



JAMES RIVER CORPORATION

FLEXIBLE PACKAGING GROUP

SAN LEANDRO PLANT

2101 Williams Street, San Leandro, CA 94577 (415) 895-4300

August 28, 1991

Mr. Larry Seto
Alameda County Health Agency
Department of Environmental Health
Division of Hazardous Materials
80 Swan Way, Room 200
Oakland, California 94621

Dear Mr. Seto:

Enclosed please find a copy of the "Revised Results of Off Site Groundwater Survey Report" and the "Additional Site Investigation Summary Report." Both reports pertain to the James River Corporation Flexible Packaging Plant located in San Leandro. These two reports contain the most comprehensive and recent information pertaining to the "Ink Room Excavation" and the "Underground Storage Tank and Associated Pipeline Removal."

All work has been completed on the work plan as approved in your letter dated August 8, 1990. This work is documented in the enclosed reports. Based on this completion, we request an official closure of the ink room and tank pipeline excavations. The reports also document evidence of a probable source of chlorinated solvent located hydraulically upgradient and off site from the James River property. Quarterly ground water monitoring has indicated that, in general, concentrations of the organic compounds, originally spilled, are declining with time. Based on this, James River has committed to another years' worth of ground water monitoring. We will supply you with reports of our future quarterly ground water tests. Please contact us if you have any questions regarding the enclosed or future reports.

Sincerely,

Bob Wenning
Bob Wenning
Engineering Manager

BW/gd
0806-556(D)

cc: Mr. Lester Feldman
California Regional Water
Quality Control Board
San Francisco Bay Region
1800 Harrison Street, 7th Floor
Oakland, California 94607

Geoff Neumann - Cincinnati
Bob Mulrooney - San Leandro



3480 Buskirk Avenue
Pleasant Hill, CA 94523-4342
P.O. Box 8045
Walnut Creek, CA 94596-1220
(415) 937-9010
FAX (415) 937-9026

91 OCT 21 11:10:59

October 17, 1991

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

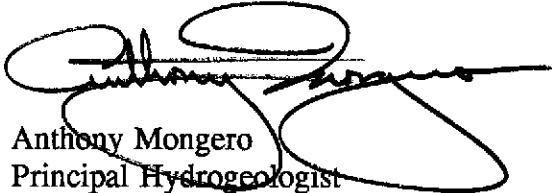
Dear Mr. Feldman:

Enclosed is a copy of the Final August 1991 Quarterly Self-Monitoring Report for the subject site.

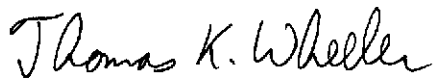
If you have any questions regarding this report, please call me at (510) 210-2203 or Mr. Thomas Wheeler at (510) 210-2227.

Sincerely,

BROWN AND CALDWELL



Anthony Mongero
Principal Hydrogeologist



Thomas K. Wheeler
Thomas K. Wheeler
California Registered Geologist
Number 3925

LE:AM:TW:jm
Enclosures

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

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

**Prepared by Brown and Caldwell
Pleasant Hill, California**

October 10, 1991

BC Brown
and Caldwell

3480 Buskirk Avenue
Pleasant Hill, CA 94523-4342
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October 17, 1991

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

11-6238-01/1

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

Dear Mr. Wenning:

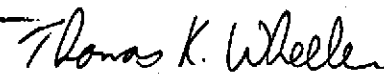
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Sincerely,

BROWN AND CALDWELL


Anthony Mongero
Principal Hydrogeologist


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California Registered Geologist
Number 3925

LE:AM:TW:jm
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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AUGUST 1991 QUARTERLY SELF-MONITORING REPORT
JAMES RIVER CORPORATION, FLEXIBLE PACKAGING GROUP
SAN LEANDRO, CALIFORNIA

October 10, 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 August 27, 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 field activities and groundwater sample analyses performed during the August 1991 quarterly monitoring round. All work completed during August 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 August 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 Brown and Caldwell Analytical (BCA), a state of California hazardous waste certified (Certificate Number 1353) laboratory located in Emeryville, California. An obstruction in the casing of Monitoring Well W-2 prevented the collection of a sample from this well. A detailed description of the groundwater monitoring field methods employed is presented in Attachment A. The 10 groundwater samples were analyzed for volatile organic compounds (VOCs) by EPA Methods 601 and 602.

Site Hydrologic Conditions

Depth to water levels were measured in all 11 existing on-site monitoring wells on August 27, 1991 to ± 0.01 foot using an electric water level sounder prior to sampling and purging. Depths to groundwater ranged from approximately 12.5 to 16.5 feet below grade. Groundwater surface elevations relative to mean sea level (MSL) were calculated using the top-of-casing elevations measured by prior investigators and range from 6.4 to 7.8 feet above MSL. Depth-to-water measurements and water-level elevations at the JRC facility on August 27, 1991, plus two prior sounding rounds, are summarized in Table 1.

