**RGA ENVIRONMENTAL, INC**

6588-9074

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## FAX TRANSMITTAL SHEET

TO: Susan Hugo
COMPANY: Alameda Co Dept Env Health
FAX NUMBER: 337-9335

FROM: Paul King
DATE: 3/3/99
NO. OF PAGES INCLUDING COVER: 17

RE: Pardee Construction Emeryville 0164.W3
JOB REFERENCE NUMBER: ~~337-9335~~

☐ URGENT ☒ FOR REVIEW ☒ PLEASE COMMENT ☐ PLEASE REPLY

Susan, you will find attached the following

- Work Plan 0164.W3 (5pp text, 2 pp Figs) dated 3/3/99
- Work Plan 0164.W1 (4pp text, 2 pp Figs) dated 4/9/98
- Work Plan 0164.W2 (3 pp text) dated 6/23/98.

The last two work plans are provided for your convenience.

Please let me know if you have any comments

Paul W. King

RGA
ENVIRONMENTAL INC

March 3, 1999
Work Plan 0164 W

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

SUBJECT: MONITORING WELL DESTRUCTION AND INSTALLATION AND GROUNDWATER MONITORING AND SAMPLING WORK PLAN
Hardage Construction Corporation Site
Intersection of Shell Mound and Powell 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.
- Construction of two groundwater monitoring wells.
- Development and surveying of the two new groundwater monitoring wells.
- Report preparation documenting well destruction and construction.
- Quarterly monitoring and sampling of six groundwater monitoring wells for four quarters.
- Report preparation for four quarterly monitoring and sampling episodes.

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. The construction of the wells is summarized as follows.

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| Well Name | Borehole Depth (ft) | Well Casing Length (ft) | Screen Length (ft) | Depth to top of Perforations (ft) |
|---|---|---|---|---|
| ATD1 | 19.0 | 18.5 | 5.0 | 13.5 |
| ATD2 | 9.5 | 9.0 | 5.0 | 4.0 |
| ATD3 | 22.0 | 21.5 | 5.0 | 16.5 |
| ATD4 | 11.5 | 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 |

Well ATD1 appears to have been destroyed previously by others. Well ATD4 is located within the footprint of a hotel which is presently under construction. Well ATD4 will be destroyed by pressure grouting, and replacement wells will be constructed for wells ATD1 and ATD4. Although well ATD5 was previously identified as being located within the footprint of the proposed hotel in RGA's Contamination Mitigation Work Plan dated April 9, 1998 (Work Plan 0164.W1), recent surveying has shown that well ATD5 is located outside the footprint of the building. The amended building footprint is shown on the attached Site Plan, Figure 2.

RGA proposes to perform the following activities.

Permitting for well destruction and well installation

All necessary permits have been obtained for the destruction of one groundwater monitoring well and for the installation of two groundwater monitoring wells.

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. The HASP will be used for well construction and destruction activities. The entire site has been identified to Underground Service Alert for underground utility location.

Destruction of one groundwater monitoring well

Construction of the proposed hotel will require the destruction of one of the existing groundwater monitoring wells (designated as ATD4). The well will be destroyed by pressure grouting by Exploration GeoServices (EGS) of San Jose, California. EGS is a properly licensed contractor.

Construction of two groundwater monitoring wells

The destroyed well will require replacement. In addition, one of the original wells in the groundwater monitoring network for the site appears to have been destroyed by others (ATD1). This well will also require replacement.

Replacement groundwater monitoring wells, designated as ATD1A and ATD4A, will be installed at the proposed locations shown on Figure 2.

A ten-inch diameter borehole will be drilled using truck-mounted hollow stem augers for each borehole. The hollow stem augers will be steam cleaned prior to use in each borehole. Soil samples will be collected from the boreholes into brass tubes at a maximum of five foot intervals, at changes in lithology and at any areas of obvious contamination using a Modified California split-spoon sampler lined with brass tubes for borehole logging purposes. Blow counts will be recorded every six inches. The soil samples will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. The soil samples will be evaluated with a photoionization detector equipped with a 10.0 eV bulb and calibrated with a 100 ppm isobutylene standard. None of the soil samples will be retained for laboratory analysis.

