



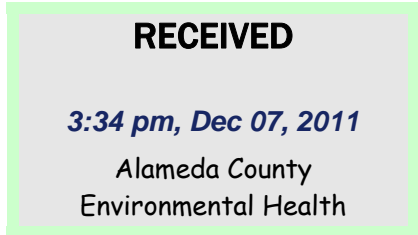
LOS ANGELES • CHICAGO • GREENWICH

December 5, 2011

1211.001.01.007

Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Attention: Mr. Mark Detterman



Transmittal
Work Plan for Focused Source Area Soil Investigation
1650 65th Street
Emeryville, California
Fuel Leak Case No. RO0000440
Geotracker Global ID T0600100511

Dear Mr. Detterman:

Submitted herewith for your review is the *Work Plan for Focused Source Area Soil Investigation, 1650 65th Street, Emeryville, California* prepared by PES Environmental, Inc.

I declare, under penalty of perjury, that the information and recommendations contained in the attached document are true and correct to the best of my knowledge.

Very truly yours,

GRIFFIN CAPITAL CORPORATION

Julie A. Treinen
Director of Asset Management

cc: Chris Baldassari, PES Environmental, Inc.

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Attention: Mr. Mark Detterman

Subject: Work Plan for Focused Source Area Soil Investigation
1650 65th Street, Emeryville, California
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Dear Mr. Detterman:

This *Work Plan for Focused Source Area Soil Investigation* (Work Plan) has been prepared by PES Environmental, Inc. (PES) on behalf of Griffin Capital Corporation (Griffin), agent for the fee owners for the property located at 1650 65th Street, in Emeryville, California (Site; Plate 1). Griffin has been requested by the Alameda County Department of Environmental Health (ACEH) to submit a work plan addressing technical comments concerning the subject property (also known as the Atrium, and formerly Emery Bay Plaza) presented in a letter from ACEH to Griffin dated November 1, 2011 (ACEH 2011 Letter). As described in the ACEH 2011 letter, ACEH has identified the delineation of residual hydrocarbons in soil within the source area as a significant data gap at the Site and a necessary component for regulatory evaluation of the Site. As such, the purpose of this Work Plan is to provide a scope of work and methods to assess residual hydrocarbons in vadose zone soil beneath the building, in general accordance with Technical Comment No. 2 of the ACEH 2011 Letter. A Work Plan (and a subsequent Work Plan Addendum based on additional requests contained in the ACEH 2011 Letter) proposing sub-slab vapor and groundwater sampling was recently submitted to ACEH under separate cover¹.

¹ PES, 2011. *Work Plan for Additional Investigation, 1650 65th Street, Emeryville, California*. July 22.
PES, 2011. *Work Plan Addendum, 1650 65th Street, Emeryville, California*. November 18.

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BACKGROUND

The removal of a former 2,000-gallon underground storage tank (UST)² and the completion of soil remediation activities³ at the Site were documented in previous reports prepared by Engineering-Science, Inc. (ES). Remediation activities were conducted by ES in February and March 1988 and included: (1) excavation and disposal of 92 cubic yards of contaminated soil in the vicinity of the former 2,000-gallon UST; and (2) collecting and analyzing confirmation soil samples from the excavation. At the time of the remediation activities conducted by ES, confirmation samples indicated that contaminant concentrations were below applicable regulatory thresholds, and backfilling of the excavation with clean soil was subsequently approved by ACEH and San Francisco Bay Regional Water Quality Control Board (RWQCB) representatives.

However, based on observations of groundwater data from wells in the source area (MW-2 and EW-1) as well as the limited historical excavation and soil confirmation sampling conducted underneath the building, ACEH has requested that additional investigation be conducted in the source area vicinity to assess residual petroleum hydrocarbons in soil from the former UST beneath the building. A proposed scope of work and a description of proposed methods are presented below. A program for groundwater sampling to address the groundwater data gap identified in a prior letter to Griffin from ACEH was included in the recently submitted *Work Plan for Additional Investigation*; therefore groundwater sampling is not contemplated in this Work Plan.

PROPOSED SCOPE OF WORK

The scope of work includes the following activities: (1) field preparation activities; (2) collection and analysis of soil samples; and (3) technical report preparation and submittal. These tasks are described below.

Field Preparation Activities

The following preparatory activities will be performed prior to the commencement of field sampling activities:

² Engineering-Science (ES), 1987. *Underground Fuel Storage Tank Site Investigation near the Southeast Corner of the Warehouse Building, 1650 65th Street Property, Emeryville, California*. September 18.

³ ES, 1988. *Implementation of Remedial Action Plan Report for United States Postal Service Site at 1650-65th Street, Emeryville California*. April 6.

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- Update the site-specific Health and Safety Plan in accordance with applicable occupational safety and health requirements and anticipated Site subsurface conditions, as needed;
- Obtain drilling permits from Alameda County Public Works Agency (ACPW);
- Contact Underground Services Alert for public utility clearance;
- Retain and schedule drilling and laboratory subcontractors; and
- Perform utility clearances and concrete coring at sampling locations.

