



ATC Associates Inc.
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Alameda County

March 18, 2011
54.25026.0001

MAR 22 2011

Environmental Health

COPY

Mr. Keith Matthews
City of Oakland Fire Department
Certified Unified Program Agency (CUPA)
250 Frank H. Ogawa Plaza, Suite 3341
Oakland, CA 94612

Subject: Subsurface Investigation Workplan, Salvation Army, 601 Webster Street,
Oakland, California

Dear Mr. Matthews:

ATC Associates Inc. (ATC) has prepared this workplan, on behalf of Salvation Army to conduct a subsurface investigation at the above referenced site. The purpose of the investigation is to evaluate the presence of from petroleum hydrocarbon impacted soil and/or groundwater beneath the site. This work was the result of residual hydrocarbons detected in soil samples collected during underground tank removal activities on November 22 and 23, 2010.

The scope of work includes advancing five soil borings, collecting soil and groundwater samples; analyzing of soil and water samples; comparing analytical results to the Environmental Screening Levels (ESLs) as provided by the California Regional Water Quality Control Board (RWQCB) San Francisco Bay Region; and preparing a summary report detailing site activities. The scope of work is described in detail in the following paragraphs.

SITE LOCATION

The site is located at 601 Webster Street in Oakland, California, as shown on Figure 1. Principal land use in the vicinity of the site consists of commercial properties including restaurants, a hotel, and several gas stations.

BACKGROUND

The site is developed as warehouse and distribution center for The Salvation Army. According to verbal information provided by the The Salvation Army, one or more underground fuel storage tanks (USTs) of unknown size were removed from the site in approximately 2000. A visual soil investigation was performed following the removal and the pit was aerated before two new USTs were installed.

In 2010, The Salvation Army made the decision to discontinue on-site fueling operations and remove the tanks and dispenser equipment from the site (Figure 2). Excavation and removal of a 12,000-gallon capacity diesel UST and an 8,000-gallon gasoline UST and the former fuel dispensers was started on November 22, 2010, and completed on November 23, 2010, by Terry Hamilton, Inc. The two tanks were triple rinsed and inerted with dry ice, tested and



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certified non-hazardous by a Marine Chemist, and loaded onto a flatbed truck and transported to Stanislaus County on November 23, 2010 for use as non-potable water tanks in a fire-suppression system. The tanks appeared to be in good condition, with no visible holes or signs of leakage. Analysis of soil samples collected from the UST pit indicated that petroleum hydrocarbons were present.

SCOPE OF WORK

Planning and Permitting

ATC will schedule field personnel and equipment, notify Underground Services Alert to locate underground utilities as required, and perform other necessary field preparation and job start-up activities. A private utility locating service will also be used to locate underground utilities that may be present in the work areas, especially in the public right of way. ATC will obtain the necessary Alameda County Public Works Agency-Water Resources drilling permits for the advancement of five soil borings.

Advancement of Soil Borings

To evaluate the horizontal extent of impacted soil and groundwater at the site, five Geoprobe® borings will be advanced to first encountered groundwater, estimated to be at approximately 16 to 25 feet bgs. This task includes mobilization to the site, advancing six soil borings, characterizing soil cuttings, collecting groundwater samples and backfilling the borings with neat cement. Estimated boring locations are shown on **Figure 2**.

The borings will be advanced using a truck mounted Geoprobe® narrow diameter, direct push technology. Drilling will be conducted by a State-licensed (C57) drilling company. A field geologist will be present to log the soil samples. Descriptions of soil types encountered and sample collection intervals will be recorded on boring logs. Soil samples will be collected at five-foot intervals, field screened with a Photo Ionization Detector (PID) or similar instrument, and an estimated one or two samples from each of the borings will be submitted for laboratory analyses. Soil sample selection will be based on PID measurements and field observations (i.e. odor and soil discoloration).

