Brown and Caldwell
Consultants

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92 JAN 14 PM 3:10

January 13, 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: November 1991 Quarterly Self-Monitoring Report
James River Corporation, Flexible Packaging Group
San Leandro, California

Dear Mr. Seto:

Enclosed is the November 1991 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.

Sincerely,

BROWN AND CALDWELL

Anthony Mongero
Principal Hydrogeologist

AM:lp
Enclosure

cc: Mr. Bob Wenning, James River Corporation, San Leandro, California

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NOVEMBER 1991 QUARTERLY SELF-MONITORING REPORT JAMES RIVER CORPORATION, FLEXIBLE PACKAGING GROUP SAN LEANDRO, CALIFORNIA

Prepared by Brown and Caldwell
Pleasant Hill, California

January 13, 199[illegible]

Brown and Caldwell
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January 13, 1991

Mr. Bob Wenning
Engineering Manager
James River Corporation
2101 Williams Street
San Leandro, California 94577

11-6238-01/1

Subject: November 1991 Quarterly Self-Monitoring Report
James River Corporation, Flexible Packaging Group
San Leandro, California

Dear Mr. Wenning:

Enclosed is the November 1991 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.

Sincerely,

BROWN AND CALDWELL

Anthony Mongero
Principal Hydrogeologist

Thomas K. Wheeler
California Registered Geologist
Number 3925

MS:AM:TW:lp
Enclosures

cc: Mr. Lester Feldman, San Francisco Bay Regional Water Quality Control Board, Oakland, California
Mr. Larry Seto, Alameda County Department of Health Services, Oakland, California

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NOVEMBER 1991 QUARTERLY SELF-MONITORING REPORT
JAMES RIVER CORPORATION, FLEXIBLE PACKAGING GROUP
SAN LEANDRO, CALIFORNIA

January 13, 1991

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 November 19, 1991, 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. 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 November 1991 quarterly monitoring round. All work completed during November was performed in accordance with the terms and conditions of our Task Order Agreement between JRC and BCC, dated July 18, 1991.

Field and Analytical Methods

The November 1991 quarterly monitoring activities conducted by BCC personnel, consisted of the following work: measurement of depth to water in 11 groundwater monitoring wells; purging of three to five volumes of well water prior to sample collection; collection of groundwater samples from 10 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 within the casing of Monitoring Well W-2 prevented the collection of a sample from this well and our attempts to remove the apparent obstruction were unsuccessful. A detailed description of the groundwater monitoring field methods employed is presented in Appendix A. The 10 groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA Methods 601 and 602.

Site Hydrologic Conditions

Prior to sampling and purging, depth to groundwater was measured to $\pm$ 0.01 foot in all 11 on-site monitoring wells on November 19, 1991 using an electric water level sounder. Depths to groundwater ranged from approximately 12 to 14 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 6.31 to 7.69 feet above MSL. Depth-to-water measurements and calculated groundwater surface elevations at the JRC facility for November 19, 1991, plus the three prior sounding rounds, are summarized in Table 1.