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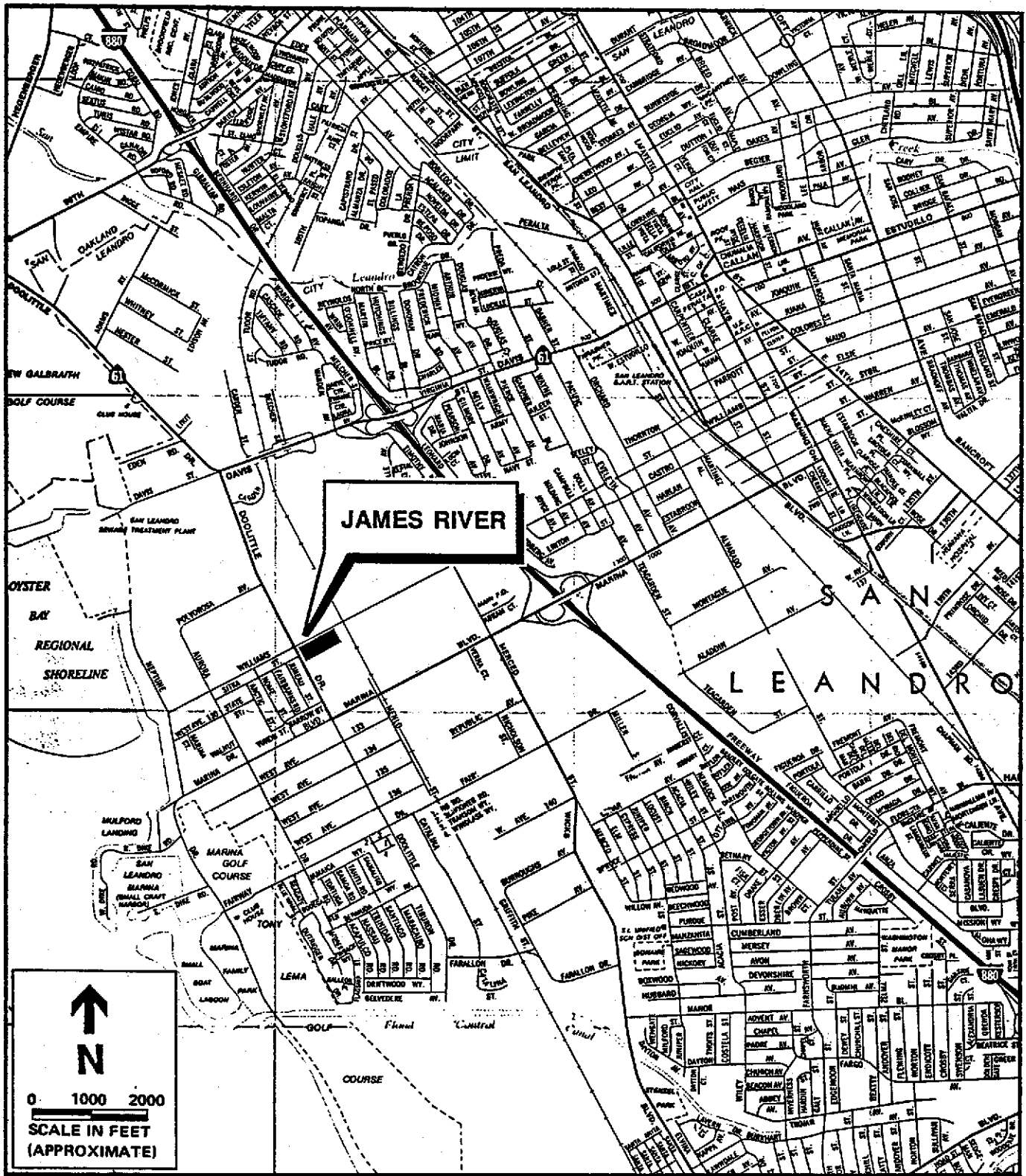


Figure 1 Site Location

Table 1
Groundwater Surface Elevations
August 27, 1991

Well Designation	Top-of-Casing Elevation (MSL)	Depth to Water 8-27-91 (Feet)	Groundwater Surface Elevations (MSL)		
			9-6-90	12-27-90	8-27-91
W-1	20.67	12.98	7.52	8.00	7.69
W-2	20.02	13.62	6.20	-	6.40
W-3	20.80	13.00	7.43	7.91	7.80
W-4	21.00	13.34	7.50	7.93	7.66
W-5	21.64	14.03	7.42	8.02	7.61
W-6	21.05	13.34	7.52	8.01	7.71
W-7	20.41	13.32	6.94	7.33	7.09
W-8	20.50	12.78	7.52	7.92	7.72
W-9	20.16	12.84	7.16	7.60	7.32
W-10	NM	16.55	-	-	-
B-1	20.59	12.95	7.47	7.91	7.64

NM = Not measured
- = Not calculated

Groundwater elevations have decreased in all wells compared to the sounding round of December 27, 1990. The average decrease was approximately 0.25 feet. This decline in groundwater elevations is likely due to the continuing drought affecting Northern California. Comparison of groundwater elevations in the shallow Monitoring Well W-4 and the deep Monitoring Well B-1 indicates that a slight upward hydraulic gradient exists beneath the site.

