

**REPORT ON
SUPPLEMENTAL 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

June 17, 1991

RECEIVED

JUN 20 1991

Mr. John Collins
Superior Plaster Castings
4800 Coliseum Avenue
Oakland, California

Subject: Confirmation of Delineation Results
of Environmental Site Assessment Performed at
4800 Coliseum Avenue, Oakland, California

Dear Mr. Collins:

This letter confirms the Phase II investigation performed by Simon Environmental Engineering (Simon-EEI) at the site located at 4800 Coliseum Avenue, Oakland, California. This investigation is described in our report entitled, "Report on Phase II Site Assessment, Superior Plaster Castings, 4800 Coliseum Way, Oakland, California," dated May 16, 1991, as having encountered elevated levels of total petroleum hydrocarbon (TPH) associated with soil boring SB-3 at the subject site.

The area around boring SB-3 exhibits TPH values of between 100 and 500 parts per million (ppm) using EPA 418.1 as the analysis method. The affected area includes contaminated soils ranging from 50 to 100 cubic yards with an approximate cleanup cost, depending on the method used, of approximately \$35,000. It is possible that further subsurface testing could reduce cost estimates. If time is not a critical factor in the cleanup procedures it should be noted that the project could be accomplished at a lesser cost utilizing bioremediation and/or volatilization of the contaminants.

If you have any questions or require additional information, please do not hesitate to contact us. Simon-EEI appreciates the opportunity to provide service to Superior Plaster Castings.

Respectfully,

Douglas Hayes
Regional Manager
Northern California

DH:nlj



SIMON-EEI Inc.

536 Stone Road, Suite J
Benicia, California 94510

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

July 2, 1991

Superior Plaster Castings
4800 Coliseum Way
Oakland, CA 94601

Attention: Mr. John Collins

Subject: Report on Supplemental Phase II Assessment
Superior Plaster Castings
4800 Coliseum Way
Oakland, California
Simon-EEI Project No. 513-779.01

Dear Mr. Collins:

Presented herewith is the supplemental report on the Phase II site assessment activities conducted at 4800 Coliseum Way, Oakland, California. The purpose of the supplemental Phase II assessment was to define the extent and nature of the hydrocarbon contaminated soils encountered during the preliminary Phase II site investigation. This report includes scope of work, soil boring and sampling methodology, analytical results, discussion, and conclusions.

If you have any questions or comments regarding this supplemental report, please do not hesitate to contact me. Simon-EEI appreciates the opportunity to be of service to Superior Plaster Castings.

Respectfully,

John Whitney
Project Hydrogeologist

JW:nlj

**REPORT ON
SUPPLEMENTAL PHASE II 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*

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

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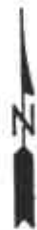
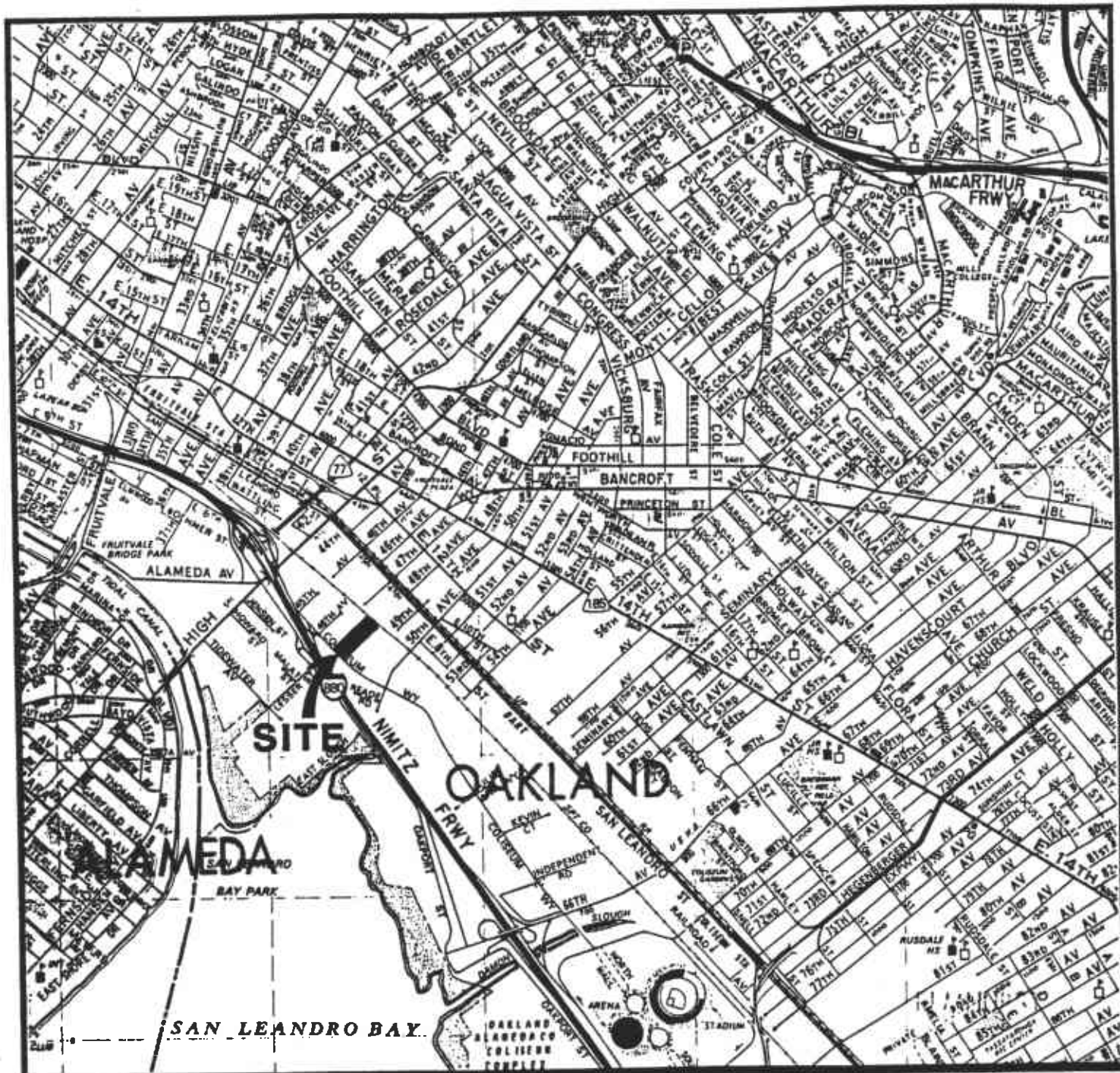
Appendix	Description
A	Boring Lithologic Logs
B	Soil Sample Vapor Screening Methodology
C	Laboratory Report and Chain-of-Custody Forms

1.0 INTRODUCTION

At the request of Mr. John Collins of Superior Plaster Castings, Inc., a supplemental 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 during the period June 3 through June 14, 1991. A site location map is presented as Figure 1.

