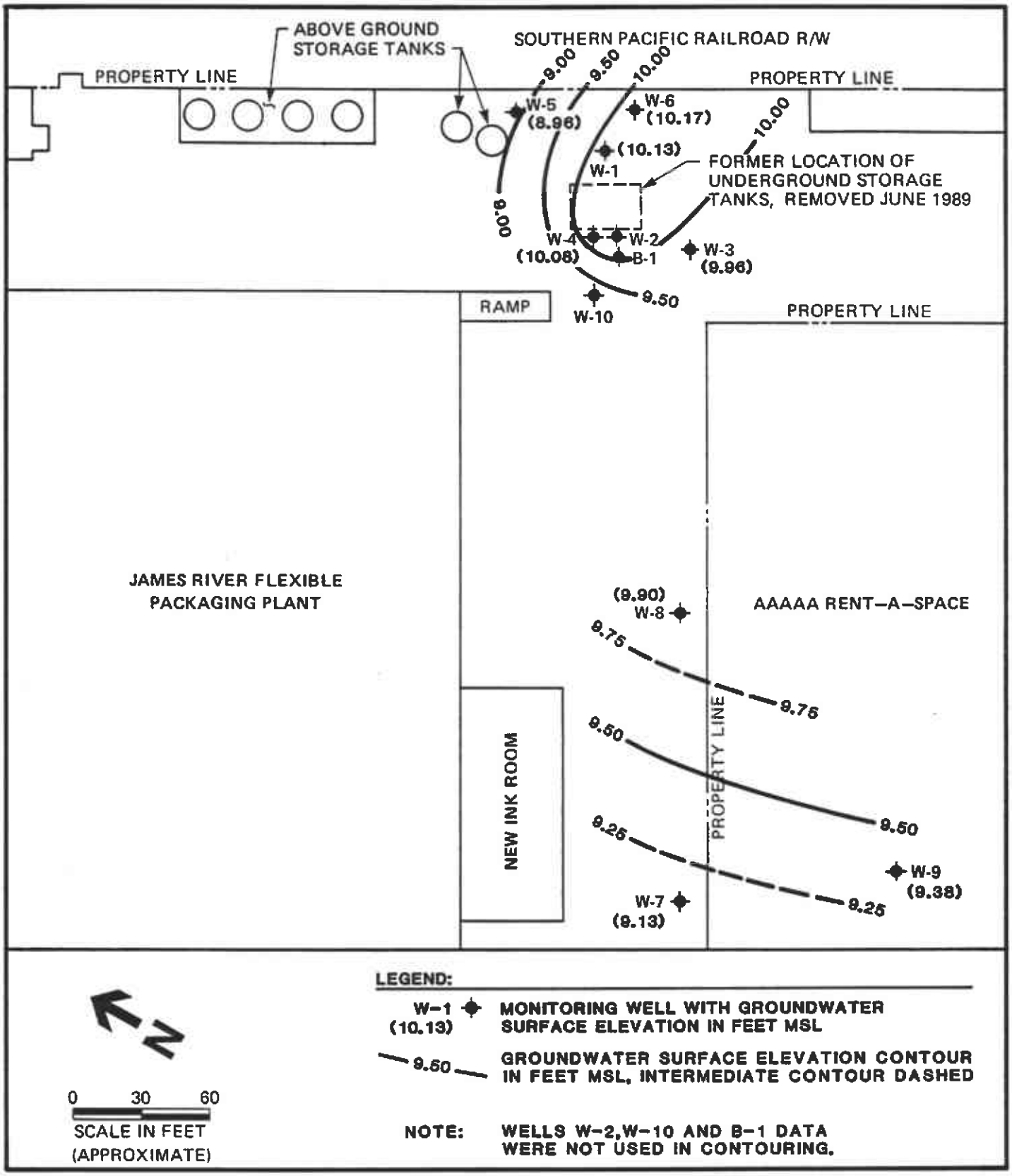

Figure 2 Groundwater Surface Elevation Contours, February 13, 1992

Groundwater Quality Analytical Results

The results of the February 1992 groundwater sample analyses are summarized in Table 2, along with the previous quarterly results obtained since March 1990 for VOCs present at, or above, method detection limits. The chain-of-custody forms and laboratory analytical data sheets for the November data are included in Appendix B.