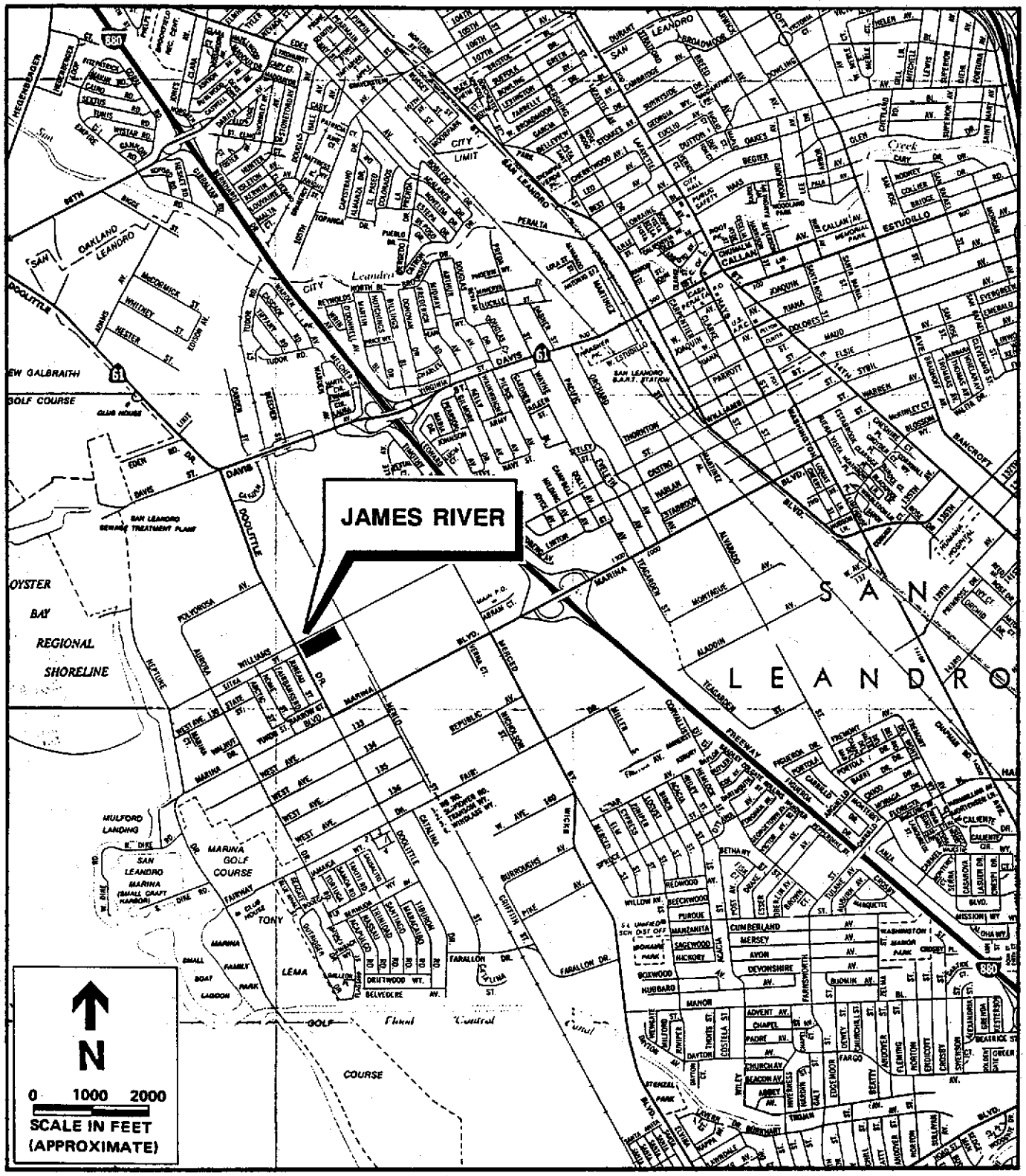

Figure 1 Site Location Map

Table 1
Groundwater Surface Elevations
November 19, 1991

Well Designation	Top-of-Casing Elevation (MSL)	Depth to Water 11-19-91 (Feet)	Groundwater Surface Elevations (MSL)			
			9-6-90	12-27-90	8-27-91	11-19-91
W-1	20.67	13.03	7.52	8.00	7.69	7.64
W-2	20.02	13.71	6.20	-	6.40	6.31
W-3	20.80	13.25	7.43	7.91	7.80	7.55
W-4	21.00	13.35	7.50	7.93	7.66	7.65
W-5	21.64	14.04	7.42	8.02	7.61	7.60
W-6	21.05	13.37	7.52	8.01	7.71	7.68
W-7	20.41	13.34	6.94	7.33	7.09	7.07
W-8	20.50	12.81	7.52	7.92	7.72	7.69
W-9	20.16	12.84	7.16	7.60	7.32	7.32
W-10	20.22	13.58	-	-	-	6.64
B-1	20.59	12.95	7.47	7.91	7.64	7.64

