FIRST SEMI-ANNUAL 1995 GROUNDWATER MONITORING

Harcros Pigments Plant
4650 Shellmound Street
Emeryville, California

April 24, 1995

Prepared for:

Harcros Pigments
Emeryville, California

Prepared by:

ROUX ASSOCIATES, INC.
1855 Gateway Boulevard, Suite 770
Concord, California 94520
(510) 602-2333

ROUX

Transmittal/Memorandum

To: Ms. Susan Hugo
Alameda County Department of Environmental Health
80 Swan Way, Room 350
Oakland, California 94621

From: Rick Riedl, P.E.

Date: April 24, 1995

Subject: First Semi-Annual 1995 Groundwater Monitoring Report
Harcros Pigments Plant
4650 Shellmound Street
Emeryville, California

Job No.: 19801W

Remarks:

Final report for you files.

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cc: Mr. Wayne Groth, Harcros Pigments, Inc.

TITLE: First Semi-Annual 1995 Groundwater Monitoring
Harcros Pigments Plant
4650 Shellmound Street
Emeryville, California

DATE: April 24, 1995

PROJECT NO: HP19801W

SUBMITTED BY: Roux Associates, Inc.
1855 Gateway Boulevard, Suite 770
Concord, California 94520

This work was done under the direction of the undersigned California Registered Engineer.

PREPARED BY:

Rick Riedl, P.E.
Project Engineer

(235-3709) fax

970-7468

Vinod Prabhakar, Ph.D.
Principal Geohydrologist

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1.0 INTRODUCTION

This report presents the findings of the March 1995 semi-annual groundwater monitoring activities conducted by Roux Associates, Inc., (Roux) at the Harcros Pigments Plant located at 4650 Shellmound Street in Emeryville, California (Site, Figures 1 and 2).

The scope of work for this semi-annual groundwater monitoring event included:

- Collection of depth to water measurements in monitoring wells RW-2, RW-3, RW-22, RW-29, RW-30 and RW-31;
- Collection of a groundwater sample from monitoring well RW-22;
- Submission of the groundwater sample collected from monitoring well RW-22 for analysis of volatile organic compounds (VOCs) by USEPA Method 8240; and
- Preparation of this report summarizing the results of the semi-annual groundwater monitoring.

2.0 SITE SETTING

The Harcros Pigments Plant, formerly Pfizer Pigments Plant, is located in a predominantly industrial area of Emeryville, California (Figure 1). The plant produces iron oxide pigments and has been in operation since 1925. The Site is on the east side of the San Francisco Bay at an elevation of about seven feet above mean sea level. The current bay shoreline is about 1,000 ft. west of the Harcros Pigments property (USGS, 1980). A 1936 aerial photograph of the plant shows the former shoreline located along the eastern edge of present day Shellmound Street. The Site is underlain by sandy clay and clay of low estimated permeability (Roux, 1990a). The regional direction of groundwater flow is to the west, towards the San Francisco Bay (Roux, 1990a).

3.0 BACKGROUND

A total of 12 underground storage tanks (USTs) have been removed from the Site since 1987. One 350-gallon steel UST which contained waste oil and waste solvents was removed from the Site in December 1987 (Roux, 1988). The waste oil tank was located within the waste oil tank pit immediately east of Service Building No. 10 (Figure 2). A total of nine

10,000-gallon diesel tanks and one 10,000-gallon Bunker C fuel oil tank were removed from the tank pit south of Service Building No. 10 in December 1989, (Roux, 1990a). A 1,000-gallon gasoline tank was removed from a tank pit south of Maintenance Shop Building No. 6 in December 1989 (Roux, 1990a).

Two double-wall fiberglass USTs are currently in place and used at the Site. One 10,000-gallon diesel tank and one 1,000-gallon gasoline tank were installed east of Service Building No. 10 by Diablo Tank & Equipment of Martinez, California, in September 1989.

In January 1990, Roux staff discovered diesel fuel floating on top of the water column in monitoring wells RW-4 and RW-11 (Roux, 1990b). Wells RW-4 and RW-11 were located near the northeastern corner of Service Building No. 10 (Figure 3). The monitoring wells were within a former waste oil tank pit and were adjacent to the two recently installed USTs and their associated pipelines.

In March and April 1990, Roux conducted an additional subsurface investigation to determine the extent of diesel fuel contamination surrounding the former waste oil tank pit. The additional investigation included drilling seven soil borings, installing two monitoring wells (RW-22 and RW-23) in the area surrounding the former waste oil tank pit where free-phase product was detected, and collecting groundwater samples from the wells at the Site. The analytical results of the soil and groundwater sampling indicated that the presence of diesel fuel was restricted to the soil and groundwater around the former waste oil tank pit (Roux, 1990b). In August 1990, soil containing diesel fuel in the former tank pit area was excavated and transported to a Class II disposal facility (Roux, 1991a). Monitoring wells RW-4 and RW-11, located in the former tank pit, were abandoned prior to soil excavation. At the request of the Alameda County Department of Environmental Health, two additional monitoring wells, RW-30 and RW-31, were installed in December 1990. These wells were installed for the purpose of monitoring groundwater quality in the vicinity of the former waste oil tank pit. Quarterly groundwater monitoring of wells RW-2, RW-3, RW-22, RW-29, RW-30 and RW-31 was initiated in January 1991.