Discussion of Results

A total of 13 VOCs were identified in the groundwater samples collected during the November quarterly monitoring round. A map showing the distribution of VOCs in the 11 wells sampled is presented on Figure 3. In general, the reported concentrations of VOCs increased in all wells sampled compared to the prior quarterly sampling round in November 1991. These increases appear to be caused by the rise in groundwater elevations beneath the site. All 11 wells contained identifiable concentrations of VOCs, however, the sample from Monitoring Well B-1 was reported to contain only one VOC: tetrachloroethylene (PCE) at 7.7 micro-grams per liter (μg/L). The most common VOCs identified in the groundwater samples were PCE, trichlorethylene (TCE), and cis-1,2-dichloroethylene (1,2-DCE). The reported concentrations of these compounds ranged from 1.2 to 3,500 μg/L of PCE, 1.5 to 970 μg/L of TCE, and 3.0 to 5,500 μg/L of 1,2-DCE. Vinyl chloride was detected in samples from six wells at concentrations ranging from 20 to 80 μg/L. The maximum concentrations of PCE, TCE, 1,2-DCE, and vinyl chloride were all reported to occur in the sample from Monitoring Well W-5. The reported concentration of VOCs in this well, Monitoring Well W-6, and the historic groundwater flow direction gradient suggest that these compounds originate off-site northeast of the JRC facility.

The aromatic VOCs, total xylenes and toluene, were detected in samples from four and three wells, respectively, at concentrations ranging from 0.9 to 1,400 μg/L and 1.7 to 12,000 μg/L. The maximum concentration of total xylenes, toluene, and ethylbenzene were all reported to occur in the sample from Monitoring Well W-10.

The concentration of VOCs in the sample from Monitoring Well W-2 are not considered to be reliable because the obstruction blocking the well inhibited purging of this well.

Table 2
Summary of Groundwater Quality Analytical Results

Well Designation	Sample Date	Analytical Results in µg/L									
		1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Ethylbenzene	Toluene	Benzene	Vinyl Chloride	Xylenes
W1	3/90	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500
	6/90	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<2000	<2000
	9/90	<1	320	<1	58	330	<1	7	<1	100	2
	12/90	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500
	8/91	<2	22	-	2.9	4.9	-	3.3	6.4	3.2	4.5
	11/91	-	13	-	4.9	3.2	0.5	1.4	5.3	4.9	3.6
	2/92	<2	330	5	140	330	<2	<2	<2	39	<2
W2	2/92	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	1.7	6.3	<0.5	7.9
W3	3/90	<5	<5	<5	130	29	<5	<5	<5	24	<5
	6/90	2	<2	<2	200	340	<2	<2	<2	<2	<2
	9/90	3	<1	<1	140	190	<1	<1	<1	14	2
	12/90	1	<1	<1	69	88	<1	<1	<1	11	3
	8/91	0.6	39	1.9	48	75	-	0.8	-	14	4
	11/91	-	73	-	46	-	-	-	-	1.9	1.8
	2/92	<2	76	6	290	340	<2	<2	<2	20	<2
W4	3/90	<500	<500	<500	<500	<500	<500	1200	<500	<500	<500
	6/90	<200	350	<200	<200	390	<200	400	<2000	<200	<200
	9/90	<1	120	<1	14	40	13	450	-	41	99
	12/90	<500	<500	<500	<500	<500	<500	840	<500	<500	<500
	8/91	<2	52	<2	15	30	12	430	10	<2.0	100
	11/91	<1	25	<1	7	9	8	120	6	8	55
	2/92	1	200	3	140	180	2	11	1	21	13

Table 2
Summary of Groundwater Quality Analytical Results
(continued)