- = Not calculated

Groundwater elevations decreased in eight of the 11 monitoring wells compared to the elevations measured during the prior sounding round conducted on August 27, 1990. The decline in groundwater elevations ranged from 0.01 feet in Monitoring Well W-4 to 0.25 feet in Monitoring Well W-3. This decline in groundwater elevations is likely due to the continuing drought affecting Northern California. Groundwater elevations in two wells (W-9 and B-1) remained the same. Prior groundwater elevations have not been determined for W-10 because the well had not been surveyed. The top-of-casing elevation of Monitoring Well W-10 was surveyed on November 10, and is 20.22 feet MSL (see Table 1).

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 screened from approximately zero 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 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 table beneath the JRC site is nearly flat. The horizontal direction of groundwater flow beneath the site on November 19, 1991 was radially outward to the north, east, 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. The recurring changes in the direction of groundwater flow beneath this portion of the site appears to be due to both the recent decline in groundwater levels 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 0.005 feet per foot between Monitoring Wells W-7 and W-8. This gradient is equivalent to that calculated for the two prior sounding rounds.

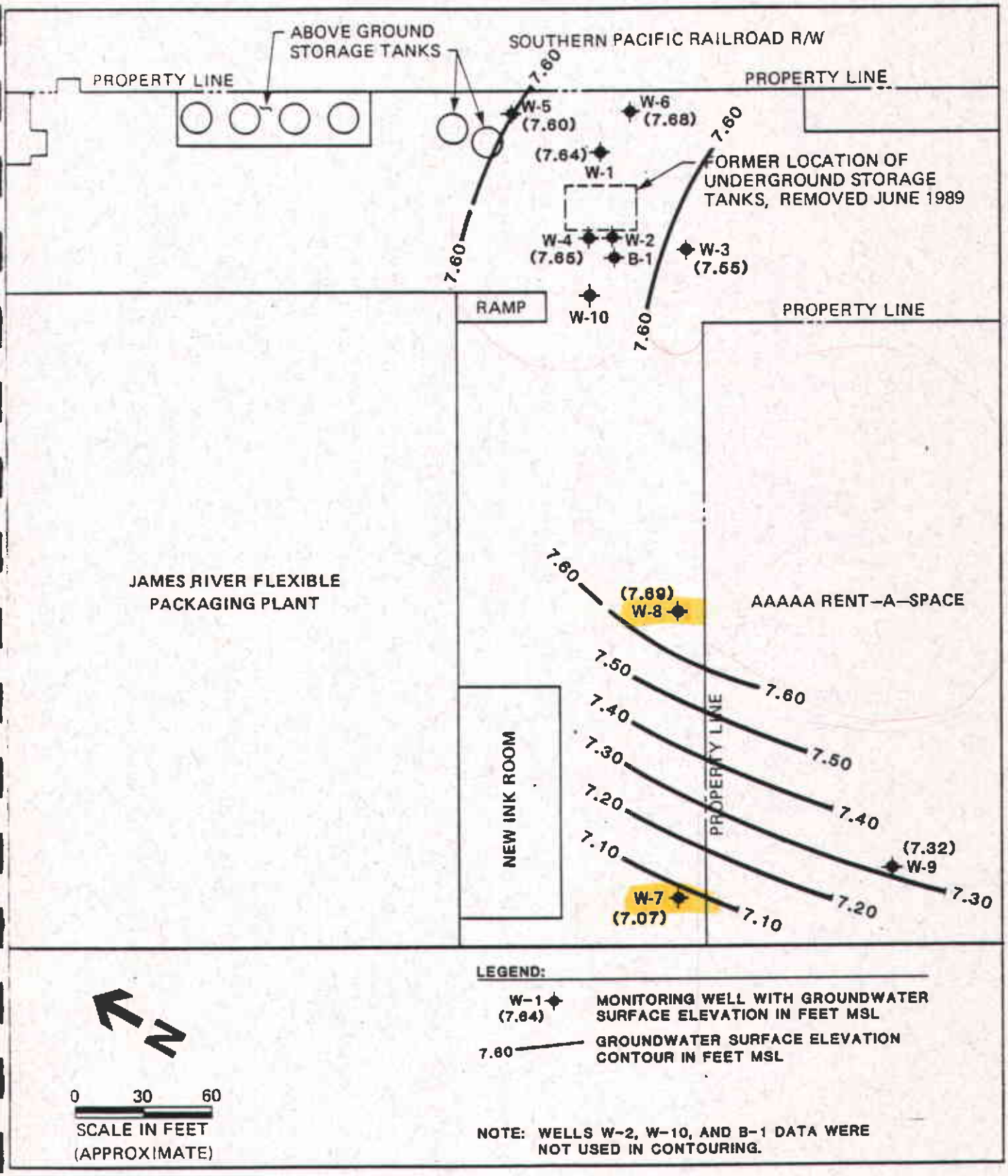

Figure 2 Groundwater Surface Elevation Contours, November 19, 1991

Brown and Caldwell Consultants

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.

Groundwater Quality Analytical Results

The results of the November 1991 groundwater sample analyses are summarized in Table 2, along with previous quarterly results 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 14 VOCs were identified in the groundwater samples collected during the November quarterly monitoring round. All 10 wells contained identifiable concentrations of VOCs, however, the sample from Monitoring Well B-1 was reported to contain only 2.4 micrograms per liter (μg/L) of tetrachloroethylene (PCE). This is below the California Maximum Contaminant Level (MCL) for PCE in drinking water of 5.0 μg/L. The most common VOCs identified in the groundwater samples were trichlorethylene (TCE), PCE, and cis-1,2-dichloroethylene (1,2-DCE). The reported concentrations of these compounds ranged from 0.6 to 670 μg/L of TCE, 2.4 to 2,600 μg/L of PCE, and 1.1 to 4,400 μg/L of 1,2-DCE.

