

SIMON

*Environmental
Engineering*

SIMON-EEI

**REPORT ON
PHASE II SITE ASSESSMENT
SUPERIOR PLASTER CASTINGS
4800 COLISEUM WAY
OAKLAND, CALIFORNIA**



SIMON-EEI Inc.

536 Stone Road, Suite J
Benicia, California 94510

Telephone (707) 747-9577
Fax (707) 747-9611

May 16, 1991

Superior Plaster Castings
4800 Coliseum Way
Oakland, CA 94612

Attention: Mr. John Collins

Subject: Report on Phase II Site Assessment
Superior Plaster Castings
4800 Coliseum Way
Oakland, California
Simon-EEI Project No. 513-779.00

Dear Mr. Collins:

Presented herewith is Simon-EEI Inc. report on the Phase II environmental site assessment performed on the property located at 4800 Coliseum Way, Oakland, California. This report includes scope of work, soil boring and sampling methodology, analytical results, discussion, and conclusions and recommendations, as deemed necessary.

If you have any questions or comments regarding this draft report, please do not hesitate to contact me. Simon-EEI appreciates the opportunity to be of service to Grubb & Ellis.

Respectfully,

John Whitney
Project Hydrogeologist

Douglas Hayes
Regional Manager
Northern California

JW, DH:nlj

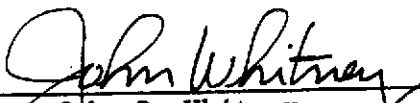
**REPORT ON PHASE II SITE ASSESSMENT
SUPERIOR PLASTER CASTINGS
4800 COLISEUM WAY
OAKLAND, CALIFORNIA**

Submitted To:


*Superior Plaster Castings
4800 Coliseum Way
Oakland, California*

Submitted By:

*Simon Environmental Engineering
536 Stone Road, Suite J
Benicia, California*



*John D. Whitney
Project Hydrogeologist*



*Douglas Hayes
Regional Manager
Northern California*

Report on Phase II Site Assessment
Superior Plaster Castings
4800 Coliseum Way
Oakland, California

Table of Contents

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION	1
2.0 PURPOSE	3
3.0 SCOPE OF WORK	3
4.0 SOIL BORING AND SAMPLING	3
5.0 SOIL SAMPLE VAPOR SCREENING	6
6.0 GROUNDWATER SAMPLING METHODOLOGY	7
7.0 ANALYTICAL PROGRAM	7
7.1 Soil Analytical Program	7
7.2 Groundwater Analytical Program	7
8.0 ANALYTICAL RESULTS	8
8.1 Soils	8
8.2 Groundwater	11
9.0 CONCLUSIONS	11
10.0 RECOMMENDATIONS	13

List of Tables

Table	Description
1	Analytical Results for Soil and Groundwater Samples (BTEX and TPH)
2	Analytical Results for Groundwater Samples (Metals)

