

November 22, 1999
Work Plan 0164.W4

5 DC 6593A

*11/29/99
1) Results of ATD2
monitoring
2) Why install in
the same area of ATD2*

Ms. Susan Hugo
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

SUBJECT: MONITORING WELL DESTRUCTION AND INSTALLATION WORK PLAN
Hardage Construction, Incorporated Site
5800 Shellmound Street
Emeryville, CA

Dear Ms. Hugo:

RGA Environmental, Inc. (RGA) is pleased to present this work plan for the following scope of work.

- Permitting for well destruction and well installation.
- Destruction of one groundwater monitoring well.
- Concomitant construction of one groundwater monitoring well.
- Development and surveying of the new groundwater monitoring well.
- Report preparation documenting well destruction and construction.

All work will be performed under the direct supervision of an appropriately registered professional. This work plan is prepared in accordance with guidelines set forth in the document "Tri-Regional Board Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites," dated August 10, 1990 and "Appendix A - Workplan for Initial Subsurface Investigation" dated August 20, 1991.

Background

A total of seven groundwater monitoring wells were previously installed at the site by others. One well (ATD1) was discovered to have been destroyed by others. One other well (ATD4) was located in the footprint of the building being constructed at the subject site. Recently, RGA destroyed well ATD4 and replaced wells ATD1 and ATD4 with wells ATD1A and ATD4A, respectively. Based upon review of documents by others, construction details of the existing wells are summarized as follows.

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ENVIRONMENTAL PROTECTION

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<u>Well Name</u>	<u>Borehole Depth(ft)</u>	<u>Well Casing Length (ft)</u>	<u>Screen Length (ft)</u>	<u>Depth to top of Perforations (ft)</u>
ATD1A	10.0	10.0	5.0	5.0
ATD2	9.5	9.0	5.0	4.0
ATD3	22.0	21.5	5.0	16.5
ATD4A	10.0	10.0	5.0	5.0
ATD5	11.5	9.5	5.0	4.5
ATD6	11.5	9.5	5.0	4.5
ATD7	11.5	9.5	5.0	4.5

It was recently discovered that monitoring well ATD2 is full of gravel. It appears that the gravel entered the well during site construction activities when the well head enclosure was inadvertently destroyed. Based upon conversations with Ms. Susan Hugo of the Alameda County Department of Environmental Health, well ATD2 will be destroyed and replaced. County authorization was granted to replace the well in the same location as the well which presently contains gravel. This will be done by drilling out existing well ATD2, and constructing a new well, designated as ATD2A, in the same borehole. The current locations of the monitoring wells is shown in the attached Site Plan Detail, Figure 2.

RGA proposes to perform the following activities. ✓

Permitting for Well Destruction and Well Installation

All necessary permits will be obtained for the destruction of one groundwater monitoring well and for the installation of one groundwater monitoring well.

Health and Safety Plan Preparation and Underground Service Alert Notification

A health and safety plan (HASP) has been prepared for construction activities at the site. A similar HASP will be used for well destruction and construction activities. The entire site has been identified to Underground Service Alert for underground utility location.

Destruction of One Groundwater Monitoring Well

Well ATD2 will be destroyed by being drilled out by Gregg Drilling (Gregg) of Martinez, California. Gregg is a properly licensed contractor. ✓

Construction of One Groundwater Monitoring Well ✓

Replacement well ATD2A will be constructed in the borehole created by the destruction of well ATD2. A ten-inch diameter borehole will be drilled using truck-mounted hollow stem augers for the borehole. The hollow stem augers will be steam-cleaned prior to use in the borehole. No soil samples will be taken or retained for laboratory analysis.

The borehole for the monitoring well will be advanced to total depth of approximately 10 feet below the ground surface. No soil samples will be collected from the borehole. Groundwater is historically encountered in wells at the site at a depth of approximately 3 to 4 feet below the ground surface.

The monitoring well will be constructed using two-inch diameter Schedule 40 PVC pipe. The lowermost 5 feet of the casing will be 0.010-inch width factory slotted. A screw-on cap or slip-cap will be placed on the bottom of each well. The annular space surrounding the screen will be filled with a Lonestar 2/16 sack sand to a height of one foot above the top of the screen. A one-foot thick layer of bentonite pellets will be placed above the sand and hydrated. The remaining annular space will be filled with a neat cement grout (sanitary seal) to approximately one half foot below the ground surface.

The top of the well pipe will be secured with a locking expandable plug and enclosed in a water-tight, traffic-rated locking vault. The top of the vault will be set slightly above grade to inhibit the collection of water in the vault.

Soil generated during drilling will be stored with other excavated soil from the site on visqueen. Water generated during equipment decontamination will be placed into the onsite storage tanks for pumped groundwater.

