RGA ENVIRONMENTAL, INC

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RO 319

FAX TRANSMITTAL SHEET

TO: Barney Chan
COMPANY: Alameda County Environmental Health Services
FAX NO: 510-337-9335
PHONE NO: 510-567-6700
RE: Western Stucco

FROM: Paul King
DATE: July 16, 2002
TOTAL NO. OF PAGES FAXED: 9
SENDER'S JOB REFERENCE NO: 0274

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY

As we discussed, attached is the Workplan.

Barney => Please disregard the earlier fax of the Workplan.

RO 319

July 16, 2002
Work Plan 0274.W1
RGA Job # WEST7698

JUL 19 2002

RGA
ENVIRONMENTAL INC.

Mr. Barney Chan
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN
[redacted]
Former Western Stucco Products
5115 East Eighth Street
Oakland, California 94601

Dear Mr. Chan:

RGA Environmental, Inc. (RGA) is pleased to present this work plan for the drilling of five soil borings, designated as B1 through B5 for the collection of five groundwater grab samples at the subject site. The samples will be collected at the perimeter of the subject site to evaluate groundwater quality in the presumed downgradient direction from one diesel Underground Storage Tank (UST) and one gasoline UST. The USTs were formerly located at the subject site adjacent to East Eighth Street. This work plan is submitted in response to your request for a work plan in a letter dated May 1, 2002. A 45-day extension was requested in a letter dated June 3, 2002 and was granted in your email dated June 4, 2002. A Site Location Map is attached as Figure 1, and a Site Plan showing the proposed drilling locations is attached as Figure 2.

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

The site consists of a flat, surfaced parking lot and building. Based on a conversation with Mr. Al Avendano of Western Stucco Products, the features identified on the Site Plan as Stucco Products Bins are empty. The nearest surface water body is San Leandro Bay, which is located approximately 2,400 feet southwest of the site.

RGA's understanding of the site history is based upon review of a Quarterly Monitoring and Summary Report dated March, 2002 prepared by EBA Engineering. Review of the report indicates that one 8,000-gallon diesel steel UST and one 8,000-gallon gasoline steel UST were removed from the site on March 26, 1991. Four holes with a maximum diameter of ½-inch were observed in the gasoline UST. Each UST was removed from a separate excavation.

Groundwater was encountered in the UST pits at a depth of nine feet below the ground surface. Approximately 4,000 gallons of groundwater was pumped from the UST pits prior to groundwater sampling in the UST pits. Petroleum hydrocarbons were detected in soil and water samples collected from each of the UST pits. Remedial actions consisted of excavation and disposal of approximately 130 cubic yards of soil in the vicinity of the former USTs.

In June, 1997 the Alameda County Department of Environmental Health (ACDEH) requested that a work plan be submitted for additional site characterization. A July 24, 1997 work plan prepared by EBA proposed drilling six soil borings to a depth of 20 feet for the collection of groundwater samples. The work plan was approved in a letter from the ACDEH dated August 4, 1997.

On September 26, 1997, a total of seven soil borings designated as EBA-1 through EBA-7 were drilled in the vicinity of the UST pits. Groundwater grab samples were obtained from three of the borings (EBA-1, EBA-3, and EBA-6), and soil samples were obtained from all of the boreholes with the exception of EBA-3. The soil samples were collected at depths ranging from 3.0 to 7.5 below the ground surface. Droplets of separate phase hydrocarbons were noted on the groundwater sample collected from borehole EBA-3 (located immediately downgradient of the former diesel UST pit).

All of the soil and groundwater samples were analyzed for TPH-D, TPH-G, BTEX and MTBE, with the exception of the water sample from borehole EBA-6, where TPH-D was not analyzed. MTBE was not detected in any of the samples. Petroleum hydrocarbons were noticeably absent from the soil samples with the exception of the sample from EBA-7 (collected at a depth of 3.0 feet), where TPH-G was detected at 2,300 ppm. TPH-G and BTEX were detected in all three of the water samples, and TPH-D was detected in EBA-1 and EBA-3 (TPH-D analysis was not performed for the water sample from EBA-6). The report for the investigation concluded that soil and groundwater had been impacted by petroleum hydrocarbons, and recommended that three groundwater monitoring wells be installed and sampled on a quarterly basis.

