CAPSULE®
ENVIRONMENTAL ENGINEERING, INC

April 25, 1995

Mr. Scott O. Seery, CHMM
Senior Hazardous Materials Specialist
Alameda County Health Agency
Division of Environmental Protection
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: Ingersoll-Rand Equipment Sales
1944 Marina Boulevard, San Leandro

Dear Mr. Seery:

Thank you for taking the time to meet with Alex Aguirre, Bob Heindl of Ingersoll-Rand, Jim Nash and Dan Reinke of Capsule. In response to your direction that we further delineate the ground water contaminant plume, we have prepared the enclosed scope of work for your review and comment. We are also working to address the other issues you raised in our meeting.

Please feel free to contact either Alex or Dan if you have any questions on this scope of work. We look forward to hearing from you soon.

Sincerely,

CAPSULE ENVIRONMENTAL ENGINEERING, INC./BRAUN INTERTEC CORP.

Daniel P. Reinke, P.E.
Principal Engineer
Capsule

Gerald E. Stuth, P.E.
Senior Project Manager
Braun Intertec

DPR:mmf
Enclosure
cc: A. Aguirre, Jr./IRES, San Leandro
R. Heindl/I-R, Bethlehem

1970 Oakcrest Avenue, Suite 215 • St. Paul, MN 55113-2624 • (612) 636-2644 • Fax (612) 636-3106
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SCOPE OF WORK
GROUNDWATER CONTAMINANT PLUME DELINEATION
INGERSOLL-RAND EQUIPMENT SALES
SAN LEANDRO, CALIFORNIA
April 25, 1995

BACKGROUND

The site, located at 1944 Marina Boulevard, San Leandro, California, consists of a portion of a subdivided building and the associated yard areas all of which are leased portions of a larger property approximately 2 1/2 miles east from San Francisco Bay. The adjacent and surrounding area is commercial and industrial. Prior uses of the property are not identified. The upper aquifer in the region contains levels of chlorinated solvents above drinking water standards from other industrial sites.

The leased site contained three steel underground storage tanks used by Ingersoll-Rand Equipment Sales (IRES). The tanks were a 500-gallon tank used for waste oil, a 5,000-gallon tank used for gasoline, and a 10,000-gallon tank used for diesel fuel. The tanks passed an integrity test in February 1987 and were retested in March 1989. The gasoline tank failed the integrity test in March 1989.

An "Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report" was filed with the San Leandro Fire Department in May 1989, and the tank was emptied and closed by the site. All three tanks were removed from the ground in October 1989, by International Technology Environmental Services (ITES). Subsequent investigation by ITES found soil and ground water contamination that was attributed to the leaking gasoline tank.

Investigation activities included installing temporary wells downgradient from the site, on the neighboring property to the west. Samples from these temporary wells showed apparent gasoline contamination. No samples were obtained that were free of petroleum compound contamination above drinking water standards.

In March of 1995, IRES and their consultant, Capsule Environmental Engineering (Capsule), met with the Alameda County project representative to determine an appropriate course of action to move the project forward. The direction obtained was that IRES should complete and submit a Corrective Action Plan evaluating the technical and economic feasibility of remedial options for the site. Preparing this Plan requires that Ingersoll-Rand complete the definition of the contaminant plume and develop a way to monitor the further spread of this plume.

This scope of work has been developed to present the proposed plume investigation activities. This plan will serve as a guiding document in the field activities, however, findings during the site work will likely modify this scope of work.

PLANNED ACTIVITIES

The investigation activities are designed to collect data on the soils characteristics and the groundwater quality. Hydraulic push-type soil sampling will be used to collect continuous soil cores which will be characterized on-site. After the boreholes have been advanced to the water table, small diameter screened polyvinyl chloride (PVC) pipe will be inserted into the borehole. The temporary well will be bailed and sampled for analysis.

Sampling is planned to be completed in the locations noted in Figure 1. Initial samples will be taken to the northwest, followed by sampling to the west and southwest. Additional sample locations will be selected based on the initial findings.

It is anticipated that the investigation activities will take two to four days, depending on the findings and the ease of access with neighboring properties. Access agreements will be obtained with neighboring facilities prior to initiating the investigation.

Following the completion of the work, the temporary well will be properly abandoned in accordance with regulations. Further information on this process is presented below.