The boreholes for the monitoring wells will be advanced to total depths of approximately 10 feet below the ground surface. Groundwater is historically encountered in wells at the site at a depth of approximately 3 to 4 feet below the ground surface.

The monitoring wells 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 two new groundwater monitoring wells

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

Surveying of the Wellhead Elevations for all of the Monitoring Wells

Following installation of the proposed groundwater monitoring wells, the top of the PVC well pipe for all of the monitoring wells at the site 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 two wells. The report will include boring logs, a map showing the well locations, the State-licensed surveyors report of the wellhead elevations, a description of field procedures, and a discussion of the site geology and hydrogeology.

Quarterly monitoring and sampling of six wells for four quarters

The seven groundwater monitoring wells at the site will be monitored, purged and sampled on a quarterly basis for four quarters. The first quarter will start at least 24 hours after the wells have been developed. Water purged from the wells will be placed into the onsite storage tanks for pumped groundwater.

The wells will be monitored for depth to water and the presence of free product and sheen using methods described above. The wells will then be purged of a minimum of three casing volumes of water, or until the well is purged dry. During purging operations, the field parameters of pH, electrical conductivity and temperature will be monitored. Once the field parameters have been observed to stabilize and a minimum of three casing volumes has been purged or a well purged dry, a groundwater sample will be collected from the monitoring well using a Teflon bailer. The bailer will be cleaned using an Alconox solution and clean water rinse prior to use.

The sample will be transferred from the bailer to 40-milliliter glass Volatile Organic Analysis (VOA) vials and 1-liter amber glass bottles which will be sealed with Teflon-lined screw caps. The VOA vials will be overturned and tapped to assure that no air bubbles are present. The sample bottles will then be labeled and placed into a cooler with ice pending delivery to the State-certified hazardous waste testing laboratory. Chain of custody procedures will be observed for all sample handling.

The groundwater samples will be analyzed for TPH-Diesel, BTEX and the 8 RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver.

Report preparation for four quarterly monitoring and sampling episodes

Upon receipt of the laboratory analytical results for each quarter, a short letter report will be prepared. The report will contain documentation of field activities associated with the collection of the groundwater samples, copies of the laboratory analytical results and chain of custody documentation, a site plan showing the calculated groundwater flow direction and the signature and stamp of an appropriately registered professional.

Should you have any questions, please do not hesitate to contact us at (510) 547-7771.

Very Truly Yours,

RGA Environmental, Inc.