Vinyl chloride was detected in samples from five wells at concentrations ranging from 1.9 to 90 μg/L. Finally, toluene was detected in samples from four wells at concentrations ranging from 0.8 to 20,000 μg/L.

A map showing the distribution of VOCs in the 10 wells sampled is presented on Figure 3. In general, the maximum concentration of VOCs were identified in the samples from Monitoring Well W-5. The reported concentration of VOCs in this well (including 670 μg/L of TCE, 2,600 μg/L of PCE, 4,400 μg/L of 1,2-DCE, and 90 μg/L of vinyl chloride) and the historic hydraulic gradient suggest that these compounds originate off-site northwest of the JRC facility.

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Table 2
Summary of Groundwater Quality Analytical Results
James River Corporation, San Leandro, California

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
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
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

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Table 2
Summary of Groundwater Quality Analytical Results
James River Corporation, San Leandro, California
(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**
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**
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**

Brown and Caldwell Consultants

Table 2
Summary of Groundwater Quality Analytical Results
James River Corporation, San Leandro, California
(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
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
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

Brown and Caldwell Consultants

Table 2
Summary of Groundwater Quality Analytical Results
James River Corporation, San Leandro, California
(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	-	-	-	-	-

µg/L = micrograms per liter
- = indicates not detected above a reporting limit of 0.5 µg/L.

NOTES:
1. Dichlordifluoromethane was detected at 26 µg/L in the sample from W-7.
2. Chloroform and 1,1-DCE were detected at 0.5 and 7.5 µg/L, respectively, in the sample from W-9.
3. Methylene Chloride was detected at 200 µg/L in the sample from W-10.
4. Monitoring Well W-2 is obstructed and is no longer sampled.