The supplemental assessment was conducted to investigate and define environmental concerns identified in a preliminary Phase II assessment conducted in April 1991. Results of the preliminary study are described in a Simon-EEI report entitled "Report on Phase II Site Assessment, Superior Plaster Castings, 4800 Coliseum Way, Oakland, California," dated May 16, 1991. The primary concern identified in the initial study was the finding of elevated levels of total petroleum hydrocarbons (TPH) in soils encountered in a single soil boring (SB-3), located in the east corner of the property.

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 and commercial operations and include: a metal scrap yard to the East (Triple-A Salvage), a steel fabrications firm to the North (Bostrom



SCALE
One Inch = 2200 feet.

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

SIMON-EEI Inc.

PROJECT NO: 513-779.01

FIGURE:

DATE: JUNE, 1991

1

and Bergen), a PG&E facility to the South, and a hotel complex across Coliseum Way to the West. A site facility map is presented in Figure 2.

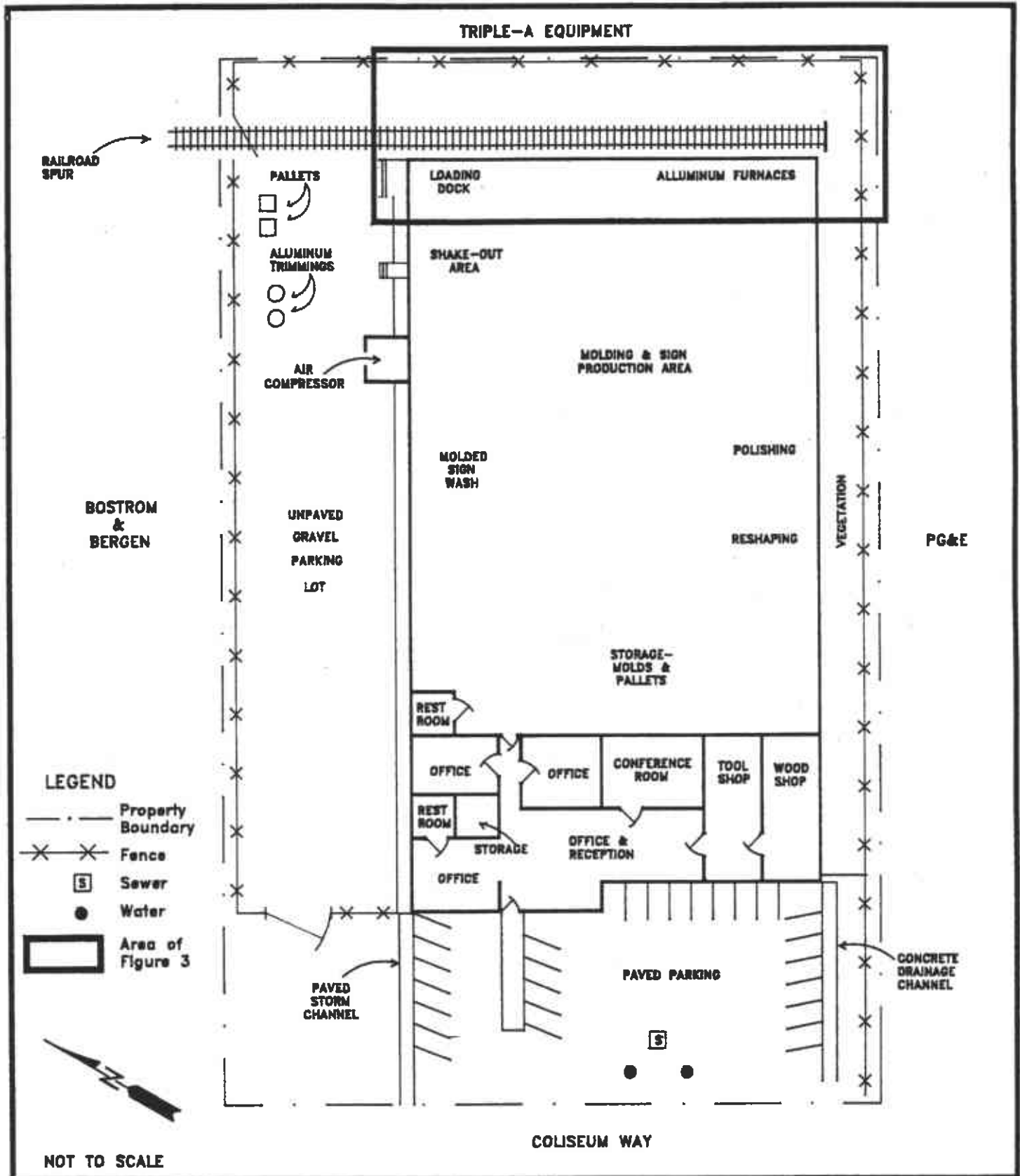
2.0 PURPOSE

The purpose of the supplemental Phase II assessment was to define the extent of TPH affected soils in the area surrounding soil boring SB-3.

3.0 SCOPE OF WORK

The scope of work performed during the supplemental assessment included the following tasks:

- o Installation and soil sampling of fifteen delineation soil borings in the area surrounding boring SB-3;
- o Soil vapor screening during soil boring installations;
- o Laboratory analysis for TPH content of ten soil samples collected from site borings;
- o Review of analytical results with respect to observed site conditions; and
- o Compilation and documentation of findings.



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

SIMON-EEI Inc.

