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SCS ENGINEERS

April 4, 2008

Mr. Jerry Wickham
Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

cc: Mr. Leo Puig
AMCAL Multi-Housing, Inc.
4545 North West Avenue, Suite 118
Fresno, California 93705

RE: Workplan for Soil Vapor Sampling, Human Health Risk Assessment, Soil Sampling, and Groundwater Sampling (Workplan)

Site: Assessor's Parcel Number (APN) 045-5302-010-05
555 98th Avenue
Oakland, California

Dear Mr. Wickham:

SCS Engineers (SCS) is pleased to present this Workplan for proposed subsurface assessment activities at the above-referenced Site. This Workplan is based on previous assessment and subsurface assessment activities conducted at the Site by SCS and others and a recent meeting between SCS, Alameda County Health Care Services (ACHCS), AMCAL Multi-Housing, Inc. (Client), and representatives of the City of Oakland and the City of Oakland Fire Department.

BACKGROUND

SCS has completed the following assessment and subsurface assessment reports in connection with the Site:

- *Phase I Environmental Site Assessment, Assessor's Parcel Number (APN) 045-5302-010-05, 555, 591, 594, and 599 98th Avenue, Oakland, California*, which was dated November 8, 2006.

- *Additional Site Investigation Activities, 555 98th Avenue, Oakland, California*, which was dated June 19, 2007.

- *Letter Report to Alameda County Department of Environmental Health, Assessor's Parcel Number (APN) 045-5302-010-05, 555 98th Avenue, Oakland, California*, which was dated October 11, 2006.

- *Technical Comments – Response to Alameda County Health Care Service Letter dated February 29, 2008, Assessor's Parcel Number (APN) 045-5302-010-05, 555 98th Avenue, Oakland, California*, which was dated March 17, 2008.

Based on a review of the above-referenced reports, ACHCS issued a letter entitled, *SLIC Case RO0002958 and Geotracker Global ID SLT19701216, AMCAL Multi-Housing Development, 555 98th Avenue, Oakland, CA 94603*, which was dated March 19, 2008. This letter provided the following technical comments:

- "During tank removal activities in December 1993, soil contamination was detected in the area of the former fuel underground storage tanks (USTs) located northeast of the former service station building. Soil samples collected from the base of the UST excavation (12 feet bgs) on December 7, 1993 contained total petroleum hydrocarbons as gasoline (TPHg) at concentrations ranging from 230 to 12,000 milligrams per kilogram (mg/kg) and benzene at concentrations ranging from 0.8 to 11 mg/kg. Soil removed from the tank excavation was stockpiled on site and sampled on January 22, 1996. Based on the results of the stockpile soil sampling, the stockpiled soil was used as backfill for the former UST excavation. However, there does not appear to be any documentation of soil treatment prior to reuse as excavation backfill. The proposed development includes plans for residential units on ground level in the area of the former USTs. Two soil vapor samples were collected in the general area of the former USTs as part of a soil vapor investigation conducted on May 31, 2007. Soil vapor sample SV5, which appears to have been collected within the footprint of the former service station building, did not contain detectable concentrations of volatile organic compounds (VOCs). Soil vapor sample SV3, which was collected immediately south of the former fuel dispensers, also did not contain detectable concentrations of VOCs. Although these soil vapor samples did not detect VOCs in the general area of the USTs, these sampling locations do not appear to be sufficiently close to the former USTs to evaluate potential vapor intrusion to residential units located directly above the former USTs. In addition, the reporting limit for VOC analysis of soil vapor samples SV3 and SV5 was 0.1 micrograms per liter (ug/L), which is equivalent to 100 micrograms per cubic meter (ug/m^3). The Environmental Screening Level (San Francisco Bay Area Regional Water Quality Control Board, November 2007) for potential vapor intrusion from soil vapor to indoor air is 84 ug/m^3 for residential land use. Therefore, the reporting limit exceeds the Environmental Screening Level for residential land use. We request that you further evaluate the potential for vapor intrusion to indoor air in the area of the former USTs. Additional soil vapor sampling in the area of the former USTs is acceptable. We also request that you extend a minimum of one soil boring in the area of the former USTs to assess the residual soil and groundwater contamination left in place below the tank backfill material."