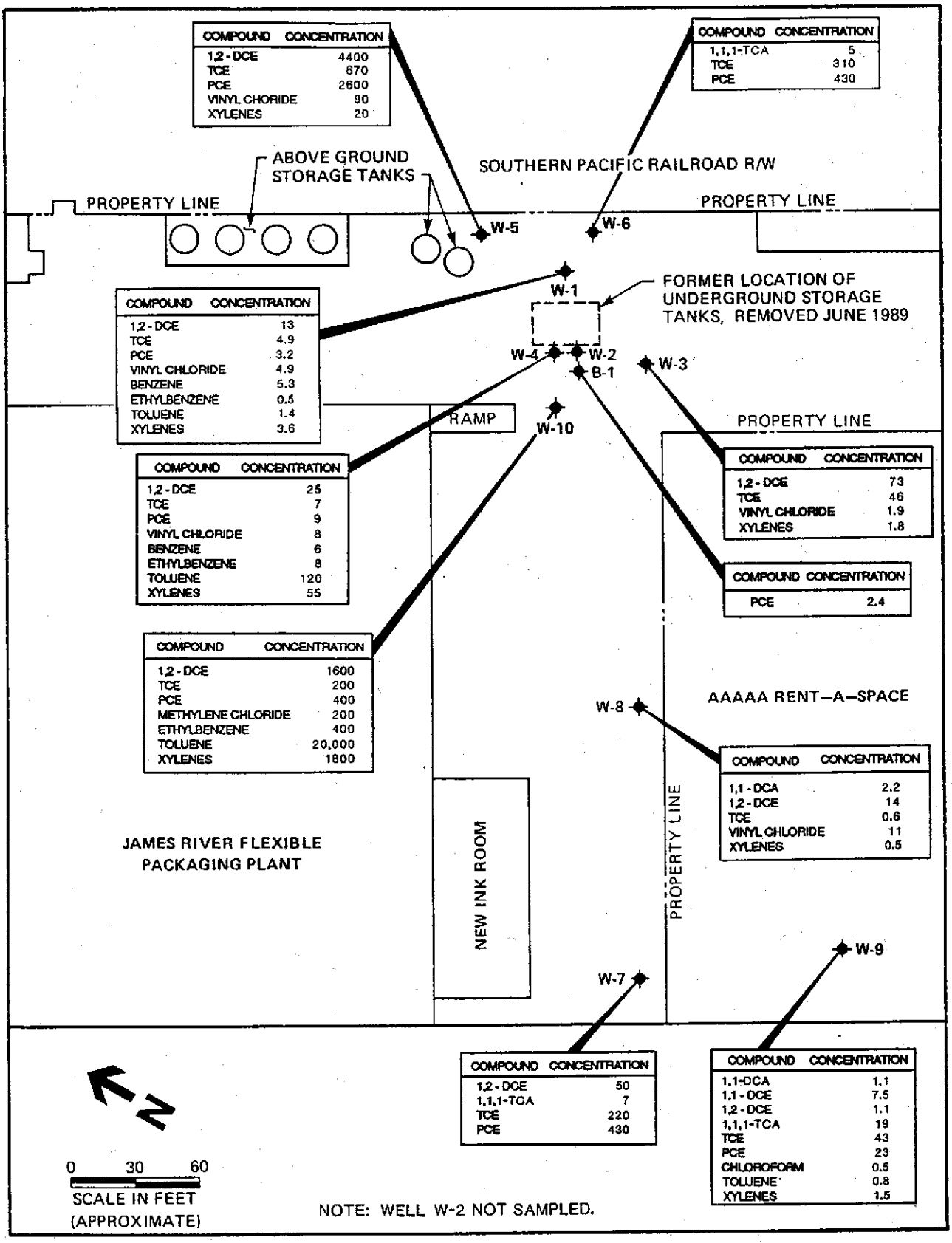

Figure 3 Groundwater Quality Analytical Results in µg/L, November 19, 1991

Significant Changes

In general, VOC concentrations identified in the groundwater samples obtained during November 1991 are consistent with prior analytical results obtained during 1990. Significant changes which have been observed are summarized below:

- The concentration of PCE and vinyl chloride decreased significantly in the sample from Monitoring Well W-3;
- The concentrations of both toluene and total xylenes decreased by more than an order of magnitude in the sample from Monitoring Well W-8.