One groundwater sample will be collected from each boring at the depth groundwater is first encountered, anticipated to be approximately 16 to 25 feet bgs. A Geoprobe® Screen Point 15 Groundwater Sampler will be threaded onto the leading end of the Geoprobe® when the groundwater is encountered. While the sampler is advanced, O-ring seals and an expendable drive point will provide a watertight system to ensure sample integrity.

When the tool has been advanced to the desired depth, extension rods will be sent downhole to brace the bottom of the sample screen as the tool casing is retracted. When the casing is retracted, up to 41-inches of screen with slot sizes of 0.004 inches will be exposed. Teflon® tubing with a check valve attached to one end will be inserted down the casing until it is immersed in groundwater. Water will then be pumped through the tubing and to the ground surface by oscillating the tubing up and down. Following soil and groundwater sample



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collection, the borings will be backfilled with neat cement grout to the ground surface. All drill cuttings, if any, will be stored on-site in a 5-gallon container pending laboratory results.

Chemical Analyses

The soil and groundwater samples from the soil borings will be immediately placed in a cooler with ice and delivered under chain-of-custody documentation to a State-certified analytical laboratory. Soil and groundwater samples will be analyzed for total petroleum hydrocarbons as gasoline (TPHg) by method 8015M; benzene, toluene, ethyl benzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), tertiary amyl methyl ether (TAME), 1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2-DCA), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), and tertiary butyl alcohol (TBA) by EPA method 8260B.

Report Preparation

Upon receipt of the analytical data from soil and groundwater samples collected from the on-site soil borings, ATC will provide City of Oakland Fire Department CUPA copies of the analytical data and make recommendations for a further course of action, if warranted.

Upon completion of the subsurface investigation activities and contingency activities, a summary report will be prepared and will include a description of field activities, boring/well logs, data presented in tabular form, isoconcentration maps depicting the estimated horizontal extent of petroleum impacted soil and groundwater.

Projected Schedule

Once approval of this workplan has been received, ATC will confirm a schedule for drilling activities. ATC will notify City of Oakland Fire Department CUPA at least 48 hours prior to beginning any field activities. The summary report will be submitted to City of Oakland Fire Department CUPA approximately 60 days following the completion of all field activities.



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If you have any questions or require additional information regarding this workplan, please contact us at (209) 579-2221.

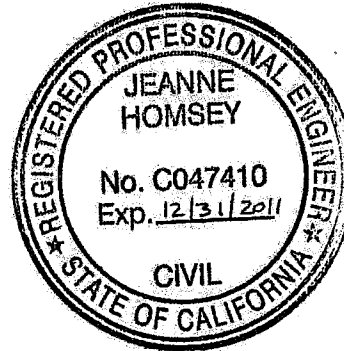
Respectfully submitted,
ATC Associates Inc.

A handwritten signature in cursive script that reads 'John Sellman'.

John Sellman
Staff Geologist

A handwritten signature in cursive script that reads 'Jeanne Homsey'.