Depth-to-groundwater measurements were used to construct the groundwater surface elevation contour map presented on Figure 2. Figure 2 shows that the direction of shallow groundwater flow beneath the site on August 27, 1991 was to the northwest in the vicinity of the former underground storage tanks (USTs) and to the west in the vicinity of Monitoring Wells W-7 through W-9. The direction of flow near the former USTs has historically been to the southwest. The change in directions beneath this portion of the site appears to be due to the decline in groundwater elevations. The direction of flow near Monitoring Wells W-7 through W-9 is consistent with historic results. The hydraulic gradient of shallow groundwater was calculated to be approximately 0.005 feet per foot between Monitoring Wells W-8 and W-7. This gradient is equivalent to that calculated for the December 1990 data.

Groundwater Quality Analytical Results

The results of the August 1991 groundwater sample analyses are summarized in Table 2, along with the previous quarterly results for VOCs present at, or above, method detection limits. The chain-of-custody forms and laboratory analytical data sheets for the August data are included in Attachment B.

Discussion of Results

A total of 14 VOCs were identified in the groundwater samples collected during the August 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 micrograms per liter ($\mu\text{g/L}$) of tetrachloroethylene (PCE). This is below the California Maximum Containment Level (MCL) for PCE in drinking water of $5.0 \mu\text{g/L}$. The most common VOCs identified in the groundwater samples were PCE, TCE, and cis-1,2-dichloroethylene (1,2-DCE), each of which were present in nine of the 10 wells sampled. The reported concentrations of these compounds ranged from 2.2 to $1,800 \mu\text{g/L}$ of PCE; 2.9 to $440 \mu\text{g/L}$ of TCE; and 2 to $3,600 \mu\text{g/L}$ of 1,2-DCE. Toluene and total xylenes were both present in six of the 10 wells sampled. The reported concentration of