PROJECT NO: 513-779.01
DATE: JUNE, 1991

FIGURE:
 2

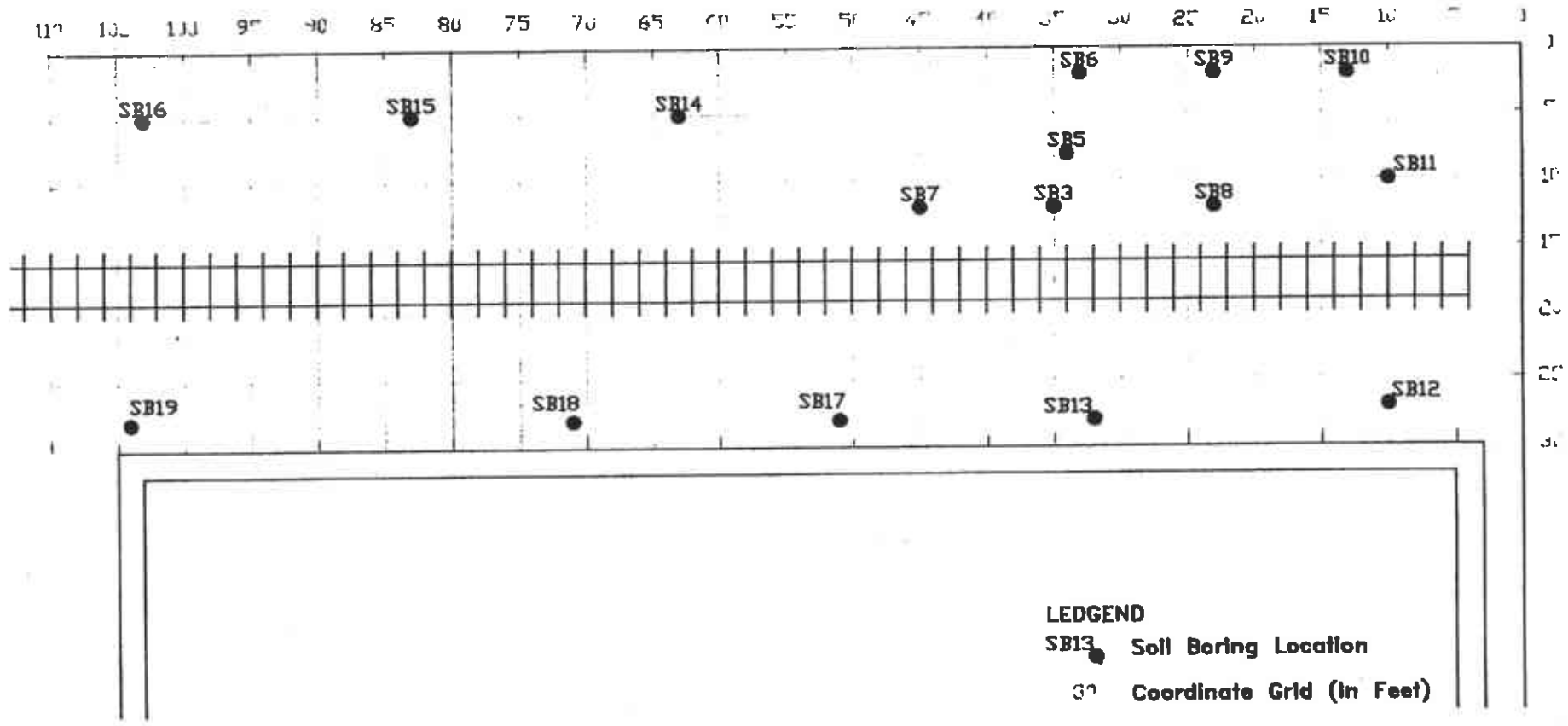
Details of the supplemental Phase II tasks are described in the following sections.

4.0 SOIL BORING AND SAMPLING

A total of fifteen delineation borings were installed at the subject property during the supplemental assessment. Borings were designated SB-5 through SB-19 and were located as presented in Figure 3 (borings SB-1 through SB-4 were installed during the preliminary Phase II work).

Nine of the borings were installed using portable, hydraulically operated solid stem augering equipment. The remaining six were installed using a truck-mounted drill rig equipped with 7-inch diameter hollow stem augers. Borings SB-5, SB-6 and SB-11 through SB-19 were augered to total depths ranging from 4.5 to 9.0 feet below ground surface. Borings SB-7 through SB-10 encountered subsurface obstructions and were completed to depths ranging from 1.5 to 2.5 feet below ground surface. Installation was performed by a California licensed environmental drilling contractor, under the direct supervision of a qualified Simon-EEI field geologist.

From the fifteen borings, a total of ten undisturbed soil samples were collected and submitted for laboratory analysis of total petroleum hydrocarbons (TPH) concentration. Typically, samples were collected from depths immediately above the anticipated water



LEDGEND
 ● SB13 Soil Boring Location
 □ Coordinate Grid (In Feet)

NOT TO SCALE

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

SIMON-EEI Inc.

PROJECT NO: 513-779.01
 DATE: JUNE, 1991

FIGURE:
 3

table interface at the site. Samples were collected with a California Modified split-barrel sampler containing two inch by six inch brass sample sleeve inserts. The sampler was mechanically driven into the soil ahead of the auger with a 140 pound slide hammer with a 30 inch drop. Upon extraction from the boring, retrieved soils were screened with an organic vapor meter (OVM), and brass insert sleeves containing undisturbed soil samples immediately sealed with aluminum foil and plastic caps, labeled, and placed in refrigerated coolers, pending delivery to the lab.

Soil conditions encountered during each boring were continuously monitored by visual and instrument screening of the auger generated soil cuttings. Boring logs recording the subsurface geologic and hydrogeologic conditions encountered were compiled by the site geologist and are presented in Appendix A of this report. Data presented in the logs includes information on soil characteristics, sampling intervals, sample numbers, Soil-gas readings, and miscellaneous drilling data.

Soil cuttings generated during the installation of the borings were stored on-site in DOT 17H waste barrels and will be disposed of in accordance with the results of the laboratory analyses. Following completion of the soils investigation, borings were backfilled from total depth to 1 foot below ground surface with bentonite pellets, and from 1 foot to surface with clean native fill.

To reduce the potential for cross contamination between borings, all downhole drilling and sampling equipment utilized during the investigation was thoroughly steam cleaned prior to use, and was decontaminated with a trisodium phosphate wash and triple rinsed with deionized water between individual borings.

5.0 SOIL SAMPLE VAPOR SCREENING

Soil vapor screening was conducted during the investigation to develop vertical and horizontal profiles of soil organic vapor concentrations in the area of investigation. Screening was conducted on samples of auger generated soil cuttings collected at two foot depth intervals or at changes in soil lithology. Driven soil samples were also screened for soil vapor concentrations. Results of the soil vapor survey are contained in the boring logs presented in Appendix A.

Screening was performed using a Thermo Instruments model 580B organic vapor meter (OVM). 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 generated during outgassing within the bag are measured. The screening methodology used is outlined in Appendix B.

