

March 18, 2003
Work Plan 0278.W1

Ms. Eva Chu
Alameda County Environmental Health Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Alameda County
MAR 24 2003
Environmental Health



SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN
Pacific Rolling Door
15900 Worthley Drive
San Lorenzo, CA

Dear Ms. Chu:

RGA Environmental, Inc. (RGA) is pleased to present this work plan for the drilling of 5 soil borings to characterize subsurface soil conditions beneath the 1984 addition to the building at the subject site. A Site Plan showing previous drilling locations (TB1 through TB5, and B6 through B14) is attached as Figure 1, and a Site Plan showing the proposed drilling locations for investigation beneath the 1984 building addition, designated B15 through B18, is attached as Figure 2.

All work will be performed under the direct supervision of a California registered geologist. 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

The site consists of a large warehouse in an industrial area of San Lorenzo, California. The site is bordered to the northeast by railroad tracks, to the southeast and northwest by industrial facilities, and to the southwest by Worthley Drive. Based on conversations with Mr. Jerry Duncan of Pacific Rolling Door (PRD), the subject site was farmland until approximately 1961. PRD occupied the site in approximately 1961 and constructed a warehouse for metal rolling door manufacturing. Spray-painting operations have been performed for a number of years on an outdoor paint rack and in an open shed located in the storage yard between the back of the building and the railroad tracks (see Figure 2, Site Plan). The spray painting operations have included lead-based paint and zinc primer.

In the 1980's, the back of the existing building was extended 100 feet towards the railroad tracks. It is our understanding that at that time, the paint racks and open shed were relocated from the back of the original building footprint approximately 100 feet towards the railroad tracks to their present location. The ground surface cover at the site consists of concrete on the southeast side of the building from the front to the back of the building. From the back of the building to the

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railroad tracks, the ground surface is covered with a gray clayey gravel cover measuring approximately 11 to 18 inches in thickness. Mr. Duncan stated that the area behind the building was initially bare earth, and that the gravel was periodically added over time to increase the gravel layer thickness. A chain link fence is present on the sides and the back of the property at the property line.

In 1995, a total of five soil samples designated as TB1 through TB5 were collected by RGA at a depth of 0.5 to 1.0 feet below the ground surface. The samples were analyzed for Volatile Organic Compounds (VOCs) using EPA Method 8010 and for CAM 17 metals. The sample results showed that VOCs were not detected and that lead was detected in all of the boreholes and zinc was detected in one of the boreholes at concentrations exceeding ten times their respective Soluble Threshold Limit Concentration (STLC) values. No Waste Extraction Tests (WETs) were performed. Based on the sample results, RGA recommended additional analysis for lead, mercury and zinc. The sample collection locations are shown on Figure 1. Documentation of the investigation and sample results is presented in RGA's Preliminary Subsurface Investigation report dated May 1, 1995.

In 2002, PRD requested that RGA return to the site to further investigate the extent of metals in soil at the site. On July 18, 2002 a total of nine soil borings, designated as borings B6 through B14, were hand augered to further investigate concentrations of lead, zinc, and mercury at the site. The July 18, 2002 investigation of these metals in the vicinity of the paint rack identified only lead at concentrations of concern. The elevated concentrations of lead appear to be limited to the clayey gravel layer which covers the ground surface behind the facility building, and which measures between 11 and 18 inches in thickness. Analysis of soil samples collected beneath the clayey gravel at a depth of 2.0 feet showed that the elevated lead concentrations appear to be limited to the clayey gravel. WET analysis on samples collected in the clayey gravel where the TTLC value exceeded ten times the lead STLC value showed that 3 of the 6 samples had concentrations which would cause the clayey gravel to be considered hazardous waste if removed from the site for disposal. The sample collection locations are shown on Figure 1. Documentation of the investigation and sample results is presented in RGA's Subsurface Investigation Report 0278.R1 dated August 19, 2002.