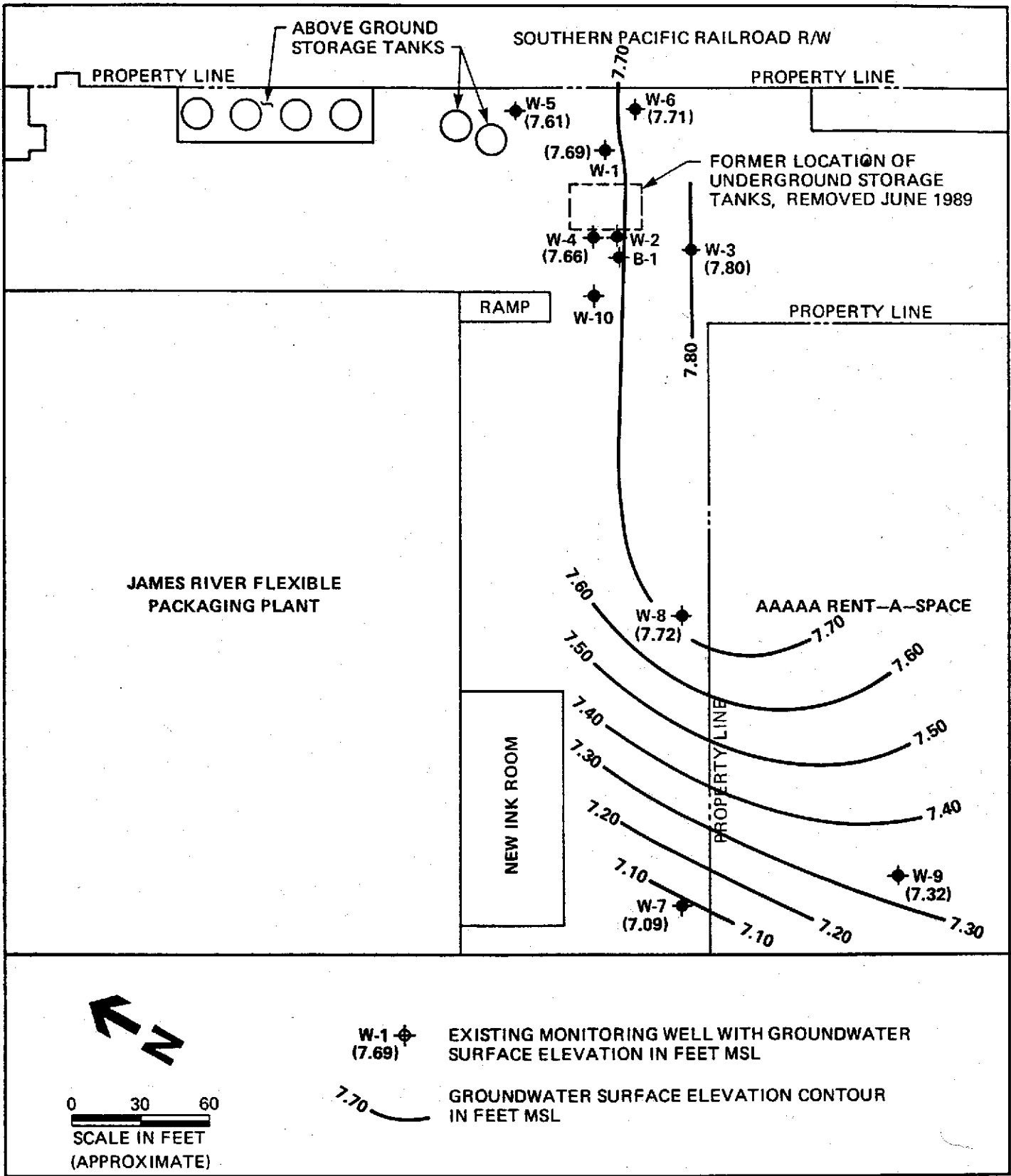


Figure 2 Groundwater Surface Elevation Contours, August 27, 1991

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	<500
	6/90	<2000	<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	<0.5	2.9	4.9	<0.5	3.3	6.4	3.2	4.5	
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	<0.5	0.8	<0.5	14	4	
W4	3/90	<500	<500	<500	<500	<500	<500	1,200	<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	
W5	3/90	<20	<20	<20	460	5,600	<20	<20	<500	190	<20	
	6/90	<50	<50	<50	340	2,100	<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	1,800	<20	40	<20	80	90	

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

Well Designation	Sample Date	Analytical Results in $\mu\text{g/L}$									
		1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Ethylbenzene	Toluene	Benzene	Vinyl Chloride	Xylene
W6	3/90	<20	<20	<20	280	1,700	<20	<20	<20	<20	<20
	6/90	<5	<5	<5	230	940	<5	<5	<5	<5	
	9/90	<5	7	<5	280	980	<5	<5	<5	<5	
	12/90	<5	6	<5	210	540	-	<5	<5	<5	
	8/91	<2	2	9	220	320	<2	<2	<2	<2	
W7	3/90	<5	72	<5	240	740	<5	<5	<5	<5	
	6/90	<5	81	<5	210	590	<5	<5	<5	<5	
	9/90	<5	65	<5	270	680	<5	<5	<5	<5	
	12/90	<5	32	19	170	480	<5	<5	<5	<5	
	8/91	<2	39	6	190	390	<2	<2	<2	<2	
W8	3/90	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	
	6/90	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	<1000	
	9/90	<1	31	<1	3	1	<1	87	<1	5	
	12/90	<500	<500	<500	<500	<500	<500	<500	<500	<500	
	8/91	3	24	<2	4	<2	<2	57	<2	13	
W9	3/90	<1	<1	<1	21	13	<1	<1	<1	<1	
	6/90	<1	<1	<1	28	23	<1	<1	<1	<1	
	9/90	1	<1	5	26	20	<1	<1	<1	<1	
	12/90	<2	<2	8	26	19	<2	4	<2	<2	
	8/91	1.2	0.8	18	39	22	<0.5	<0.5	<0.5	<0.5	

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

Well Designation	Sample Date	Analytical Results in $\mu\text{g/L}$									
		1,1-DCA	1,2-DCE	1,1,1-TCA	TCE	PCE	Ethylbenzene	Toluene	Benzene	Vinyl Chloride	Xylenes
W10	12/90	<5000	<5000	<5000	<5000	<5000	440	31,000	<5000	<5000	<5000
	8/91	<100	1600	<100	200	500	500	18,000	100	<100	2200
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	<0.5	<0.5	<0.5	<0.5	2.2	<0.5	<0.5	<0.5	<0.5	<0.5

$\mu\text{g/L}$ = micrograms per liter

Monitor Well W-2 is obstructed and is no longer sampled.

- = indicates not detected above a reporting limit of 0.5 $\mu\text{g/L}$.

NOTES:

1. Trichlorofluoromethane (Freon-11) was detected at 0.6 mg/L in the sample from W-3.
2. Chloroform and 1,1-DCE were detected at 0.8 and 9.5 mg/L, respectively, in the sample from W-9.
3. Methylene Chloride was detected at 400 mg/L in the sample from W-10.

these compounds ranged from 0.8 to 18,000 $\mu\text{g/L}$ toluene and 4 to 2,200 $\mu\text{g/L}$ of total xylenes. 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 Wells W-5 and W-10. The reported concentration of VOCs in Monitoring Well W-5 (including 1,800 $\mu\text{g/L}$ of PCE, 3,600 $\mu\text{g/L}$ of 1,2-DCE, and 80 $\mu\text{g/L}$ of vinyl chloride) suggest that these compounds originate off-site northeast of the JRC facility.