Development of the New Groundwater Monitoring Well

At least 48 hours after the well has been installed, the well will be developed by surging and overpumping until the water discharged from the well is relatively clear. A total of 55 gallons will be removed from the well during development. Water removed from the well will be placed into the onsite storage tanks for pumped groundwater.

Surveying of the Wellhead Elevation for the New Monitoring Well

Following installation of the proposed groundwater monitoring well, the top of the PVC well pipe of the monitoring well will be surveyed vertically to the nearest 0.01 foot relative to a Mean Sea Level datum by a State-licensed surveyor.

Report Preparation Documenting Well Destruction and Construction

A report will be prepared documenting destruction of one well and construction and development of one well. The report will include a boring log, a map showing the well locations, the State-licensed surveyors report of the wellhead elevation, a description of field procedures, and a discussion of the site geology and hydrogeology. The report will bear the stamp of an appropriately registered professional.

Quarterly monitoring and sampling of the wells at the site is discussed in a work plan previously submitted to and approved by the County.

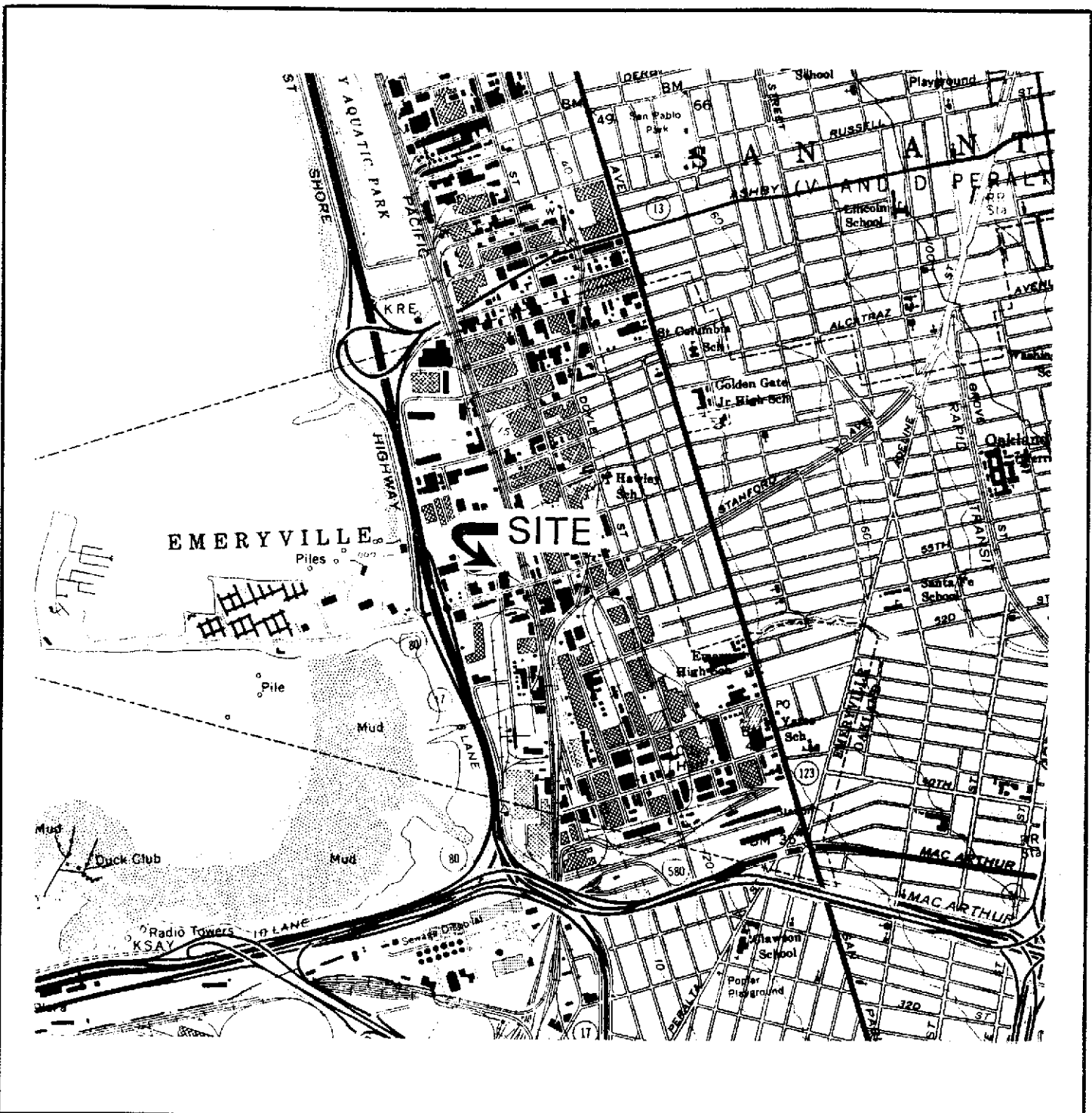
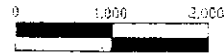