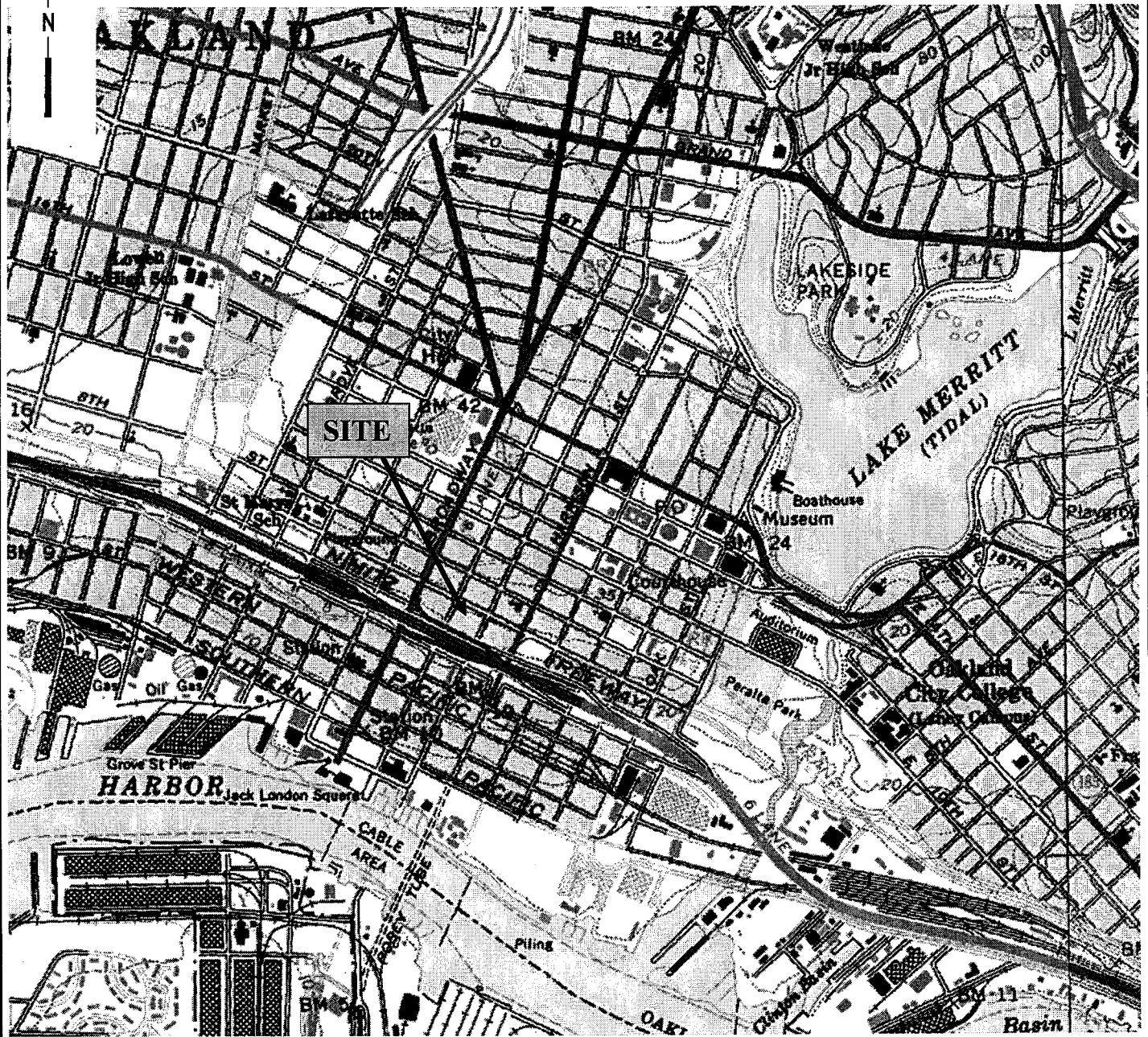
Jeanne Homsey, P.E.
CA Registered Civil Engineer No. 47410



Attachments

cc: Ms. Donna Drogos
Alameda County LOP
1131 Harbor Bay Parkway
Alameda, California 94502

Kaye Patterson
Property Project Manager
The Salvation Army, ARC Command



SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP
 OAKLAND WEST QUADRANGLE, CALIFORNIA, DATED 1959, PHOTO-UPDATED 1980.