Conclusions and Recommendations

Historic comparison of quarterly analytical results shows that, in general, VOC concentrations in groundwater samples from beneath the JRC site have been consistent over time with two exceptions. First, VOC concentrations have declined in Monitoring Well W-1; and second, 1,2-DCE concentrations have increased in Monitoring Well W-5. The VOCs identified in the groundwater samples from Monitoring Wells W-5 and W-6 located at the northwest JRC property line appear to originate from a source area located off-site and northwest of the facility. These VOCs appear to be migrating onto the JRC site and contributing to the elevated concentrations identified in the monitoring wells located immediately downgradient of the former USTs. With one exception, VOCs do not occur in the deep Monitoring Well B-1, indicating that these chemicals are generally confined to shallow groundwater beneath the site.

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.

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: E91-11-476

Received: 19 NOV 91
Mailed : 02 DEC 91

REVISED 13 DEC 91

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
11-476-1	W-1	19 NOV 91
11-476-2	MW-3	19 NOV 91
11-476-3	W-4	19 NOV 91
11-476-4	W-5	19 NOV 91
11-476-5	W-6	19 NOV 91

PARAMETER	11-476-1	11-476-2	11-476-3	11-476-4	11-476-5
EPA Method 8010					
Date Analyzed	11.21.91	11.25.91	11.22.91	11.21.91	11.21.91
Confirmation Date	11.23.91	11.23.91	11.23.91	11.23.91	11.22.91
Dilution Factor, Times	1	1	2	50	5
1,1,1-Trichloroethane, ug/L	<0.5	<0.5	<1	<20	5
1,1,2,2-Tetrachloroethane, ug/L	<0.5	<0.5	<1	<20	<2
1,1,2-Trichloroethane, ug/L	<0.5	<0.5	<1	<20	<2
1,1-Dichloroethane, ug/L	<0.5	<0.5	<1	<20	<2
1,1-Dichloroethene, ug/L	<0.5	<0.5	<1	<20	<2
1,2-Dichloroethane, ug/L	<0.5	<0.5	<1	<20	<2
1,2-Dichlorobenzene, ug/L	<0.5	<0.5	<1	<20	<2
1,2-Dichloroethene (Total), ug/L	13	73	25	4400	<2
1,2-Dichloropropane, ug/L	<0.5	<0.5	<1	<20	<2
1,3-Dichlorobenzene, ug/L	<0.5	<0.5	<1	<20	<2
1,4-Dichlorobenzene, ug/L	<0.5	<0.5	<1	<20	<2
2-Chloroethylvinylether, ug/L	<0.5	<0.5	<1	<20	<2
Bromodichloromethane, ug/L	<0.5	<0.5	<1	<20	<2
Bromomethane, ug/L	<0.5	<0.5	<1	<20	<2
Bromoform, ug/L	<0.5	<0.5	<1	<20	<2
Chlorobenzene, ug/L	<0.5	<0.5	<1	<20	<2
Carbon Tetrachloride, ug/L	<0.5	<0.5	<1	<20	<2

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Analytical

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Emeryville CA 94608
415-428-2300
FAX 415-547-2643

Analytical Report

LOG NO: E91-11-476

Received: 19 NOV 91
Mailed : 02 DEC 91

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

Project: 6238-01

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11-476-4	W-5	19 NOV 91
11-476-5	W-6	19 NOV 91

