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Work Plan for Further Soil Characterization, Harrison Street Garage Site, 1432 - 1434 Harrison Street, Oakland, California

> December 15, 1992 2680.04

Prepared for Alvin H. Bacharach and Barbara J. Borsuk 383 Diablo Road, Suite 100 Danville, California 94526



# **LEVINE** FRICKE



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ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

December 14, 1992

LF-2680.04

Mr. Paul Smith Senior Hazardous Materials Specialist Alameda County Health Care Services Agency Division of Hazardous Materials 80 Swan Way, Room 200 Oakland, California 94612

Subject: Work Plan for Further Soil Characterization, Harrison Street Garage Site, 1432 - 1434 Harrison Street, Oakland, California

Dear Mr. Smith:

On behalf of Mr. Alvin H. Bacharach and Mrs. Barbara J. Borsuk, Levine Fricke has prepared the enclosed work plan for further soil characterization near two fuel underground storage tanks (USTs) at the Harrison Street Garage site in Oakland, California.

As you know, previous soil and ground-water investigations have been performed at this site by Subsurface Consultants, Inc., SCS Engineers, Inc., and RGA Environmental, Inc. While these investigations have provided valuable data concerning site soil and ground-water quality, it is our opinion that the second state of the second state of the second state of the second state of the shallow ground-water elevation, lateral and vertical extent of affected soils, and geotechnical properties of soils around the tanks are insufficient. Instate of soils around the tanks are insufficient. Instate of the substate of the state of the

> 1900 Powell Street, 12th Floor Emeryville, California 94608 (510) 652-4500 Fax (510) 652-2246

### **LEVINE-FRICKE**

We will finalize and implement the enclosed work plan for further soil characterization after we have received and incorporated your comments and obtained your approval on behalf of the ACDEH. If you have any questions or comments, please call either of the undersigned.

Sincerely,

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John Sturman, P.E. Senior Geotechnical Engineer

michael Stoll

Michael Stoll Project Engineer

Enclosure

cc: Alvin H. Bacharach Barbara J. Borsuk Mark Thomson, Esq., Alameda County District Attorney's Office Randall D. Morrison, Crosby, Heafey, Roach & May Craig S. J. Johns, Crosby, Heafey, Roach & May Mark Borsuk, Esq.

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FIGURE 2: SITE PLAN SHOWING UNDERGROUND STORAGE TANKS IN HARRISON STREET SIDEWALK AND PROPOSED BORING LOCATIONS

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December 15, 1992

LF-2680.04

### WORK PLAN FOR FURTHER SOIL CHARACTERIZATION HARRISON STREET GARAGE SITE 1432-1434 HARRISON STREET, OAKLAND, CALIFORNIA

#### INTRODUCTION

On behalf of Mr. Alvin H. Bacharach and Mrs. Barbara J. Borsuk, Levine-Fricke has prepared this work plan for further soil characterization near two fuel underground storage tanks (USTs) at the Harrison Street Garage site in Oakland, California ("the Site"; Figure 1). The Site currently contains four USTs, some hydraulic lifts, and an alleged sump. U.S. Some hydraulic lifts, but the state of the state of

#### OBJECTIVES

The objectives of the proposed activities are as follows:

- · assessed in the second second level and the there is on starting of the second second
- assess the second construction around the second se

Data collected during this investigation will be used to develop a detailed plan for UST removal and remediation of affected soils.

#### BACKGROUND

The Site currently is operated as a parking garage. Before its current use, the Site also served as an automobile service facility, which included retail gasoline sales. Presently, four USTs remain at the Site, including transmission 1.000 realized in the Site located in the second second

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USTs located in the basement near Alice Street. We understand that the USTs currently are not in use. The USTs adjacent to Harrison Street are reported to have previously contained motor fuel (gasoline and possibly diesel) and the USTs near Alice Street contained waste oil. Additionally, a fuel dispenser, two hydraulic lifts, and one former sump are located within the parking garage. The former sump are located within the parking garage. The former is the former of the two forms is lift, and one former is the former is a second because from the Site in response to a request from the Alameda County Department of Environmental Health (ACDEH).