Based on the laboratory data collected during 1991, quarterly sampling was discontinued at this Site with the exception of monitoring well RW-22. In June, 1994, the Alameda County Department of Environmental Health approved a semi-annual monitoring schedule for well RW-22.

4.0 GROUNDWATER SAMPLING

Field activities for the first semi-annual 1995 groundwater sampling took place on March 15, 1995. Depth to groundwater measurements were collected from monitoring wells RW-2, RW-3, RW-22, RW-29, RW-30 and RW-31 (Table 2). Data from RW-22 were used to calculate the volume of water needed to purge prior to sampling. Three well casing volumes of water were removed from well RW-22 using a polyethylene bailer.

A groundwater sample was collected in a disposable bailer and poured into two 40-milliliter glass vials for analysis of VOCs. Visual observations of the groundwater sample, the measurement of pH, conductivity and temperature at the time of sample collection was recorded on a well sampling data form (Appendix A). The sample vials were labeled and stored on ice in a cooler chest while in transit to the laboratory. Chain-of-Custody documentation was maintained for the sample (Appendix B).

The groundwater sample was submitted to Sequoia Analytical laboratory of Walnut Creek, California. The groundwater sample was analyzed for Volatile Organic Compounds (VOCs) by USEPA Method 8240.

5.0 SUMMARY OF FINDINGS

5.1 Groundwater Flow

Water levels were measured on March 15, 1995, in six on-site monitoring wells (Table 1). The depth to groundwater at the Site has historically been about two to six feet below ground surface (bgs). The depth to groundwater measured on March 15, 1995, ranged from 3.25 ft. to 5.28 ft. bgs. Groundwater elevations calculated from these water levels indicated the direction of groundwater movement at the Site was to the southwest at a gradient of about 0.025 (Figure 4). This flow direction and gradient is generally consistent with historical

measurements. The local flow direction towards the southwest differs from the regional flow direction to the west, possibly due to the influence of Temescal Creek, located about 170 ft. south of Service Building No. 10.

5.2 Analytical Results

Laboratory analyses of the groundwater sample collected from well RW-22 on March 15, 1995, indicate cis-1,2-dichloroethene and trans-1,2-dichloroethene were detected at concentrations of 3.7 and 3.1 μg/L, respectively. All other VOC analytes classified by EPA method 8240 were below the laboratory detection limit.

Table 2 summarizes the laboratory analytical data for the groundwater samples collected from well RW-22.

5.3 Next Sampling

The next groundwater sampling event is tentatively scheduled for September 1995. Groundwater samples collected from RW-22 will be analyzed for VOCs by USEPA Method 8240.

6.0 REFERENCES

Roux Associates. 1988. Underground Storage Tank Site Investigation, Pfizer Pigments, Inc., Emeryville, California. August 12, 1988.

Roux Associates. 1990a. Diesel Fuel Site Investigation, Pfizer Pigments Plant, Emeryville, California. May 2, 1990.

Roux Associates. 1990b. Work Plan, Site Investigation and Fuel Recovery, Pfizer Pigments Plant, Emeryville, California. March 8, 1990.

Roux Associates. 1991a. Soil Remediation Report, Harcros Pigments Plant, Emeryville, California. May 6, 1991.

Roux Associates. 1991b. Second Quarter Groundwater Monitoring, Harcros Pigments Plant, Emeryville, California. July 17, 1991.

United States Geologic Survey. 1980. Oakland West Quadrangle, California Photo Revised 1980.

TABLES

Table1 Summary of Ground Water Elevation Data
Harcros Pigments Plant, Emeryville, California

Monitoring Well Number	Date	Measuring Point Elevation (1)	Depth to Water (2)	Ground Water Elevation (1)
RW-2	1/8/91	6.84	4.93	1.91
	4/9/91	6.84	3.50	3.34
	7/11/91	6.84	4.05	2.79
	10/3/91	6.84	4.14	2.70
	2/14/92	6.84	3.00	3.84
	5/13/92	6.84	4.42	2.42
	8/28/92	6.84	4.43	2.41
	11/30/92	6.84	4.55	2.29
	3/2/93	6.84	3.93	2.91
	5/19/93	6.84	4.63	2.21
	9/2/93	6.84	-	-
	12/3/93	6.84	4.60	2.24
	3/4/94	6.84	4.18	2.66
	9/27/94	6.84	4.99	1.85
	3/15/95	**6.84**	**3.27**	**3.57**
RW-3	1/8/91	7.38	4.00	3.38
	4/9/91	7.38	3.13	4.25
	7/11/91	7.38	3.58	3.80
	10/3/91	7.38	3.60	3.78
	2/14/92	7.38	2.93	4.45
	5/13/92	7.38	3.68	3.70
	8/28/92	7.38	3.69	3.69
	11/30/92	7.38	3.43	3.95
	3/2/93	7.38	2.86	4.52
	5/19/93	7.38	3.10	4.28
	9/2/93	7.38	3.59	3.79
	12/3/93	7.38	3.29	4.09
	3/4/94	7.38	3.19	4.19
	9/27/94	7.38	3.74	3.64
	3/15/95	**7.38**	**3.05**	**4.33**

Footnotes:
(1) Elevation in feet relative to Emeryville datum.
(2) Depth in feet below measuring point.

