RGA
ENVIRONMENTAL INC

July 12, 1999
Work Plan 0216.W1

Mr. Amir Gholami
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RESPONSE
7/29/99

RE: SUBSURFACE INVESTIGATION WORK PLAN
STID 3410
Quan's Automotive Service
10100 East 14th Street
Oakland, CA 94603

Dear Mr. Gholami:

RGA Environmental, Inc. (RGA) is pleased to present this work plan for subsurface investigation to evaluate soil and groundwater contamination at the subject site. This investigation was requested in your letter dated May 4, 1999 to Ms. Marla Gensler of Exxon Company USA and Mr. Tony and Mrs. Fee Ling Chan. RGA has been retained by Mr. and Mrs. Chan to prepare this work plan. The submittal date of this work plan was extended by you during a telephone conversation with RGA.

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. An appropriately registered professional will oversee all subsurface exploration for environmental sample collection.

BACKGROUND

It is RGA's understanding that the site is a former gasoline station with a building consisting of a double bay garage, office, and restrooms. Exxon Company, U.S.A. reportedly occupied the site at one time, and left the site in the mid-1970s. In 1974, three Underground Storage Tanks (USTs) were removed from the site – two 8,000 gallon capacity USTs and one 500 gallon capacity waste oil UST. RGA is not aware of any samples collected at the time of tank removal.

On October 15, 1993, the oil-water separator was reported to have been emptied, steam cleaned, and closed. Because a seam was observed in the side of the oil-water separator, two soil samples were collected from approximately one foot below grade and

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ENVIRONMENTAL PROTECTION

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approximately two feet away from the oil-water separator. Details of the sump closure activities are presented in a report written by Geomatrix Consultants, Inc. (Geomatrix), of San Francisco for their Project #2462, dated March 25, 1994. A site plan, titled "Site Plan & Boring Locations," is attached with this report as Figure 1. Review of the sample analytical results from this report indicate that Total Petroleum Hydrocarbons as Diesel (TPH-D), Total Petroleum Hydrocarbons as Gasoline (TPH-G), volatile organic and semi-volatile organic compounds, and some metals were detected.

A letter to Mrs. Medhulla Logan of the Alameda County Department of Environmental Health (ACDEH) was found in RGA's file review at ACDEH. This letter, dated October 24, 1994, from Mr. George G. Benetatos, documents that between the time of the report which documents the cleaning and closure of the oil-water separator (March 25, 1994) and the letter's date, one of the service bays at the subject site was excavated, presumably to remove contaminants detected in the soil samples collected from the vicinity of the oil water separator. The excavation is noted in the letter to be approximately six feet wide and seventeen feet deep. The length of the excavation was not specified. A sample taken from the excavated soil on August 23, 1994 is reported to have had a Total Petroleum Hydrocarbons as Motor Oil (TPH-MO) concentration of 6,200 ppm. No documentation was found for the sample chain of custody, laboratory report, or soil disposal.

SCOPE OF WORK

The following activities will be performed to investigate subsurface conditions at the subject site:

- Regulatory agency coordination, permitting, and preparation of a health and safety plan.
- Drilling of four soil borings around the former oil-water separator and collection of soil and groundwater samples from the soil borings.
- Soil and groundwater sample analysis.
- Report preparation.

Each of these is discussed below in more detail.

Regulatory Agency Coordination

Prior to field activities, all necessary permits will be obtained from the Alameda County Department of Public Works (ACDPW), and any other responsible regulatory agencies.

Scheduled dates of field activities will be provided to the ACDEH. Additionally, prior to the beginning of field activities, a health and safety plan (HASP) will be prepared.

Soil Boring

A total of four soil borings designated as B3 through B6 will be drilled at locations shown in Figure 1. Soil samples will be collected for laboratory analysis at three depths in each borehole, as follows:

- From a depth equivalent to the bottom of the oil-water separator, which is approximately 5 feet below grade
- From directly above the water table.
- At a depth midway between the bottom of the oil-water separator and the water table.