6.0 ANALYTICAL PROGRAM

A total of ten undisturbed soil samples collected from the subject property were submitted for analysis to Superior Analytical Laboratories, Martinez, California. Analyses included EPA Method 8015 (Modified) for Total Petroleum Hydrocarbons in the diesel and gasoline ranges, and EPA Method 418.1 for diesel and heavier TPH components. EPA approved sample preservation procedures were maintained throughout, and Standard Chain-of-Custody procedures were followed to document possession and transport of the samples from the site to the analytical laboratory.

7.0 ANALYTICAL RESULTS

Discussion of the analytical results for the soil samples collected from the subject property are presented in the following section and in tabular form in Table 1. Copies of laboratory analytical reports and Chain-of-Custody forms for the samples are included in Appendix C.

7.1 Soils

Seven of the ten samples submitted for analysis contained detectable concentrations of TPH. Concentrations ranged from 94 parts per million (ppm) in the sample collected from boring SB-16 to 6200 ppm in the sample collected from boring SB-11. Non-detect concentrations were reported for samples submitted from borings SB-13, SB-17, and SB-19. All samples were collected at depths ranging from

TABLE 1A
ANALYTICAL LABORATORY REPORT
FOR SOIL SAMPLES

Sample Number	EPA Method 8015(a)	
	Gasoline	Diesel
SB6-1-4.5	56	220
SB14-2-4.5	490	530
SB15-3-4.5	220	370
SB16-4-4.5	ND<10(b)	94

(a) Measured in parts per million (ppm)
(b) ND = Not Detected @ level shown

TABLE 1B
ANALYTICAL LABORATORY REPORT
FOR SOIL SAMPLES

Sample Number	EPA 418.1(a)
	Total Petroleum Hydrocarbons
SB11-5-5.5	6200
SB12-6-5.5	2800
SB13-7-5.5	ND<50(b)
SB17-8-5.0	ND<50
SB18-9-5.5	2500
SB19-10-5.5	ND<50

(a) Measured in parts per million (ppm)
(b) ND = Not Detected @ level shown

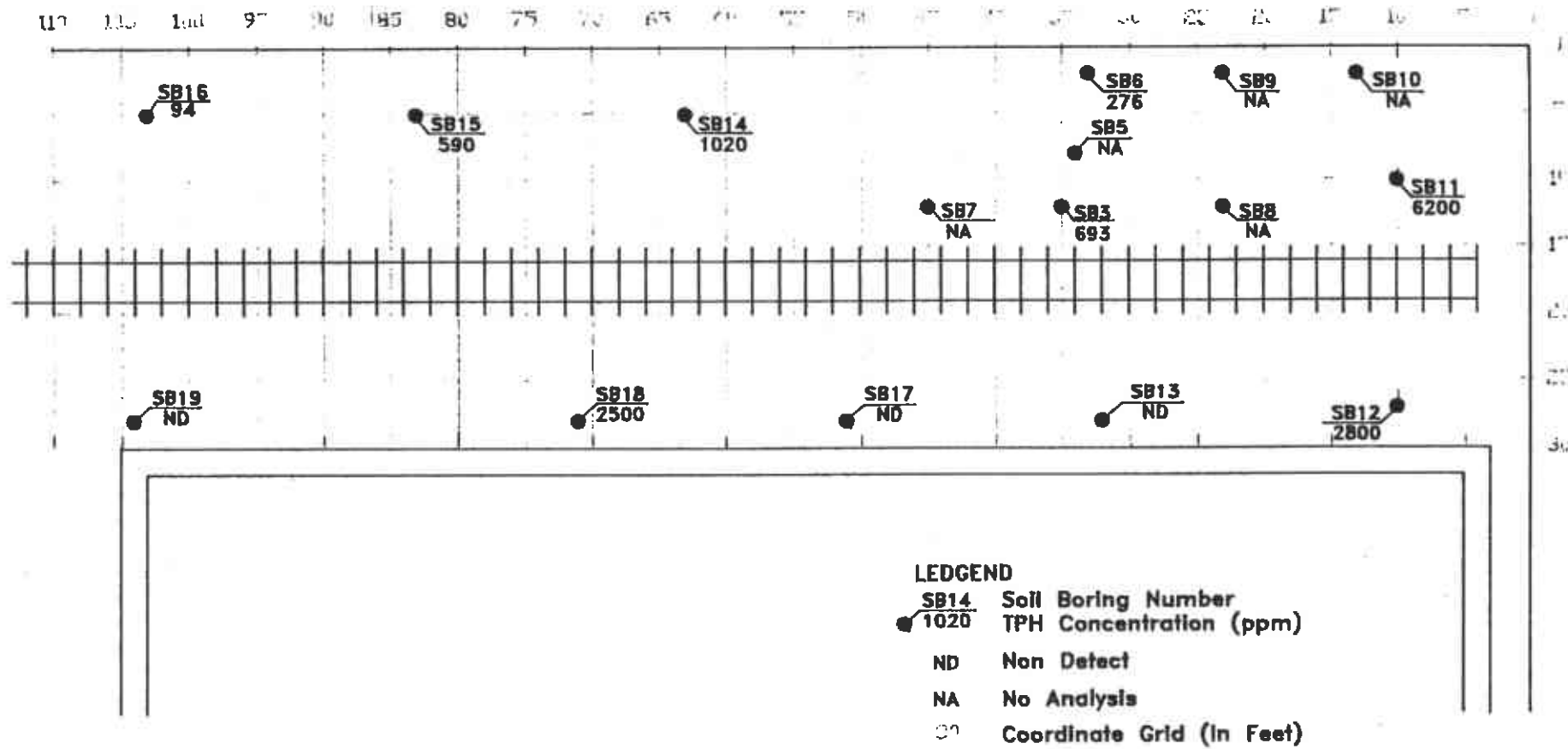
4.5 to 5.5 feet below ground surface. Figure 4 presents the soil boring locations and associated soil TPH concentration.

8.0 DISCUSSION

Findings of the Phase II assessment indicate that varying levels of hydrocarbon effected soils occur within the area of investigation. TPH concentrations ranged from non-detect to 6200 ppm in samples collected from depths ranging from 4.5 to 5.5 feet below ground surface. Visual and instrument screening of soils suggest that shallower soils have also been impacted.

Laboratory analytical results indicate that various hydrocarbon types occur at the site. Compounds in both the gasoline and diesel range were reported in the lab results, and visual screening of soils during the field investigation noted traces of tar-like substances in sandy fill material within the upper two to three of the site soils, primarily in borings installed along the eastern property line.

