Ro-251

Alameda County

JUL 02 2003

Environmental Health

June 26, 2003
Work Plan 0278.W2
RGA Job # PRD9045

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

SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN (B40 through B53)
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 13 soil borings for additional subsurface investigation of lead and Volatile Organic Chemicals (VOCs) in soil and groundwater at the subject site. This work plan is prepared in response to conversations with Ms. Eva Chu at the Alameda County Department of Environmental Health (ACDEH) following her review of RGA's Subsurface Investigation Report (0278.R2) dated May 16, 2003 for the subject site. A Site Plan Detail showing previous drilling locations is attached as Figure 1. A Site Plan Detail showing the proposed drilling locations, designated as B40 through B52, 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 1). 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 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.

Following the 2002 investigation, the presence of lead, zinc, and VOCs was investigated in the vicinity of the former paint racks, now located beneath the 1984 building addition. This work was performed in accordance with RGA's Subsurface Investigation Work Plan dated March 18, 2003, and Work Plan Addendum dated March 31, 2003 for boreholes B15 through B23. Written approval of the work plan and work plan addendum was provided by Ms. Eva Chu of the Alameda County Department of Environmental Health (ACDEH) in a letter dated April 3, 2003.

In the approval letter, it was suggested that additional soil samples be collected outside the building to further define the extent of lead in soil. In response to this suggestion, a map showing boring locations B24 through B39 outside the building was provided to Ms. Chu for review. On April 4, 2003 Ms. Chu approved the outside proposed borehole locations contingent upon moving borehole B31 closer to the building.

The subsequent investigation on April 8, 2003 of lead in the vicinity of the paint rack behind the site building, as well as lead, zinc, and VOCs underneath the 1984 building addition, identified the lead and VOCs at concentrations of concern at one location inside the building (borehole B23), and lead outside the building in the surface gravel layer at various locations. Documentation of the sample results is presented in RGA's Subsurface Investigation Report dated May 16, 2003.

Following review of the report, Ms. Chu verbally requested that a work plan be submitted to implement the recommendations in the report. Ms. Chu requested that the work plan address the presence of VOCs in groundwater and the extent of VOCs in soil in the vicinity of a roll-up door located at the back of the facility; the presence of lead in groundwater beneath the highest concentration of lead detected in soil, and the horizontal extent of lead in areas not investigated behind the building.

SCOPE OF WORK

In order to further define the extent of the areas at the subject site impacted by lead and VOCs, RGA will perform the following tasks:

- Project coordination.
- Health and safety plan preparation.
- Underground utility location.
- Soil boring oversight.
- Collection of soil samples and groundwater samples.
- Arrange for sample analysis.
- Prepare a report documenting collection of soil samples and the laboratory analytical results.

Each of these is discussed below in detail.

Project Coordination

Following approval of this work plan, field activities will be scheduled with the client, drillers, and the laboratory, and notification will be provided to the ACDEH of the scheduled field dates.

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 Location

At least 48 hours prior to the beginning of fieldwork, Underground Service Alert will be contacted in an effort to identify underground utilities in the vicinity of the proposed drilling locations.

Soil Boring Oversight and Sample Collection

Boreholes B40, B41, and B42 will be drilled for groundwater investigation purposes. Boreholes B40, B41, and B42 will be drilled to a depth of approximately ten feet, or two feet below first encountered groundwater. One groundwater sample will be collected from each of these three boreholes. In addition, two soil samples will be collected from borehole B41. The soil samples will be collected from borehole B41 at the depths from 6 to 12 inches and from 36 to 42 inches. Excavated soil will be evaluated with a Photoionization Detector (PID) for the presence of VOCs.

Borehole B40 will be drilled inside the building where VOCs were previously encountered to investigate the presence and extent of VOCs in soil and groundwater beneath the building. Borehole B41 will be drilled outside of a roll-up door located at the back of the building to investigate VOCs in soil and water that may have originated from historic solvent disposal at this location. Borehole B42 will be drilled outside at the location where the highest lead concentration has been encountered to evaluate the presence of lead in groundwater.

Ten (10) additional locations, boreholes B43 through B52, will be hand augered to a total depth of 6 inches to define the extent of lead impacted near-surface soil in the yard behind the site building. Samples will be taken at each of the 10 locations between the depths of 6 and 12 inches. The boreholes will be extended below the one foot depth at locations B44, B47, B50 and B52 to evaluate the gravel cover layer thickness. No samples will be collected for laboratory analysis from below the 6 inch to 12 inch sample in boreholes B43 through B52. The proposed locations for boreholes B40 through B52 are shown in the attached Figure 2 - Site Plan Detail.

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 and water generated during drilling will be stored in drums onsite pending characterization and disposal.

