CONSULTING GROUND-WATER
GEOLOGISTS AND ENGINEERS
ROUX ASSOCIATES

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90 OCT 24 AM 8:27

October 22, 1990

Mr. Gil Wistar
Hazardous Materials Specialist
Alameda County Department of Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Subject: Work Plan for Installation of Two Monitoring Wells Downgradient from the Former Waste Oil Tank Pit Excavation Area at the Harcros Pigments Plant, 4650 Shellmound Street, Emeryville, California

Dear Mr. Wistar:

In response to your September 19, 1990 letter to Michael Herzog of Harcros Pigments, Roux Associates West, Inc. (Roux) has prepared this Work Plan for Installation of Two Monitoring Wells Downgradient from the Former Waste Oil Tank Pit Excavation Area at the Harcros Pigments Plant, 4650 Shellmound Street, Emeryville, California (Site; Figure 1).

Two monitoring wells will be installed downgradient from the former waste oil tank pit excavation area. These wells will be located as indicated in Figure 2. The wells will be constructed as described in Section 4.0 of the Work Plan for Soil Remediation and Ground Water Monitoring, Harcros Pigments Plant, Emeryville, California, dated May 29, 1990, except that two wells rather than one will be installed, and the wells will be constructed of two-inch, rather than four-inch PVC. A copy of Section 4.0 of the May 29, 1990 Work Plan is attached for your convenience.

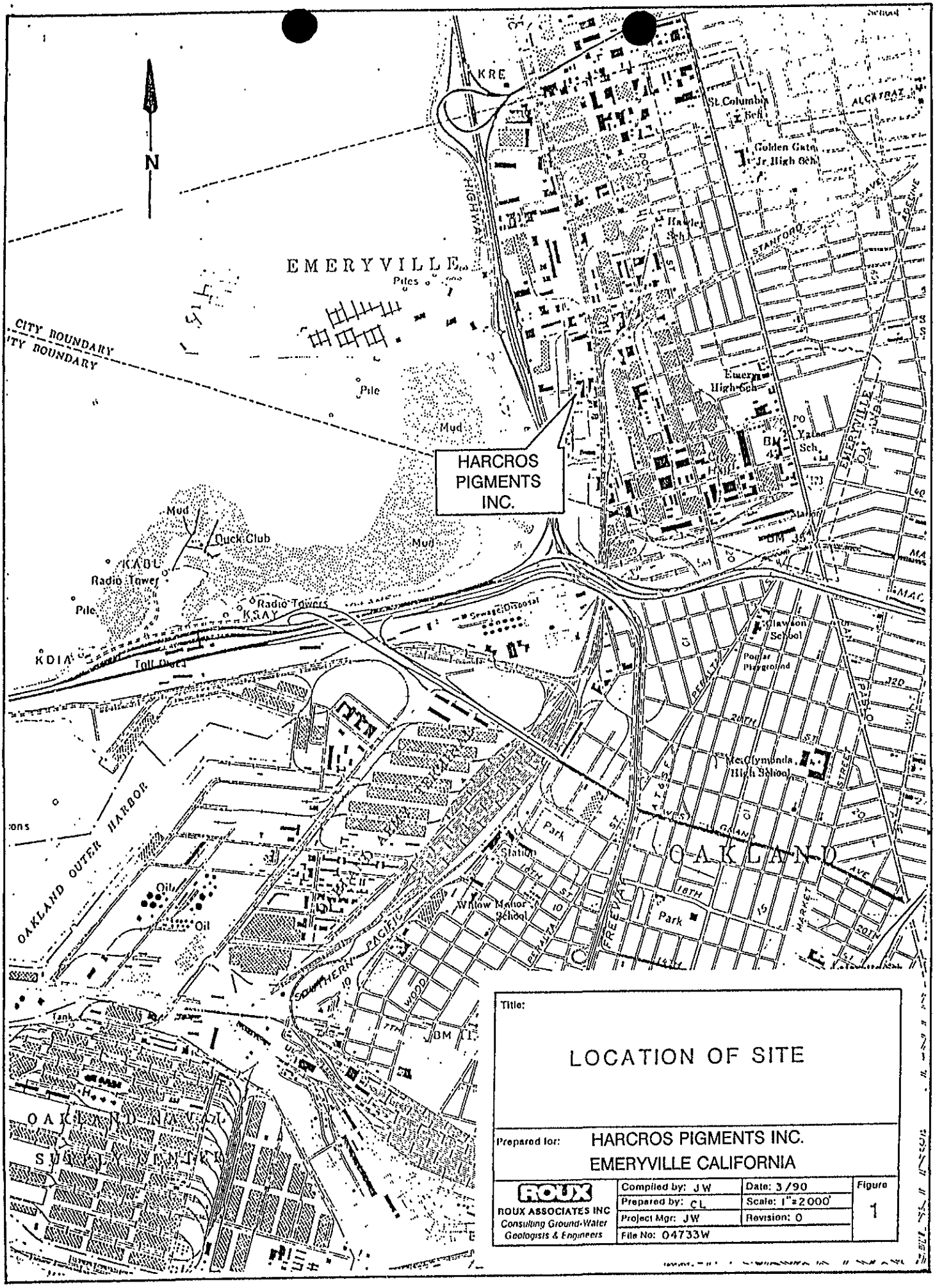
Please contact Joseph DeMartini at (415) 370-2275 if you have any questions.