FIGURE 1
SITE LOCATION MAP

THE SALVATION ARMY
 601 WEBSTER STREET
 OAKLAND, CALIFORNIA

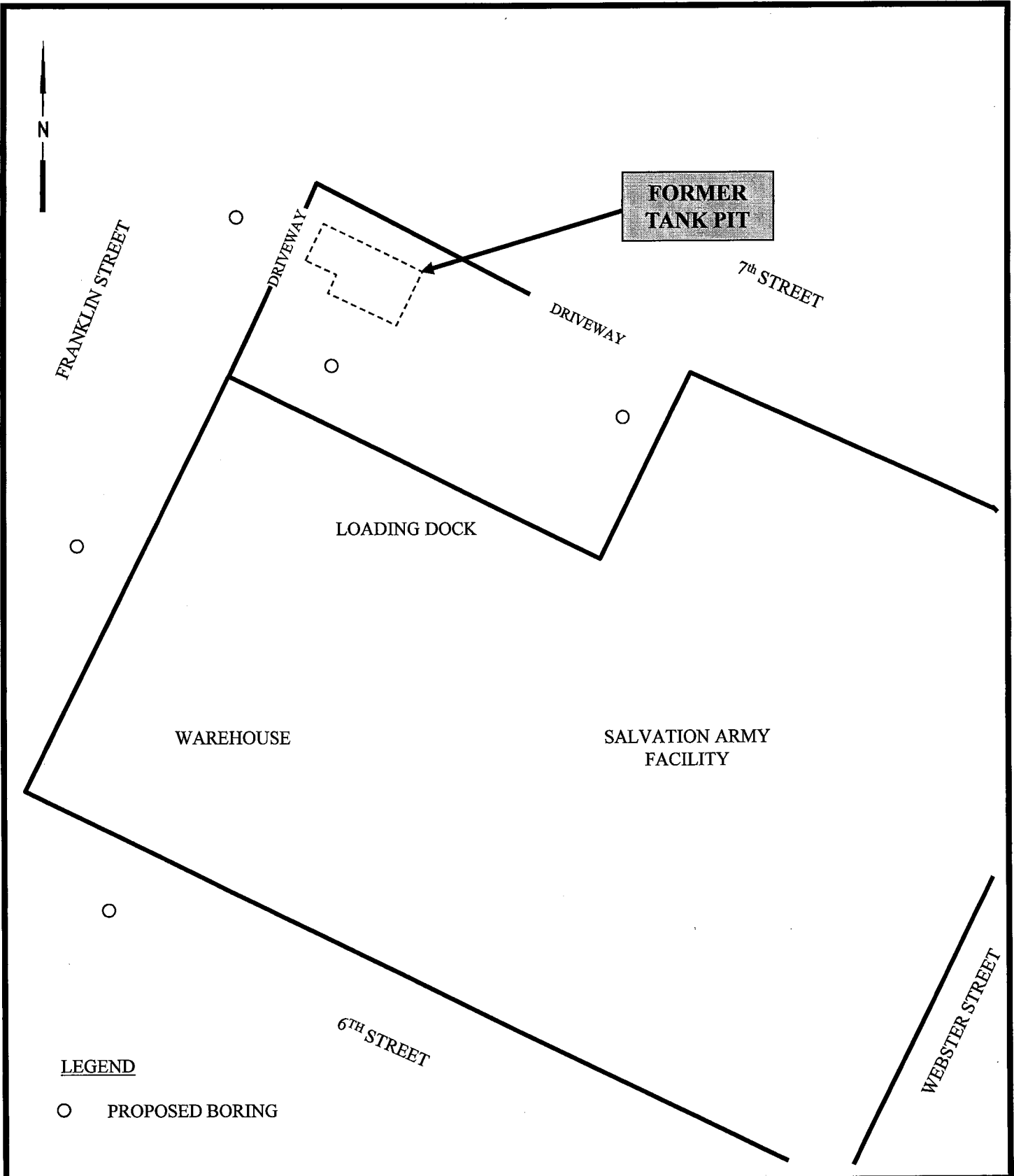


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PROJECT NO: 54.25026.0001

DESIGNED BY: JK SCALE: 1:24,000 REVIEWED BY: JH

DRAWN BY: JK DATE: 03/11 FILE: LOCATION



LEGEND

○ PROPOSED BORING

FIGURE 2
SITE MAP
WITH PROPOSED BORING LOCATIONS
 THE SALVATION ARMY
 601 WEBSTER STREET
 OAKLAND, CALIFORNIA



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