Previous investigations of the area surrounding the subject USTs have been performed by Subsurface Consultants, Inc., SCS Engineers, Inc., and RGA Environmental, Inc. (RGA). These investigations indicated hydrocarbons identified as gasoline (and possibly diesel) were present in soil samples collected near the Harrison Street USTs. However, the second second

#### RATIONALE FOR SOIL BORING LOCATIONS

The lateral and vertical extent of hydrocarbon-affected soils around the USTs should be well-defined to enable removal of accessible affected soils during UST removal. Because removal of the USTs will require the use of sheeting or shoring to support the excavation walls, sidewalk, street, and adjacent underground utilities, **definitional field and manual** field of these **definition** apport of Additionally, shallow groundwater elevation, which may be locally elevated based on existing data, should be assessed to evaluate the potential that ground water will enter the excavation during UST removal, which may cause the USTs to "float" during removal.

Although the extent of affected soils has not been fully defined in the vicinity of the waste-oil USTs, the hydraulic lifts, the sump, or the fuel dispenser, it is our opinion that additional soil characterization in these areas is not warranted at this time for UST closure. The waste-oil USTs

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appear to be surrounded by a concrete vault, the extent of which has not been assessed. This vault may serve to contain affected soils and could be damaged if drilling activities for this further soil characterization investigation were conducted near it.

#### SCOPE OF WORK

To supplement the soil-quality data collected during these previous investigations and to better assess the lateral and vertical extent of petroleum-affected soils, Levine.Fricke proposes to drill USTS **Control Control Control** Proposed drilling locations are shown on Figure 2. We expect that these **Control Control C** 

Following review of the data obtained, a work plan for UST removal (which will include the hydraulic lifts and the sump) will be prepared and submitted to the ACDEH, assuming that additional soil characterization is unwarranted. The work plan will outline UST, sump, hydraulic lift, and fuel dispenser removal activities in addition to methods for soil sampling and analyses.

During previous activities at the Site, a Health and Safety Plan (HSP) for removal of the tanks was prepared by RGA. Subsequently, Long, and the tanks was prepared by RGA. As indicated in Task 1, a second by the tanks of the tanks How the tanks of tanks of the tanks of tan

The proposed scope of work for further soil characterization includes the following specific tasks:

Task 1: Development and Implementation of an Addendum to the Site Health and Safety Plan Task 2: Permitting for Drilling Soil Borings Task 3: Verification of Utility Locations Task 4: Drilling Task 5: Observation of Drilling Activities Task 6: Laboratory Testing Task 7: Reporting

These tasks are described in more detail below.

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+15 plan should include

#### Task 1: Development and Implementation of an Addendum to the Site Health and Safety Plan

In accordance with Occupational Safety and Health Administration (OSHA) guidelines, a second addendum to the previously developed and approved HSP will be prepared for drilling activities. This addendum will include an analysis of hazards that may be encountered by on-site workers conducting the proposed drilling activities and outline precautions to reduce the potential risks to workers from the identified hazards. Possible chemical exposure pathways will be evaluated and appropriate means of worker protection will be outlined.

### Task 2: Permitting for Drilling Soil Borings

Levine-Fricke will coordinate with the **Approximate Sector** to obtain required permits for the subject work before initiating field activities. Based on our experience, an encroachment permit will be required by the City of Oakland for drilling in Harrison Street, and an excavation permit will be needed for drilling in the sidewalk. In addition, an Alameda County Zone 7 Drilling Permit will be required for the soil borings.

#### Task 3: Verification of Utility Locations

Levine-Fricke will outline the proposed drilling locations with white paint and notify Underground Service Alert (USA) two days before start of field work. Additionally, a private underground utility location service will be subcontracted by Levine-Fricke to provide more information regarding underground utility lines near the proposed soil borings before commencement of drilling.

#### Task 4: Drilling

The three soil borings will be drilled by a California C-57licensed drilling contractor using a truck-mounted rig in the approximate locations shown on Figure 2. The second second

The e borings will be determined in the field based on soil conditions encountered and the depth to ground water.