Based on discussion with Ms. Eva Chu at the Alameda County Department of Environmental Health, the presence of lead and zinc will need to be investigated in the vicinity of the former paint racks, now located beneath the 1984 building addition. Ms. Chu requested that a work plan be submitted describing the methods for investigation of the lead and zinc.

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Scope of Work

In order to determine the extent of lead and zinc contamination in the soil beneath the 1984 building addition at the subject site, RGA will perform the following tasks:

- Regulatory agency coordination.
- Health and safety plan preparation.
- Underground utility survey.
- Client and contractor (driller and laboratory) coordination.
- Concrete coring oversight.
- Soil boring oversight.
- Collection of two soil samples from each borehole.
- Arrange for sample analysis for lead and zinc for the samples collected at a depth of six inches.
- Report preparation documenting collection of soil samples and the laboratory analytical results.

Each of these is discussed below in detail.

Regulatory Agency Coordination

Following approval of the work plan, notification will be provided to the ACDEH prior to drilling.

Client and Contractor Coordination

Following approval of this work plan, field activities will be scheduled with the client, drillers, and the laboratory.

Health and Safety Plan Preparation

A health and safety plan will be prepared for the scope of work identified in this work plan.

Underground Utility Survey

Prior to the beginning of concrete coring, an underground utility survey will be performed in an effort to identify underground utilities in the vicinity of the proposed drilling locations.

Concrete Coring Oversight

The concrete floor at the five proposed drilling locations will be concrete cored.

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Soil Boring Oversight and Sample Collection

A total of five soil borings will be drilled to a depth of approximately two feet inside the existing building warehouse area. The concrete floor will be cored at each location to allow hand augering. A total of two soil samples will be collected from each of the five locations. The samples will be collected at the depths from 6 to 12 inches and from 24 to 30 inches at each location. Excavated soil will be evaluated with a Photoionization Detector (PID) for the presence of Volatile Organic Compounds (VOCs).

All drilling and sampling equipment will be cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole. Following completion of sample collection activities, the boreholes will be filled with neat cement grout. Any soil or water generated during drilling will be stored on plastic at the site pending characterization and disposal. Soil stored on plastic will be covered to prevent runoff during precipitation events.

Arrange for Sample Analysis

The samples will be sent to a State-accredited hazardous waste testing laboratory for analysis on a normal (five working day) turn around basis. The samples collected at the depth of 6 to 12 inches will be analyzed for Total Limit Threshold Concentration (TTLC) values of the metals lead and zinc. In the event that concentrations of metals are detected that exceed ten times their respective Soluble Threshold Limit Concentrations (STLC) values, additional Waste Extraction Test (WET) analysis will be performed for the metals with elevated concentrations for those samples. In addition, the samples collected at a depth of 24 to 30 inches from the boreholes where WET analysis is performed will also be analyzed for TTLC values of the metals that were detected at concentrations of concern in the sample collected at the 6 to 12 inch depth.

Report Preparation

A report will be prepared documenting sample collection and the sample results. The report will include a map showing the area of sampling, a description of field procedures, and a discussion of the sample results, and recommendations. The report will bear the stamp of an appropriately registered professional.

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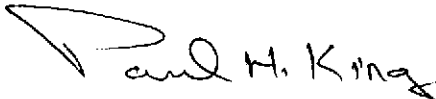
Should you have any questions, please do not hesitate to contact us at (510) 547-7771.

Very Truly Yours,

RGA Environmental, Inc.