In addition, one groundwater grab sample will be collected from each borehole for laboratory analysis.

The boreholes will be drilled using a 1.5-inch outside diameter Geo-Probe. The Geo-Probe sampler will be washed with an Alconox solution followed by a clean water rinse prior to use in each borehole. The boreholes will be advanced to a depth of approximately three feet below first encountered groundwater. Based on review of Geomatrix's March 25, 1994 report, it is RGA's understanding that groundwater will be encountered at a depth of 20 to 30 feet below grade. 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 Geo-Probe soil sampler lined with brass tubes. The soil samples will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System.

Groundwater samples will be collected from the top of the groundwater in each borehole using the Geo-Probe's screen point groundwater sampler. The sampler will be washed with an Alconox solution and clean water rinse prior to use in each borehole. The groundwater samples will be transferred from the sampler to 40-milliliter Volatile Organic Analysis (VOA) vials and capped with Teflon-lined screw caps. The VOAs will be overturned and tapped to assure that no air bubbles are present. The VOAs will then be labeled and stored in a cooler with ice pending delivery to a state-accredited laboratory. Chain of custody procedures will be observed for all sample handling.

Following completion of the soil borings, the borings will be filled with neat cement grout to the ground surface. Soil generated during drilling activities will be stockpiled on site

and covered with visqueen pending appropriate disposal. Water generated during drilling activities will be stored on site in 55 gallon drums pending appropriate disposal.

Soil and Groundwater Sample Analysis

Three soil and one groundwater samples will be analyzed from each boring, for a total of twelve soil and four water samples. Each of the sixteen samples will be analyzed for the following: TPH-D using EPA Method 5030 in conjunction with Modified EPA Method 8015; EPA Method 8020 compounds (including purgable aromatics and halocarbons, including benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE)); EPA Method 8270 compounds (polynuclear aromatics, or PNAs); and the LUFT 5 Metals (cadmium, chromium, lead, nickel and zinc) by EPA Approved Methods. Analysis will be done at a state-certified hazardous materials testing lab.

Report Preparation

Following receipt of the laboratory analytical results, RGA will prepare a report documenting soil boring and sample collection activities. The report will contain copies of the laboratory analytical reports and chain of custody documentation. The laboratory results will be summarized in a tabulated format. The report will contain boring logs, a site plan showing the soil boring locations, a description of the local geology and hydrogeology, a discussion of the sample results, recommendations based on the sample results, and the stamp of a Certified Engineering Geologist or Registered Geologist.

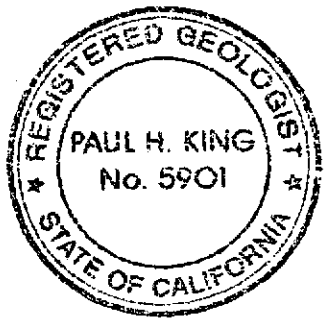
Should you have any questions or comments, please do not hesitate to contact us at (510) 547-7771.

Very Truly Yours,

RGA Environmental, Inc.

JoAnn Copperud (GMB FOR)
JoAnn Copperud
President

Paul H. King
Paul H. King
California Registered Geologist #5901
Expiration Date: 12/31/99



Attachment: Site Plan & Boring Locations (Geomatrix Report, Figure 1)