SOIL CORING PROCEDURES

Portable, hydraulically-driven soil coring systems will be used to obtain soil and ground water samples for lithologic and chemical analysis.

Two nested sampling rods are driven simultaneously. Small diameter inner sampling rods are used to obtain and retrieve the soil cores; the larger diameter (2 1/2 inch outside diameter) outer rods serve as temporary drive casing.

As the rods are advanced, soil is drawn into a 1 7/8-inch diameter, 3-foot-long sample barrel that is attached to the end of the inner rods. Soil samples are collected in 1 3/4 inch-diameter by 6-inch-long stainless steel sleeves inside the sample barrel as both rods are advanced. After being driven 3 feet, the inner rods are removed from the bore hole with a hydraulic winch. The stainless sleeves containing the soil samples are removed from the inner sample barrel and can then be

preserved for chemical analyses or used for lithologic identification. After adding new stainless steel sleeves, the drive sampler and inner rods are then lowered back into the bore hole to the previous depth, an additional 3-foot section of casing is attached, and the process is repeated until the desired depth is reached.

The use of outer rods prevents sloughing of the formation while the inner rods are withdrawn from the hole. This ensures that the drive sampler will always be sampling soil from the desired interval rather than potentially contaminated soil that has sloughed in from higher up in the hole.

All drive casing, inner sample barrels, inner rods, and tools will be cleaned with a high pressure, hot water washer between holes. Sample barrels will be washed with trisodium phosphate and double rinsed with deionized water between samples collected in the same hole. All rinsate from the cleaning will be contained in 55-gallon drums at the project site.

GROUND WATER SAMPLING PROCEDURES

After the targeted water-bearing zone has been penetrated, the sample barrel and inner rods will be removed from the bore hole and the drive casing will be pulled up approximately 3 feet to allow ground water to flow into the bore hole. 1-inch diameter Schedule 40 PVC casing with a 5 foot section of 0.010 inch slotted well screen may be installed in the borehole to facilitate the collection of ground water samples. Threaded sections of PVC are lowered into the borehole inside the drive casing. The drive casing is then pulled up to expose the slotted interval of the PVC. Ground water samples may then be collected from within the PVC casing with a 1-inch diameter Teflon or stainless steel bailer until adequate sample volume is obtained.

Samples will be analyzed for petroleum compounds.

BOREHOLE GROUTING

On completion of soil and water sampling, boreholes will be abandoned with a grout mixture of Type II cement with 4 percent pure sodium bentonite. The grout will be pumped through a 1-inch diameter grouting tube positioned at the bottom of the boring, prior to withdrawing the outer rods. Any asphalt damaged during the investigation activities will be patched.