 for

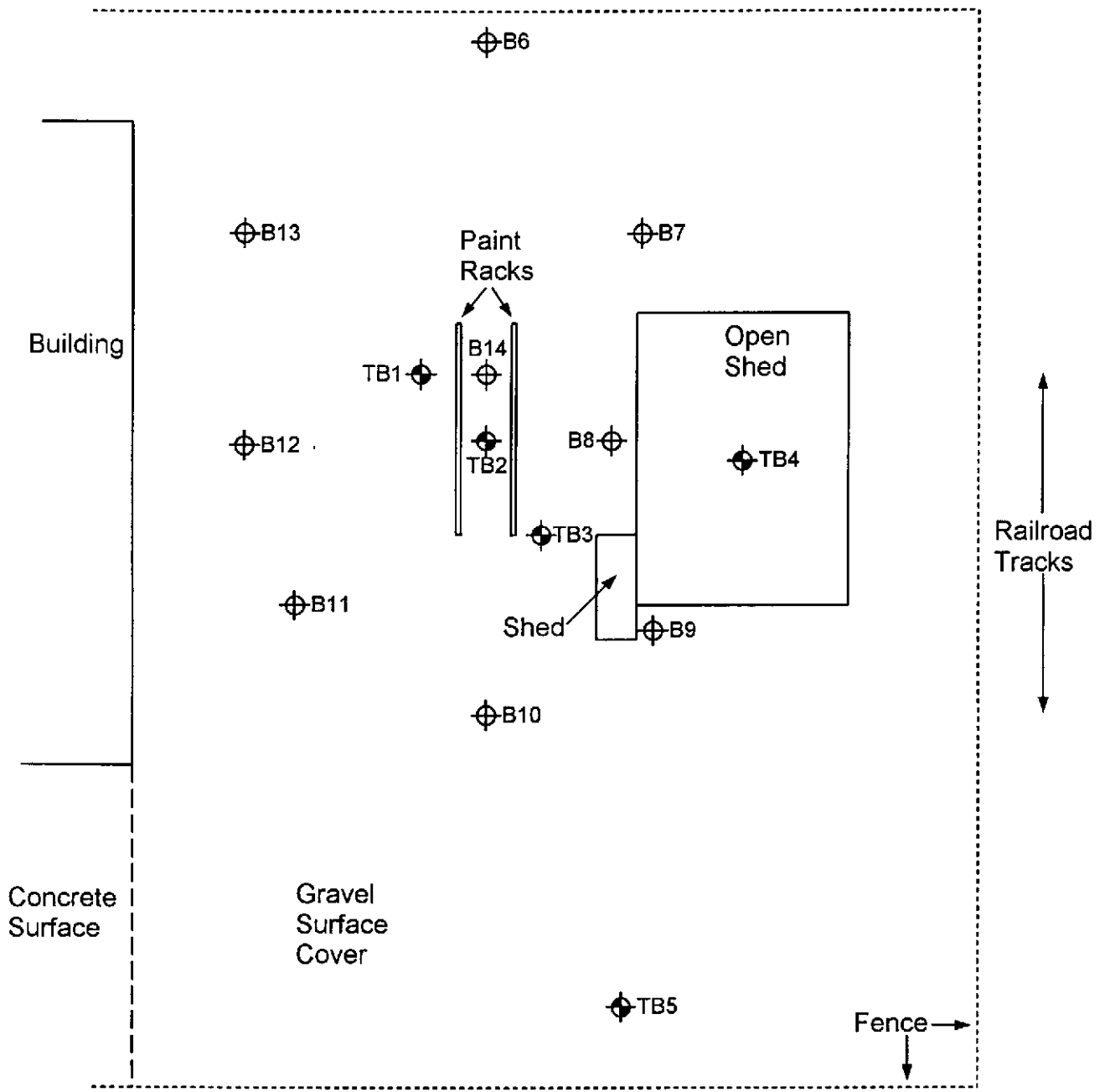
Karin Schroeter
Project Manager



Paul H. King
California Registered Geologist #5901
Expires 12/31/03

Attachment: Figure 1, Site Plan showing previous drilling locations
Figure 2, Site Plan showing the proposed drilling locations

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LEGEND

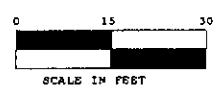
- ⊕ Soil Boring Location (2002 Investigation)
- ⊕ Soil Boring Location (1995 Investigation)

FIGURE 1
SITE PLAN - PREVIOUS INVESTIGATIONS
 Pacific Rolling Door
 15900 Worthley Drive
 San Lorenzo, California