Geologic and hydrogeologic conditions observed during the field program show the area of investigation to be underlain by approximately one to three feet of silty and gravelly sand fill underlain by a sandy clay layer, which extends vertically down to the limits of the soils investigation. The groundwater table was observed at a depth of approximately 5.0 feet below ground surface in soil boring SB-5.



NOT TO SCALE

SOIL TOTAL PETROLEUM HYDROCARBONS CONCENTRATION MAP
 SUPERIOR PLASTER CASTINGS, INC.
 OAKLAND, CALIFORNIA

SIMON-EEI Inc.

PROJECT NO: 513-779.01
 DATE: JUNE, 1991

FIGURE:
 4

Variations in subsurface conditions were noted in borings installed immediately adjacent to the site rail spur. In borings SB-7, SB-11, SB-13 and SB-19, the surface material to a depth of approximately one to two feet consisted of moderately coarse gravel fill. This material is believed to be part of the subgrade of the rail line. In borings SB-7, SB-11, and SB-13, perched water was encountered in the gravel fill. In boring SB-13, traces of apparent free hydrocarbon droplets were observed in the water-wet gravel at a depth of one foot.

Maximum soil gas readings in most borings were recorded at depths roughly coinciding with the base of the surficial sandy fill interval. Soil gas readings generally declined below that depth. Exceptions were borings SB-11, SB-12, SB-14, and SB-15, in which readings generally increased with depth.

9.0 CONCLUSIONS

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

- o Phase II findings indicate that various petroleum types are present in the effected soils in the area of investigation, and that the vertical extent of effected soils extends from surface to the water table. These findings suggest that site conditions may be the result of multiple surface spills.



APPENDIX A
BORING LITHOLOGIC LOGS

BORING: SB-5		FILE NAME: SB5	
PROJECT NAME: Superior Plaster Casting		PROJECT NO. 513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Portable Aug	
SCHEDULE		SAMPLING METHOD:	
INITIATED: 6-03-91	DEPTH: 5.0'		DRILLING CO: Simon-EEI
COMPLETED: 6-03-91	DATE: 6-03-91		DRILLED BY: Dahlstedt
BACKFILLED: 6-03-91	TIME: 5:00 pm		LOGGED BY: J. Whitney
GROUND ELEVATION: NA	BORING DEPTH: 9.0'		SHEET 1 OF 1

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	USCS	SYMBOL		
0	No Samples Taken				1.0	SM		SILTY SAND/FILL: Dark brown-gray; little to some silt; little fine to coarse gravel; trace rubble; trace metal fragments; moist; slight odor CLAY: Dark gray; trace silt; trace tarry material @ interface w/ silty sand fill; moist; slight odor @5' slight hydrocarbon odor @6' medium gray; trace fine to medium sand; very moist to wet; slight hydrocarbon odor	
					6.7	CL			
					7.1				
					3.2				
5					2.5				
					1.1				
					0.5				
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-6		FILE NAME: SB6	
PROJECT NAME: Superior Plaster Casting		PROJECT NO.513-779.01	
LOCATION/COORDINATES:		RIG TYPE:Portable Aug	
SCHEDULE		WATER LEVEL	
INITIATED: 6-04-91		DEPTH: NA	
COMPLETED: 6-04-91		DATE: NA	
BACKFILLED: 6-04-91		TIME: NA	
GROUND ELEVATION: NA		BORING DEPTH: 4.5'	
		SAMPLING METHOD:	
		DRILLING CO: Simon-EEI	
		DRILLED BY: Dahlstedt	
		LOGGED BY: J. Whitney	
		SHEET 1 OF 1	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	USCS	SYMBOL		
0					1.9	SM		SILTY SAND/FILL: Medium brown; very fine to medium; trace coarse sand to fine subangular gravel; little to some silt; trace tarry fragments @2' dark gray-brown; trace clay; little tarry material interspersed; dry to slightly moist; no to slight hydrocarbon odor @2.5' some tarry material; moderate hydrocarbon odor CLAY: Dark gray; trace fine sand; slight hydrocarbon odor; moist @3.5' very moist to wet @4.0' wet	
				15.1					
	SB6-1-			6.0	CL				
5	4.5			4.7					
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-7		FILE NAME: SB7	
PROJECT NAME: Superior Plaster Casting		PROJECT NO.513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Portable Aug	
SCHEDULE		SAMPLING METHOD:	
INITIATED: 6-04-91		DRILLING CO: Simon-EEI	
COMPLETED: 6-04-91		DRILLED BY: Dahlstedt	
BACKFILLED: 6-04-91		LOGGED BY: J. Whitney	
GROUND ELEVATION: NA		SHEET 1 OF 1	
		WATER LEVEL	
		DEPTH: 1.0'	
		DATE: 6-04-91	
		TIME: NA	
		BORING DEPTH: 1.5'	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	SAMPLE	NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	USCS		
0	No Samples Taken					0	GP	SANDY GRAVEL/FILL: Medium brown to dark gray downward; coarse to fine; little coarse to fine sand; sub- angular; water @1.0'	Unable to penetrate below 1.5'
5									
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-8

FILE NAME: SB8

PROJECT NAME: Superior Plaster Casting

PROJECT NO. 513-779.01

LOCATION/COORDINATES:

RIG TYPE: Portable Aug

SCHEDULE

WATER LEVEL

INITIATED: 6-04-91

DEPTH: NA

COMPLETED: 6-04-91

DATE: NA

BACKFILLED: 6-04-91

TIME: NA

SAMPLING METHOD:

DRILLING CO:
Simon-EEI

DRILLED BY: Dahlstedt

LOGGED BY: J. Whitney

GROUND ELEVATION: NA

BORING DEPTH: 2.5'

SHEET 1 OF 1

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS	
	S A M P L E	N U M B E R	D E P T H	T Y P E	B L O W S	O V M ppm	U S C S			S Y M B O L
0	No Samples Taken					0	SP	GRAVELLY SAND/FILL: Medium brown to dark gray-brown; fine to coarse; little subangu- lar fine gravel; trace silt; dry to moist SILTY SAND: Dark gray; little silt; trace fine gravel; slight to moderate hydrocarbon odor; very moist @1.5' asphaltic layer; soft @2.0' moderate hy- drocarbon odor @2.5' resistant layer	Unable to penetrate, below 2.5'
					0	SM			
5										
10										
15										
20										

SIMON-EEI Inc.