PARAMETER	11-476-1	11-476-2	11-476-3	11-476-4	11-476-5
Chloroethane, ug/L	<0.5	<0.5	<1	<20	<2
Chloroform, ug/L	<0.5	<0.5	<1	<20	<2
Chloromethane, ug/L	<0.5	<0.5	<1	<20	<2
Dibromochloromethane, ug/L	<0.5	<0.5	<1	<20	<2
Dichlorodifluoromethane, ug/L	<0.5	<0.5	<1	<20	<2
Freon 113, ug/L	<0.5	<0.5	<1	<20	<2
Methylene chloride, ug/L	<0.5	<0.5	<1	<20	<2
Trichloroethene, ug/L	4.9	46	7	670	310
Trichlorofluoromethane, ug/L	<0.5	<0.5	<1	<20	<2
Tetrachloroethene, ug/L	3.2	<0.5	9	2600	430
Vinyl chloride, ug/L	4.9	1.9	8	90	<2
cis-1,2-Dichloroethene, ug/L	13	73	25	4400	<2
cis-1,3-Dichloropropene, ug/L	<0.5	<0.5	<1	<20	<2
trans-1,2-Dichloroethene, ug/L	<0.5	<0.5	<1	<20	<2
trans-1,3-Dichloropropene, ug/L	<0.5	<0.5	<1	<20	<2

Brown and Caldwell
Analytical

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415-428-2300
FAX 415-547-3643

Analytical Report

LOG NO: E91-11-476

Received: 19 NOV 91
Mailed : 02 DEC 91

Mr. Tony Mongero
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3480 Buskirk Avenue
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11-476-4	W-5	19 NOV 91
11-476-5	W-6	19 NOV 91

PARAMETER	11-476-1	11-476-2	11-476-3	11-476-4	11-476-5
EPA Method 8020					
Date Analyzed	11.21.91	11.25.91	11.22.91	11.21.91	11.21.91
Confirmation Date	11.23.91	11.23.91	11.23.91	11.23.91	---
Dilution Factor, Times	1	1	2	50	5
1,2-Dichlorobenzene, ug/L	<0.5	<0.5	<1	<20	<2
1,3-Dichlorobenzene, ug/L	<0.5	<0.5	<1	<20	<2
1,4-Dichlorobenzene, ug/L	<0.5	<0.5	<1	<20	<2
Benzene, ug/L	5.3	<0.5	6	<20	<2
Chlorobenzene, ug/L	<0.5	<0.5	<1	<20	<2
Ethylbenzene, ug/L	0.5	<0.5	8	<20	<2
Toluene, ug/L	1.4	<0.5	120	20	<2
Total Xylene Isomers, ug/L	3.6	1.8	55	<20	<2

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Analytical Report

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Mailed : 02 DEC 91

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Project: 6238-01

REPORT OF ANALYTICAL RESULTS

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
11-476-6	W-7	19 NOV 91
11-476-7	W-8	19 NOV 91
11-476-8	W-9	19 NOV 91
11-476-9	W-10	19 NOV 91
11-476-10	B-1	19 NOV 91

PARAMETER	11-476-6	11-476-7	11-476-8	11-476-9	11-476-10
EPA Method 8010					
Date Analyzed	11.21.91	11.22.91	11.21.91	11.21.91	11.21.91
Confirmation Date	11.22.91	11.22.91	11.23.91	11.23.91	11.22.91
Dilution Factor, Times	5	1	1	200	1
1,1,1-Trichloroethane, ug/L	7	<0.5	19	<100	<0.5
1,1,2,2-Tetrachloroethane, ug/L	<2	<0.5	<0.5	<100	<0.5
1,1,2-Trichloroethane, ug/L	<2	<0.5	<0.5	<100	<0.5
1,1-Dichloroethane, ug/L	<2	2.2	1.1	<100	<0.5
1,1-Dichloroethene, ug/L	<2	<0.5	7.5	<100	<0.5
1,2-Dichloroethane, ug/L	<2	<0.5	<0.5	<100	<0.5
1,2-Dichlorobenzene, ug/L	<2	<0.5	<0.5	<100	<0.5
1,2-Dichloroethene (Total), ug/L	50	14	1.1	1600	<0.5
1,2-Dichloropropane, ug/L	<2	<0.5	<0.5	<100	<0.5
1,3-Dichlorobenzene, ug/L	<2	<0.5	<0.5	<100	<0.5
1,4-Dichlorobenzene, ug/L	<2	<0.5	<0.5	<100	<0.5
2-Chloroethylvinylether, ug/L	<2	<0.5	<0.5	<100	<0.5
Bromodichloromethane, ug/L	<2	<0.5	<0.5	<100	<0.5
Bromomethane, ug/L	<2	<0.5	<0.5	<100	<0.5
Bromoform, ug/L	<2	<0.5	<0.5	<100	<0.5
Chlorobenzene, ug/L	<2	<0.5	<0.5	<100	<0.5
Carbon Tetrachloride, ug/L	<2	<0.5	<0.5	<100	<0.5