Well Designation	Sample Date	Analytical Results in µg/L									
		1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Ethylbenzene	Toluene	Benzene	Vinyl Chloride	Xylenes
W5	3/90	<20	<20	<20	460	5600	<20	<20	<500	190	<20
	6/90	<50	<50	<50	340	2100	<50	<50	<2000	300	<50
	9/90	<20	<20	<20	170	670	<20	<20	<20	220	<20
	12/90	<5	480	<5	63	130	<5	13	<5	99	<5
	8/91	<20	3600	<20	440	1800	<20	40	<20	80	90
	11/91	<20	4400	<20	670	2600	<20	<20	<20	90	20
	2/92	<20	5500	<20	970	3500	<20	<20	<20	80	<20
W6	3/90	<20	<20	<20	280	1700	<20	<20	<20	<20	<20
	6/90	<5	<5	<5	230	940	<5	<5	<5	<5	<5
	9/90	<5	7	<5	280	980	<5	<5	<5	<5	<5
	12/90	<5	6	<5	210	540	-	<5	<5	<5	<5
	8/91	<2	2	9	220	320	<2	<2	<2	<2	<2
	11/91	<5	<5	5	310	430	<2	<2	<2	<5	<2
	2/92	<2	<2	7	360	430	<2	<2	<2	<2	<2
W7	3/90	<5	72	<5	240	740	<5	<5	<5	<5	<5
	6/90	<5	81	<5	210	590	<5	<5	<5	<5	<5
	9/90	<5	65	<5	270	680	<5	<5	<5	<5	<5
	12/90	<5	32	19	170	480	<5	<5	<5	<5	<5
	8/91	<2	39	6	190	390	<2	<2	<2	<2	<2
	11/91	<2	50	7	220	430	<2	<2	<2	<2	<2
	2/92	<2	110	7	240	410	<2	<2	<2	29	<2

Table 2
Summary of Groundwater Quality Analytical Results
(continued)

Well Designation	Sample Date	Analytical Results in µg/L									
		1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Ethylbenzene	Toluene	Benzene	Vinyl Chloride	Xylenes
W8	3/90	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000
	6/90	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000
	9/90	<1	31	<1	3	1	<1	87	<1	5	7
	12/90	<500	<500	<500	<500	<500	<500	<500	<500	<500	<500
	8/91	3	24	<2	4	<2	<2	57	<2	13	290
	11/91	2.2	14	-	0.6	-	-	-	-	11	0.5
	2/92	5.1	72	<0.5	1.5	1.2	<0.5	<0.5	<0.5	54	0.9
W9	3/90	<1	<1	<1	21	13	<1	<1	<1	<1	<1
	6/90	<1	<1	<1	28	23	<1	<1	<1	<1	<1
	9/90	1	<1	5	26	20	<1	<1	<1	<1	<1
	12/90	<2	<2	8	26	19	<2	4	<2	<2	<2
	8/91	1.2	0.8	18	39	22	-	-	-	-	-
	11/91	1.1	1.1	19	43	23	-	0.8	-	-	1.5
	2/92	3.1	3.0	30	61	27	<0.5	<0.5	<0.5	<0.5	<0.5
W10	12/90	<5000	<5000	<5000	<5000	<5000	440	31000	<5000	<5000	<5000
	8/91	<100	1600	<100	200	500	500	18000	100	<100	2200
	11/91	<100	1600	<100	200	400	400	20000	<100	<100	1800
	2/92	<100	1100	<100	<100	400	400	12000	<100	<100	1400

Table 2
Summary of Groundwater Quality Analytical Results
(continued)

Well Designation	Sample Date	Analytical Results in µg/L									
		1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Ethylbenzene	Toluene	Benzene	Vinyl Chloride	Xylenes
B1	3/90	<1	2	<1	<1	2	<1	<1	<1	<1	<1
	6/90	<1	1	<1	<1	2	<1	<1	<1	<1	<1
	9/90	<1	2	<1	<1	3	<1	<1	<1	<1	<1
	12/90	<1	1	<1	<1	2	<1	<1	<1	<1	<1
	8/91	-	-	-	-	2.2	-	-	-	-	-
	11/91	-	-	-	-	2.4	-	-	-	-	-
	2/92	<0.5	<0.5	<0.5	<0.5	7.7	<0.5	<0.5	<0.5	<0.5	<0.5