In February, 2001 EBA oversaw the installation of three monitoring wells (MW1- through MW-3) and one observation well (OW-1) at the site. The results of four monitoring and sampling events between February 6 and November 26, 2001 have resulted in highly variable groundwater flow directions and relatively consistent petroleum hydrocarbon concentrations in water. The variable groundwater flow directions have been attributed to water level fluctuations in well

MW-1 not being consistent with the other wells at the site. However, the regional groundwater flow direction is assumed to be southwesterly towards San Leandro Bay. The measured depth to water in the wells after development has ranged from 2.37 to 7.81 feet (with one exception), with the majority of measurements showing the measured depth to water to be less than 6.0 feet.

In accordance with an October 8, 2001 ACDEH request, soil and groundwater sample results were evaluated using San Francisco Bay Regional Water Quality Control Board (RWQCB) August, 2000 Table B risk based screening levels (RBSLs) and City of Oakland risk based corrective action (RBCA) guidelines for an industrial/commercial site with clayey silt soil. Inhalation of outdoor air was selected as the route of exposure for soil contamination. Ingestion was selected as the route of exposure for groundwater contamination, although the report stated that the possibility of this type of exposure at the site was extremely low.

The report states that the RBSL for TPH-G in soil was exceeded in only one sample, and the RBSL for TPH-D for soil was exceeded in only one sample. Similarly, the RBSL for TPH-G in water from the wells was exceeded in well MW-2, OW-1, and on two occasions in well MW-1. The RBSL for TPH-D in water from the wells was exceeded in only OW-1.

The RBCA guidelines do not address TPH-G or TPH-D. They only address BTEX concentrations. No BTEX concentrations in soil exceeded the RBCA guidelines. The only BTEX constituent that exceeded the RBCA guidelines in groundwater samples from the wells was 1.1 ug/L of benzene in well MW-2 during the initial sampling event in 2001 (the RBCA guideline for benzene in ingested groundwater is1.0 ug/L). As stated before, groundwater ingestion is not a likely route of exposure at the site. BTEX compounds have not been detected in groundwater samples from the wells during any of the other monitoring or sampling events. However, review of the three groundwater grab sample results from boreholes EBA-1 and EBA-3 (located immediately downgradient of the former UST pits) and EBA-6 (also located downgradient of the former UST pits) shows that benzene concentrations were exceeded in all of the samples, toluene concentrations were exceeded in one of the samples, and ethylbenzene and xylene concentrations were exceeded in two of the samples.

In a letter dated May 1, 2002 from the ACDEH, characterization of the extent of petroleum hydrocarbons in soil and groundwater was requested. In addition, a sensitive receptor survey and a review of potential impacts to surface water in the vicinity of the site was requested.

SCOPE OF WORK

To address the elements requested in the May 1, 2002 ACDEH letter, RGA will perform the following tasks:

- Regulatory agency coordination for drilling of five soil borings.
- Mark drilling locations for Underground Service Alert notification and health and safety plan preparation.
- Soil boring oversight.
- Collection of one groundwater grab sample from each borehole.
- Purge and sample the four existing groundwater monitoring wells (MW-1, MW-2, MW-3 and OW-1).
- Arrange for sample analysis.
- Perform a sensitive receptor survey.
- Report preparation documenting groundwater sample collection and the laboratory analytical results.

Each of these is discussed below in detail.

Regulatory Coordination

Based on discussions with the Alameda County Public Works Agency, a permit will not be necessary for the drilling of the five soil borings because of the shallow depth of drilling. Following work plan approval, the ACDEH will be notified of the scheduled drilling date.

Health and Safety Plan Preparation

The drilling locations will be marked with white paint and Underground Service Alert will be notified for underground utility location. A health and safety plan will be prepared for the scope of work identified in this work plan.