Table1 Summary of Ground Water Elevation Data
Harcros Pigments Plant, Emeryville, California

Monitoring Well Number	Date	Measuring Point Elevation (1)	Depth to Water (2)	Ground Water Elevation (1)
RW-22	1/8/91	7.42	4.04	3.38
	4/9/91	7.42	3.53	3.89
	7/11/91	7.42	4.02	3.40
	10/3/91	7.42	3.92	3.50
	2/14/92	7.42	3.06	4.36
	5/13/92	7.42	3.96	3.46
	8/28/92	7.42	3.95	3.47
	11/30/92	7.42	3.79	3.63
	3/2/93	7.42	3.06	4.36
	5/19/93	7.42	4.49	2.93
	9/2/93	7.42	3.95	3.47
	12/3/93	7.42	3.72	3.70
	3/4/94	7.42	3.46	3.96
	9/27/94	7.42	4.09	3.33
	3/15/95	**7.42**	**2.66**	**4.76**
RW-29	1/8/91	7.01	5.68	1.33
	4/9/91	7.01	3.95	3.06
	7/11/91	7.01	4.63	2.38
	10/3/91	7.01	4.71	2.30
	2/14/92	7.01	3.68	3.33
	5/13/92	7.01	5.55	1.46
	8/28/92	7.01	5.62	1.39
	11/30/92	7.01	5.78	1.23
	3/2/93	7.01	4.83	2.18
	5/19/93	7.01	5.90	1.11
	9/2/93	7.01	6.13	0.88
	12/3/93	7.01	5.90	1.11
	3/4/94	7.01	5.36	1.65
	9/27/94	7.01	6.32	0.69
	3/15/95	**7.01**	**3.76**	**3.25**

Footnotes:
(1) Elevation in feet relative to Emeryville datum.
(2) Depth in feet below measuring point.

Table1 Summary of Ground Water Elevation Data
Harcros Pigments Plant, Emeryville, California

Monitoring Well Number	Date	Measuring Point Elevation (1)	Depth to Water (2)	Ground Water Elevation (1)
RW-30	1/8/91	7.51	4.23	3.28
	4/9/91	7.51	3.24	4.27
	7/11/91	7.51	3.80	3.71
	10/3/91	7.51	3.93	3.58
	2/14/92	7.51	2.99	4.52
	5/13/92	7.51	3.36	4.15
	8/28/92	7.51	3.83	3.68
	11/30/92	7.51	3.09	4.42
	3/2/93	7.51	3.02	4.49
	5/19/93	7.51	3.05	4.46
	9/2/93	7.51	3.81	3.70
	12/3/93	7.51	3.20	4.31
	3/4/94	7.51	2.71	4.80
	9/27/94	7.51	3.90	3.61
	3/15/95	**7.51**	**2.45**	**5.06**
RW-31	1/8/91	7.08	3.43	3.65
	4/9/91	7.08	2.57	4.51
	7/11/91	7.08	3.07	4.01
	10/3/91	7.08	3.13	3.95
	2/14/92	7.08	2.14	4.94
	5/13/92	7.08	3.11	3.97
	8/28/92	7.08	3.16	3.92
	11/30/92	7.08	2.83	4.25
	3/2/93	7.08	1.83	5.25
	5/19/93	7.08	2.40	4.68
	9/2/93	7.08	2.90	4.18
	12/3/93	7.08	2.60	4.48
	3/4/94	7.08	1.98	5.10
	9/27/94	7.08	2.53	4.55
	3/15/95	**7.08**	**1.80**	**5.28**