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

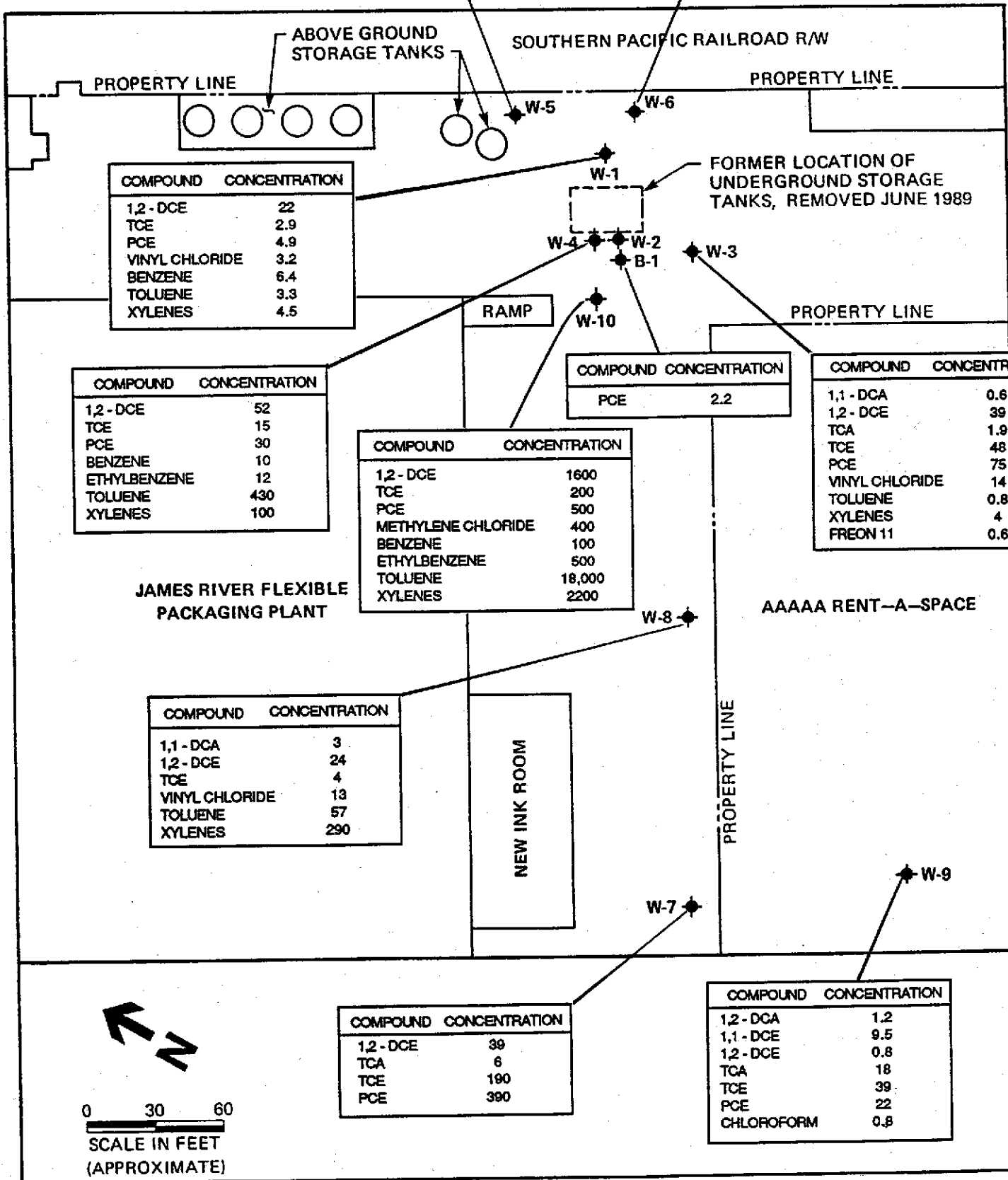
- The concentration of 1,2-DCE, PCE, and vinyl chloride decreased by an order of magnitude, or more, in the sample from Monitoring Well W-1;
- The concentration of vinyl chloride also decreased by an order of magnitude in the sample from Monitoring Well W-4;
- The concentration of 1,2-DCE increased significantly in the samples obtained from Monitoring Wells W-3 and W-5; and
- The concentration of total xylenes increased significantly in the samples from Monitoring Wells W-5 and W-8.

Conclusions and Recommendations

In general, VOC concentrations have been consistent over time with the exception that VOC concentrations have declined in Monitoring Well W-1, and 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 JRC northwest property line appear to originate from a source area located off-site to the northwest of the facility. These VOCs also appear to be contributing to the elevated concentrations identified in the monitoring wells located downgradient of the former USTs. Significant VOC concentrations do not occur in the deep Monitoring Well B-1, indicating that these chemicals are confined to shallow groundwater beneath the site.