Robert Gils
Project Manager

Paul H. King
California Registered Geologist

Attachments: Figure 1, Site Location Map
Figure 2, Site Plan

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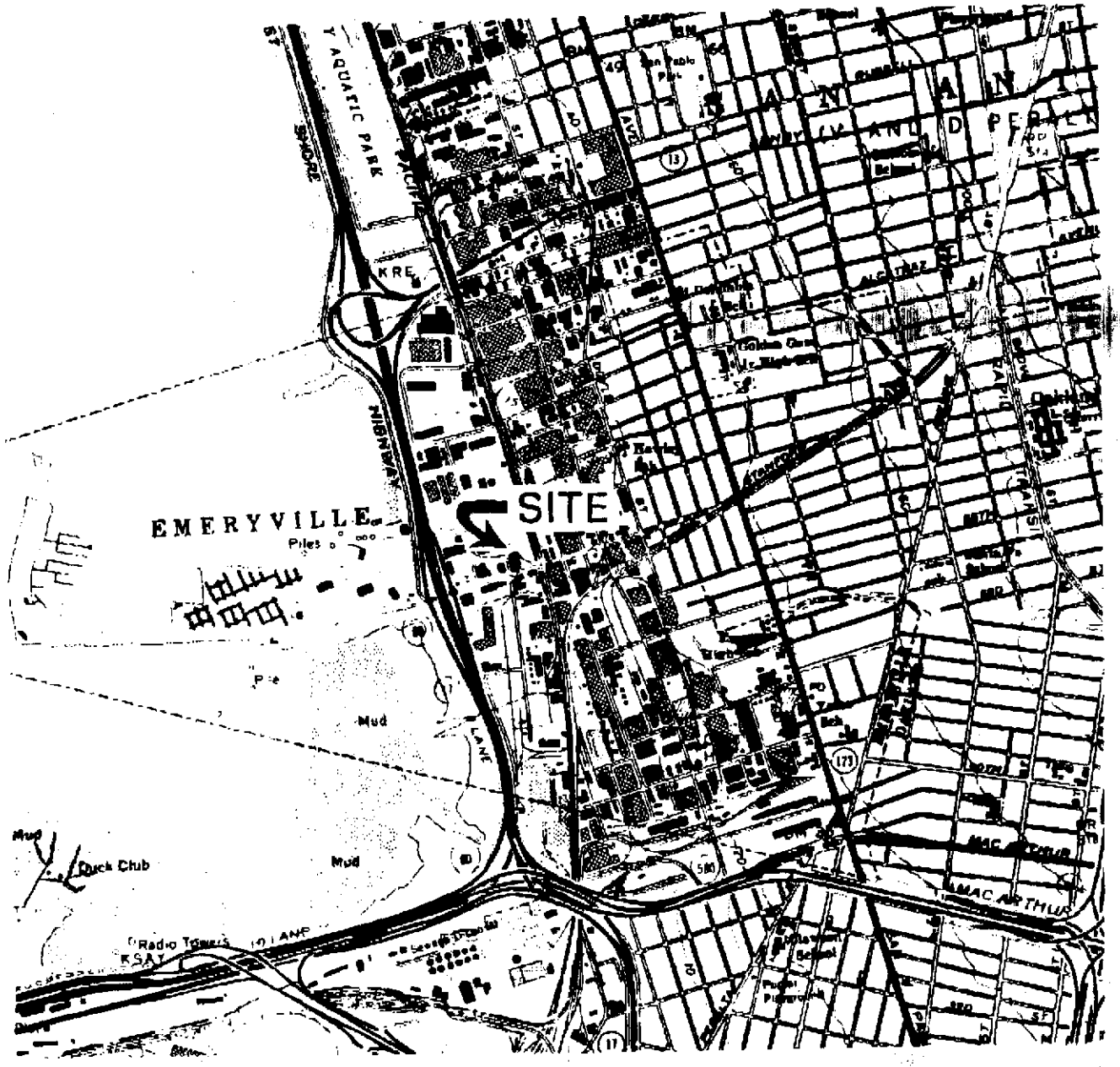


FIGURE 1
SITE LOCATION MAP
Hardage Suite Hotels, Inc.
Intersection of Shellmound and Powell Street (Northeast corner)
Emeryville, California