µg/L = micrograms per liter
- = indicates not detected above a reporting limit of 0.5 µg/L.
1,1-DCA = 1,1-Dichloroethane
1,2-DCE = 1,2-Dichloroethene
1,1,1-TCA = trichloroethane
TCE = trichlorethylene
PCE = tetrachloroethylene

NOTES:

1. 1,1-DCE was detected at 1 µg/L in the sample from W-4.
2. Chloroform was detected at 3 µg/L in the sample from W-7.
3. Trichlorofluoromethane was detected at 2.8 µg/L in the sample from W-8.
4. 1,1-DCE and chloroform were detected at 19 and 1.8 µg/L, respectively, in the sample from W-9.

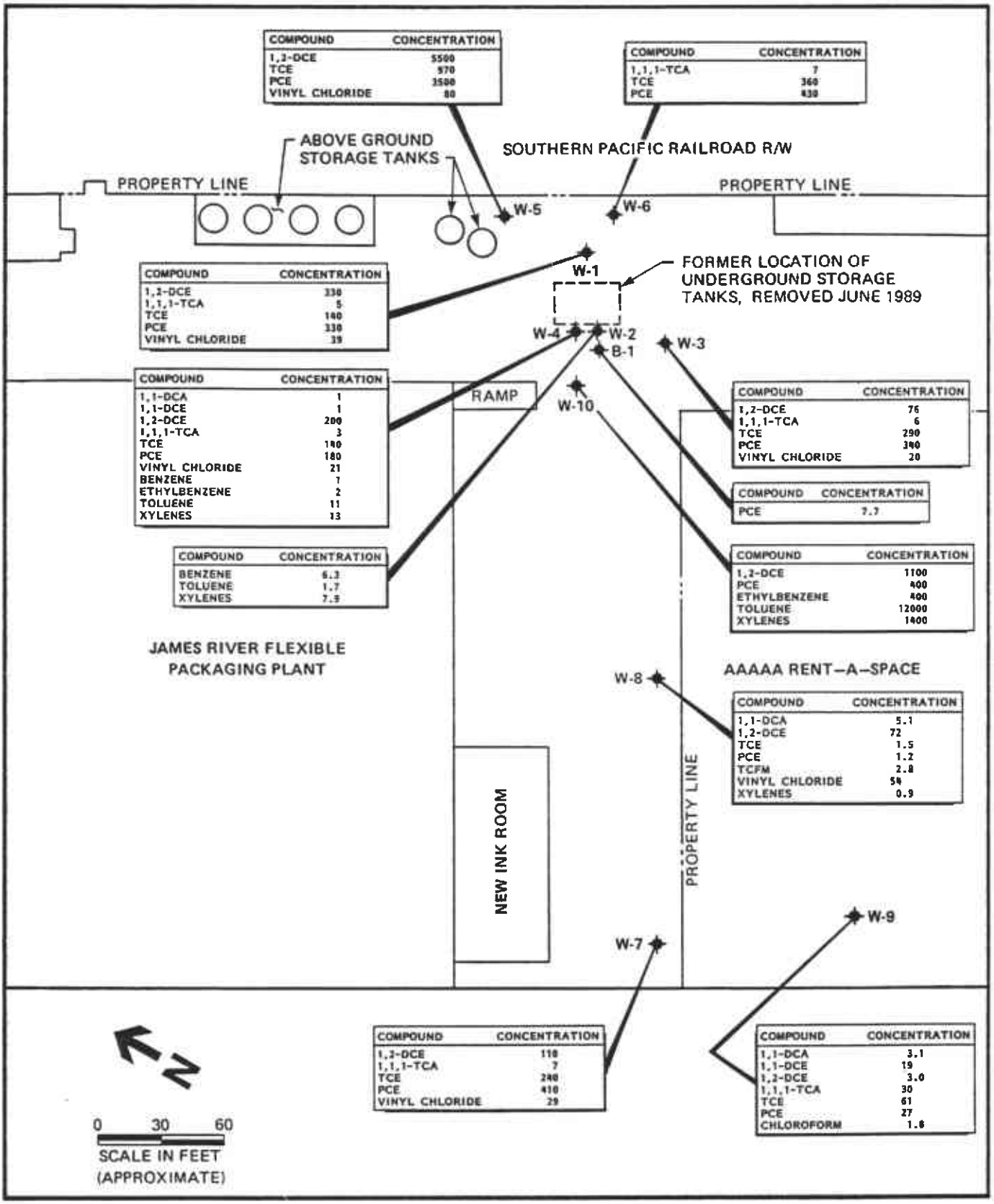

Figure 3 Groundwater Quality Analytical Results in µg/L, February 13, 1992

Significant Changes. In general, VOC concentrations identified in the groundwater samples obtained during February 1992 increased, but with the following exceptions, are consistent with prior analytical results obtained during November 1990.

- The concentration of PCE increased to 7.7 μg/L in the sample from Monitoring Well B-1, which is above the California Maximum Contaminant Level (MCL) for drinking water of 5.0 μg/L.

- In general, the reported concentrations of PCE, TCE, and 1,2-DCE increased significantly in the samples from Monitoring Wells W-1, W-3, and W-4 compared to the previous quarter.

- The concentration of vinyl chloride increased from less than the detection limit of 2.0 to 29 μg/L in the sample from Monitoring Well W-7.

- The measured groundwater elevation in Monitoring Well W-2 rose above the existing well obstruction, resulting in the ability to collect a sample. This groundwater sample, however, was reported to contain low-level concentrations of toluene, benzene and xylenes, which are not consistent with the results from adjacent wells.

Conclusions

The direction of groundwater flow beneath the former UST area has varied during 1991 compared to the historic direction of flow observed prior to 1991. This fluctuation appears to be due to both the groundwater gradient beneath the JRC site which is nearly flat, and the recent heavy rains which have occurred after six years of drought in Northern California.