COMPOUND	CONCENTRATION
1,2 - DCE	3600
TCE	440
PCE	1800
VINYL CHLORIDE	80
TOLUENE	40
XYLENES	90

COMPOUND	CONCENTRATION
1,2 - DCE	2
TCA	9
TCE	220
PCE	320



COMPOUND	CONCENTRATION
1,2 - DCE	22
TCE	2.9
PCE	4.9
VINYL CHLORIDE	3.2
BENZENE	6.4
TOLUENE	3.3
XYLENES	4.5

COMPOUND	CONCENTRATION
1,2 - DCE	52
TCE	15
PCE	30
BENZENE	10
ETHYLBENZENE	12
TOLUENE	430
XYLENES	100

COMPOUND	CONCENTRATION
1,2 - DCE	1600
TCE	200
PCE	500
METHYLENE CHLORIDE	400
BENZENE	100
ETHYLBENZENE	500
TOLUENE	18,000
XYLENES	2200

COMPOUND	CONCENTRATION
PCE	2.2

COMPOUND	CONCENTRATION
1,1 - DCA	0.6
1,2 - DCE	39
TCA	1.9
TCE	48
PCE	75
VINYL CHLORIDE	14
TOLUENE	0.8
XYLENES	4
FREON 11	0.6

JAMES RIVER FLEXIBLE PACKAGING PLANT

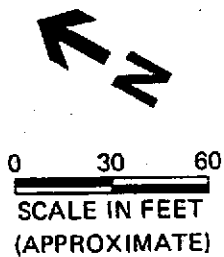
AAAAA RENT-A-SPACE

COMPOUND	CONCENTRATION
1,1 - DCA	3
1,2 - DCE	24
TCE	4
VINYL CHLORIDE	13
TOLUENE	57
XYLENES	290

NEW INK ROOM

COMPOUND	CONCENTRATION
1,2 - DCE	39
TCA	6
TCE	190
PCE	390

COMPOUND	CONCENTRATION
1,2 - DCA	1.2
1,1 - DCE	9.5
1,2 - DCE	0.8
TCA	18
TCE	39
PCE	22
CHLOROFORM	0.8



It is recommended that quarterly monitoring at the JRC facility be continued to evaluate changing chemical distributions in groundwater with time. In addition, it is also recommended that:

1. The newly constructed Monitoring Well W-10 be surveyed relative to MSL during the next scheduled quarterly monitoring round in November 1991; and
2. The obstruction in Monitoring Well W-2 should be removed if possible. If the well can not be repaired, it should be abandoned in accordance with State of California well abandonment requirements.

ATTACHMENT A
GROUNDWATER SAMPLING PROCEDURES

ATTACHMENT B

**LABORATORY DATA SHEETS
AND CHAIN-OF-CUSTODY FORMS**

Analytical Report

LOG NO: E91-08-648

Received: 27 AUG 91

Mailed: SEP 10 1991

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

Project: 6238-01

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
08-648-1	W-3	27 AUG 91
08-648-2	B-1	27 AUG 91
08-648-3	W-7	27 AUG 91
08-648-4	W-1	27 AUG 91
08-648-5	W-5	27 AUG 91

PARAMETER	08-648-1	08-648-2	08-648-3	08-648-4	08-648-5
Halocarbons (EPA 601)					
Date Analyzed	09.01.91	08.28.91	09.04.91	09.01.91	09.01.91
Confirmation Date	09.03.91	08.29.91	09.04.91	09.03.91	09.01.91
Dilution Factor, Times	1	1	5	1	50
1,1,1-Trichloroethane, ug/L	1.9	<0.5	6	<0.5	<20
1,1,2,2-Tetrachloroethane, ug/L	<0.5	<0.5	<2	<0.5	<20
1,1,2-Trichloroethane, ug/L	<0.5	<0.5	<2	<0.5	<20
1,1-Dichloroethane, ug/L	0.6	<0.5	<2	<0.5	<20
1,1-Dichloroethene, ug/L	<0.5	<0.5	<2	<0.5	<20
1,2-Dichloroethane, ug/L	<0.5	<0.5	<2	<0.5	<20
1,2-Dichlorobenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
1,2-Dichloroethene (Total), ug/L	39	<0.5	39	22	3600
1,2-Dichloropropane, ug/L	<0.5	<0.5	<2	<0.5	<20
1,3-Dichlorobenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
1,4-Dichlorobenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
2-Chloroethylvinylether, ug/L	<0.5	<0.5	<2	<0.5	<20
Bromodichloromethane, ug/L	<0.5	<0.5	<2	<0.5	<20
Bromomethane, ug/L	<0.5	<0.5	<2	<0.5	<20
Bromoform, ug/L	<0.5	<0.5	<2	<0.5	<20
Chlorobenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
Carbon Tetrachloride, ug/L	<0.5	<0.5	<2	<0.5	<20
Chloroethane, ug/L	<0.5	<0.5	<2	<0.5	<20
Chloroform, ug/L	<0.5	<0.5	<2	<0.5	<20
Chloromethane, ug/L	<0.5	<0.5	<2	<0.5	<20

Analytical Report

LOG NO: E91-08-648

Received: 27 AUG 91

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

Project: 6238-01

REPORT OF ANALYTICAL RESULTS

Page 2

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
08-648-1	W-3	27 AUG 91
08-648-2	B-1	27 AUG 91
08-648-3	W-7	27 AUG 91
08-648-4	W-1	27 AUG 91
08-648-5	W-5	27 AUG 91