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

RGA Environmental, Inc.
1260 45th Street
Emeryville, California 94608

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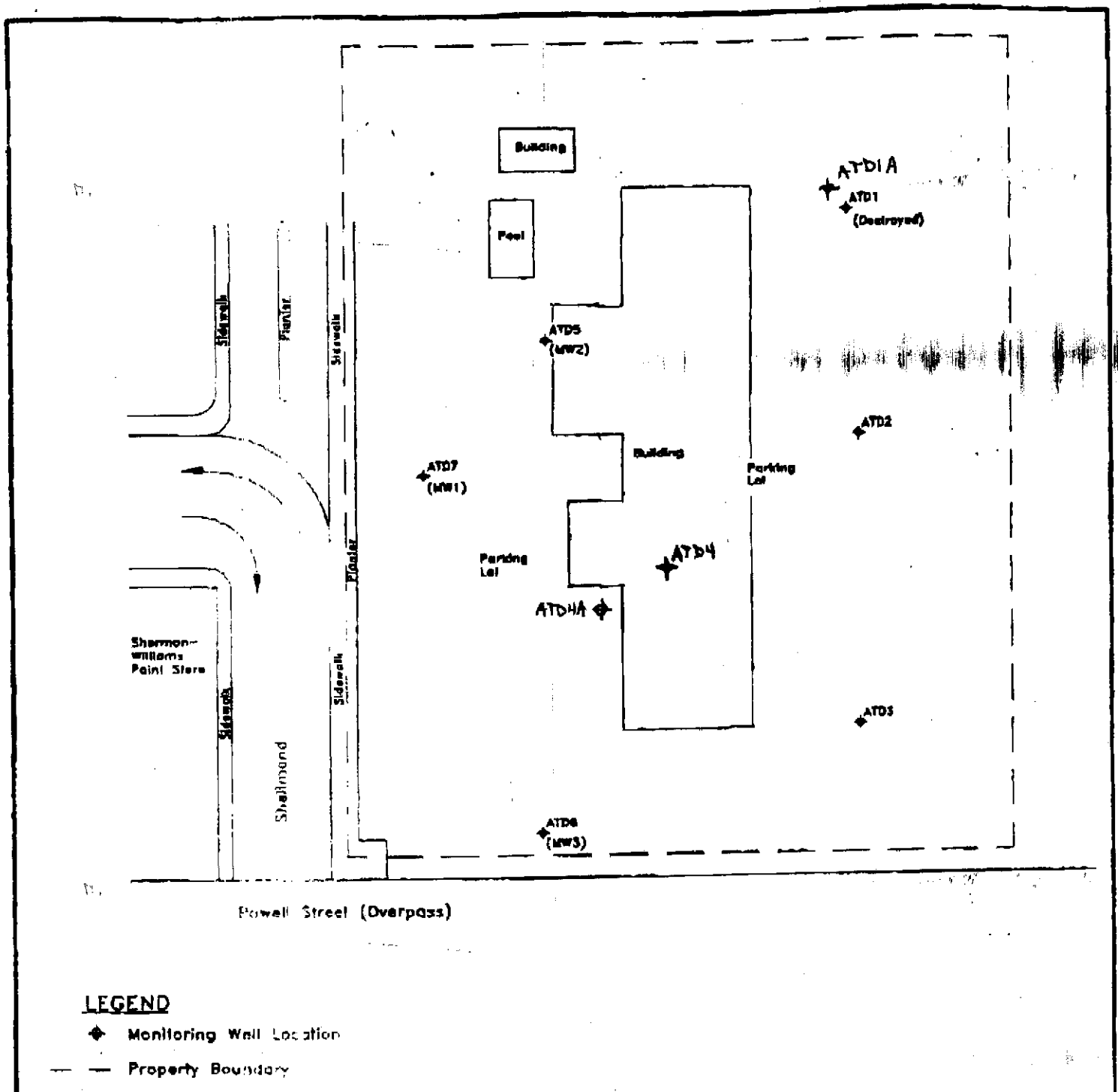


FIGURE 2
SITE PLAN
Hardage Suite Hotels, Inc.
Intersection of Shellmound and Powell Street (Northeast corner)
Emeryville, California

Base Map From:
GA Environmental Inc.
November, 1997
Mission Engineers, Inc.
August 5, 1991
Applied GeoSciences
February, 1992
(Ref 0640028)

RGA Environmental, Inc.
1260 45th Street
Emeryville, California 94608

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FILE COPY

RGA ENVIRONMENTAL INC

April 9, 1998
Work Plan 0164 W1

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

RE: CONTAMINATION MITIGATION WORK PLAN
Hardage Suite Hotels, Inc. Site
Intersection of Shellmound Street and Powell Street
Emeryville, California

Dear Ms. Hugo:

This work plan addresses the management and monitoring of contaminated soil and groundwater, which may be encountered during development of the subject property. The subject property is located at the northeast corner of the intersection of Shellmound Street and Powell Street in Emeryville. The development of the property consists of the construction of a multi-story hotel. Soil which has been identified during previous subsurface investigations as containing organic and inorganic contaminants may be encountered while excavating for the construction of structure footings and utility trenches.