Very Truly Yours,
ROUX ASSOCIATES WEST, INC.

Keith G. Kennedy, R.G., CGWP
Principal
Environmental Manager
California Registered Geologist #4903

Joseph DeMartini
Senior Engineer

Doc #HP19801W.1.3



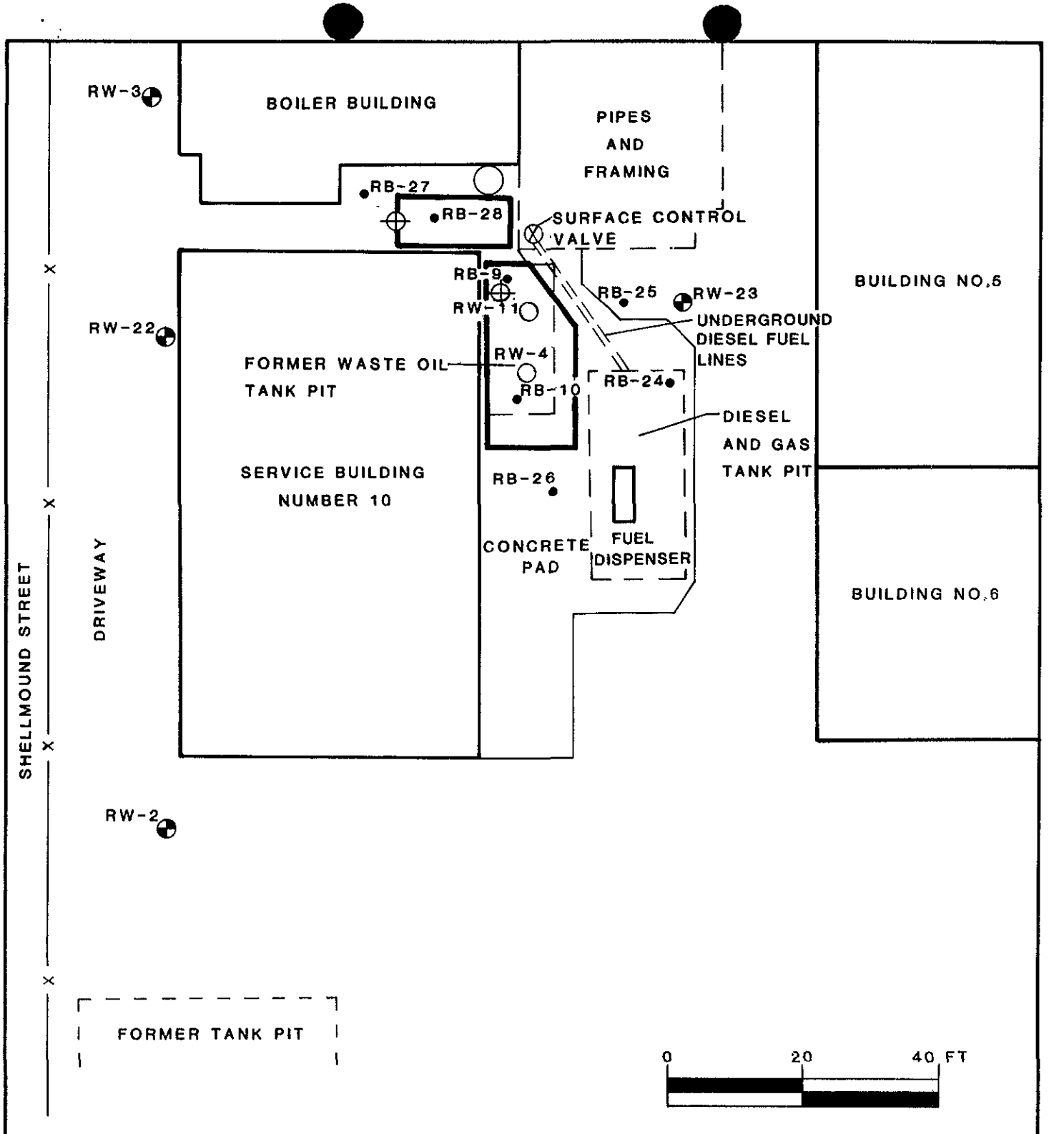
Title:

LOCATION OF SITE

Prepared for: HARCROS PIGMENTS INC.
EMERYVILLE CALIFORNIA

ROUX
ROUX ASSOCIATES INC
Consulting Ground-Water Geologists & Engineers

Compiled by: JW	Date: 3/90	Figure 1
Prepared by: CL	Scale: 1"=2000'	
Project Mgr: JW	Revision: 0	
File No: 04733W		



EXPLANATION

RB-3 ● SOIL BORING LOCATION AND DESIGNATION

RW-2 ◒ MONITORING WELL LOCATION AND DESIGNATION

APPROXIMATE AREA OF EXCAVATION

⊕ PROPOSED MONITORING WELL LOCATION

RW-11 ○ FORMER MONITORING WELL LOCATION AND DESIGNATION

Title

PROPOSED MONITORING WELL LOCATIONS

Prepared for

HARCROS PIGMENT INC.

ROUX ASSOCIATES INC
Environmental Consultants
Geologists & Engineers

Compiled by G.M	Date 4/90	Figure 2
Prepared by V.M.	Scale SHOWN	
Project Mgr J.W.	Revision 0	
File No. 1980IW		

WORK PLAN
SOIL REMEDIATION AND GROUND-WATER MONITORING

HARCROS PIGMENTS PLANT
Emeryville, California

May 29, 1990

10/22/90 revision: only pp. 15 and 16 changed

Prepared for:

Harcros Pigments Inc.
Emeryville, California

Prepared by:

ROUX ASSOCIATES WEST, INC.
1340 Arnold Drive, Suite 231
Martinez, CA 94553
(415) 370-2275

Doc#PF04739W1.6

CONTENTS

4.0 GROUND-WATER MONITORING WITHIN AREA OF SOIL EXCAVATION

Following soil excavation, verification sampling, and backfilling, 2 ground-water monitoring wells will be installed within the former waste oil tank pit near the former locations of wells RW-4 and RW-11. The purpose of this monitoring well will be to evaluate ground-water quality within the area of diesel contamination following soil remediation.

The monitoring well will be drilled to a depth of 13.5 feet. A ten-foot long, threaded, four-inch diameter, PVC slotted (0.010-inch slot) section and an appropriate length of blank PVC riser pipe will be placed in the hole. The screened zone will be gravel-packed with Monterey No. 2 sand. A one-foot thick layer of bentonite pellets will be emplaced above the sand pack. A locking well cap will be placed on the PVC pipe and a metal traffic box will be cemented in place at the surface.

The well will be surveyed to an accuracy of 0.01 feet by a licensed surveyor. The well will be developed by removing five to ten casing volumes of water from the well to ensure that the well screen is open to the formation. Water withdrawn from the well will be stored in an aboveground tank or 55-gallon drums located on site. The purge water will be disposed of in a manner consistent with the water quality. If the water contains detectable petroleum hydrocarbons,the water will be manifested and hauled to an off-site disposal facility that is approved to accept the water. If the purge water contains less than 10 mg/L of TPH-D, the water will be used for irrigation purposes on site. Following development of the well, it will be allowed to recover over a period of at least 48 hours. Water levels will be measured

from the top of the PVC casing using an electronic water level meter and will be calibrated using a chalked steel tape.

Ground-water samples will be collected and analyzed quarterly for total petroleum hydrocarbons as diesel fuel using Modified USEPA Method 8015. In addition to the monitoring well to be installed as described above, existing wells RW-2, RW-3, RW-22, and RW-23 will also be sampled and analyzed quarterly for TPH-D. Prior to sampling, the wells will be purged by removing three to five casing volumes. The ground-water samples will be collected in a stainless steel bailer. The pH, temperature, and conductivity of the water sample will be measured in the field. The presence of a sheen or odor will be recorded. The sample will be placed in 1-liter amber glass bottles, labelled, sealed in a plastic ziplock bag, and stored in an ice chest until delivery to the analytical laboratory. Letter-reports containing the laboratory reports and chain-of-custody forms will be submitted following each sampling event.