Soil Boring Oversight and Groundwater Sample Collection

A total of five soil borings, designated as borings B1 through B5, will be hand-augered by Mr. Al Avendano to characterize groundwater conditions downgradient from the two former USTs. The boreholes will be hand-augered using six- or eight-inch outside diameter solid stem augers. Based on review of site vicinity topography (see Figure 1), the groundwater flow direction at the site is anticipated to be to the southwest. The boreholes will be hand-augered to total depths of approximately 5 feet, or two feet below first encountered groundwater, whichever is encountered first. Based on review of the Quarterly Monitoring and Summary Report by EBA Engineering dated March, 2002, the anticipated depth at which groundwater will be encountered is approximately 3 to 5 feet below the ground surface. One groundwater grab sample will be collected from each borehole for laboratory analysis using a Teflon bailer. Chain of custody procedures will be observed for all sample handling. The proposed locations of the soil borings are shown on the attached Site Plan, Figure 2.

The soil from all of the borings will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System. All soil samples from the boreholes will be evaluated with a 10.3 eV Photoionization Detector (PID) calibrated using a 100 ppm isobutylene standard.

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 in drums at the subject site pending characterization and disposal.

Purge and Sample the Four Existing Groundwater Monitoring Wells

The four existing groundwater monitoring wells (MW-1, MW-2, MW-3 and OW-1) will be purged and sampled at the time that the groundwater grab samples are collected. The field parameters of pH, temperature and conductivity will be monitored during well purging. After the field parameters have been observed to stabilize and a miniumum of three casing volumes of water has been purged (or the wells purged dry), the wells will be sampled with a clean Teflon bailer. All purging and sampling equipment will be decontaminated with an Alconox solution and clean water rinse prior to use in each well. The sample containers will be stored in a cooler with ice pending delivery to a State-accredited hazardous waste laboratory. Chain of custody procedures will be observed for all sample handling.

Arrange for Sample Analysis

All of the groundwater samples will be analyzed on a normal (five working day) turn around basis at McCampbell Analytical, Inc. of Pacheco, California as follows.

- 5 borehole groundwater samples (B1 through B5) for TPH Multi Range (Gas, Diesel and Oil)
- 5 borehole groundwater samples (B1 through B5) for BTEX/MTBE by EPA 8020
- 4 well groundwater samples (MW-1, MW-2, MW-3, OW-1) for TPH Multi Range
- 2 well groundwater samples (MW-1 and MW-3) for BTEX/MTBE by EPA 8020
- 2 well groundwater samples (MW2 and OW1) for BTEX, MTBE, TAME, ETBE, DIPE, TBA, EDB and EDC by EPA 8260

In all groundwater samples where MTBE is detected, MTBE confirmation analysis will be performed using EPA Method 8260.

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Perform a Sensitive Receptor Survey

A sensitive receptor survey will be performed for drinking water wells within a 2,000 foot radius of the site.

Report Preparation

Upon receipt of the laboratory analytical results, a report will be prepared. The report will document groundwater sample collection procedures and sample results. The report will include a site plan showing the drilling locations, boring logs, tables summarizing the sample results, the results of the sensitive receptor survey, identification and an evaluation of impacts to surface water in the vicinity of the site, and recommendations based on the sample results.

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

Sincerely,

Heather McCormick
for
Karin Schroeter
Project Manager

Paul H. King

Paul H. King
California Registered Geologist
Registration No. : 5901
Expires: 12/31/03

