

R. William Rudolph, Jr., PE
Thomas E. Cundey, PE
Jeriann N. Alexander, PE

ENVIRONMENTAL
PROTECTION
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January 9, 1995
SCI 469.009

Ms. Juliet Shin
Alameda County Health Care Services Agency
80 Swan Way, Room 200
Oakland, California 94621

Workplan
Soil and Groundwater Investigation
College of Alameda - Building B Area
555 Atlantic Avenue
Alameda, California

Dear Ms. Shin:

This letter presents a workplan prepared by Subsurface Consultants, Inc. (SCI) to conduct a soil and groundwater investigation at the referenced site. SCI previously provided environmental engineering services during the removal of five underground storage tanks, conducted a groundwater investigation, and performed quarterly groundwater monitoring since 1991. Results of tank removal and the groundwater investigation were presented in reports dated October 31, 1991 and April 3, 1992. The most recent monitoring event letter is dated October 27, 1995.

BACKGROUND

Groundwater monitoring events have shown elevated levels of extractable hydrocarbons in two of the wells situated near a former waste oil tank (MW-3 and MW-5). However, the source of extractable hydrocarbons does not appear to be former tank releases, since soil samples obtained following waste oil tank removal contained relatively low, (i.e. less than 60 mg/kg) extractable hydrocarbon concentrations.

In 1994, SCI observed the removal of three underground hydraulic hoists from inside Building B, situated east of the former tank area. Elevated concentrations of extractable hydrocarbons were detected in two grab groundwater samples obtained from the area of the former hoists. Data generated to date suggests that the contamination observed in wells MW-3 and MW-5 may be associated with

Subsurface Consultants, Inc.

171 12th Street • Suite 201 • Oakland, California 94607 • Telephone 510-268-0461 • FAX 510-268-0137

Ms. Juliet Shin
Alameda County Health Care Services Agency
January 9, 1996
SCI 469.009
Page 2

releases from the former hoists rather than from the former waste oil tank. A site plan, showing location of existing wells is presented on Plates 1 and 2.

On October 25, 1995, SCI and Mr. Robert Mibach of the Peralta Community College District met with you to discuss investigation findings and the potential to obtain site closure. Data generated to date appears to indicate the impacts due to former tank releases are minimal. However it was understood that to attain site closure additional study would be required to evaluate the extent of contamination related to the former hoists. This work plan has been prepared by SCI to provide additional study.

WORK PLAN

To further evaluate site conditions it is proposed to perform the following tasks:

- Task 1 - Investigate the Extent of Hydraulic Fluid Impacts
- Task 2 - Additional Groundwater Monitoring Event
- Task 3 - Site Specific Risk Assessment
- Task 4 - Engineering Analysis and Report Presentation

Task 1 - Investigate Hydraulic Hoist Releases

Subsurface conditions will be evaluated by drilling and sampling 6 test borings approximately 10 to 20 feet deep. Four (4) of the borings will be located within the building and two will be located outside the north side of the building, as shown on Plate 2. Prior to drilling, a permit will be obtained from the Alameda County Flood Control and Water Conservation District (Zone 7).

The borings will be continuously sampled using a cuttingless sampling system. SCI's field engineer/geologist will observe drilling operations and prepare detailed logs of the soils encountered. Soil samples will be frequently retained in stainless steel or brass tubes. The samples will be refrigerated until transmitted to the analytical laboratory. Soil cuttings will be screened in the field using an organic vapor meter.

Upon completion of soil sampling, a 1-inch diameter machine slotted well screen will be placed into the borings to facilitate collection of groundwater samples. Approximately 3 volumes of water will be removed from the casings prior to sampling. Water samples will be retained using new disposable bailers and will be placed in appropriate containers supplied by the laboratory. Following sample collection, the casings will be removed and all the borings will be backfilled with cement grout.