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sompled for?

Modified California spirt-based complet. In this method, soil samples are collected in clean brass liners that are inserted in the sample barrel. After removing the barrel, the samples will be inspected in the tubes. To retain the tubes, the ends of the tubes will be capped, sealed, labeled, and placed in a chilled ice chest.

Soil cuttings generated during drilling will be stored on site divers or site in sealed 55-gallon drums. Warning stickers will be affixed to the drums stating: "Caution, Waste Soils, Do Not Handle" and the generator's name, site location, date, and boring number. We anticipate that the drill cuttings can be disposed of with soils excavated during UST removal activities. Drill augers will be steam cleaned before being brought to the Site and on site after drilling has been completed. Steam-cleaning water will be collected in a trough and stored on site in 55-gallon drums labeled "Caution, Wastewater, Do Not Handle." Water disposal options will be evaluated, and the water will be disposed of, after soil-quality results are obtained.

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#### Task 5: Observation of Drilling Activities

A Levine-Fricke geotechnical engineer will observe drilling, record soil lithology encountered, note ground-water conditions, screen soil samples for volatile hydrocarbons, and collect soil samples for chemical and geotechnical analyses. Drill cuttings and soil samples collected will be screened for volatile organic compounds using a field flame ionization detector the which measures the total volatile organics in air. Approximately four soil samples will detected to an environmental laboratory for hydrocarbon analysis described under Task 6. Additionally, which geotechnical laboratory for

The soil borings will be left open for approximately three hours to measure the static ground-water level. The depth to ground water will be measured by a Levine-Fricke engineer using an electric water-level probe.

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1 grand water data

3.81, 1.55,

8.29 000

56 pph benz

#### Task 6: Laboratory Testing

Previous soil chemical data indicate that the hydrocarbons detected in soil in the vicinity of the Harrison Street USTs are primarily gasoline, but some diesel has been detected. And the inclusion modified EPA Method 8015. Accordingly while soll annuals will be conducted need to look for Total Pb based on borings Analyses will be conducted by a state-certified laboratory.

Samples will be submitted for analysis based on FID readings, cited in soil lithology, and existing soil-quality data to better RGA, PSA assess the lateral and vertical extent of petroleum-affected soils. Hen12,1992

Additionally, to provide data to the structural engineer who REA will design the shoring or sheeting, two soil samples will be report tested for grain-size analyses, and five samples will be  $A_{demanded}$ Ascomented tested for in situ moisture content and dry density in 2.4 ppb bromodichlandin Levine Fricke's geotechnical laboratory. 30. pph chloroform

#### Task 7: Reporting

in gronducter The methods used and results obtained for soil characterization activities described herein will be presented in an appendix included in the work plan for UST removal. 35.2 ppn TOO Soil boring logs, a table presenting soil chemical data obtained, and laboratory certificates will be included.

#### LEVINE-FRICKE PROJECT MANAGEMENT

Mr. John Sturman, P.E., Senior Geotechnical Engineer, will be the overall project manager for this project. As such, Mr. Sturman will be the primary contact for the ACDEH.

Mr. Michael Stoll, Project Geotechnical Engineer, will coordinate field operations and interface with contractors and subcontractors. He will also oversee the field activities and assist with data analysis and report preparation.

Mr. Ted Splitter, P.E., Principal Geotechnical Engineer, will provide review of the technical and regulatory compliance aspects of the project.

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#### ESTIMATED SCHEDULE

Levine.Fricke estimates that permitting from the City of Oakland will require at least two weeks and perhaps as much as six weeks. Thus, we expect determined the second of the second of the available within two to three weeks after drilling, assuming normal seven- to ten-working-day turnaround. After obtaining laboratory results, if an additional phase of field work is deemed necessary, such field work will be discussed with the ACDEH. However, if the results are deemed appropriate to proceed with a UST closure plan, a work plan for UST closure subsequently will be submitted to the ACDEH.



SOURCE: Thomas Bros. map. Alameda County



Figure 1 : SITE VICINITY MAP

Project No. 92P-431K

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