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

Cc: Mr. Al Avendano

PHK/hcm
0274.W1

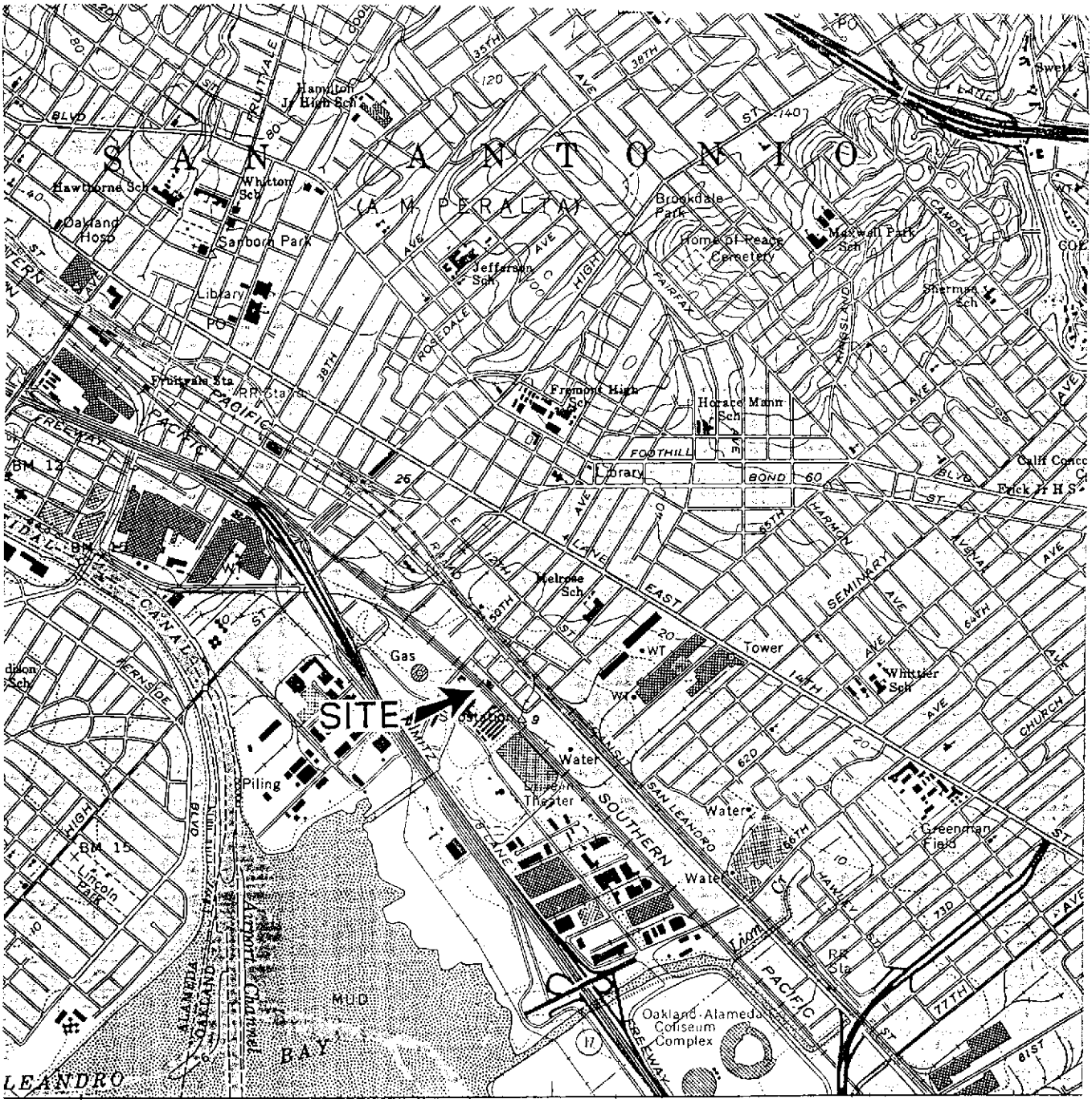

FIGURE 1
SITE LOCATION MAP
Western Stucco Products
5115 East Eighth, Oakland, California

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Base Map From:
U.S. Geological Survey
Oakland East, Calif.
7.5 Minute Quadrangle
Photorevised 1980