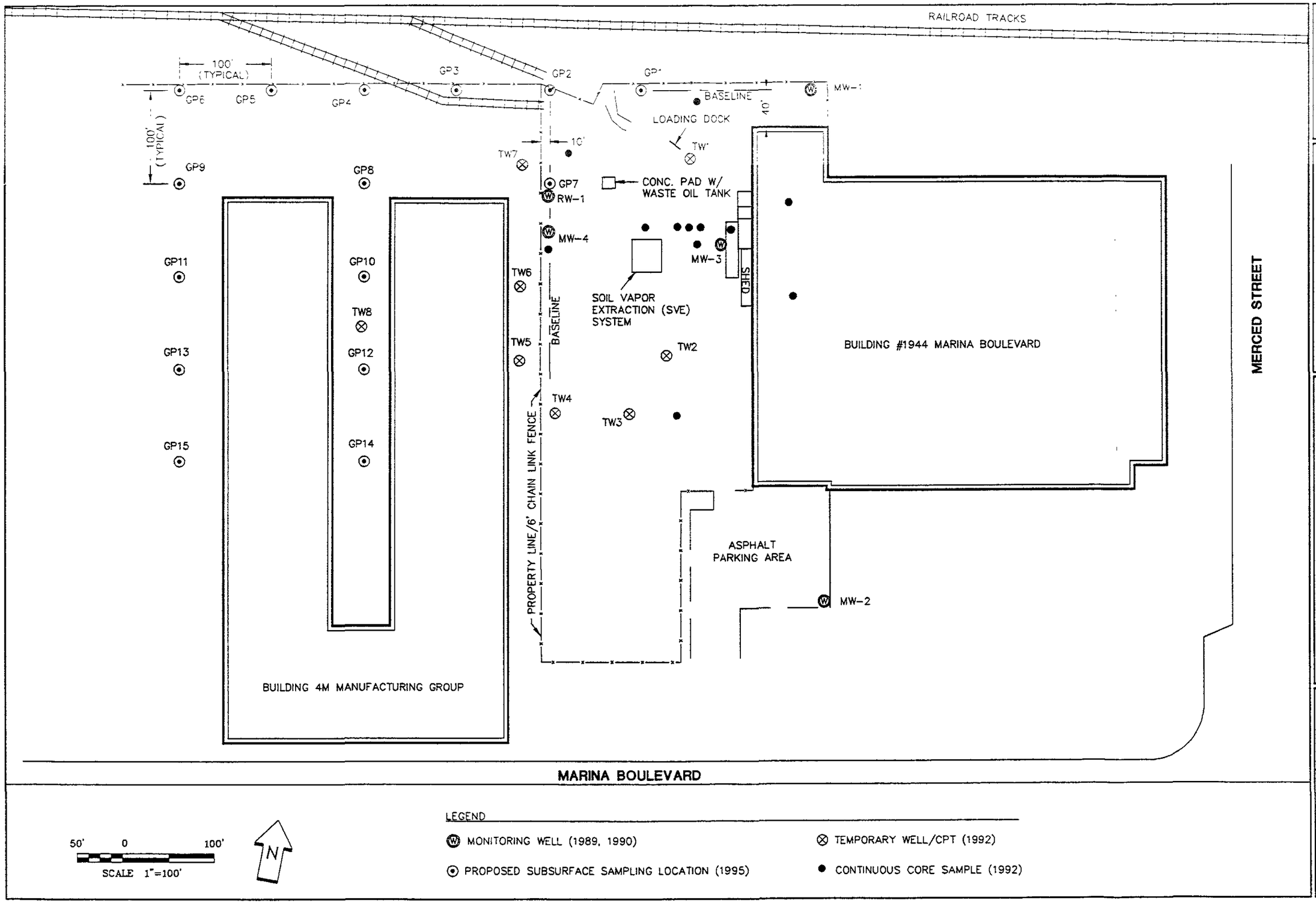
SCHEDULE

Bids are being solicited and contractor selection is expected to be completed in April 1995. Analytical bids may also be solicited. Work on obtaining access to neighboring properties will begin in April. Access activities will include locating underground utilities in all of the potential investigation areas. Assuming there are no problems in the contracting process and in obtaining access, site investigation activities could be conducted as soon as mid-May. Site investigation activities are expected to take one week.

Following the analyses, the installation of monitoring wells may be required. A brief, letter type report (letter report) will be prepared for submittal to Alameda County. The letter report will summarize the investigation findings and present the technical basis for either not additional investigation work or provide a monitoring well installation plan. The monitoring well installation plan would provide proposed well locations and their rationale.

Depending on the findings and proposed well locations, these wells could be installed sixty days following the letter report submittal to Alameda County.

FIGURE 1
PROPOSED SAMPLING LOCATIONS



BRAUN INTERTEC

CAPSULE
ENVIRONMENTAL ENGINEERING, INC.
1979 OAKCREST AVE., SUITE 216
ST. PAUL, MINNESOTA 55113
(612) 638-2544

PROPOSED SUBSURFACE SAMPLE LOCATION MAP
INGERSOLL-RAND CORPORATION
1944 MARINA BOULEVARD
SAN LEANDRO, CA

		DATE
INT		
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APP'D BY:	GES	03-30-95
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Address: 1970 OAKCREST AVE STE 215

City: ST PAUL State: MN ZIP Required: 55113

INTERNAL BILLING REFERENCE INFORMATION (optional) (First 24 characters will appear on invoice): 001-142-500

To (Recipient's Name) Please Print: Scott Seery
Recipient's Phone Number (Very Important): ( )

Company: Alameda County Health Agency

Exact Street Address (We Cannot Deliver to P.O. Boxes or P.O. Zip Codes): 1131 Harbor Bay Parkway, 2nd Floor

City: Alameda State: CA ZIP Required: 94502

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