This work plan includes the following elements.

- Health and safety plan.
- Soil contamination management plan.
- Groundwater contamination management plan.

A Site Location Map is attached as Figure 1, and a Site Plan is attached as Figure 2.

## BACKGROUND

A summary of investigations performed at the subject site is provided in RGA's "Environmental Site Assessment Update Report" dated December 11, 1997.

## HEALTH AND SAFETY PLAN

A health and safety plan will be prepared and implemented for all site workers who may be exposed to contaminated soil. The health and safety plan will address all known or suspected

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contaminants which may be encountered in soil or groundwater at the site. The plan will include the following information.

- The types of contaminants which may be encountered.
- The physiological effects and symptoms of exposure to the contaminants.
- The anticipated locations of the contaminants.
- Engineering and administrative procedures to minimize exposure to contaminants.
- Contaminant monitoring requirements.
- Personal protective equipment requirements.
- Equipment and personnel decontamination procedures.
- Procedures for implementation and administration of the plan.

SOIL CONTAMINATION MANAGEMENT PLAN

Soil will only be excavated for construction purposes, such as construction of structural footings or digging of utility trenches. Soil excavated during construction activities will be stockpiled on site on a sheet of visqueen and covered with visqueen to prevent runoff during rain events or to minimize dust generation. Exposed soil will be wetted during excavation activities to minimize dust generation.

Composite soil samples consisting of four discrete samples will be collected for each 100 cubic yards of stockpiled soil for characterization purposes. The samples will be collected in the following manner. Four evenly spaced locations will be selected for each 100 cubic yards of soil. The stockpile will be excavated to a depth of approximately one to two feet at each location, and a brass tube will be filled with soil at each location. After sample collection, the ends of the brass tubes will be sealed in aluminum foil, covered with plastic endcaps, labeled, and placed in ziplock baggies. The capped brass tubes were then placed into a cooler with ice pending delivery to a State-certified hazardous waste testing laboratory. Chain of custody procedures were followed for all sample handling.

The composite samples will be analyzed for the following constituents.

- Total Recoverable Petroleum Hydrocarbons (EPA Method 418.1)
- BTEX (EPA Method 8020)
- CAM 17 Metals, total concentrations (using EPA-approved methods).

Based on the sample results, the stockpiled soil will be evaluated for use as fill material at the site. In the event that hazardous waste concentrations are encountered, the soil which exhibited the hazardous waste concentrations will be removed from the site as hazardous waste to a hazardous waste disposal facility.

## GROUNDWATER CONTAMINATION MANAGEMENT PLAN

Groundwater removed during construction activities eg. for dewatering will be stored in holding tanks and analyzed prior to discharge to either the sanitary sewer or the storm drain. The samples will be analyzed for constituents and at frequencies required by the permitting agency for discharge.

A total of six existing groundwater monitoring wells, designated as ATD1 through ATD6, have been identified at the site. The wells were installed during previous subsurface investigations. Review of site conditions during a site visit in November, 1997 revealed a hole filled with concrete at the location of one of the wells identified as ATD1. During the site visit, two of the wells (ATD2 and ATD3) were not located because of the presence of soil which had been spread on the central and eastern portion of the site.