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
11-476-6	W-7	19 NOV 91
11-476-7	W-8	19 NOV 91
11-476-8	W-9	19 NOV 91
11-476-9	W-10	19 NOV 91
11-476-10	B-1	19 NOV 91

PARAMETER	11-476-6	11-476-7	11-476-8	11-476-9	11-476-10
Chloroethane, ug/L	<2	<0.5	<0.5	<100	<0.5
Chloroform, ug/L	<2	<0.5	0.5	<100	<0.5
Chloromethane, ug/L	<2	<0.5	<0.5	<100	<0.5
Dibromochloromethane, ug/L	<2	<0.5	<0.5	<100	<0.5
Dichlorodifluoromethane, ug/L	26	<0.5	<0.5	<100	<0.5
Freon 113, ug/L	<2	<0.5	<0.5	<100	<0.5
Methylene chloride, ug/L	<2	<0.5	<0.5	200	<0.5
Trichloroethene, ug/L	220	0.6	43	200	<0.5
Trichlorofluoromethane, ug/L	<2	<0.5	<0.5	<100	<0.5
Tetrachloroethene, ug/L	430	<0.5	23	400	2.4
Vinyl chloride, ug/L	<2	11	<0.5	<100	<0.5
cis-1,2-Dichloroethene, ug/L	50	14	1.1	1600	<0.5
cis-1,3-Dichloropropene, ug/L	<2	<0.5	<0.5	<100	<0.5
trans-1,2-Dichloroethene, ug/L	<2	<0.5	<0.5	<100	<0.5
trans-1,3-Dichloropropene, ug/L	<2	<0.5	<0.5	<100	<0.5

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
11-476-6	W-7	19 NOV 91
11-476-7	W-8	19 NOV 91
11-476-8	W-9	19 NOV 91
11-476-9	W-10	19 NOV 91
11-476-10	B-1	19 NOV 91

PARAMETER	11-476-6	11-476-7	11-476-8	11-476-9	11-476-10
EPA Method 8020					
Date Analyzed	11.21.91	11.22.91	11.21.91	11.21.91	11.21.91
Confirmation Date	---	11.22.91	11.23.91	11.23.91	---
Dilution Factor, Times	5	1	1	200	1
1,2-Dichlorobenzene, ug/L	<2	<0.5	<0.5	<100	<0.5
1,3-Dichlorobenzene, ug/L	<2	<0.5	<0.5	<100	<0.5
1,4-Dichlorobenzene, ug/L	<2	<0.5	<0.5	<100	<0.5
Benzene, ug/L	<2	<0.5	<0.5	<100	<0.5
Chlorobenzene, ug/L	<2	<0.5	<0.5	<100	<0.5
Ethylbenzene, ug/L	<2	<0.5	<0.5	400	<0.5
Toluene, ug/L	<2	<0.5	0.8	20000	<0.5
Total Xylene Isomers, ug/L	<2	0.5	1.5	1800	<0.5

NOTE: This report was revised 12/13/91 by R. Bauer to correct total xylene result for W-1, detection limits for various compounds for W-6, TCE and dichlorodifluoromethane results for W-7, and chlorobenzene result on 8020 analysis for W-10.

L. Lessley

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