List of Figures

Figure	Description
1	Site Location Map
2	Soil Boring Location Map

List of Appendices

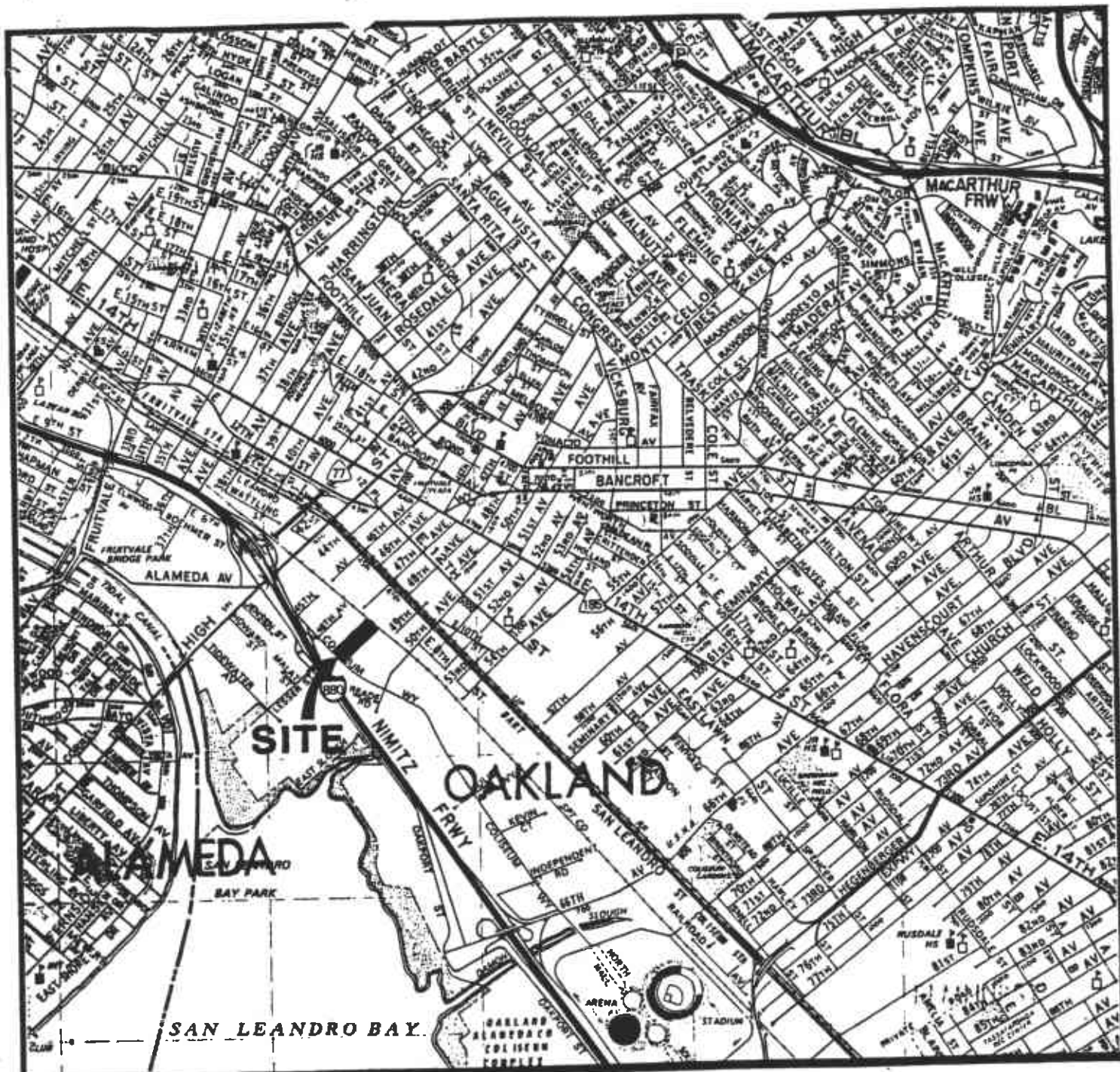
Appendix	Description
A	Boring Lithologic Logs
B	Soil Samples Vapor Screening Methodology
C	Laboratory Report and Chain-of-Custody Forms

1.0 INTRODUCTION

At the request of Mr. Michael Collins of Superior Plaster Castings a Phase II environmental site assessment was conducted by Simon-EEI Inc. on the industrial property located at 4800 Coliseum Way, Oakland, California. Field work for the assessment was performed on April 23, 1991.

The assessment was conducted to investigate environmental concerns relating to the site, which were identified in a preliminary (Phase I) site assessment conducted by Aqua Terra Technologies of Walnut Creek, California in early April, 1991. The primary concerns of the Phase I assessment included the unknown effects to the soil and groundwater conditions of the subject property from offsite sources of contamination. A site location map is presented as Figure 1.

The subject property consists of a land parcel of approximately one acre containing a 30,000 square foot two-story commercial building. The property is currently leased to Superior Plaster Casting, Inc., which specializes in the manufacture of plaster cast aluminum products. Adjacent properties are utilized for industrial operations and include: a metal scrap yard to the east (Triple-A Salvage), a steel fabrications firm to the north (Bostrom and Bergen), a PG&E facility to the south, and a hotel complex across Coliseum Way to the west.



SCALE
One inch = 2200 feet.