BORING: SB-9		FILE NAME: SB9	
PROJECT NAME: Superior Plaster Casting		PROJECT NO.513-779.01	
LOCATION/COORDINATES:		RIG TYPE:Portable Aug	
SCHEDULE		WATER LEVEL	
INITIATED: 6-04-91		DEPTH: NA	DRILLING CO: Simon-EEI
COMPLETED: 6-04-91		DATE: NA	DRILLED BY: Dahlstedt
BACKFILLED: 6-04-91		TIME: NA	LOGGED BY: J. Whitney
GROUND ELEVATION: NA		BORING DEPTH: 2.0'	SHEET 1 OF 1

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	S A M P L E	N U M B E R	D E P T H	T Y P E	B L O W S	O V M ppm	U S C S		
0	No Samples Taken					0	SM	<u>ASPHALTIC LAYER</u> <u>SILTY SAND/FILL:</u> Dark brown; fine to medium; little silt; trace fine to coarse gravel; slightly moist	Unable to penetrate below 2.0'
5									
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-10		FILE NAME: SB10	
PROJECT NAME: Superior Plaster Casting		PROJECT NO.: 513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Portable Aug	
SCHEDULE		SAMPLING METHOD:	
INITIATED: 6-04-91		DRILLING CO: Simon-EEI	
COMPLETED: 6-04-91		DRILLED BY: Dahlstedt	
BACKFILLED: 6-04-91		LOGGED BY: J. Whitney	
GROUND ELEVATION: NA		BORING DEPTH: 1.5'	
		SHEET 1 OF 1	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	USCS	SYMBOL		
0	No Samples Taken					SM	Co	SILTY SAND/FILL: Dark brown; fine to coarse; little silt; trace gravel; slightly moist	Unable to penetrate, below 1.5'
5									
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-11		FILE NAME: SB11	
PROJECT NAME: Superior Plaster Casting		PROJECT NO. 513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Mobile B-53	
SCHEDULE		WATER LEVEL	
INITIATED: 6-14-91	DEPTH: NA	SAMPLING METHOD: CS	
COMPLETED: 6-14-91	DATE: NA	DRILLING CO: Kvilhaug Drilling	
BACKFILLED: 6-14-91	TIME: NA	DRILLED BY: Crocker	
GROUND ELEVATION: NA	BORING DEPTH: 5.5'	LOGGED BY: J. Whitney	
		SHEET 1 OF 1	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	SAMPLE NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	USCS	SYMBOL		
0					7.1	GP	GRAVEL/FILL: Medium gray; fine to coarse; moist to wet GRAVELLY SAND/FILL: Dark gray; fine to coarse; little fine gravel; slight hydrocarbon odor; wet to moist CLAY: Dark gray-brown; moderate hydrocarbon odor @5.5' medium green-gray; and sand; moderate light hydrocarbon odor; possible free hydrocarbon on fracture planes; very moist	Perched water @ 1.0'
				70.0	SP			
5	SB11-5-5.5			20	128.0	CL	////		
10									
15									
20									

SIMON-EEL Inc.

BORING: SB-12		FILE NAME: SB12	
PROJECT NAME: Superior Plaster Casting		PROJECT NO. 513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Mobile B-53	
SCHEDULE		WATER LEVEL	
INITIATED: 6-14-91	DEPTH: NA	SAMPLING METHOD: CS	
COMPLETED: 6-14-91	DATE: NA	DRILLING CO: Kvilhaug Drilling	
BACKFILLED: 6-14-91	TIME: NA	DRILLED BY: Crocker	
GROUND ELEVATION: NA	BORING DEPTH: 5.5'	LOGGED BY: J. Whitney	
		SHEET 1 OF 1	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	SAMPLE NUMBER	DEPTH	TYPE	BLOWS	OV M PPM	USCS	SYMBOL		
0					4.7	GP	⋯	SANDY GRAVEL/FILL: Medium gray; little fine to coarse sand; moist CLAY: Medium to dark gray; slight hydrocar- bon odor; moist CLAYEY SAND: Dark gray to medium gray mottled; very moist	
					12.0	CL	▨		
5	SB12-6- 5.5			18	17.1	SC	▩		
10									
15									
20									

SIMON-EEL Inc.

BORING: SB-13		FILE NAME: SB13	
PROJECT NAME: Superior Plaster Casting		PROJECT NO. 513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Mobile B-53	
SCHEDULE		WATER LEVEL	
INITIATED: 6-14-91	DEPTH: NA	DRILLING CO: Kvilhaug Drilling	
COMPLETED: 6-14-91	DATE: NA	DRILLED BY: Crocker	
BACKFILLED: 6-14-91	TIME: NA	LOGGED BY: J. Whitney	
GROUND ELEVATION: NA	BORING DEPTH: 5.5'		SHEET 1 OF 1

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	SAMPLE NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	US CS	SY MBOL		
0						GP	•••••	SANDY GRAVEL/FILL: Medium brown; fine; subrounded to subangu- lar; fine to coarse sand; trace free hydro- carbon; moist to wet SANDY CLAY: Dark gray; little fine to coarse sand; trace free pro- duct droplets on wet outer surfaces of clay; moist to very moist @5.5' medium-gray to green-gray mottled; no odor; no free hydrocar- bon; very moist to wet	Perched water @ 1.5'
				19.7		CL	▨		
5	SB13-7- 5.5			20	3.8				
10									
15									
20									

SIMON-EEL Inc.

BORING: SB-14		FILE NAME: SB14	
PROJECT NAME: Superior Plaster Casting			PROJECT NO.: 513-779.01
LOCATION/COORDINATES:			RIG TYPE: Portable Aug
SCHEDULE		WATER LEVEL	
INITIATED: 6-04-91		DEPTH: NA	
COMPLETED: 6-04-91		DATE: NA	
BACKFILLED: 6-04-91		TIME: NA	
GROUND ELEVATION: NA		BORING DEPTH: 4.5'	
			SAMPLING METHOD:
			DRILLING CO: Simon-EEI
			DRILLED BY: Dahlstedt
			LOGGED BY: J. Whitney
			SHEET 1 OF 1