Comparison of quarterly analytical results shows that, in general, VOC concentrations in groundwater samples from beneath the JRC Facility have been consistent over time with two exceptions. First, the concentrations of PCE, TCE, and 1,2-DCE increased significantly in the samples from Monitoring Wells W-1, W-3, and W-4 during February 1992; and second, the concentration of vinyl chloride increased above the detection limit in the sample from Monitoring Well W-7 compared to the previous quarterly sampling round. Furthermore, the maximum reported concentrations of VOCs have historically been identified in the groundwater samples from Monitoring Wells W-5 and W-6, located at the northeast JRC property line. Based upon historic groundwater flow directions, these VOCs appear to originate from a source area located off-site northeast of the facility. These VOCs appear to have migrated onto the JRC site and have contributed to the elevated concentrations identified in the monitoring wells located immediately downgradient of the

former USTs. Finally, all prior samples from Monitoring Well B-1 were reported to contain PCE at 2 to 3 μg/L. The reported presence of PCE in the sample from Monitoring Well B-1 obtained during February 1992 above the California MCL of 5 μg/L should be confirmed by additional sample analyses.

Recommendations

It is recommended that quarterly monitoring at the JRC facility be continued to evaluate chemical distributions in groundwater with time. In addition, it is recommended that Monitoring Well W-2 be destroyed in accordance with State of California well abandonment requirements because the obstruction in the well is believed to prevent the collection of representative depth-to-water measurements and water quality samples.

APPENDIX A

GROUNDWATER SAMPLING PROCEDURES

APPENDIX A

GROUNDWATER SAMPLING PROCEDURES

Prior to collecting a sample of groundwater, each monitoring well is purged by removing three or more well volumes of water, using a centrifugal pump. A well volume is defined as the amount of groundwater in the well casing prior to pumping. The pH, temperature, and electrical conductivity of the water are measured periodically during the purging.