Ms. Juliet Shin
Alameda County Health Care Services Agency
January 9, 1995
SCI 469.009
Page 3

Selected soil and groundwater samples will be transmitted to Curtis & Tompkins, Ltd., an analytical laboratory certified by the State of California Department of Health Services. For estimating purposes, SCI proposes analyzing 1 soil and water sample from each boring/temporary well. The samples will be analyzed for the following:

1. Total extractable hydrocarbons (TEH), using EPA Methods 3550/8015 modified, and
2. Oil and grease, (O&G) using SMWW 5520,

Drilling and sampling equipment will be steam cleaned prior to each use. Steam cleaning water, purge water and any soil cuttings will be contained in 55 gallon drums and left on-site for later disposal. Based on previous analytical data obtained from the site, it is assumed that the soil can be disposed of as a non-hazardous material and that the water can be recycled at facilities in the Bay Area. SCI will coordinate the removal of the drums and follow-up on disposal.

Task 2 - Additional Groundwater Monitoring Event

Concurrent with the hoist investigation, the existing wells MW-1 through MW-5 will be purged and sampled. Groundwater levels will be measured in the wells prior to purging the wells of at least 3 well volumes. When the wells have recharged to at least 80 percent of their original volume, groundwater samples will be obtained using disposable, pre-cleaned bailers. Water samples will be placed in pre-cleaned containers and refrigerated until delivery to the analytical laboratory. Water generated during sampling will be placed in 55 gallon drums and left on-site for later disposal as described below. The water samples will be analyzed for TEH, O&G, total dissolved solids, polynuclear aromatic hydrocarbons and dissolved oxygen.

Task 3 - Site Specific Risk Assessment

SCI will perform a site specific risk assessment of the tank and hoist area in accordance with the Risk-Based Corrective Action (RBCA) analysis process outlined in ASTM E 17-39. Applicable site constraints and parameters will be incorporated into the analysis.

Ms. Juliet Shin
Alameda County Health Care Services Agency
January 9, 1996
SCI 469.009
Page 4

Task 4 - Engineering Analysis and Report Preparation

Based on the studies described herein, SCI will develop conclusions regarding:

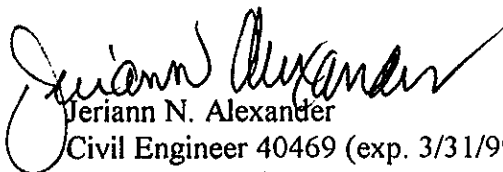
1. Soil and groundwater conditions;
2. Groundwater gradient and flow direction;
3. The presence of the tested for contaminants in the samples analyzed;
4. The significance of contaminant levels with respect to state and local regulatory criteria;
5. The environmental fate of the contaminants of concern; and
6. Risks associated with the contaminants of concern detected at the site.

SCI will discuss the results of the studies with the ACHCSA and determine whether the ACHCSA will consider the site for closure. The results of the studies will then be presented in a written report. The report will include a site plan, boring logs, analytical test data, Chain-of-Custody Records and either a petition for site closure, if appropriate, or the scope of additional investigation if required by the ACHCSA.

SCI appreciates the opportunity to present this workplan and would be pleased to discuss it with you. If you have any questions, please call.

Yours very truly,

Subsurface Consultants, Inc.



Jeriann N. Alexander

Civil Engineer 40469 (exp. 3/31/99)
Registered Environmental Assessor 03130 (exp. 6/30/96)

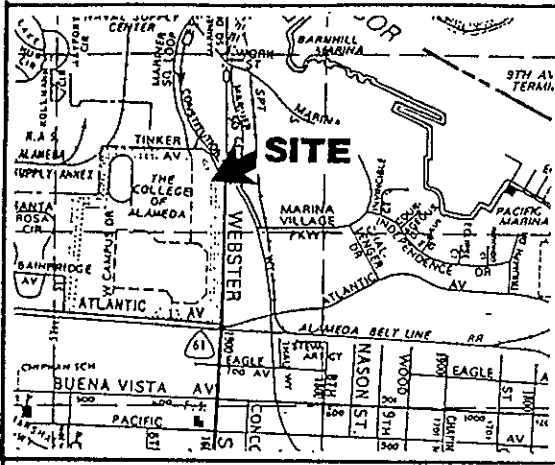
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Ms. Juliet Shin
Alameda County Health Care Services Agency
January 9, 1995
SCI 469.009
Page 5