Comparison of the planned area of construction for development of the site with the location of the existing wells shows that well ATD5 is located within the footprint of the planned building. Prior to the beginning of construction at the site, well ATD5 will be permitted and destroyed by a properly licensed contractor. Well ATD5 will be replaced with a well of similar construction designated as ATD5A at a location approximately 10 to 15 feet to the west of the present ATD5 location.

Soil covering the ATD2 and ATD3 well locations will be removed to locate the wells. In the event that the wells are not located, replacement wells designated as ATD2A and ATD3A of similar construction will be installed at the ATD2 and ATD3 locations.

The groundwater monitoring network for the site (six wells) will be monitored and sampled for four quarters. Quarterly monitoring and sampling procedures will be as follows. Prior to sampling, the monitoring wells will be purged of a minimum of three casing volumes of water, or until the wells have been purged dry. During purging operations, the field parameters of electrical conductivity, temperature and pH will be monitored. Once the field parameters are observed to stabilize, and a minimum of three casing volumes have been purged or the wells have been purged dry and partially recovered, water samples will be collected using a clean Teflon bailer.

The water samples will be transferred to 40-milliliter glass Volatile Organic Analysis (VOA) vials and 1-liter amber glass bottles which will be sealed with Teflon-lined screw caps. The VOA vials will be overturned and tapped to assure that no air bubbles are present.

The VOA vials and bottles will then be transferred to a cooler with ice, until they are transported to a State-certified hazardous waste testing laboratory. Chain of custody documentation will accompany the samples to the laboratory.

The groundwater samples will be analyzed for TPH-Diesel and Benzene, Toluene, Ethylbenzene and Xylenes (BTEX). Monitoring and sampling reports will be prepared and submitted to the Alameda County Department of Environmental Health on a quarterly basis. After four quarters, the sample results will be evaluated to determine if contaminant concentrations have changed. If there is no evidence of increasing contaminant concentrations, case closure will be requested.

Should you have any questions or comments, please do not hesitate to contact us at (510) 547-7771.

Sincerely,

RGA Environmental, Inc.

Karin Schroeter

Karin Schroeter
Project Manager

Paul H. King

Paul H. King
California Registered Geologist
Registration No.: 5901
Expiration Date: 12/31/99

REGISTERED GEOLOGIST
PAUL H. KING
No. 5901
STATE OF CALIFORNIA

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Attachments: Figures 1 and 2

cc: Ms. Judith S. Fabion, Hardage Suite Hotels, Inc.


FIGURE 1
SITE LOCATION MAP
Hardage Suite Hotels, Inc.
Intersection of Shellmound and Powell Street (Northeast corner)
Emeryville, California