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Arrange for Sample Analysis

All samples will be sent to a State-accredited hazardous waste testing laboratory for analysis on a normal (five working day) turn around basis. The water samples from boreholes B40 and B41, as well as the two soil samples from borehole B41 will be analyzed for VOCs by EPA Method 8260. The water samples from boreholes B40 and B42 will be analyzed for total lead. In addition, the soil sample from borehole B41 at a depth of 36 inches and the soil samples from boreholes B43 through B52 at a depth of 6-inches will be analyzed for Total Limit Threshold Concentration (TTLC) values of lead. In the event that concentrations of lead are detected that exceed ten times the Soluble Threshold Limit Concentrations (STLC) value for lead, additional Waste Extraction Test (WET) analysis will be performed for those samples with elevated concentrations of lead.

Report Preparation

A report will be prepared documenting sample collection and the sample results. The report will include a map showing the sample collection locations, a description of field procedures, a discussion of the sample results, and recommendations. The report will bear the 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.

Wilhelm Wickenbeck
for
Karin Schroeter
Project Manager

Paul H. King

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

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

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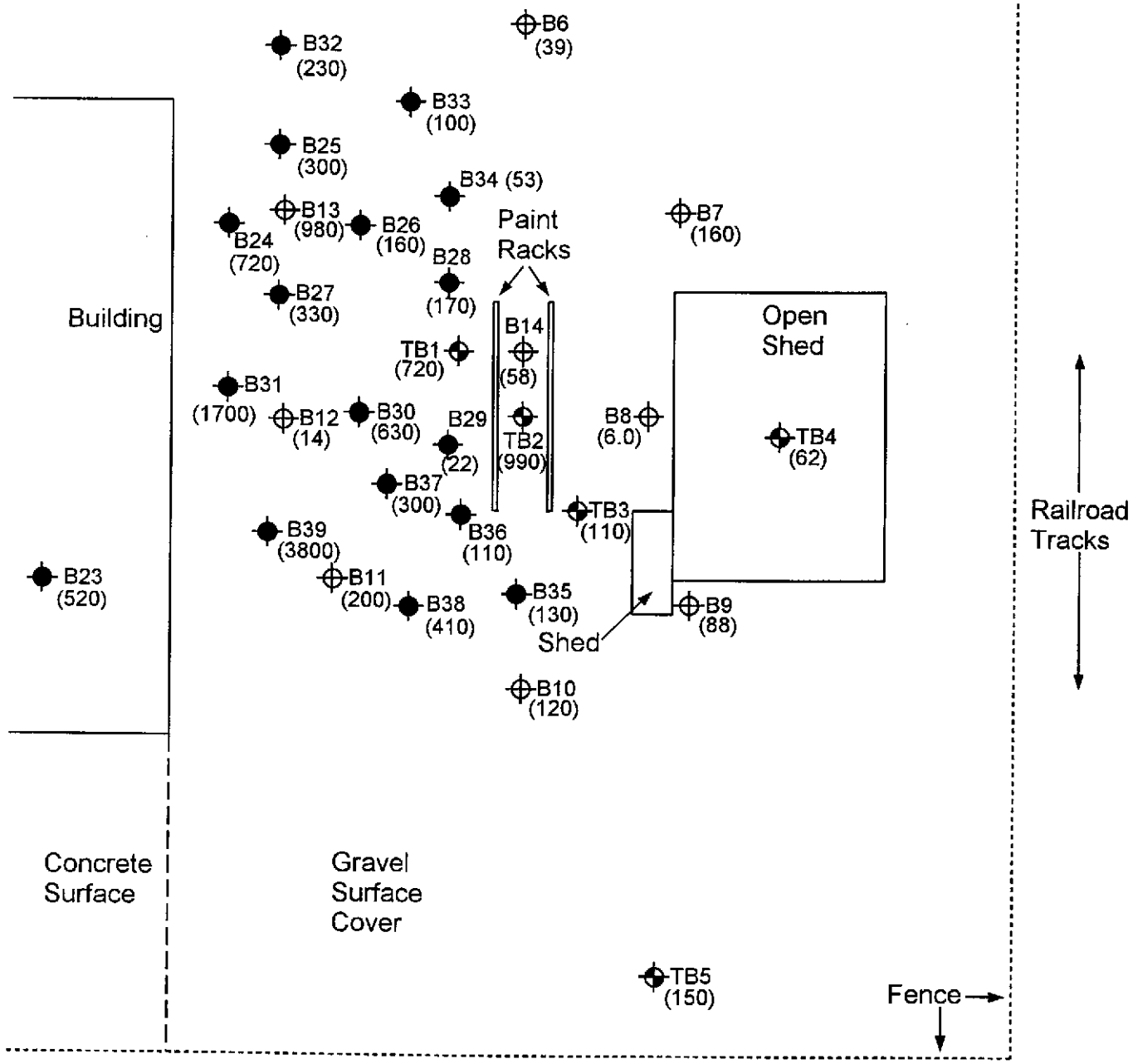
0278.W2