SITE LOCATION MAP
SUPERIOR PLASTER CASTINGS, INC.
OAKLAND, CALIFORNIA

SIMON-EEI Inc.

PROJECT NO: 513-779.00

FIGURE:
1

DATE: MAY, 1991

2.0 PURPOSE

The purpose of this Phase II assessment was to investigate site soil and groundwater conditions to assess the impact from historical usage of the site and the properties in the surrounding vicinity.

3.0 SCOPE OF WORK

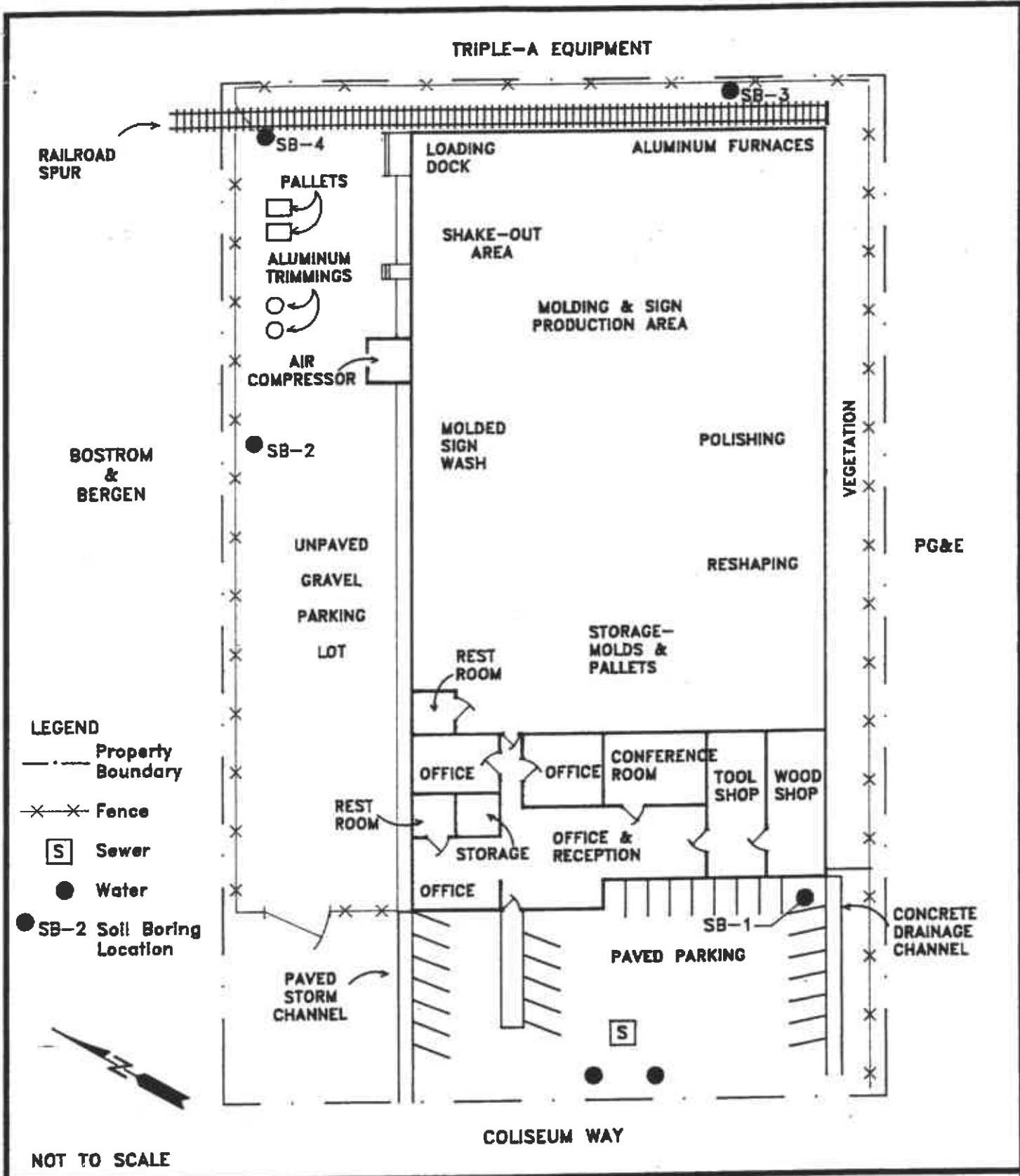
To address the concerns stated in the previous Phase I assessment, the following tasks were completed:

- o Installation and soil sampling of four soil borings;
- o Soil sample vapor screening;
- o Groundwater sampling from the four soil borings;
- o Laboratory analysis of collected soil and groundwater samples for specific contaminants;
- o Review of analytical results with respect to observed site conditions; and
- o Compilation and documentation of findings.