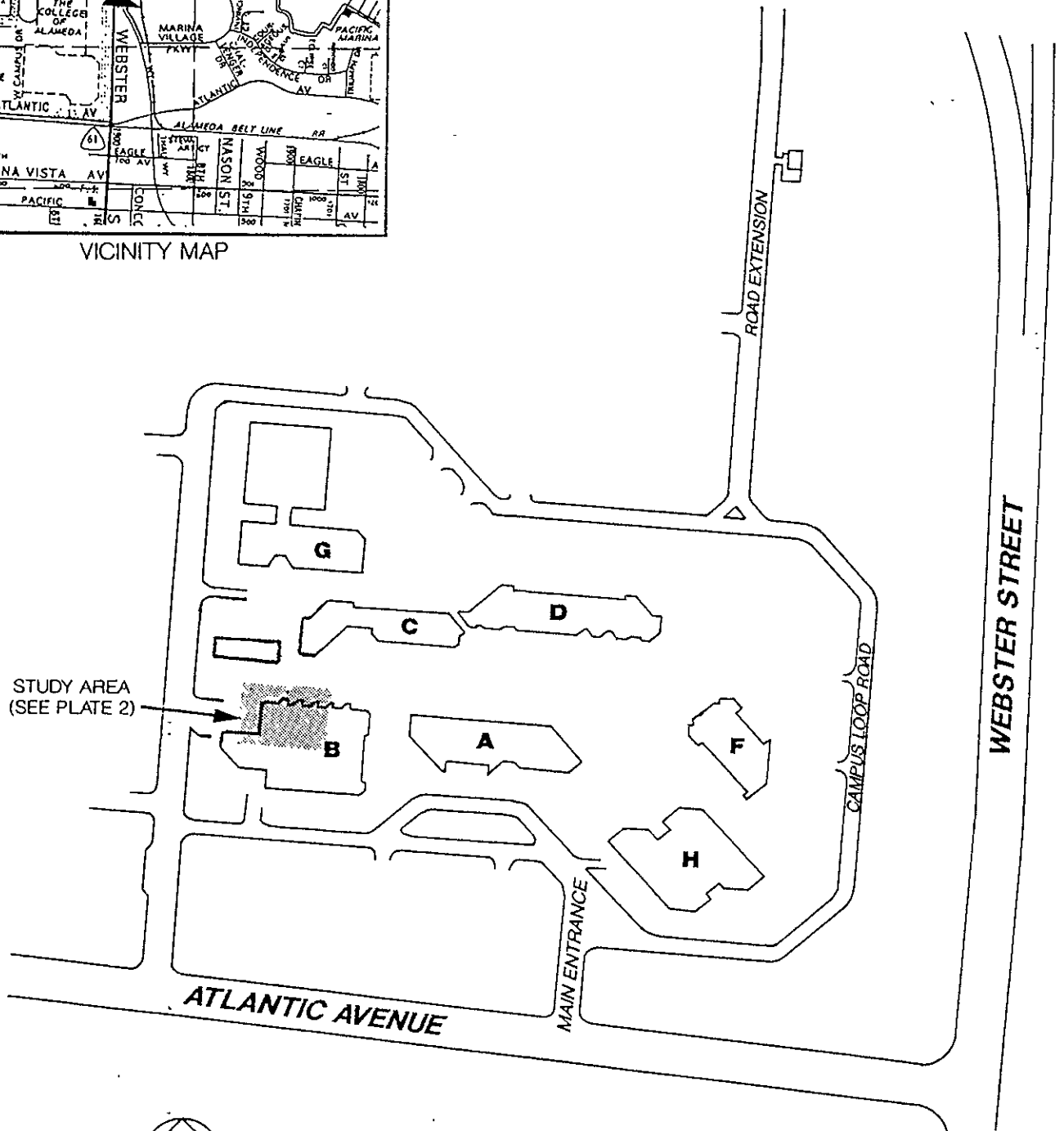
2 copies submitted

cc: Mr. Robert Mibach
Director of Physical Plant
Peralta Community College District
333 East 8th Avenue
Oakland, California 94606