LEGEND

- Soil Boring Location (1995 Investigation)
- Soil Boring Location (2002 Investigation)
- Soil Boring Location (April 2003 Investigation)
- (999) TTLC Lead Concentration, ppm

FIGURE 1
SITE PLAN DETAIL - PREVIOUS BORING LOCATIONS, TTLC Lead
Pacific Rolling Door
15900 Worthley Drive
San Lorenzo, California

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Base Map From:
RGA Environmental
July, 2002

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

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SCALE IN FEET

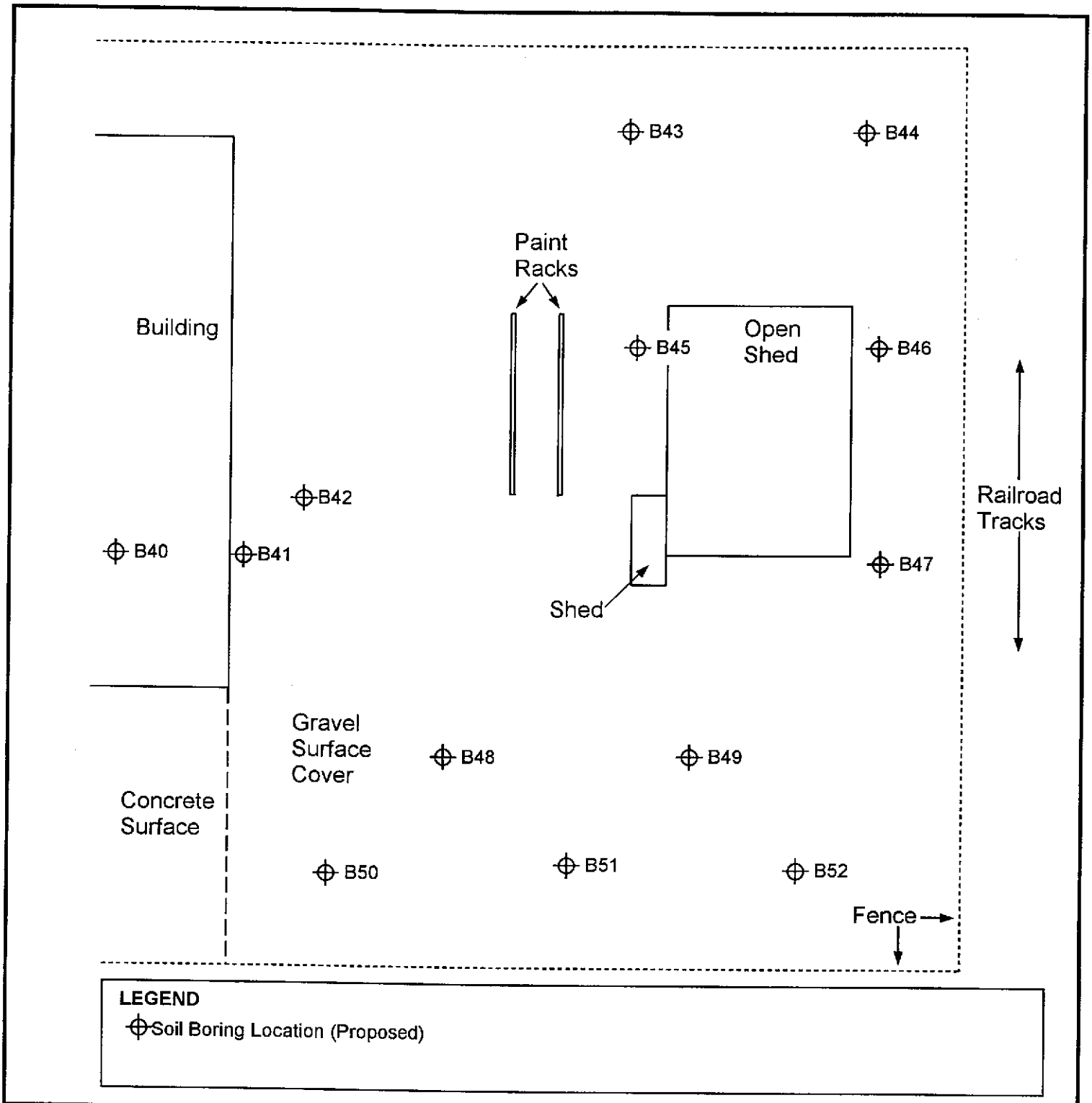

FIGURE 2
SITE PLAN DETAIL - PROPOSED BORING LOCATIONS
Pacific Rolling Door
15900 Worthley Drive
San Lorenzo, California

N

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