Each of these tasks are described in detail in the following sections.

4.0 SOIL BORING AND SAMPLING

A total of four soil borings were drilled at the subject property. Borings were designated SB-1 through SB-4. Their locations are presented in the site map provided in Figure 2. Installation of the borings and collection of soil samples was supervised and/or



SOIL BORING LOCATION MAP
 SUPERIOR PLASTER CASTINGS, INC.
 OAKLAND, CALIFORNIA

SIMON-EEI Inc.

PROJECT NO: 513-779.00.
 DATE: MAY, 1991

FIGURE:
 2

performed by a qualified field geologist under the direction of a California Registered Geologist.

All borings were installed using truck-mounted drilling equipment utilizing 7-inch diameter hollow stem augers. Borings SB-1 through SB-3 were augered to a total depth of 15.0 feet and SB-4 was augered to a total depth of 13.5 feet. Prior to mobilization, and between each boring location, the drill rig and associated downhole equipment were steam cleaned to reduce the potential for cross contamination between borings.

Soil samples were collected from the borings at five-foot depth intervals, with the first sample from each boring collected at a depth approximately coinciding with the groundwater table interface. Samples were collected with a California Modified split barrel sampler with six inch by 2 inch diameter brass sample tube inserts. The sampler was driven into the soil ahead of the auger with a 140 pound slide hammer with a 30 inch drop. Upon extraction from the boring, portions of the retrieved samples were screened for the potential presence of organic vapors with a photo-ionization detector (PID). Sample tubes containing samples to be submitted for laboratory analysis were immediately sealed with teflon tape and plastic caps, labeled, and placed in refrigerated coolers pending delivery to the lab. Standard Chain-of-Custody procedures were followed to document transport of the samples from the site to the analytical laboratory.

During the installation of the soil borings, logs depicting the subsurface geologic and hydrogeologic conditions encountered were compiled by the site geologist. Copies of the prepared boring logs are presented in Appendix A of this report. Logs include information on soil characteristics, sampling intervals and sample numbers, PID readings, and miscellaneous drilling data.

Soil cuttings generated during the installation of the borings were stored in DOT 17H waste barrels at the site and will be disposed in accordance with the results of the laboratory analyses. Following sampling, each boring was backfilled from total depth to approximately 3 feet depth with bentonite pellets and from 3 feet to surface with a cement slurry. In paved areas borings were covered with an asphalt patch material.

5.0 SOIL SAMPLE VAPOR SCREENING

All soil samples retrieved during the installation of borings were screened in the field for the potential presence of organic vapors using a photo-ionization detector (PID). The screening method used is referred to as the "head space method" where a small amount of the soil is placed within a sealed plastic bag and vapors generate during outgassing within the bag are measured. The methodology used is outlined in Appendix B.

6.0 GROUNDWATER SAMPLING METHODOLOGY

Groundwater samples were collected from each of the borings installed at the subject property. Samples were extracted from the borings using clean disposable bailers. Samples to be analyzed for BTX&E (benzene, toluene, xylene, and ethylbenzene - soluble aromatic hydrocarbons) were containered in 40 ml VOA vials. Samples to be analyzed for metals contaminants were containered in 500 ml amber glass bottles. All samples were appropriately numbered, labeled and refrigerated for transport to the analytical laboratory. Standard Chain-of-Custody documentation was provided for all samples.

7.0 ANALYTICAL PROGRAM

7.1 Soil Analytical Program

A total of five soil samples collected from the site were submitted to the laboratory for analysis. Analytical methodologies included EPA Method 8015 (Modified) for Total Petroleum Hydrocarbons in the diesel and gasoline ranges, and EPA Method 8020 for BTX&E.