Base Map From:
 RGA Environmental
 July, 2002

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



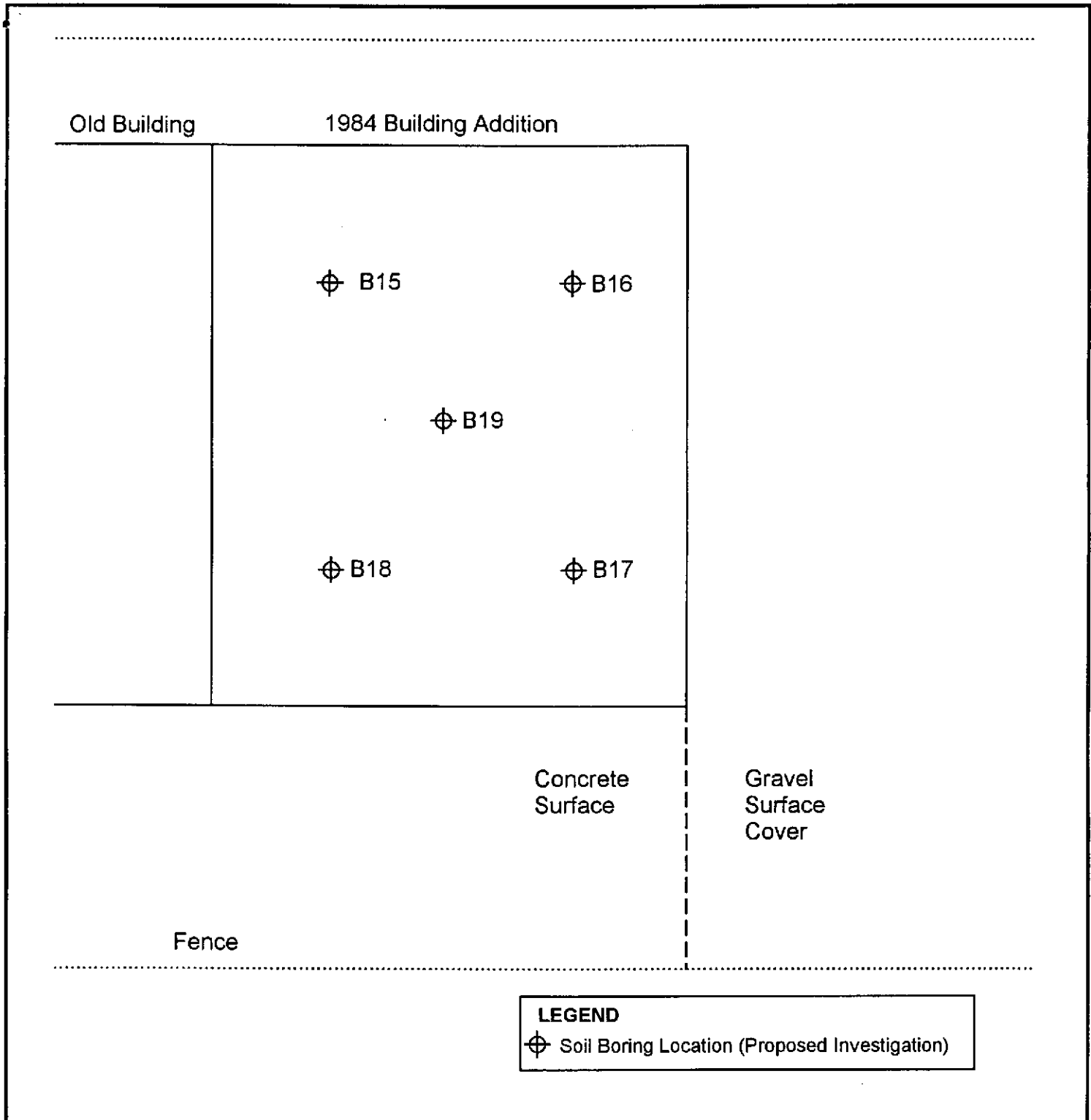


FIGURE 2
SITE PLAN - PROPOSED INVESTIGATION
 Pacific Rolling Door
 15900 Worthley Drive
 San Lorenzo, California



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