FIGURE 1
SITE LOCATION MAP
 Hardage Construction Corporation Site
 5800 Shellmound Street
 Emeryville, California



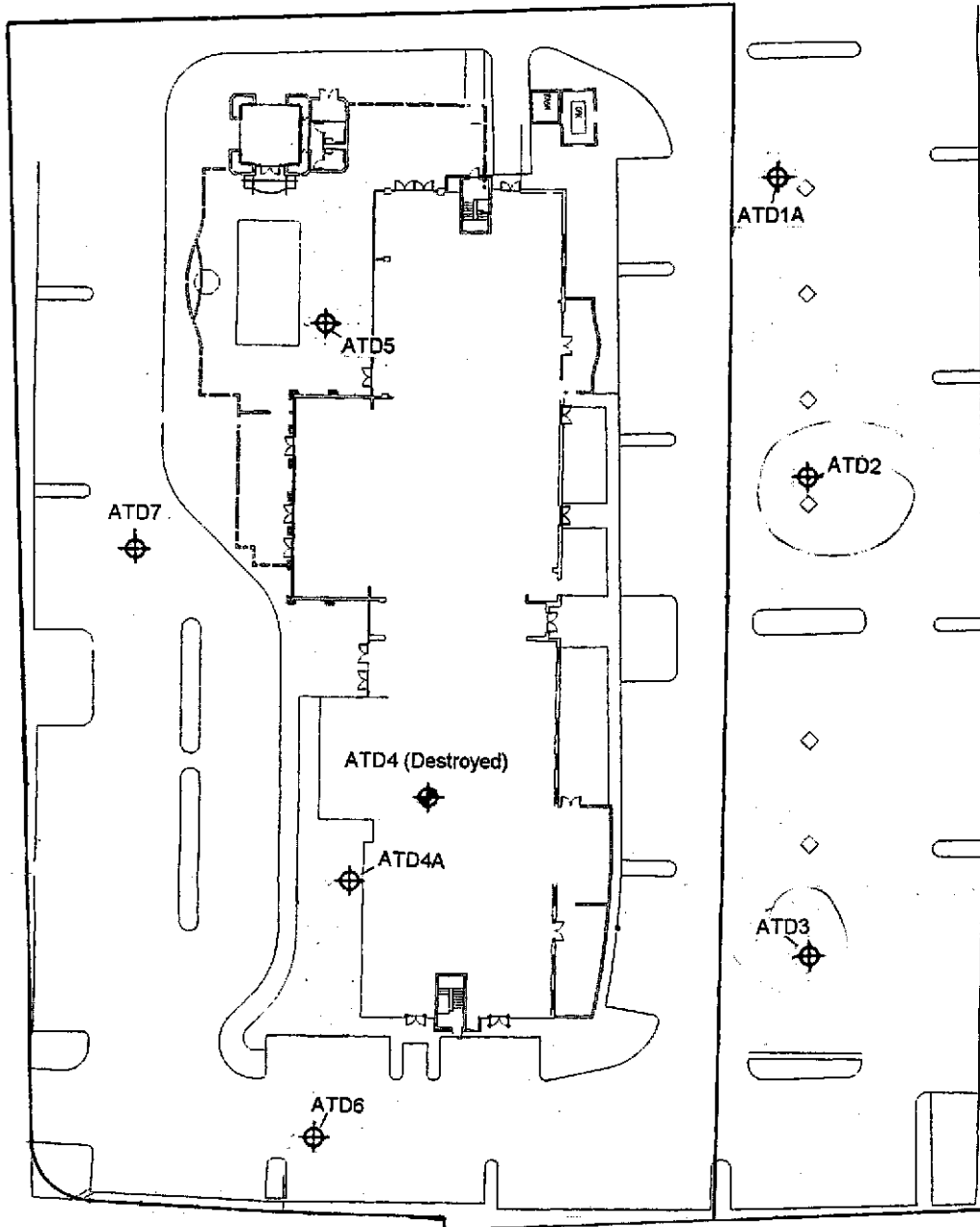
Source:
 U.S. Geological Survey
 Oakland West, California
 7.5 Minute Quadrangle
 Photorevised, 1980

RGA Environmental, Inc.
 4701 Doyle Street, Suite 14
 Emeryville, California 94608



SCALE IN FEET

Shellmound Street



Southern Pacific
Rail Road
Right-Of-Way

Powell Street Overpass

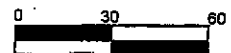
LEGEND
⊕ Existing Monitoring Well Location
⊖ Former Monitoring Well Location

FIGURE 2
SITE PLAN DETAIL
Hardage Construction Corporation Site
5800 Shellmound Street
Emeryville, California



Source:
Santina & Thompson, Inc.
Woodfin Suite Hotel
Monitoring Well Location and Elevation Map
March, 1999

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SCALE IN FEET