PARAMETER	08-648-1	08-648-2	08-648-3	08-648-4	08-648-5
Dibromochloromethane, ug/L	<0.5	<0.5	<2	<0.5	<20
Dichlorodifluoromethane, ug/L	<0.5	<0.5	<2	<0.5	<20
Freon 113, ug/L	<0.5	<0.5	<2	<0.5	<20
Methylene chloride, ug/L	<0.5	<0.5	<2	<0.5	<20
Trichloroethene, ug/L	48	<0.5	190	2.9	440
Trichlorofluoromethane, ug/L	0.6	<0.5	<2	<0.5	<20
Tetrachloroethene, ug/L	75	2.2	390	4.9	1800
Vinyl chloride, ug/L	14	<0.5	<2	3.2	80
cis-1,2-Dichloroethene, ug/L	39	<0.5	39	22	3600
cis-1,3-Dichloropropene, ug/L	<0.5	<0.5	<2	<0.5	<20
trans-1,2-Dichloroethene, ug/L	<0.5	<0.5	<2	<0.5	<20
trans-1,3-Dichloropropene, ug/L	<0.5	<0.5	<2	<0.5	<20

Analytical Report

LOG NO: E91-08-648

Received: 27 AUG 91

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

Project: 6238-01

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
08-648-1	W-3	27 AUG 91
08-648-2	B-1	27 AUG 91
08-648-3	W-7	27 AUG 91
08-648-4	W-1	27 AUG 91
08-648-5	W-5	27 AUG 91

PARAMETER	08-648-1	08-648-2	08-648-3	08-648-4	08-648-5
Vol.Aromatics (EPA-602)					
Date Analyzed	09.01.91	08.28.91	09.04.91	09.01.91	09.01.91
Confirmation Date	09.03.91	---	09.04.91	09.03.91	09.01.91
Dilution Factor, Times	1	1	5	1	50
1,2-Dichlorobenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
1,3-Dichlorobenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
1,4-Dichlorobenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
Benzene, ug/L	<0.5	<0.5	<2	6.4	<20
Chlorobenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
Ethylbenzene, ug/L	<0.5	<0.5	<2	<0.5	<20
Toluene, ug/L	0.8	<0.5	<2	3.3	40
Total Xylene Isomers, ug/L	4.0	<0.5	<2	4.5	90

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED				
08-648-6	W-4	27 AUG 91				
08-648-7	W-8	27 AUG 91				
08-648-8	W-6	27 AUG 91				
08-648-9	W-10	27 AUG 91				
08-648-10	W-9	27 AUG 91				
PARAMETER	08-648-6	08-648-7	08-648-8	08-648-9	08-648-10	
Halocarbons (EPA 601)						
Date Analyzed	09.04.91	09.01.91	09.04.91	09.01.91	08.28.91	
Confirmation Date	09.03.91	09.01.91	09.04.91	09.01.91	08.29.91	
Dilution Factor, Times	5	5	5	200	1	
1,1,1-Trichloroethane, ug/L	<2	<2	9	<100	18	
1,1,2,2-Tetrachloroethane, ug/L	<2	<2	<2	<100	<0.5	
1,1,2-Trichloroethane, ug/L	<2	<2	<2	<100	<0.5	
1,1-Dichloroethane, ug/L	<2	3	<2	<100	1.2	
1,1-Dichloroethene, ug/L	<2	<2	<2	<100	9.5	
1,2-Dichloroethane, ug/L	<2	<2	<2	<100	<0.5	
1,2-Dichlorobenzene, ug/L	<2	<2	<2	<100	<0.5	
1,2-Dichloroethene (Total), ug/L	52	24	2	1600	0.8	
1,2-Dichloropropane, ug/L	<2	<2	<2	<100	<0.5	
1,3-Dichlorobenzene, ug/L	<2	<2	<2	<100	<0.5	
1,4-Dichlorobenzene, ug/L	<2	<2	<2	<100	<0.5	
2-Chloroethylvinylether, ug/L	<2	<2	<2	<100	<0.5	
Bromodichloromethane, ug/L	<2	<2	<2	<100	<0.5	
Bromomethane, ug/L	<2	<2	<2	<100	<0.5	
Bromoform, ug/L	<2	<2	<2	<100	<0.5	
Chlorobenzene, ug/L	<2	<2	<2	<100	<0.5	
Carbon Tetrachloride, ug/L	<2	<2	<2	<100	<0.5	
Chloroethane, ug/L	<2	<2	<2	<100	<0.5	
Chloroform, ug/L	<2	<2	<2	<100	0.8	
Chloromethane, ug/L	<2	<2	<2	<100	<0.5	



Brown and Caldwell
Analytical

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

Analytical Report

LOG NO: E91-08-648

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

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REPORT OF ANALYTICAL RESULTS