7.2 Groundwater Analytical Program

A total of four groundwater samples (one per boring) were submitted to the laboratory for analysis. Analytical methodologies included EPA Method 602 for BTX&E, and EPA 6000 and 7000 Series methodologies for CAM 8 metals.

8.0 ANALYTICAL RESULTS

Discussion of the analytical results for soil and groundwater samples collected from the subject property are presented in the following sections and in tabular form in Tables 1 and 2. Laboratory analytical reports and Chain-of-Custody forms for soil and groundwater samples are including in Appendix C.

8.1 Soils

From the soil samples submitted for analysis of total petroleum hydrocarbons (TPH), only samples from a single boring, SB-3, exhibited detectable TPH levels in either the gasoline and diesel ranges. Sample SB3-3-3.5, collected at a depth of 3.5 feet in boring SB-3, contained a diesel concentration of 690 mg/Kg (milligrams per Kilogram; equivalent to parts per million) and gasoline concentration of 3 mg/Kg. Sample SB3-4-8.5, collected at a depth of 8.5 feet in boring SB-3, contained no detectable diesel concentration but did exhibit a gasoline concentration of 1 mg/Kg. The samples analyzed for TPH from borings SB-1, SB-2, and SB-4 exhibited no detectable levels of either gasoline or diesel.

Three of the five soil samples analyzed for BTX&E contained detectable levels of the analytes. Sample SB1-1-2.5, collected at a depth of 2.5 feet in boring SB-1, contained 6 ug/Kg (micrograms per Kilogram; equivalent to parts per billion) of toluene. Sample

TABLE 1

ANALYTICAL RESULTS FOR SOIL AND GROUNDWATER SAMPLES (a)

Sample No.	Benzene	Toluene	Xylene	Ethlybenzene	TPH (b) (gasoline)	TPH (diesel)
Soil Samples						
<u>Soil Boring No. 1</u>						
SB1-1-2.5	ND<3 (c)	6	ND<3	ND<3	ND<1	ND<10
<u>Soil Boring No. 2</u>						
SB2-2-4.5	ND<3	ND<3	ND<3	ND<3	ND<1	ND<10
<u>Soil Boring No. 3</u>						
SB3-3-3.5	11	4	5	13	3	690
SB3-4-8.5	ND<3	ND<3	ND<3	ND<3	1	ND<10
<u>Soil Boring No. 4</u>						
SB4-5-3.5	ND<3	5	ND<3	ND<3	ND<1	ND<10
Groundwater Samples						
<u>Soil Boring No. 1</u>						
SB1-1-W	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NA (d)	NA
<u>Soil Boring No. 2</u>						
SB2-3-W	ND<0.3	ND<0.3	ND<0.3	0.3	NA	NA
<u>Soil Boring No. 3</u>						
SB3-5-W	ND<0.3	ND<0.3	ND<0.3	5	NA	NA
<u>Soil Boring No. 4</u>						
SB4-7-W	ND<0.3	ND<0.3	ND<0.3	ND<0.3	NA	NA

(a) Measured in parts per billion (ppb)

(b) TPH = Total Petroleum Hydrocarbons (TPH results are measured in parts per million [ppm])

(c) ND = Not Detected at Level Shown

(d) NA = No Analysis Taken

TABLE 2

ANALYTICAL RESULTS FOR GROUNDWATER SAMPLES (a)

Parameter	Sample Number				MCL (a)
	SB1-2-W	SB2-4-W	SB3-6-W	SB4-8-W	
Arsenic	0.035	0.054	0.027	0.073	0.050
Barium	1.4	1.6	1.2	3.1	5.000
Cadmium	<0.002 (c)	<0.002	<0.002	<0.002	0.005
Chromium	0.49	0.65	0.31	0.88	0.100 (b)
Lead	0.042	0.055	0.073	0.15	0.005 (b)
Mercury	0.0024	0.0032	0.0020	0.0059	0.002 (b)
Selenium	<0.003	<0.003	<0.003	<0.003	0.050 (b)
Silver	<0.01	<0.01	<0.01	<0.01	0.050 (b)

(a) MCL = Maximum Contaminant Level

(b) PMCL = Proposed Maximum Contaminant Level

(c) Not detected at level shown.