After three or more well volumes have been removed and the pH, temperature, and electrical conductivity have stabilized, a groundwater sample is obtained with a disposable teflon bailer equipped with a bottom-emptying valve.

All sample bottles are obtained precleaned from BC Analytical (BCA), a state certified hazardous waste analytical laboratory. The size and material of the bottle is specific to the type of analysis to be performed. The bottle is carefully filled to the very top, and sealed with a teflon-lined cap (septa). The sample is visually inspected to ensure that no air bubbles remain within.

Depending on the type of chemical analysis required, the samples are preserved with hydrochloric acid and/or cooled to 4 degrees C. Samples are then labeled and transported in cooled ice chests under chain-of-custody to BCA in Emeryville, California for analysis within the Environmental Protection Agency designated holding time.

APPENDIX B

LABORATORY DATA SHEETS AND CHAIN-OF-CUSTODY FORMS

Analytical Report

LOG NO: E92-02-293

Received: 13 FEB 92

Mailed: MAR 0 3 1992

Mr. Tony Mongero
Brown and Caldwell
3480 Buskirk Avenue
Pleasant Hill, California 94523

Project: 6238-01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-293-1	W-3	13 FEB 92
02-293-2	B-1	13 FEB 92
02-293-3	W-1	13 FEB 92
02-293-4	W-4	13 FEB 92
02-293-5	W-6	13 FEB 92

PARAMETER	02-293-1	02-293-2	02-293-3	02-293-4	02-293-5
EPA Method 8010					
Date Analyzed	02.18.92	02.17.92	02.18.92	02.21.92	02.21.92
Confirmation Date	02.19.92	02.19.92	02.19.92	02.21.92	02.22.92
Dilution Factor, Times	5	1	5	2	5
1,1,1-Trichloroethane, ug/L	6	<0.5	5	3	7
1,1,2,2-Tetrachloroethane, ug/L	<2	<0.5	<2	<1	<2
1,1,2-Trichloroethane, ug/L	<2	<0.5	<2	<1	<2
1,1-Dichloroethane, ug/L	<2	<0.5	<2	1	<2
1,1-Dichloroethene, ug/L	<2	<0.5	<2	1	<2
1,2-Dichloroethane, ug/L	<2	<0.5	<2	<1	<2
1,2-Dichlorobenzene, ug/L	<2	<0.5	<2	<1	<2
1,2-Dichloroethene (Total), ug/L	76	<0.5	330	200	<2
1,2-Dichloropropane, ug/L	<2	<0.5	<2	<1	<2
1,3-Dichlorobenzene, ug/L	<2	<0.5	<2	<1	<2
1,4-Dichlorobenzene, ug/L	<2	<0.5	<2	<1	<2
2-Chloroethylvinylether, ug/L	<2	<0.5	<2	<1	<2
Bromodichloromethane, ug/L	<2	<0.5	<2	<1	<2
Bromomethane, ug/L	<2	<0.5	<2	<1	<2
Bromoform, ug/L	<2	<0.5	<2	<1	<2
Chlorobenzene, ug/L	<2	<0.5	<2	<1	<2
Carbon Tetrachloride, ug/L	<2	<0.5	<2	<1	<2
Chloroethane, ug/L	<2	<0.5	<2	<1	<2
Chloroform, ug/L	<2	<0.5	<2	<1	<2
Chloromethane, ug/L	<2	<0.5	<2	<1	<2

Brown and Caldwell
Analytical

1255 Powell Street
Emeryville CA 94608
415-428-2300
FAX 415-547-3643

Analytical Report

LOG NO: E92-02-293

Received: 13 FEB 92

Mr. Tony Mongero
Brown and Caldwell
3480 Buskirk Avenue
Pleasant Hill, California 94523

Project: 6238-01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-293-1	W-3	13 FEB 92
02-293-2	B-1	13 FEB 92
02-293-3	W-1	13 FEB 92
02-293-4	W-4	13 FEB 92
02-293-5	W-6	13 FEB 92