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

RGA Environmental, Inc.
1260 45th Street
Emeryville, California 94608

SCALE IN FEET

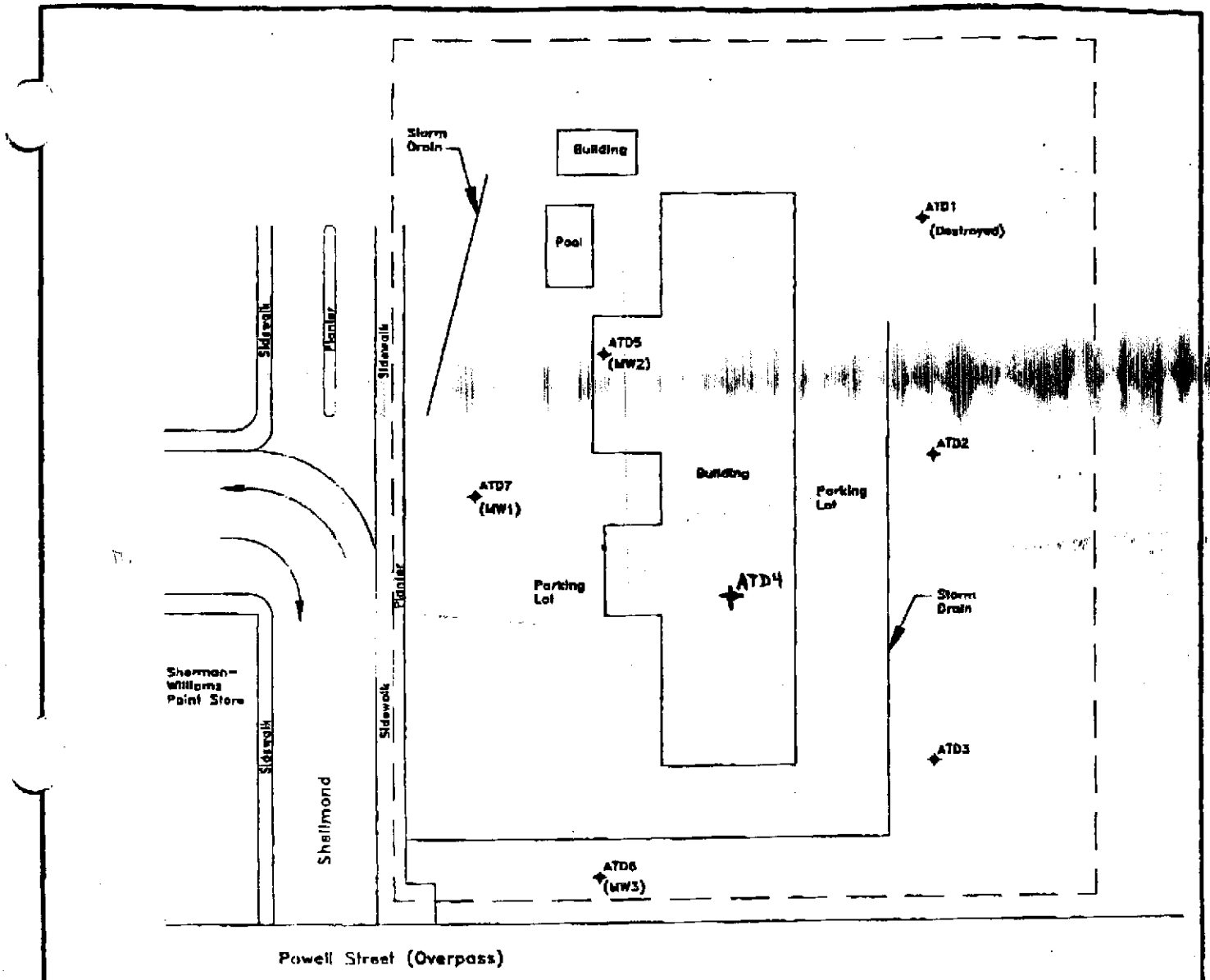


FIGURE 2
SITE PLAN
Hardage Suite Hotels, Inc.
Intersection of Shellmound and Powell Street (Northeast corner)
Emeryville, California

Base Map From:
GA Environmental Inc.
November, 1987
Mission Engineers, Inc.
August 8, 1991
Applied GeoSciences
February, 1992
(BJ10640065)

RGA Environmental, Inc.
1260 45th Street
Emeryville, California 94608

RGA

June 23, 1998
Work Plan 0164.W2

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

RE: CONTAMINATION MITIGATION WORK PLAN ADDENDUM
Woodlin Suite Hotels, Inc. Site
Intersection of Shellmound Street and Powell Street
Emeryville, California

Dear Ms. Hugo:

This work plan addendum modifies RGA Environmental, Inc's (RGA) Contamination Mitigation Work Plan 0164.W1 dated March 24, 1998 for the subject site. The amendments provided in this work plan are prepared in accordance with the following:

- A telephone conversation with Ms. Barbara Cook of the California Department of Toxic Substance Control (DTSC).
- Telephone conversations with Mr. Derek Lee of the San Francisco Bay Regional Water Quality Control Board (RWQCB).
- A meeting between Paul King of RGA, Chuck Hibert of Woodlin Site Hotels, Inc., (WSHI), formerly Hardage Suite Hotels, Inc., and Susan Hugo of the Alameda County Department of Environmental Health (ACDEH) at the ACDEH offices on June 11, 1998.