Attachments: Plate 1 - Site Plan
Plate 2 - Study Area Plan



VICINITY MAP



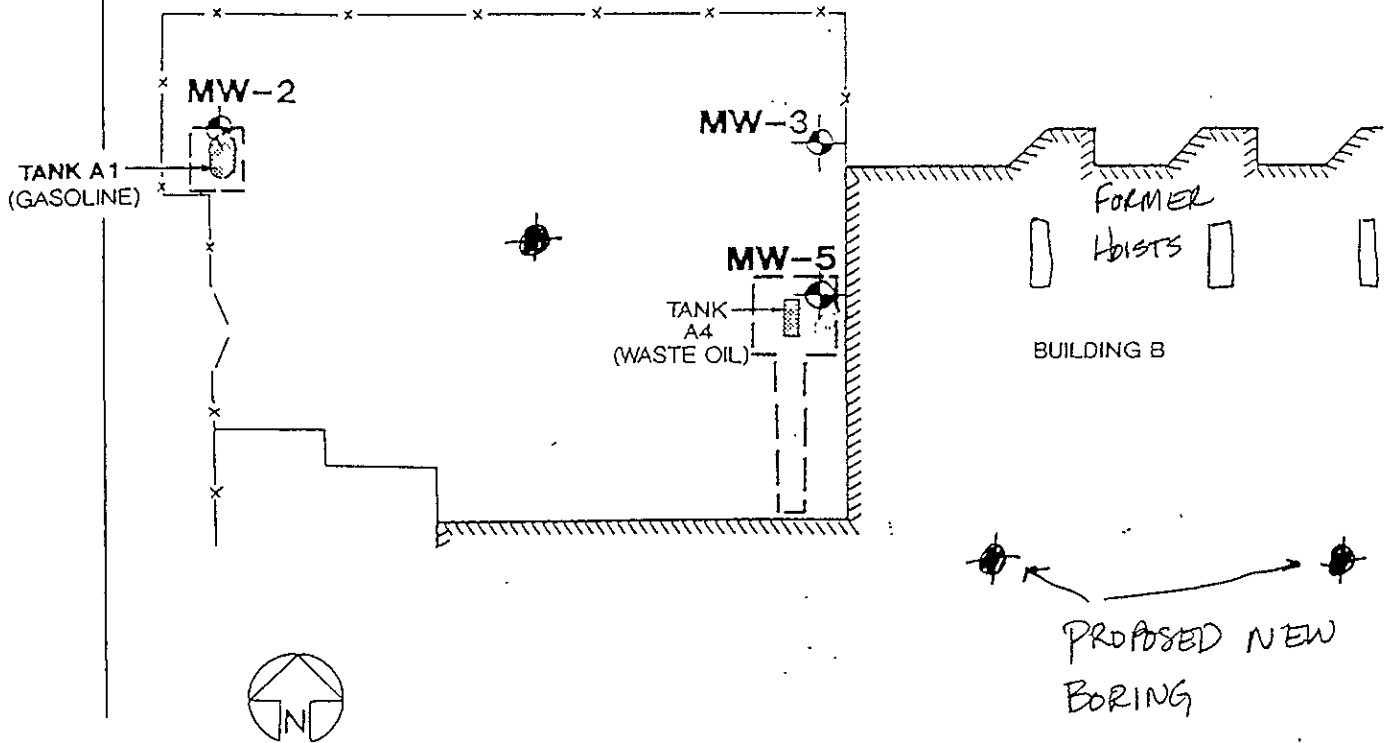
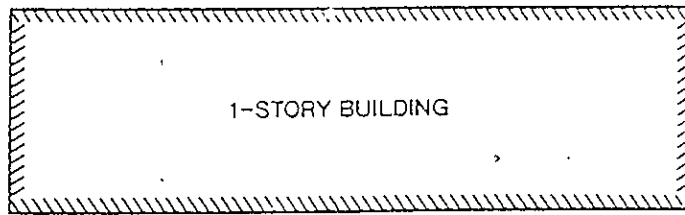
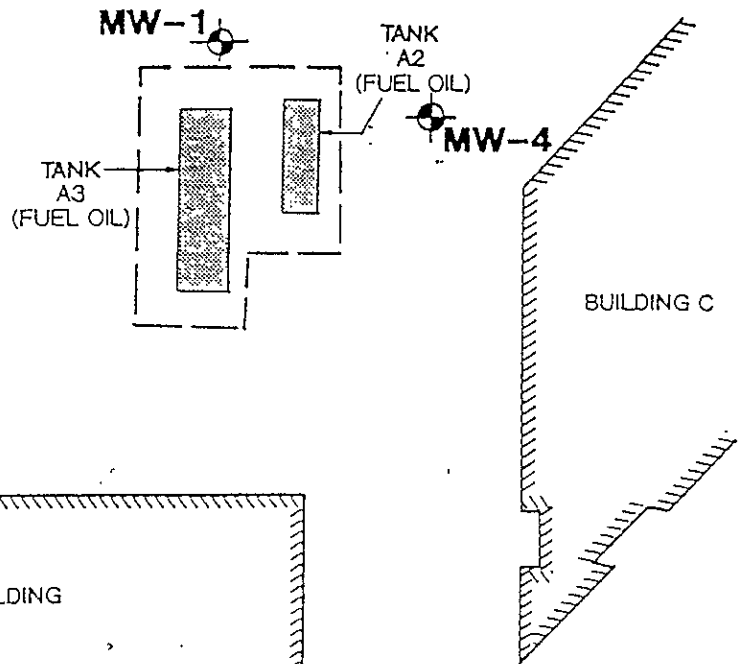
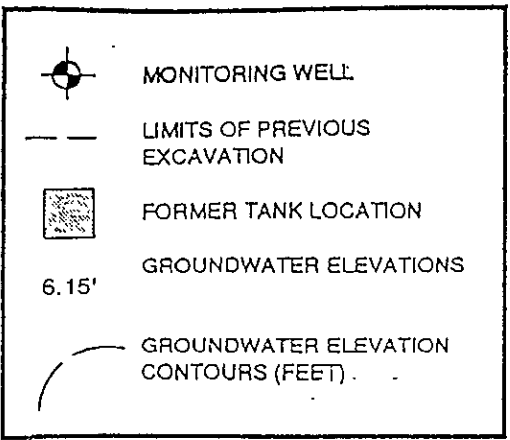
APPROXIMATE SCALE (feet)



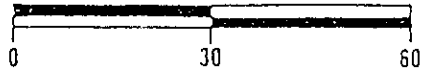
SITE PLAN

Subsurface Consultants

COLLEGE OF ALAMEDA - ALAMEDA, CA			PLATE
JOB NUMBER	DATE	APPROVED	1
469.010	9/21/94	uw	



APPROXIMATE SCALE (feet)



STUDY AREA PLAN

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COLLEGE OF ALAMEDA - ALAMEDA, CA

JOB NUMBER

DATE

APPROVED

MW

PLATE

2