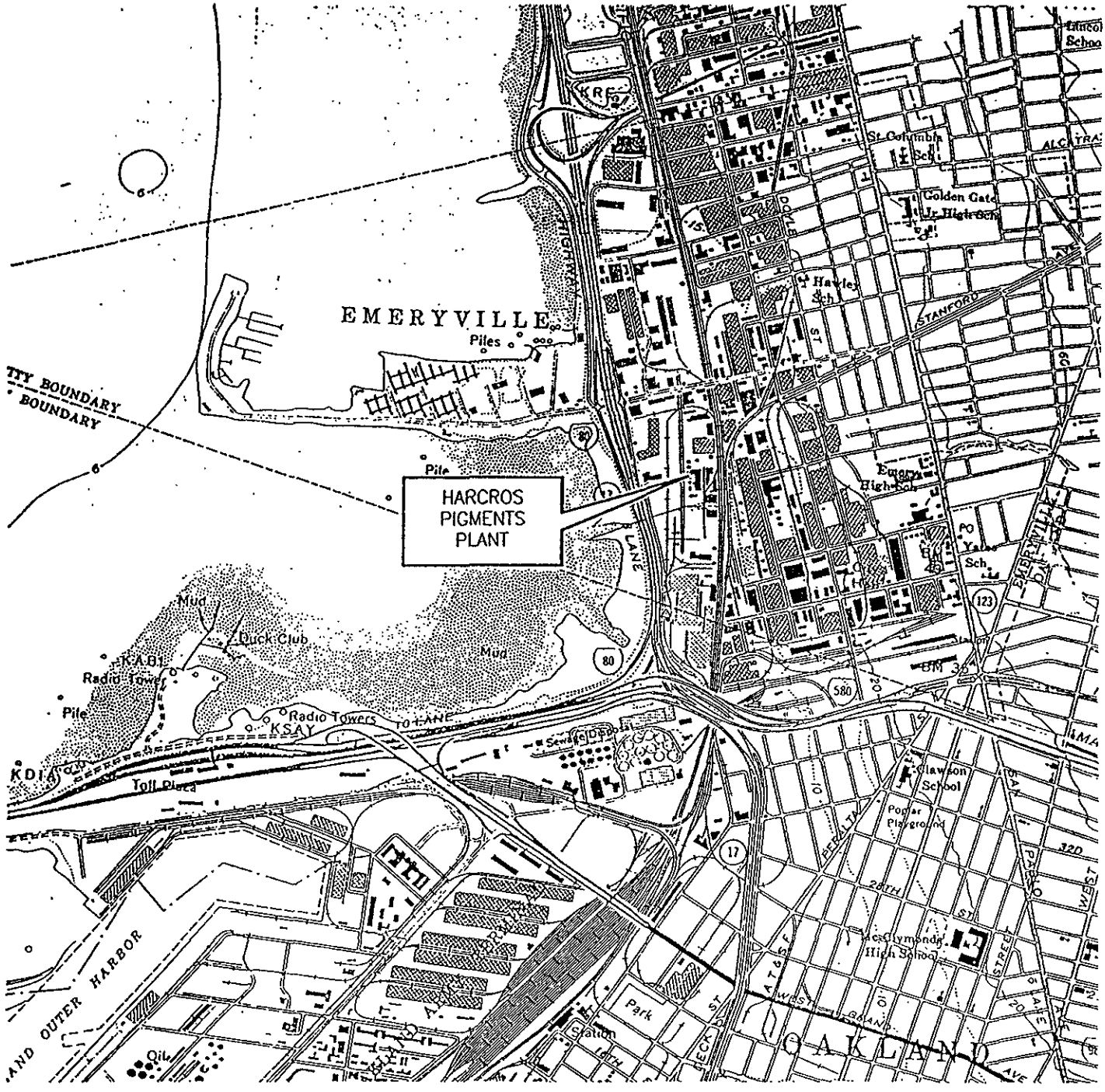
Footnotes:
(1) Elevation in feet relative to Emeryville datum.
(2) Depth in feet below measuring point.

Table 2. Summary of Monitoring Well RW-22 Ground Water Analytical Data
Harcros Pigments Plant, Emeryville, California

Monitoring Well Number	Date	cis-1,2-Dichloroethene (1)	trans-1,2-Dichloroethene	Volatile Organic Compounds (1)
RW-22	1/8/91	ND	ND	ND
	4/9/91	NA	NA	NA
	7/11/91	5.2	ND	ND
	10/3/91	5.3	ND	ND
	2/14/92	5.6	5.3	ND
	5/13/92	ND	ND	ND
	8/28/92	7.0	6.0	ND
	11/30/92	6.0	5.0	ND
	3/2/93	ND	ND	ND
	5/19/93	ND	ND	ND
	9/2/93	ND	ND	ND
	3/4/94	ND	ND	ND
	9/27/94	ND	ND	ND
	3/15/95	**3.7**	**3.1**	**ND**

Footnotes:
(1) Analyzed by USEPA Method 8240.
All detected concentrations reported in micrograms per liter (ug/L).
ND = Not detected. Detection limit varies from 2.0 to 10 ug/L.
NA = Not analyzed.

FIGURES



SOURCE:

USGS 7.5 MINUTE QUADRANGLE
OAKLAND WEST, CALIFORNIA, 1980.

N

0' 2,000'

TITLE:

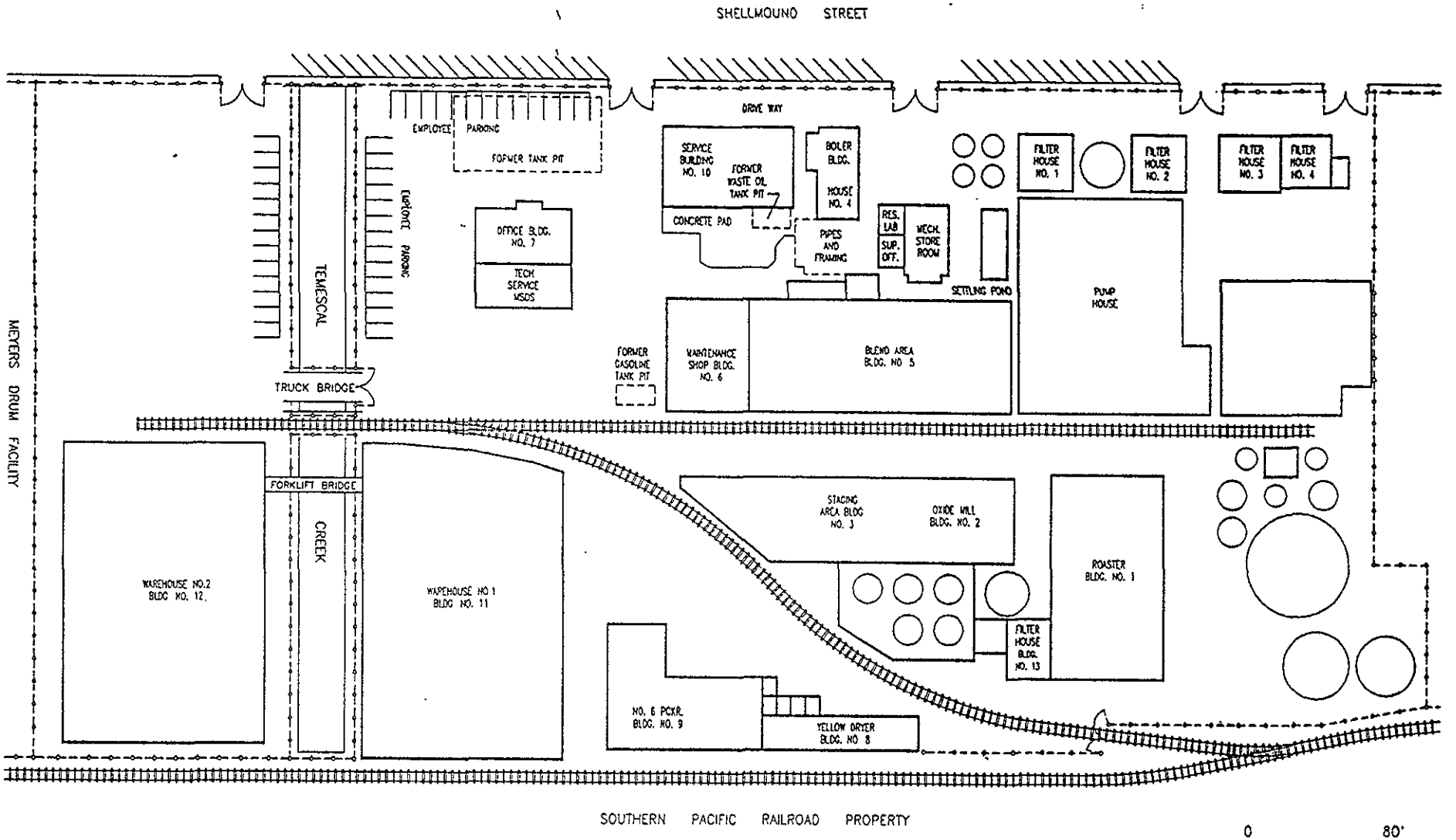
LOCATION OF SITE

PREPARED FOR:

HARCROS PIGMENTS, INC.

ROUX
ROUX ASSOCIATES
ENVIRONMENTAL CONSULTING & MANAGEMENT

COMPILED BY:	J.F.	DATE:	01/92	FIGURE 1
PREPARED BY:	R.P.	SCALE:	AS SHOWN	
PROJECT MANAGER:	P.S.	REVISION:	0	
PROJECT NO.	19801W	FILE #:	19801W01	



SOURCE NOTE:
MAP MODIFIED FROM EMERYVILLE PAINT MAP
PROVIDED BY HARCROS PIGMENTS, INC.

ROUX ASSOCIATES
ENVIRONMENTAL CONSULTING & MANAGEMENT

COMPILED BY:	P.S.
PREPARED BY:	D.D.
PROJECT MNGR.	P.S.
DATE:	07/92
SCALE:	AS SHOWN
PROJECT NO.	19801W01
FILE NAME:	19801W2B

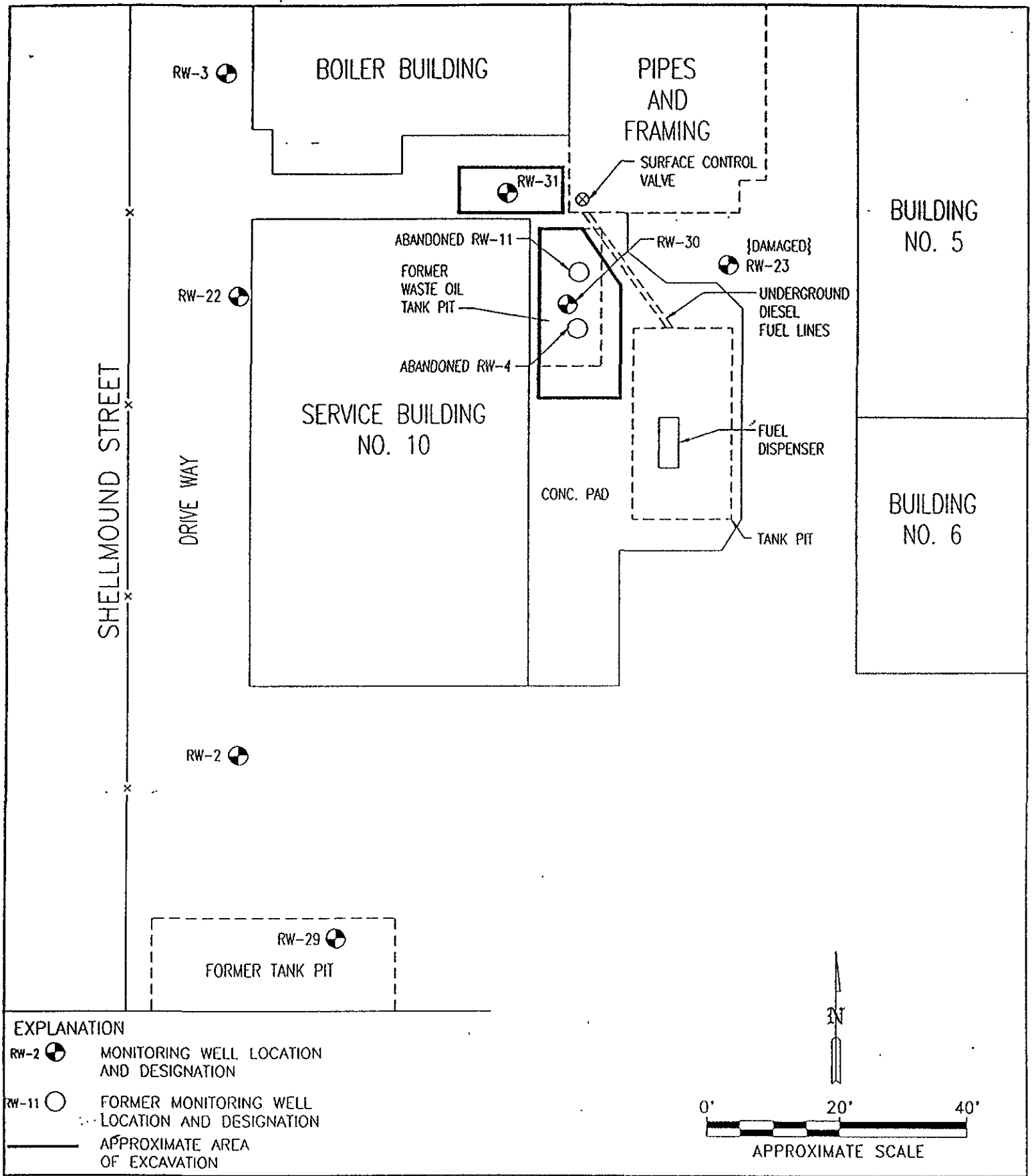
PREPARED FOR: HARCROS PIGMENTS INC.
EMERYVILLE, CA