On March 26, 2008, SCS, the Client, and representative of the City of Oakland and City of Oakland Fire Department attended a meeting with the ACHCS. At this meeting the ACHCS

requested the following scope of services be completed to assess the potential for human health risk associated with vapor intrusion:

- The collection of three soil samples and one groundwater sample from one soil boring (to the northeast of the former gasoline service station building [interpreted to be the correct former USTs location]).[1] Soil samples are proposed to be collected at depths of 3, 5, and 7 feet below grade and the groundwater sample is proposed to be collected between 7 and 10 feet below grade. Soil and groundwater samples are proposed to be analyzed for VOCs in accordance with Environmental Protection Agency (EPA) Method 8260B.

- The collection of three soil vapor samples and their subsequent analysis for VOCs in accordance with Environmental Protection Agency (EPA) Method 8260B. Two samples were requested in the former USTs excavation area to the northeast of the former gasoline service station building (interpreted to be the correct former USTs location) and one sample was requested in the former USTs excavation area to the east of the former gasoline service station building (interpreted to be the historically misplotted former USTs location).

The following scope of services includes subsurface assessment activities designed to address the above-referenced ACHCS requests.

OBJECTIVES

Objectives of the proposed scope of services are to:

- Assess the possible presence and concentrations of VOCs in the soil and groundwater in the interpreted area of the former USTs excavation.

- Assess the possible presence and concentrations of VOCs in the soil vapor at the Site (in the vicinity of the former USTs excavation) in connection with the possible gasoline service station formerly located at the Site.

- Assess the likelihood that Significant[2] human health risk exists at the Site as a result of vapor phase migration of VOCs.

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[1] SCS was provided two figures from the ACHCS indicated two possible locations of the former USTs excavation. As reported by the ACHCS, the location depicted to the northeast of the former gasoline service station building is the interpreted historically misplotted USTs location. These interpreted USTs excavations are depicted on the attached Proposed Sample Location Map.

[2] For the purposes of this assessment, significant is defined as greater than one in 1,000,000 excess lifetime cancer risk.

SCOPE OF SERVICES

Task I Preparation of Fieldwork

Preparation of Health and Safety Plan

A health and safety plan for work conducted at the Site and workers within the "exclusion zone" is required pursuant to the regulations found in 29 Code of Federal Regulations (CFR) Part 1910.120 and California Code of Regulations (CCR), Title 8, Section 5192. Therefore, a health and safety plan will be prepared for the proposed work scope, and will outline the potential chemical and physical hazards that may be encountered during drilling and sampling activities. The appropriate personal protective equipment and emergency response procedures for the anticipated site-specific chemical and physical hazards will be detailed in this plan. SCS and contracted personnel involved with the proposed field work will be required to read and sign this document in order to encourage proper health and safety practices.

Utility Search and Markout

SCS will notify Underground Service Alert (USA), as required by state law, and hire a private utility locator. This procedure is designed to minimize the likelihood of drilling into a subsurface utility.

Boring Permits

As required by the Alameda County Department of Public Works (ACDPW), a boring permit application will be prepared and submitted to the ACDPW with the proper fees. The permit application will be reviewed by an appropriate licensed professional.

Task II Soil and Groundwater Sampling and Analysis

Soil and Groundwater Sampling

To assess the possible presence of VOCs in the shallow soil and groundwater beneath the Site (in connection possible residual concentrations of VOCs in the USTs excavation backfill material and groundwater as it relates to human health risk from vapor intrusion), a direct push drilling rig will be used to drill one soil boring to a depth of approximately 7 to 10 feet below grade at the Site in the interpreted area of the former USTs excavation (please see the attached figure for the proposed boring location).

Please note that while we will attempt to achieve our target depths, we may not be able to do so due to drilling "refusal" from rocks or the hardness/resistance of the soils. The drilling activities are expected to take less than one day to complete, assuming boring locations are readily accessible (please note that it is important to have full and complete access during drilling activities).