PARAMETER	02-293-1	02-293-2	02-293-3	02-293-4	02-293-5
Dibromochloromethane, ug/L	<2	<0.5	<2	<1	<2
Dichlorodifluoromethane, ug/L	<2	<0.5	<2	<1	<2
Freon 113, ug/L	<2	<0.5	<2	<1	<2
Methylene chloride, ug/L	<2	<0.5	<2	<1	<2
Trichloroethene, ug/L	290	<0.5	140	140	360
Trichlorofluoromethane, ug/L	<2	<0.5	<2	<1	<2
Tetrachloroethene, ug/L	340	7.7	330	180	430
Vinyl chloride, ug/L	20	<0.5	39	21	<2
cis-1,2-Dichloroethene, ug/L	76	<0.5	330	200	<2
cis-1,3-Dichloropropene, ug/L	<2	<0.5	<2	<1	<2
trans-1,2-Dichloroethene, ug/L	<2	<0.5	<2	<1	<2
trans-1,3-Dichloropropene, ug/L	<2	<0.5	<2	<1	<2

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02-293-1	W-3	13 FEB 92
02-293-2	B-1	13 FEB 92
02-293-3	W-1	13 FEB 92
02-293-4	W-4	13 FEB 92
02-293-5	W-6	13 FEB 92

PARAMETER	02-293-1	02-293-2	02-293-3	02-293-4	02-293-5
EPA Method 8020					
Date Analyzed	02.18.92	02.17.92	02.18.92	02.26.92	02.26.92
Confirmation Date	02.19.92	---		02.21.92	---
Dilution Factor, Times	5	1	5	2	5
1,2-Dichlorobenzene, ug/L	<2	<0.5	<2	<1	<2
1,3-Dichlorobenzene, ug/L	<2	<0.5	<2	<1	<2
1,4-Dichlorobenzene, ug/L	<2	<0.5	<2	<1	<2
Benzene, ug/L	<2	<0.5	<2	1	<2
Chlorobenzene, ug/L	<2	<0.5	<2	<1	<2
Ethylbenzene, ug/L	<2	<0.5	<2	2	<2
Toluene, ug/L	<2	<0.5	<2	11	<2
Total Xylene Isomers, ug/L	<2	<0.5	<2	13	<2
Other EPA Method 8020	---	---	---	---	---

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Pleasant Hill, California 94523

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REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-293-6	W-2	13 FEB 92
02-293-7	W-10	13 FEB 92
02-293-8	W-5	13 FEB 92
02-293-9	W-8	13 FEB 92
02-293-10	W-7	13 FEB 92

PARAMETER	02-293-6	02-293-7	02-293-8	02-293-9	02-293-10
EPA Method 8020					
Date Analyzed	02.26.92	02.26.92	02.26.92	02.17.92	02.26.92
Confirmation Date	02.22.92	02.22.92	02.22.92	02.19.92	---
Dilution Factor, Times	1	200	50	1	5
1,2-Dichlorobenzene, ug/L	<0.5	<100	<20	<0.5	<2
1,3-Dichlorobenzene, ug/L	<0.5	<100	<20	<0.5	<2
1,4-Dichlorobenzene, ug/L	<0.5	<100	<20	<0.5	<2
Benzene, ug/L	6.3	<100	<20	<0.5	<2
Chlorobenzene, ug/L	<0.5	<100	<20	<0.5	<2
Ethylbenzene, ug/L	<0.5	400	<20	<0.5	<2
Toluene, ug/L	1.7	12000	<20	<0.5	<2
Total Xylene Isomers, ug/L	7.9	1400	<20	0.9	<2
Other EPA Method 8020	---	---	---	---	---

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Pleasant Hill, California 94523

Project: 6238-01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-293-11	W-9	13 FEB 92