CC: Mr. Tony and Mrs. Fee Ling Chan

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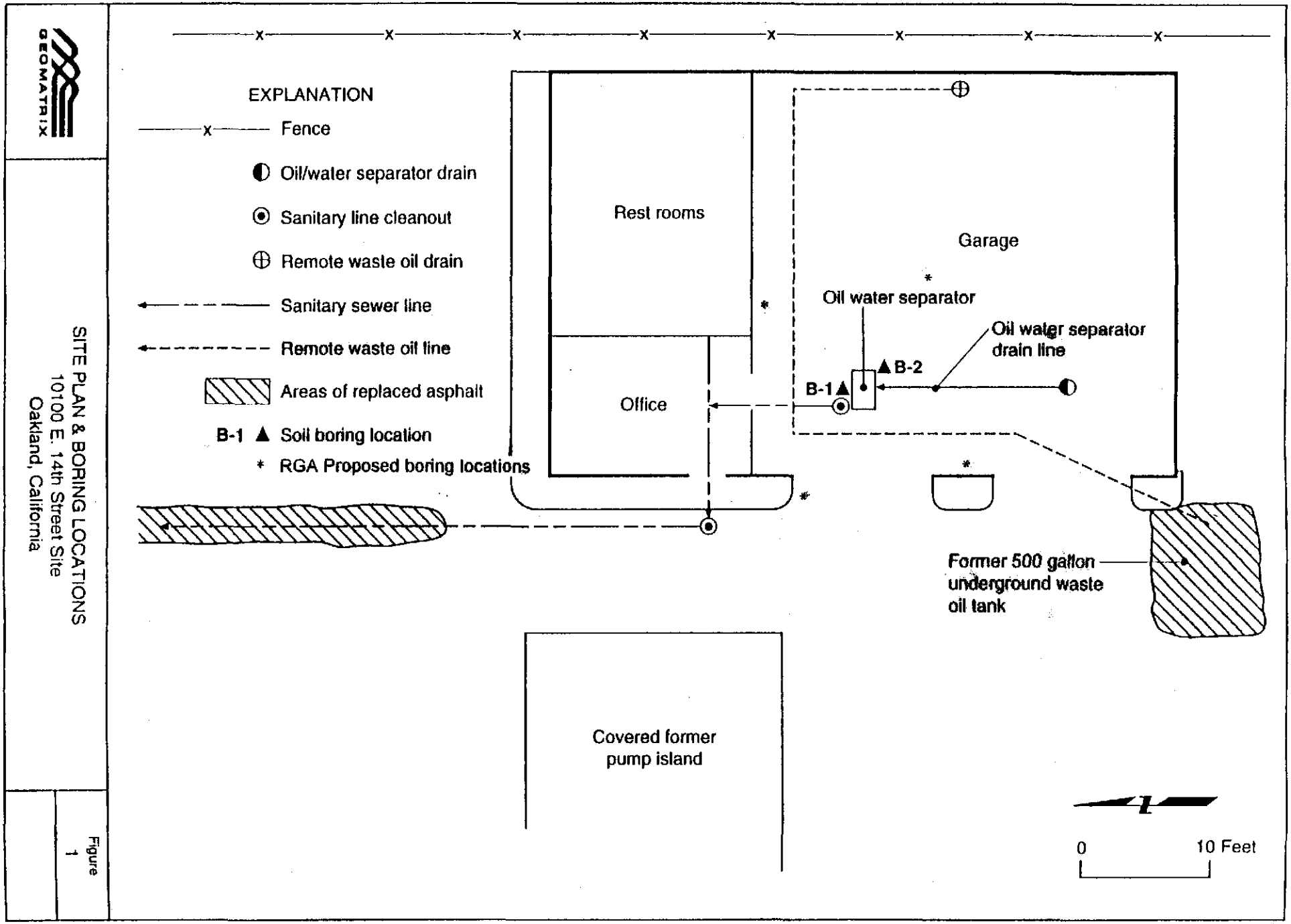
GEOMATRIX
SITE PLAN & BORING LOCATIONS
10100 E. 14th Street Site
Oakland, California
EXPLANATION
Fence
Oil/water separator drain
Sanitary line cleanout
Remote waste oil drain
Sanitary sewer line
Remote waste oil line
Areas of replaced asphalt
B-1 Soil boring location
RGA Proposed boring locations
Rest rooms
Office
Garage
Oil water separator
Oil water separator drain line
B-1
B-2
Former 500 gallon underground waste oil tank
Covered former pump island
0
10 Feet
Figure 1