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

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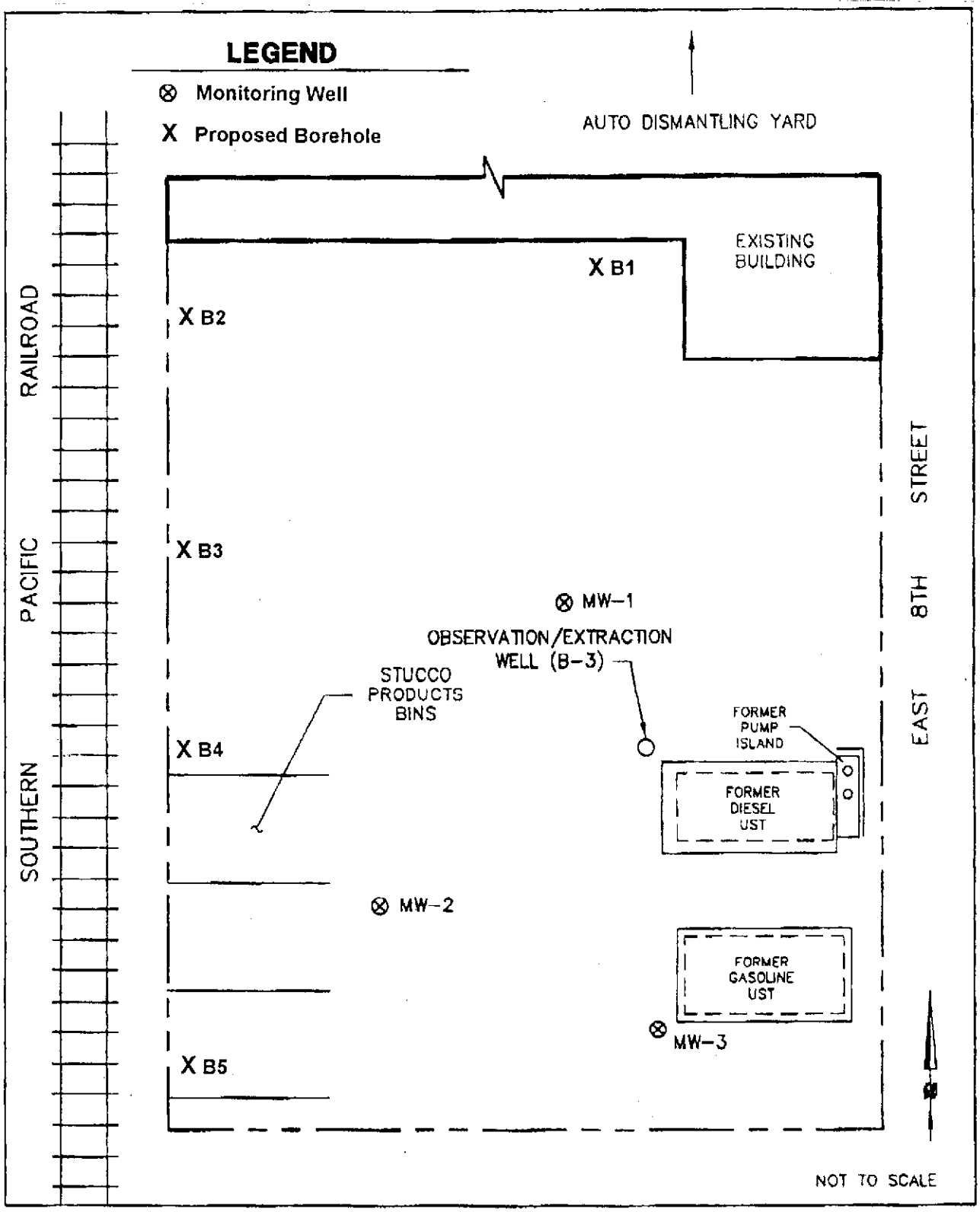

FIGURE 2
SITE PLAN
Western Stucco Products
5115 East Eighth, Oakland, California

Base Map From: EBA Engineering Santa Rosa, CA October 2000	RGA Environmental, Inc. 4701 Doyle Street, Suite 14 Emeryville, CA 94608	Not To Scale