Page 5

LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED				
08-648-6	W-4	27 AUG 91				
08-648-7	W-8	27 AUG 91				
08-648-8	W-6	27 AUG 91				
08-648-9	W-10	27 AUG 91				
08-648-10	W-9	27 AUG 91				

PARAMETER	08-648-6	08-648-7	08-648-8	08-648-9	08-648-10
Dibromochloromethane, ug/L	<2	<2	<2	<100	<0.5
Dichlorodifluoromethane, ug/L	<2	<2	<2	<100	<0.5
Freon 113, ug/L	<2	<2	<2	<100	<0.5
Methylene chloride, ug/L	<2	<2	<2	400	<0.5
Trichloroethene, ug/L	15	4	220	200	39
Trichlorofluoromethane, ug/L	<2	<2	<2	<100	<0.5
Tetrachloroethene, ug/L	30	<2	320	500	22
Vinyl chloride, ug/L	<2	13	<2	<100	<0.5
cis-1,2-Dichloroethene, ug/L	52	24	2	1600	0.8
cis-1,3-Dichloropropene, ug/L	<2	<2	<2	<100	<0.5
trans-1,2-Dichloroethene, ug/L	<2	<2	<2	<100	<0.5
trans-1,3-Dichloropropene, ug/L	<2	<2	<2	<100	<0.5

Analytical Report

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3480 Buskirk Avenue
Pleasant Hill, California 94523

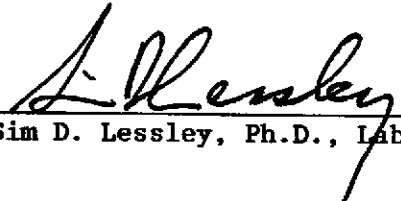
Project: 6238-01

REPORT OF ANALYTICAL RESULTS

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LOG NO	SAMPLE DESCRIPTION, GROUND WATER SAMPLES	DATE SAMPLED
08-648-6	W-4	27 AUG 91
08-648-7	W-8	27 AUG 91
08-648-8	W-6	27 AUG 91
08-648-9	W-10	27 AUG 91
08-648-10	W-9	27 AUG 91

PARAMETER	08-648-6	08-648-7	08-648-8	08-648-9	08-648-10
Vol.Aromatics (EPA-602)					
Date Analyzed	09.04.91	09.01.91	09.04.91	09.01.91	08.28.91
Confirmation Date	09.03.91	09.01.91	09.04.91	09.01.91	---
Dilution Factor, Times	5	5	5	200	1
1,2-Dichlorobenzene, ug/L	<2	<2	<2	<100	<0.5
1,3-Dichlorobenzene, ug/L	<2	<2	<2	<100	<0.5
1,4-Dichlorobenzene, ug/L	<2	<2	<2	<100	<0.5
Benzene, ug/L	10	<2	<2	100	<0.5
Chlorobenzene, ug/L	<2	<2	<2	<100	<0.5
Ethylbenzene, ug/L	12	<2	<2	500	<0.5
Toluene, ug/L	430	57	<2	18000	<0.5
Total Xylene Isomers, ug/L	100	290	<2	2200	<0.5


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

CHAIN OF CUSTODY RECORD

BCA Log Number 9108040

Client name B/C-P.H.			Project or PO# 6238-01			Analyses required														
Address 3460 BUSKIRK AVE.			Phone # 937-9010			<div style="display: flex; justify-content: space-between;"> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">601</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">602</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">603</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">604</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">605</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">606</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">607</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">608</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">609</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">610</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">611</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">612</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">613</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">614</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">615</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">616</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">617</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">618</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">619</div> <div style="writing-mode: vertical-rl; transform: rotate(180deg);">620</div> </div>														
City, State, Zip PLEASANT HILL, CA 94523			Report attention TONY MONGERO																	
Lab Sample number	Date sampled	Time sampled	Type See key below	Sampled by McILVENNA, LAPLANTE	Number of containers	Remarks														
1	8/27	1105	GW	W-3	6	3	3													
2	"	12:10		B-1	6	3	3													
3		1210		W-7	6	3	3													
4		1314		W-1	6	3	3													
5		1425		W-5	6	3	3													
6		1422		W-4	6	3	3													
7		1516		W-8	6	3	3													
8		1300		W-6	6	3	3													
9		1550		W-10	6	3	3													
10		16		W-9	6	3	3													

Signature	Print Name	Company	Date	Time
	KEVIN L. McILVENNA	B/C-P.H.	8-27-91	
	Kevin Flores	P.O.	8/27/91	12:00 PM
Relinquished by				
Received by				
Relinquished by				
Received by				
Relinquished by				
Received by Laboratory				

- B C ANALYTICAL**
- 1255 Powell Street, Emeryville, CA 94608 (415) 428-2300
 - 801 Western Avenue, Glendale, CA 91201 (818) 247-5737
 - 1200 Pacifico Avenue, Anaheim, CA 92805 (714) 978-0113

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

Disposal arrangements: _____

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