Soil samples will be collected using a split-spoon or similar type sampler. Soil samples will be described in general accordance with the Unified Soil Classification System.

Sampling equipment will be cleaned prior to each sampling event to minimize the likelihood of cross-contamination of the borings and to minimize the potential for a false positive in the soil samples analyzed.

Soil samples will be driven into acetate tubes. The ends of the sample tubes will be covered with Teflon™ sheeting, and tightly closed with end caps. The sample containers will be labeled and submitted to an on-Site state-accredited laboratory for analysis. Chain-of-custody procedures will be implemented for sample tracking. A written analytical report will be provided by the laboratory upon completion of the sample testing.

A shallow groundwater grab sample will be collected from the boring using a temporary PVC casing and screen, or equivalent. This sample collection technique is based on the assumption that groundwater easily recharges.

The direct push boring will be backfilled with appropriate backfill materials as required by the ACDPW. No cuttings are expected to be generated during the drilling operations at the Site.

Laboratory Sample Analysis

To assess the possible presence of VOCs in the shallow soil and groundwater in the interpreted area of the former USTs excavation at the Site, up to three soil samples and one groundwater sample will be analyzed for VOCs in general accordance with EPA Method 8260B. The laboratory reporting limits for VOCs (associated with carcinogenic analytes associated with gasoline [e.g., benzene, ethyl benzene, MTBE, etc.]) will be set less than their respective Environmental Screening Level (ESL) values.

Task III Soil Vapor Sampling and Analysis

Soil Vapor Sampling

SCS proposes to collect up to three soil vapor samples at the Site to assess the potential for soil vapor to contain VOCs at the interpreted locations of two possible former USTs excavations. As indicated in the Background section above, two samples will be collected at the interpreted former USTs excavation area to the northeast of the former gasoline service station building (interpreted to be the correct former USTs location) and one sample will be collected at the interpreted former USTs excavation area to the east of the former gasoline service station building (interpreted to be the historically misplotted former USTs location).

The soil vapor sampling probe, which consists of a 1-inch diameter, hollow, metal rod will be driven to the desired sampling depth. Soil vapor samples will be collected from depths of approximately 5 feet below grade. The soil vapor probe holes will be backfilled with appropriate backfill materials as required by the ACDPW. Please note that while we will make our best effort to achieve the target depths and collect soil vapor samples, we may not be able to do so because of the hardness, resistance, or low permeability of the soil encountered during drilling.

Chain-of-custody procedures will be implemented for sample tracking. A written analytical report will be provided by the laboratory upon the completion of the sample testing.

Laboratory Analysis

The soil vapor samples will be analyzed on-Site by a State-accredited mobile laboratory. Samples will be analyzed for VOCs in general accordance with EPA Method 8260B. A written analytical report will be provided by the laboratory upon the completion of the sample testing. The laboratory reporting limits for VOCs (associated with carcinogenic analytes associated with gasoline [e.g., benzene, ethyl benzene, MTBE, etc.]) will be set less than their respective ESL values.

Task IV Human Health Risk Assessment

If detectable concentrations of VOCs are encountered during the soil vapor sampling activities, a limited human health risk assessment will be conducted. This assessment will include a review of data generated during the proposed soil vapor survey, as well as data generated during the previous soil vapor survey, to assess the concentration of VOCs in soil vapor, if any, in the interpreted USTs excavation area. In addition, this task will include identification of potential vapor migration pathways, and will identify likely future receptors for subsurface contaminants. We will provide an estimate of the natural attenuation properties of the soil, structural improvements, and mechanical systems that may contain, control, dilute, or inhibit the movement of contaminants through the subsurface. Based on this information, SCS will develop a reasonable and defensible vapor phase transport model (using the California Department of Toxic Substances Control [DTSC] health risk assessment model). SCS personnel will then assess whether a significant human health risk exists at the Site based on the available data and assumed land use.