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	USCS	SYMBOL		
0									
5	SB14-2- 4.5				4.8 15.7 36.0	SM CL 	<p>SILTY SAND/FILL: Medium brown; fine to medium; little to some silt; trace fine gravel; slightly moist @1.0' dark gray-brown; fine to coarse; slight to heavy hydrocarbon odor</p> <p>CLAY: Dark gray; trace little silt; trace fine sand; moderate hydrocarbon odor; moist @4.0' medium to dark mottled; moderate hydrocarbon odor</p>		
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-15		FILE NAME: SB15	
PROJECT NAME: Superior Plaster Casting		PROJECT NO.513-779.01	
LOCATION/COORDINATES:		RIG TYPE:Portable Aug	
SCHEDULE		WATER LEVEL	
INITIATED: 6-04-91		DEPTH: NA	
COMPLETED: 6-04-91		DATE: NA	
BACKFILLED: 6-04-91		TIME: NA	
GROUND ELEVATION: NA		BORING DEPTH: 4.5'	
		SAMPLING METHOD:	
		DRILLING CO: Simon-EEI	
		DRILLED BY: Dahlstedt	
		LOGGED BY: J. Whitney	
		SHEET 1 OF 1	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	SAMPLE NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	USCS	SYMBOL		
0					5.7	SM		SILTY SAND/FILL: Medium brown to drk brown; fine to medium; little to some silt; trace coarse sand to fine gravel; slight hydrocarbon odor; trace tarry fragments; slightly moist to moist SILTY CLAY: Dark gray w/trace medium gray mottling; little silt; moderate hydrocarbon odor; moist to very moist	
				23.0	CL				
5	SB15-3-4.5				38.0				
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-16

FILE NAME: SB16

PROJECT NAME: Superior Plaster Casting

PROJECT NO.513-779.01

LOCATION/COORDINATES:

RIG TYPE:Portable Aug

SCHEDULE

WATER LEVEL

INITIATED: 6-04-91

DEPTH: NA

COMPLETED: 6-04-91

DATE: NA

BACKFILLED: 6-04-91

TIME: NA

SAMPLING METHOD:

DRILLING CO:
Simon-EEI



DRILLED BY: Dahlstedt

LOGGED BY: J. Whitney

GROUND ELEVATION: NA

BORING DEPTH: 4.5'

SHEET 1 OF 1

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	S A M P L E	N U M B E R	D E P T H	T Y P E	B L O W S	O V M ppm	U S C S		
0							SM	 SILTY SAND/FILL: Medium brown to dark brown; fine to medium; little silt; trace fine gravel; moist  SILTY CLAY; Dark gray; trace to little silt; slight hydrocarbon odor; moist to wet	
4.5	SB16-4-				6.2				
5					3.2		CL		
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-17		FILE NAME: SB17	
PROJECT NAME: Superior Plaster Casting		PROJECT NO.: 513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Mobile B-53	
SCHEDULE		WATER LEVEL	
INITIATED: 6-14-91		DEPTH: NA	
COMPLETED: 6-14-91		DATE: NA	
BACKFILLED: 6-14-91		TIME: NA	
GROUND ELEVATION: NA		BORING DEPTH: 6.5'	
		SAMPLING METHOD: CS	
		DRILLING CO: Kvilhaug Drilling	
		DRILLED BY: Crocker	
		LOGGED BY: J. Whitney	
		SHEET 1 OF 1	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	SAMPLE NUMBER	DEPTH	TYPE	BLOWS	O V M ppm	U S C S	S Y M B O L		
0					16.7	SM	[diagonal lines]	SILTY SAND/FILL: Medium brown to yellow-brown; fine to coarse, little silt; trace gravel; slightly moist SANDY CLAY: Dark gray; little sand; moist; no odor @5.0' medium gray to gray-green mottled; no odor; trace fine gravel; wet	
5	SB17-8-5.0			16	3.8	CL	[diagonal lines]		
					1.9				
10									
15									
20									

SIMON-EEL Inc.

BORING: SB-18		FILE NAME: SB18	
PROJECT NAME: Superior Plaster Casting		PROJECT NO. 513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Mobile B-53	
SCHEDULE		WATER LEVEL	
INITIATED: 6-14-91	DEPTH: NA	DRILLING CO: Kvilhaug Drilling	
COMPLETED: 6-14-91	DATE: NA	DRILLED BY: Crocker	
BACKFILLED: 6-14-91	TIME: NA	LOGGED BY: J. Whitney	
GROUND ELEVATION: NA	BORING DEPTH: 5.5'	SHEET 1 OF 1	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	NUMBER	DEPTH	TYPE	BLOWS	OV M ppm	USCS	SYMBOL		
0					168.0	GP		SANDY GRAVEL/FILL: Medium brown; fine to coarse; fine to coarse sand; slightly moist to moist SANDY CLAY: Medium gray to dark gray; trace to little fine to coarse sand; slight hydrocarbon odor; moist to very moist	
5	SB18-9-5.5			17	19.0	CL			
10									
15									
20									

SIMON-EEI Inc.

BORING: SB-19		FILE NAME: SB19	
PROJECT NAME: Superior Plaster Casting		PROJECT NO.513-779.01	
LOCATION/COORDINATES:		RIG TYPE: Mobile B-53	
SCHEDULE		WATER LEVEL	
INITIATED: 6-14-91	DEPTH: NA	SAMPLING METHOD: CS	
COMPLETED: 6-14-91	DATE: NA	DRILLING CO: Kvilhaug Drilling	
BACKFILLED: 6-14-91	TIME: NA	DRILLED BY: Crocker	
GROUND ELEVATION: NA	BORING DEPTH: 5.5'	LOGGED BY: J. Whitney	
		SHEET 1 OF 1	

DEPTH IN FEET	SAMPLE DATA					SOIL TYPE		SOIL DESCRIPTION	REMARKS
	SAMPLE NUMBER	DEPTH	TYPE	B L O W S	O V M ppm	U S C S	S Y M B O L		
0						GP	⋯	GRAVEL/FILL: Dark brown; coarse; trace sand; moist SANDY CLAY: Medium gray to green-gray downward; little to some fine to coarse sand; trace fine to coarse gravel; moist to very moist	
				9.0		CL	▨		
5	SB19-10 -5.5			21	4.7 3.8				
10									
15									
20									

SIMON-EEL Inc.

APPENDIX B

SOIL SAMPLES VAPOR SCREENING METHODOLOGY

APPENDIX B

SOIL SAMPLE VAPOR SCREENING METHODOLOGY

Presented below is the basic methodology for field screening of soil sample vapor. The screening is performed using an HNU Model P101 and/or Photo-Vac tip portable photo-ionization detector (PID) or a Foxboro OVA flame-ionization detector (FID). These detectors provide a non-discriminatory indication of the presence of a variety of organic compounds and can be used for relative quantification of organic compound presence. With this capability, the detectors serve as useful tools in the screening of soil samples in the field. The basic method for field screening of a soil sample with the detector is as follows:

1. The soil sample is removed from the sample tube or tip of the sampler and approximately one cubic inch is placed in a sealable polyethylene bag with a capacity of approximately 500 milliliters.
2. The sample is crushed through the walls of the bag to provide greater surface area for vapor outgassing.
3. Outgassing of the sample is allowed for approximately five minutes at ambient air temperature.
4. The bag is then pierced with the probe of the analyzer and the vapors are drawn out of the bag using the analyzer pump.
5. Readings are noted from the initial insertion to when the bag is collapsed. The sustained value for the reading is recorded unless there is moisture interference. In this case, the initial high reading is recorded before moisture interferences causes the reading to diminish.
6. If soil or excessive moisture is drawn into the instrument, the sample probe is thoroughly cleaned and air is passed through the system until the zero or background level is attained.
7. Readings are tabulated with the boring number and depth of the sample noted on the field log which is maintained by the on-site geologist.