SB3-3-3.5, collected at a depth of 3.5 in boring SB-3, contained 11 ug/Kg benzene, 4 ug/Kg toluene, 5 ug/Kg ethylbenzene, and 13 ug/Kg xylenes. Sample SB4-5-3.5, collected at a depth of 3.5 feet in boring SB-4, contained 5 ug/Kg toluene.

8.2 Groundwater

Of the four groundwater samples submitted for analysis of BTX&E, two contained detectable levels of the analytes. Sample SB2-2-W from boring SB-2 contained xylenes at a concentration of 0.3 ug/L (micrograms per liter; equivalent to parts per billion) and sample SB3-5-W from boring SB-3 contained xylenes at a concentration of 5 ug/L. The other two water samples were reported at below the detection limit of 0.3 ug/L.

Metals analyses performed on the four groundwater samples detected concentrations of five of the eight metal analytes in each of the four samples. Metals detected were: arsenic, barium, chromium, lead and mercury. A complete tabulation of the metals results is presented in Table 2.

9.0 CONCLUSIONS

Based on the data compiled during the Phase II environmental assessment the following conclusions are offered:

- o Analysis of soils from four borings found detectable levels of total petroleum hydrocarbons (TPH) in boring SB-3 only. Concentrations were found to decline with depth, decreasing from 690 ppm to non-detect in the diesel range, and from 3 ppm to 1 ppm in the gasoline

range, for the samples collected at 3.5 feet and 8.5 feet depth, respectively. The results suggest this soil contamination may be the result of a surface spill.

Guidelines with respect to remedial actions for hydrocarbon contaminated soils were reviewed in the California Regional Water Quality Control Board's "Leaking Underground Fuel Tank (LUFT) Field Manual." Based on the specific geologic and hydrogeologic conditions observed at the site during the Phase II assessment, and the leaching potential analysis contained in the LUFT Manual, it is probable that regulatory action would require site cleanup of TPH levels to below 10 ppm for gasoline and below 100 ppm for diesel contaminated soils. It should be noted, however, that specific remedial requirements differ between various local and regional regulatory agencies and can only be determined through consultation and negotiation with the specific implementing agency.

- o Analysis of soils from four borings found detectable levels of BTX&E in borings SB-1, SB-3, and SB-4. Again, based on the LUFT guidelines, it is probable that regulatory agencies would not require remedial action in the areas of SB-1 or SB-4 but would require cleanup in the area of SB-3. Specific cleanup levels for BTX&E are determined by the local or regional regulatory agencies based on site specific conditions.
- o Analysis of a limited number of groundwater samples for BTX&E found only detectable levels of xylenes in Borings SB-2 and SB-3. Reported xylene levels for these borings were 0.3 ppb and 5 ppb, respectively.

While these levels do not approach or exceed California Department of Health Services regulatory standards for drinking water maximum contaminant levels (MCL's), remedial requirements again are determined by local or regional regulatory agencies based on site specific conditions and could potentially require cleanup to non-detect levels.

- o Metals were detected at concentrations exceeding applicable MCL standards in all groundwater samples collected from the four soil borings. Metals exceeding MCL values included arsenic, chromium, lead, and mercury.

Based on the historical site usage information contained in the Phase I assessment performed by Aqua Terra Technologies, and the likely groundwater gradient in the local area, Simon-EEI believes that the detected groundwater metal contaminants stem from an off-site source.

10.0 RECOMMENDATIONS

The results of the Phase II assessment conducted on the subject property indicate that one area of environmental concern exists with regards to the soils at the property. To define the extent of this area, Simon-EEI recommends additional soil contaminant delineation in proximity to soil boring SB-3. Delineation would require installation of additional soil borings and laboratory analysis of these soil samples.

Recommendations concerning metals detected in the site groundwater cannot be made without consultation with the local implementing agency, the Alameda County Department of Environmental Health.