Soil Sampling and Analysis

Soil samples will be collected from the Site and the samples will be submitted to a laboratory for chemical analysis. As shown on Plate 2, two vertical soil borings will be advanced and discrete vadose zone soil samples will be collected for chemical analysis from each boring. The proposed boring locations are intended to provide an assessment of the extent of residual petroleum hydrocarbon contamination suspected in vadose zone soil under the building. Based on historical depth-to-water measurements obtained from nearby wells MW-2 and EW-1⁴, shallow groundwater is anticipated to be encountered at a depth of approximately 10 to 11 feet below ground surface (bgs).

The borings will be advanced from inside the building utilizing a limited-access direct-push drilling rig. A PES geologist or engineer will observe the borehole drilling and will prepare a lithologic log of the borings using the Unified Soil Classification System. Soil samples will be field screened for VOCs using a photoionization detector (PID), and the PID readings will be recorded on the lithologic log. Two soil samples are anticipated to be collected from each boring, at depths of approximately 4.5 to 5 feet bgs, and at a depth of 0.5 to 1 foot above first encountered wet soil (anticipated to be between 9 and 10 feet bgs), consistent with the prior UST excavation sidewall soil samples collected during remediation activities as well as samples collected during installation of Site monitoring wells⁵. Soil sampling depths and analyses may be modified based on the results of field screening, observations of changes in lithology, or visual or olfactory indications of VOCs.

Continuous soil cores will be collected from the borings by advancing a 4-foot long sampler lined with a polyvinyl chloride (PVC) sample sleeve using direct push technology. Soil

⁴ PES, 2011b. *Groundwater Monitoring Report, Second Quarter 2011 Sampling Event, 1650 65th Street, Emeryville, California.* July 22.

⁵ Engineering-Science (ES), 1989. *Groundwater Contamination Investigation, 1650 65th Street Property, Emeryville, California.* November.

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samples will be collected by cutting the desired sampling intervals directly out of the core with a decontaminated hand saw, then sealing each end with Teflon sheets and plastic end caps. Soil samples for total petroleum hydrocarbons quantified as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), and fuel oxygenates analysis will be collected with an Encore™ or Terra Core® sampling device in accordance with U.S. Environmental Protection Agency (USEPA) Method 5035. Soil samples will be analyzed for the following:

- TPHg using EPA Test Method 8015B;
- BTEX using EPA Test Method 8260B;
- Fuel oxygenates consisting of methyl-tertiary butyl ether (MTBE), ethyl tertiary-butyl ether (ETBE), di-isopropyl ether (DIPE), tert-butyl alcohol (TBA), ethylene dibromide (EDB), 1,2-dichloroethane (1,2-DCA), and tertiary-amyl methyl ether (TAME) using U.S. EPA Test Method 8260BB; and
- TPH quantified as motor oil (TPHmo) using EPA Test Method 8015B with silica gel cleanup.

Filled soil containers will be labeled for identification and immediately placed in a chilled, thermally insulated cooler (containing either bagged ice or blue ice) until delivery under chain-of-custody protocol to the project laboratory. Each sample will be assigned a sample number that will be entered on the chain-of-custody form. The chain-of-custody form will accompany the sample shipment to the laboratory to document sample possession from the time of collection. The samples will be analyzed under a standard turnaround time.

Borehole drilling and sampling services will be provided by a licensed contractor possessing a valid C-57 water well contractor's license issued by the State of California, and in accordance with California Department of Water Resource Water Well Standards (Bulletin 74-90). The sampling will be conducted under the supervision of a California-registered geologist or engineer.

To minimize the potential for cross-contamination between sampling locations, downhole drilling and sampling equipment will be thoroughly cleaned prior to initiating work and between each sampling location. Sampling equipment will be washed in a dilute Alconox solution, rinsed with potable water, and final rinsed with distilled water between each sampling location. Direct-push drilling equipment will be decontaminated as necessary with a high-pressure hot water wash between sampling locations. Soil cuttings and decontamination fluids will be temporarily stored on-site pending characterization and proper off-site disposal. Upon completion of sampling activities, each borehole will be grouted to the surface in accordance with ACPW requirements.

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Reporting and Schedule

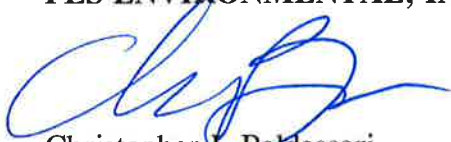
A description of the methods, procedures, and results of the sampling activities will be presented in a report submitted within eight weeks after receiving approval of this Work Plan from ACEH. Additionally, the results will be submitted electronically to the State Water Resources Control Board Geotracker database, and an electronic copy of the finalized report will be uploaded to Geotracker and ACEH file-transfer protocol (ftp) websites.

Closing

We trust that this is the information you require at this time. Please call either of the undersigned if you have any questions.

Yours very truly,

PES ENVIRONMENTAL, INC.



Christopher J. Baldassari
Senior Geologist



Robert S. Creps, P.E.
Principal Engineer



Attachments: Plate 1 – Site Location Map
Plate 2 – Site Plan and Proposed Soil Sample Locations

cc: Julie A. Treinen, Griffin Capital Corporation

ATTACHMENTS



PROJECT SITE

EMERYVILLE

BERKELEY

SAN ANTONIO



Scale in Feet

U.S.G.S. Topo Map - Oakland West, California, 7.5-minute quadrangle. Map version 1997; current as of 1993



PES Environmental, Inc.
Engineering & Environmental Services

Site Location Map
1650 65th Street
Emeryville, California

PLATE

1