APPENDIX C
LABORATORY REPORT AND
CHAIN OF CUSTODY FORMS

SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 83262
CLIENT: Simon-EEI Inc.
CLIENT JOB NO.: 513-779.01

DATE RECEIVED: 06/05/91
DATE REPORTED: 06/12/91

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS by Modified EPA SW-846 Method 8015

LAB #	Sample Identification	Concentration (mg/Kg)	
		Gasoline Range	Diesel Range
1	SB6-1-4.5	56**	220*
2	SB14-2-4.5	490	530*
3	SB15-3-4.5	220**	370*
4	SB16-4-4.5	ND<10	94*

*Not typical diesel pattern
**Not typical gasoline pattern

Method Detection Limit for Gasoline and Diesel in Soil: 10 mg/Kg

QAQC Summary:

Daily Standard run at 200mg/L: RPD Gasoline = 8
RPD Diesel = 8
MS/MSD Average Recovery = 109%: Duplicate RPD = 2

Richard Srna, Ph.D.


Laboratory Manager

OUTSTANDING QUALITY AND SERVICE

SUPERIOR ANALYTICAL LABORATORIES, INC.

825 ARNOLD, STE. 114 • MARTINEZ, CALIFORNIA 94553 • (415) 229-1512

DOHS #319

C E R T I F I C A T E O F A N A L Y S I S

LABORATORY NO.: 83362
CLIENT: Simon-EEI Inc.
CLIENT JOB NO.: 513-779.01

DATE RECEIVED: 06/17/91
DATE REPORTED: 06/24/91

ANALYSIS FOR PETROLEUM HYDROCARBONS by Method 9071/418.1

LAB #	Sample Identification	Concentration (mg/Kg) Petroleum Hydrocarbons
1	SB11-5-5.5	6200
2	SB12-6-5.5	2800
3	SB13-7-5.5	ND<50
4	SB17-8-5.0	ND<50
5	SB18-9-5.5	2500
6	SB19-10-5.5	ND<50

mg/kg - parts per million (ppm)

Method Detection Limit for Petroleum Hydrocarbons in Soil: 50 mg/Kg

QAQC Summary:

MS/MSD Average Recovery = 109%: Duplicate RPD = 4

Richard Srna, Ph.D.



Laboratory Manager

OUTSTANDING QUALITY AND SERVICE

SIMON-EEI Inc.

536 STONE ROAD, Suite J
 BENICIA, CALIFORNIA 94810 (707) 747-9677

CHAIN OF CUSTODY RECORD

LABORATORY: SEND: JOHN WHITNEY	PROJECT NO. 513-779.01	PURCHASE ORDER NO.
SAMPLERS:(signature) <i>John Whitney</i>		
Phone No. (707) - 747-9611 (fax)		

SAMPLE NO.	DATE	TIME	ANALYSES REQUESTED												Number of Containers	REMARKS	
SB6-1-4.5	6/4/91														✓	1	Please call to confirm analysis
SB14-2-4.5															✓	1	
SB15-3-4.5															✓	1	
SB16-4-4.5															✓	1	
												4					

PINK COPY: SAMPLER RETAINS YELLOW COPY: LABORATORY COPY
 WHITE COPY: LABORATORY SIGNS AND RETURNS WITH ANALYTICAL RESULTS

TOTAL NUMBER OF CONTAINERS 4

Relinquished by:(signature) <i>John Whitney</i>	Received by:(signature)	Date/Time
Relinquished by:(signature)	Received by:(signature)	Date/Time
Relinquished by:(signature)	Received by:(signature)	Date/Time
Relinquished by:(signature)	Received for laboratory by:(signature) <i>[Signature]</i>	Date/Time 6/4/91 11:00

SIMON-EEI Inc.

538 STONE ROAD, Suite J
 BENICIA, CALIFORNIA 94510 (707) 747-9677

CHAIN OF CUSTODY RECORD

Job # 83362

LABORATORY: <i>Superior Analytical Labs, Inc.</i>	PROJECT NO. <i>513-779.01</i>	PURCHASE ORDER NO.
<i>825 Arnold St. Suite 114</i>	SAMPLERS:(signature) <i>[Signature]</i>	
<i>Marinez, CA 94553</i>	Phone No. <i>(707) 247-9577</i>	

SAMPLE NO.	DATE	TIME	ANALYSES REQUESTED												Number of Containers	REMARKS			
			1	2	3	4	5	6	7	8	9	10	11	12					
<i>SB11-5-5.5</i>	<i>6/14/91</i>	<i>1:00P</i>	<i>418.1</i>	✓														<i>1</i>	<i>soils</i>
<i>SB12-6-5.5</i>				✓														<i>1</i>	
<i>SB13-7-5.5</i>				✓														<i>1</i>	
<i>SB17-8-5.0</i>				✓														<i>1</i>	
<i>SB18-9-5.5</i>				✓														<i>1</i>	
<i>SB19-10-5.5</i>	<i>↓</i>	<i>↓</i>		✓														<i>1</i>	

Please Initial: *BW*

Samples stored in ice: *BW*

Appropriate containers: *BW*

Samples preserved: *BW*

VCA's without headspace: *BW*

Comments:

PINK COPY: SAMPLER RETAINS YELLOW COPY: LABORATORY COPY

WHITE COPY: LABORATORY SIGNS AND RETURNS WITH ANALYTICAL RESULTS

TOTAL NUMBER OF CONTAINERS: *6*

Relinquished by:(signature) <i>[Signature]</i>	Received by:(signature)	Date/Time <i>6/17/91 11:2</i>
Relinquished by:(signature)	Received by:(signature)	Date/Time
Relinquished by:(signature)	Received by:(signature)	Date/Time
Relinquished by:(signature)	Received for laboratory by:(signature) <i>F Taracila</i>	Date/Time <i>6/17/91 11</i>