Task V Data Evaluation, Figure Preparation, and Report Preparation (Subsurface Assessment)

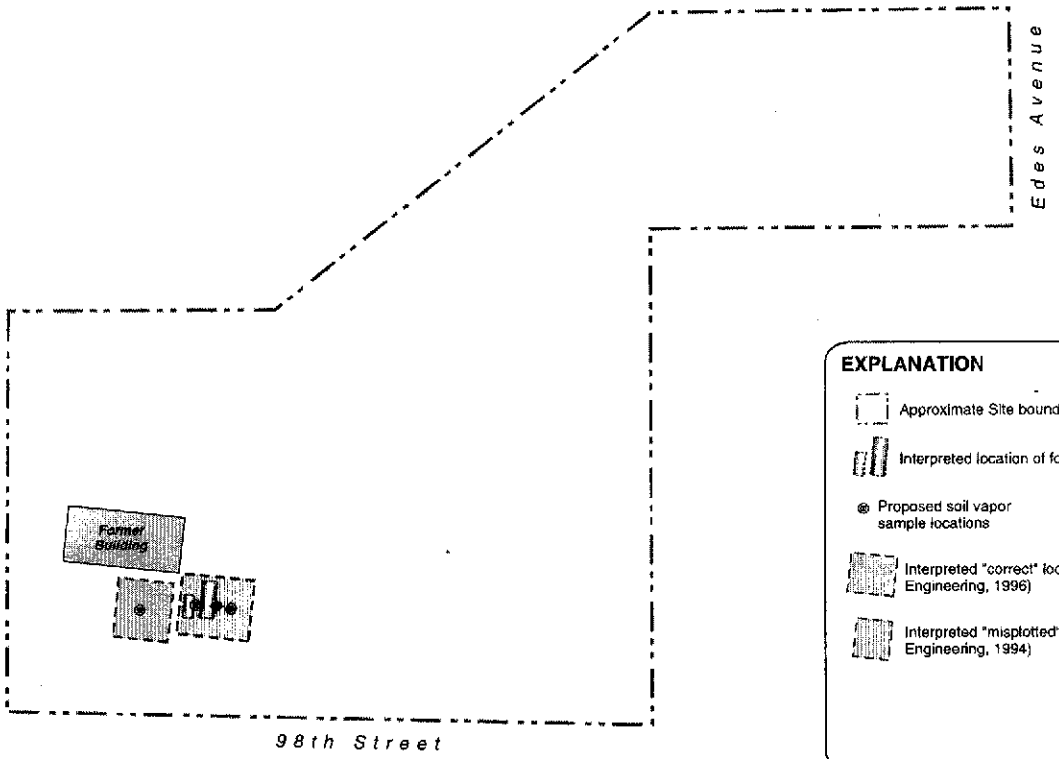
Based on the findings of the field investigation and laboratory results from the above scope of services, a letter report (Report) will be prepared. The Report will cover the various areas investigated at the Site and will include laboratory reports, chain-of-custody records, figures including soil sample analytical results, tabulated analytical results, and appropriate support documentation. The Report will be peer-reviewed and signed by the appropriately licensed professional. The work conducted at the Site will be overseen by a professional geologist.

If we may assist you in any way, please do not hesitate to call our office at (858) 571-5500. We look forward to working with you on this important project.

Sincerely,
SCS ENGINEERS

Ryan T. Marcos, CAC
Project Manager

PG 7972
For
Steve Clements, P.G. 6740
Project Geologist



EXPLANATION

- Approximate Site boundary
- Interpreted location of former underground storage tanks (UST)
- Proposed soil vapor sample locations
- Proposed soil and groundwater boring location
- Interpreted "correct" location of UST excavation (Soil Tech Engineering, 1996)
- Interpreted "misplotted" location of UST excavation (Soil Tech Engineering, 1994)

0 25 50 75
Approximate Graphic Scale in Feet

North

Disclaimer: This figure is based on available data. Actual conditions may differ. All locations and dimensions are approximate.

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PROPOSED SAMPLE LOCATIONS MAP
AMCAL Multi-Housing, Inc.
555 98th Avenue
Oakland, California

Project No.: 01205501.17

Figure 1

Date Drafted: 4/3/08