TITLE:

SITE PLAN

EMERYVILLE, CA

FIGURE 2



EXPLANATION

RW-2 ⊕ MONITORING WELL LOCATION AND DESIGNATION

RW-11 ○ FORMER MONITORING WELL LOCATION AND DESIGNATION

——— APPROXIMATE AREA OF EXCAVATION

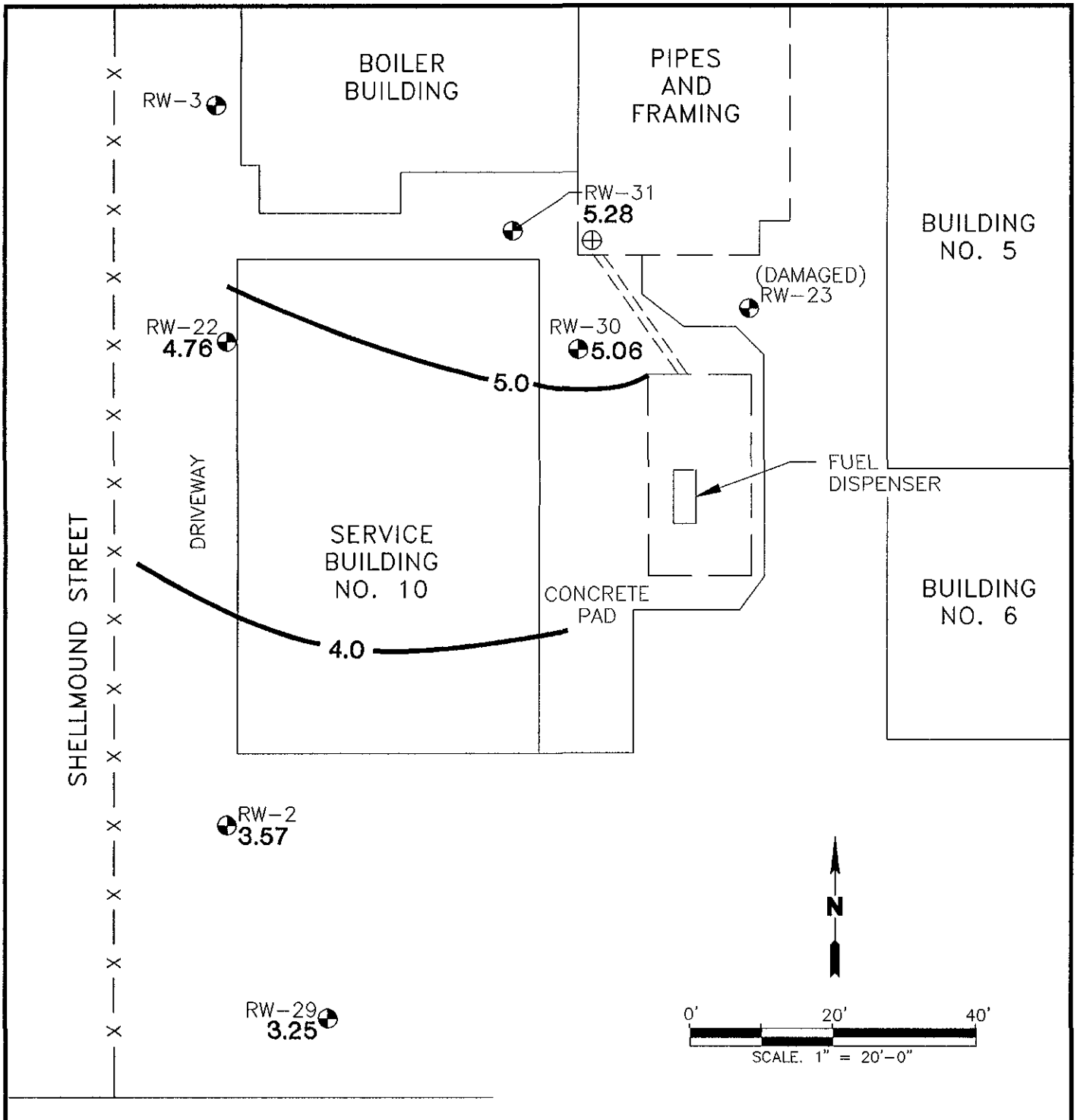
ROUX ASSOCIATES
ENVIRONMENTAL CONSULTING & MANAGEMENT

COMPILED BY:	K.B.
PREPARED BY:	R.P.
PROJECT MNGR.	T.R.
DATE:	03/93
SCALE:	AS SHOWN
PROJECT NO.	19801W
FILE NAME:	19801QM1

PREPARED FOR: HARCROS PIGMENTS, INC.

TITLE: LOCATION OF MONITORING WELLS AND FORMER TANK PITS

FIGURE 3



EXPLANATION

- MONITORING WELL LOCATION AND DESIGNATION
- 4.0 — LINE OF EQUAL GROUNDWATER ELEVATION (ELEVATIONS IN FEET ABOVE MEAN SEA LEVEL)

Title:

GROUNDWATER ELEVATIONS MARCH 15, 1995

Prepared For:
HARCROS PIGMENTS, INC.

ROUX ASSOCIATES INC.
Environmental Consulting & Management

Compiled by: J.M.	Date: 4/24/95	FIGURE
Prepared by: G. Wood	Scale: AS SHOWN	4
Project Mgr: R.R.	Revision: 1	
Project No. 19801W	File No: 19801-2	

APPENDICES

APPENDIX A

Well Sampling Data Forms

GROUND WATER SAMPLE FIELD DATA SHEET

PROJECT NO: 19801W WELL ID: ~~MW-~~ RW-22

CLIENT/STATION #: Harcross, Emeryville CA ADDRESS: 4650 Shellmound St.

CASING DIAMETER (inches): 2 | 3 | (4) | 6 | 8 | 12 | Other

GALLON/LINEAR FOOT: 0.17 | 0.38 | 0.66 | 1.5 | 2.6 | 5.8 | Other

TD ~~17.6~~ 14.6 - DTW 2.66 X GALLON/LINEAR FT. 0.66 X CASING VOLUME 3 = CALCULATED PURGE 23.6

ACTUAL PURGE 24

DATE PURGED: 3-15-95 START (2400 Hr) 9:50 END (2400 Hr) 10:29

DATE SAMPLED: 3-15-95 START (2400 Hr) 10:30 END (2400 Hr) 10:35

TIME (2400 Hr)	VOLUME (gal.)	pH (units)	E.C. (µmhos/cm @ 25° C)	TEMPERATURE (°F)	COLOR (visual)	TURBIDITY (visual)
9:58 AM	5	11.43	2,370	60.2	Light ~~Brown~~ Brown	Moderate
10:08 AM	~~5~~ 10	9.65	2,260	59.0	Light Brown	Moderate
10:16 AM	~~15~~ 15	9.58	2,280	58.7	clear	Moderate
10:21 AM	~~20~~ 20	9.36	2,290	59.4	clear	moderate
10:29 AM	24	8.81	2,310	59.6	clear	Moderate

FIELD QC SAMPLES COLLECTED AT THIS WELL (i.e. FB-1, XDUP-1): _____

PURGING EQUIPMENT		SAMPLING EQUIPMENT	
___ 2" Bladder Pump	___ Bailer (Teflon®)	___ 2" Bladder Pump	___ Bailer (Teflon®)
___ Centrifugal Pump	X Bailer (~~PVC~~) PE	___ DDL Sampler	___ Bailer (Stainless Steel)
___ Submersible Pump	___ Bailer (Stainless Steel)	___ Dipper	___ Submersible Pump
___ Dedicated		X Bailer Disposable (PE)	___ Dedicated
Other: _____		Other: _____	

REMARKS: _____

PRINT NAME: _____

PAGE 1 OF 1 SIGNATURE: _____

APPENDIX B

Chain-of-Custody Documentation

ROUX

CHAIN OF CUSTODY

№ 01065 W

ROUX ASSOCIATES INC
Environmental Consulting & Management
1855 GATEWAY BOULEVARD, SUITE 770
CONCORD, CALIFORNIA 94520
Tel. (510) 602-2333 • Fax (510) 687-1258

PAGE 1 OF

PROJECT NAME: HARCROSS
PROJECT NUMBER: 198011.U
PROJECT LOCATION: 4650 Shellmound St., Emeryville CA
SAMPLER(S): RICK R. JOHN M
PROJ MGR.: Rick Rieck

ANALYSES

SAMPLE DESIGNATION/LOCATION	DATE COLLECTED	TIME COLLECTED	SAMPLE MATRIX	VOCs by #8240					TOTAL BOTTLES	NOTES
RW-22	3/15/95	1030	Water	X					2	5030884AB