Based upon discussions with the DTSC, the only concern of the DTSC at this time is that a Health and Safety Plan (HASP) be approved by the DTSC prior to the beginning of field activities. A HASP will be submitted to the DTSC and ACDEH for review and approval prior to the beginning of field activities.

Based upon discussions with the RWQCB, the only concern of the RWQCB is that any potential contaminants in the fill material at the site not be carried into deeper strata during the driving of piles for the proposed construction. Based upon a telephone conversation with Mr. Derek Lee at the RWQCB, Mr. Lee has received a work plan discussing the pile driving

methodology and the work plan appears to address his concerns. The work plan proposes to drill a pile pilot hole to a depth of approximately ten feet prior to driving the piles.

Based upon our meeting at the ACDEH offices, the Contamination Mitigation Work Plan for the site will be amended as follows:

- Review of boring logs and well construction details by Applied Geosciences, Inc. from Appendix C.2 of the Phase II Subsurface Investigation Report dated February 12, 1992 shows two boring logs, designated as ATD1 and ATD1A, and one well construction diagram designated as ATD1. The boreholes for ATD1 and ATD1A are 10.5 and [illegible]5 feet, respectively. The ATD1 boring log stratigraphy consists of clayey gravel and fill debris to a depth of 7.5 feet, which is underlain by silty clay to the total depth explored of 7.5 feet. The ATD1A boring log stratigraphy consists of silty clay to the total depth explored of 19.5 feet.

  The well construction diagram shows a borehole with a total depth of 19.0 feet, a five foot screened interval (between the depths of 13.5 and 18.5 feet), and a six foot sand pack. During a site inspection, a concrete-filled depression was observed at the location where ATD1 is identified on the Applied Geosciences, Inc. report map.

- Prior to the beginning of construction at the site, soil presently covering the asphalt-covered ground surface in the vicinity of well ATD4 will be removed to locate this well. In the event that the well is not located, a magnetometer will be used to locate the well lid. If the well is located, it will be destroyed at the time that well ATD5 is destroyed. If the well is not located, notification will be provided to the ACDEH. All well destruction will be performed in accordance with all appropriate permit requirements.

- Replacement wells for wells ATD1, ATD4 and ATD5 will be installed at locations outside the footprint of the proposed building at the site.

- In the event that any USTs are encountered during site development, the USTs will be closed in accordance with ACDEH permitting requirements, including appropriate permit fees.

- Composite soil sample analysis will be amended from Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1 to TPH Multi-Range.

- If excavated soil is to be considered for re-use at the site, it will be sampled at a frequency of one discrete sample for each 20 cubic yards of soil, and EPA Method

8270 analysis will be performed in addition to the analytes specified in the March 24, 1998 work plan. However, if the soil is to be hauled from the site, EPA Method 8270 analysis will not be performed unless required by the disposal facility.

- In addition to the analytes identified in the March 24, 1998 work plan for the quarterly groundwater monitoring and sampling program, samples collected from the onsite groundwater monitoring wells will be analyzed for the 8 RCRA metals arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver.

- A Storm Water Pollution Prevention Plan (SWPP) is required and has been prepared for construction activities at the site. However, a Notice of Intent to the State for the SWPP is not required because the construction site is not larger than five acres in size.

Should you have any questions or comments, please do not hesitate to contact us at (510) 547-7771.

Sincerely,

RGA Environmental, Inc.

Karin Schroeter
Project Manager

Paul H. King

Paul H. King
California Registered Geologist
Registration No.: 5901
Expiration Date: 12/31/99


cc: Mr. Chuck Hibert, Hardage Suite Hotels, Inc.

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