PARAMETER	02-293-11
EPA Method 8010	
Date Analyzed	02.17.92
Confirmation Date	02.19.92
Dilution Factor, Times	1
1,1,1-Trichloroethane, ug/L	30
1,1,2,2-Tetrachloroethane, ug/L	<0.5
1,1,2-Trichloroethane, ug/L	<0.5
1,1-Dichloroethane, ug/L	3.1
1,1-Dichloroethene, ug/L	19
1,2-Dichloroethane, ug/L	<0.5
1,2-Dichlorobenzene, ug/L	<0.5
1,2-Dichloroethene (Total), ug/L	3.0
1,2-Dichloropropane, ug/L	<0.5
1,3-Dichlorobenzene, ug/L	<0.5
1,4-Dichlorobenzene, ug/L	<0.5
2-Chloroethylvinylether, ug/L	<0.5
Bromodichloromethane, ug/L	<0.5
Bromomethane, ug/L	<0.5
Bromoform, ug/L	<0.5
Chlorobenzene, ug/L	<0.5
Carbon Tetrachloride, ug/L	<0.5
Chloroethane, ug/L	<0.5
Chloroform, ug/L	1.8
Chloromethane, ug/L	<0.5
Dibromochloromethane, ug/L	<0.5
Dichlorodifluoromethane, ug/L	<0.5
Freon 113, ug/L	<0.5
Methylene chloride, ug/L	<0.5

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Project: 6238-01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
02-293-11	W-9	13 FEB 92

PARAMETER	02-293-11
Trichloroethene, ug/L	61
Trichlorofluoromethane, ug/L	<0.5
Tetrachloroethene, ug/L	27
Vinyl chloride, ug/L	<0.5
cis-1,2-Dichloroethene, ug/L	3.0
cis-1,3-Dichloropropene, ug/L	<0.5
trans-1,2-Dichloroethene, ug/L	<0.5
trans-1,3-Dichloropropene, ug/L	<0.5
EPA Method 8020	
Date Analyzed	02.17.92
Dilution Factor, Times	1
1,2-Dichlorobenzene, ug/L	<0.5
1,3-Dichlorobenzene, ug/L	<0.5
1,4-Dichlorobenzene, ug/L	<0.5
Benzene, ug/L	<0.5
Chlorobenzene, ug/L	<0.5
Ethylbenzene, ug/L	<0.5
Toluene, ug/L	<0.5
Total Xylene Isomers, ug/L	<0.5
Other EPA Method 8020	---

Sim D. Lessley, Ph.D., Laboratory Director

Brown and Caldwell
Analytical

1255 Powell Street
Emeryville CA 94608
415-428-2300
FAX 415-547-3643

CHAIN OF CUSTODY RECORD

BCA Log Number

Client name	Project or PO#
Address	Phone #
City, State, Zip	Report attention

Lab Sample number	Date sampled	Time sampled	Type* See key below	Sampled by / Sample description	Number of containers	Analyses required: 5520	5520 (HC)	Hazardous sample / Special handling required	Remarks
E-1	2/13/12	10:35	GW	W-3	4	X	X		
E-2		10:46	"	MW-1	4	X	X		
E-3		11:30	"	W-1	4	X	X		
E-4		11:35	"	W-4	4	X	X		
E-5		12:00	"	W-6	4	X	X		
E-6		12:05	"	W-2	4	X	X		
E-7		12:40	"	W-10	4	X	X		
E-8		13:[illegible]	"	W-5	4	X	X		
E-9		13:45		W-8	4	X	X		
E-10		13:50	"	W-7	4	X	X		
E-11	[illegible]	[illegible]		W-9	4	X	X		

	Signature	Print Name	Company	Date	Time
Relinquished by					
Received by		KATHI FLORIS	BCA	2/13/12	15:50
Relinquished by					
Received by					
Relinquished by					
Received by Laboratory					

B C ANALYTICAL

1255 Powell Street, Emeryville, CA 94608 (510) 428-2300
801 Western Avenue, Glendale, CA 91201 (818) 247-5737
1200 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: WW—Wastewater SU—Surface Water SO—Soil SL—Sludge PE—Petroleum OT—Other NA—Nonaqueous GW—Groundwater AQ—Aqueous