RELINQUISHED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N	RECEIVED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N
Richard Rieck	Roux	3/15	11:26		RB Kelley	Sequoia Analytical	3/15/95	11:26 am	
RELINQUISHED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N	RECEIVED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N
RELINQUISHED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N	RECEIVED BY: (SIGNATURE)	FOR	DATE	TIME	SEAL INTACT Y OR N

DELIVERY METHOD: DROP-OFF

ANALYTICAL LABORATORY: SEQUOIA, CONCORD

COMMENTS: STANDARD TAT

APPENDIX C

Laboratory Analytical Reports

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Roux Associates	Client Project ID:	#19801W, Harcross	Sampled:	Mar 15, 1995
1855 Gateway Blvd., Ste. 770	Sample Descript:	Water, RW-22	Received:	Mar 15, 1995
Concord, CA 94520	Analysis Method:	EPA 8240		
Attention: Rick Riedl	Lab Number:	503-0884	Analyzed:	Mar 27, 1995
			Reported:	Mar 30, 1995

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/L
Acetone	10	N.D.
Benzene	2.0	N.D.
Bromodichloromethane	2.0	N.D.
Bromoform	2.0	N.D.
Bromomethane	2.0	N.D.
2-Butanone	10	N.D.
Carbon disulfide	2.0	N.D.
Carbon tetrachloride	2.0	N.D.
Chlorobenzene	2.0	N.D.
Chloroethane	2.0	N.D.
2-Chloroethyl vinyl ether	10	N.D.
Chloroform	2.0	N.D.
Chloromethane	2.0	N.D.
Dibromochloromethane	2.0	N.D.
1,1-Dichloroethane	2.0	N.D.
1,2-Dichloroethane	2.0	N.D.
1,1-Dichloroethene	2.0	N.D.
cis-1,2-Dichloroethene	2.0	3.7
trans-1,2-Dichloroethene	2.0	3.1
1,2-Dichloropropane	2.0	N.D.
cis-1,3-Dichloropropene	2.0	N.D.
trans-1,3-Dichloropropene	2.0	N.D.
Ethylbenzene	2.0	N.D.
2-Hexanone	10	N.D.
Methylene chloride	5.0	N.D.
4-Methyl-2-pentanone	10	N.D.
Styrene	2.0	N.D.
1,1,2,2-Tetrachloroethane	2.0	N.D.
Tetrachloroethene	2.0	N.D.
Toluene	2.0	N.D.
1,1,1-Trichloroethane	2.0	N.D.
1,1,2-Trichloroethane	2.0	N.D.
Trichloroethene	2.0	N.D.
Trichlorofluoromethane	2.0	N.D.

Analytes reported as N.D. were not present above the stated limit of detection.

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Roux Associates	Client Project ID:	#19801W, Harcross	Sampled:	Mar 15, 1995
1855 Gateway Blvd., Ste. 770	Sample Descript:	Water, RW-22	Received:	Mar 15, 1995
Concord, CA 94520	Analysis Method:	EPA 8240		
Attention: Rick Riedl	Lab Number:	503-0884	Analyzed:	Mar 27, 1995
			Reported:	Mar 30, 1995

VOLATILE ORGANICS by GC/MS (EPA 8240)

Analyte	Detection Limit µg/L	Sample Results µg/kg
Vinyl acetate	2.0	N.D.
Vinyl chloride	2.0	N.D.
Total Xylenes	2.0	N.D.

Surrogates	Control Limit %		% Recovery
1,2-Dichloroethane-d4	50	150	101
Toluene-d8	50	150	108
4-Bromofluorobenzene	50	150	105

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL, #1271

Kenneth K. F. Lee
Laboratory Director

Sequoia Analytical

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Roux Associates
1855 Gateway Blvd., Ste. 770
Concord, CA 94520
Attention: Rick Riedl

Client Project ID: #19801W, Harcross
Matrix: Liquid
QC Sample Group: 503-0884

Reported: Mar 30, 1995

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloroethene	Benzene	Toluene	Chloro-benzene
Method:	EPA 8240	EPA 8240	EPA 8240	EPA 8240	EPA 8240
Analyst:	M. Nguyen	M. Nguyen	M. Nguyen	M. Nguyen	M. Nguyen
MS/MSD Batch#:	5030884	5030884	5030884	5030884	5030884
Date Prepared:	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995
Date Analyzed:	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995
Instrument I.D.#:	GC/MS 2	GC/MS 2	GC/MS 2	GC/MS 2	GC/MS 2
Conc. Spiked:	50 µg/L	50 µg/L	50 µg/L	50 µg/L	50 µg/L
Matrix Spike % Recovery:	100	104	112	104	104
Matrix Spike Duplicate % Recovery:	104	104	112	104	100
Relative % Difference:	3.9	0.0	0.0	0.0	3.9
LCS Batch#:	LCS032795	LCS032795	LCS032795	LCS032795	LCS032795
Date Prepared:	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995
Date Analyzed:	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995	Mar 27, 1995
Instrument I.D.#:	GC/MS 2	GC/MS 2	GC/MS 2	GC/MS 2	GC/MS 2
LCS % Recovery:	96	100	104	96	100
% Recovery Control Limits:	DL-234	71-157	37-151	47-150	37-160

SEQUOIA ANALYTICAL, #1271

Kenneth K. F. Lee
Laboratory Director

Please Note:
The LCS is a control sample of known, interferent free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.