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PERJURY STATEMENT

Subject: Case No. RO0002981 and Geotracker Global ID T10000000416,
Red Hanger Kleaners, 6334-6339 College Avenue, Oakland, CA 94618

“I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.”



Quin Kinnebrew
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EFI Global, Inc.

May 23, 2012

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Soil Gas Survey Workplan

Red Hangar Cleaners
Oakland, California
RO#0002981

EFI Global, Inc. (EFI) is pleased to present this soil gas survey workplan to the Alameda County Environmental Health Department (ACEH). This workplan has been prepared in response to an ACEH request dated June 24, 2011.

Purpose

This soil gas survey proposes to assess the concentrations of acetone, chloroform, tetrachloroethylene (PCE) and toluene in soil vapor underlying the site. Those four compounds were detected during the most recent assessment of soils and groundwater beneath the site. A description of our proposed soil gas study is provided in the following sections. Our approach is in accordance with the draft California Department of Toxic Substances Control (DTSC) and Regional Water Quality Control Board (RWQCB) guidance document "Advisory-Active Soil Gas Investigations", dated April 2012. The data collected from this survey will be evaluated in accordance with the DTSC guidance document "Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance)" dated October 2011.

A health and safety plan will be prepared and followed during the sampling activities.

Site Background

The site is located in a mixed commercial and residential area of Oakland, and consists of a three-story building, a parking area, and associated landscaping. The building is currently occupied by various tenants, including a dry cleaning facility.

A Phase I investigation performed for the Site in 2005 in support of a property transfer identified the following Recognized Environmental Conditions associated with the site:

- The apparent former presence of a gasoline underground storage tank (UST) in the northwestern portion of the property; and
- Historical dry cleaning activities conducted since 1987, particularly with respect to potential releases of tetrachloroethylene (PCE).

Based on the findings of the Phase I investigation, a Phase II subsurface investigation was performed at the site to assess whether the suspected UST was present, and to determine whether volatile organic compounds (VOCs; particularly PCE) and/or total petroleum hydrocarbons (TPH) were present in the subsurface. Investigation activities included a geophysical survey in the suspected UST area, and soil and ground water sampling. The scope and findings of this Phase II investigation are presented in the report entitled Phase II Subsurface Investigation Report – 6293[sic] College Avenue – Oakland, California (AEI Consultants, May 2005), which has been provided to the ACEH.

According to the Phase II report, a geophysical anomaly interpreted as a backfilled excavation was observed in the suspected UST vicinity. As part of this field event, analyses for TPH and/or VOCs were performed on soil samples collected from five borings at the site (maximum soil sample depth 4 feet below ground surface [bgs]). Four of the borings were in the vicinity of the dry cleaning machines in the southwest corner of the site, and one boring was in the former UST area in the site's northwest corner. TPH was not detected in the soil sample from the former UST area, and the only VOC detected in the dry cleaning machine area was PCE. The PCE detections were relatively low, but the highest detection (0.26 mg/kg) was slightly higher than the 0.25 mg/kg RWQCB screening level for commercial/industrial land use that was cited in the report. In addition, PCE and chloroform were detected in a ground water sample. The PCE detection in this ground water sample (48 µg/L) was higher than the 5 µg/L screening level that was cited in the report.

A second Phase II was conducted at the site in June 2005 by EFI in response to a request by the City of Oakland Fire Department (OFD). The scope and findings of that sampling event are presented in a June 28, 2005 letter report. During that sampling event, a ground water sample was collected from a location south of the dry cleaning machines. There was no evidence of PCE impacts to soils, but the presence of PCE and chloroform in ground water was confirmed. The PCE in groundwater was reported at a concentration of 15 µg/L. Based on the data from these two phases of investigation, OFD issued a No Further Action letter and the property transaction was completed.

An additional round of soil and ground water sampling was conducted at the site in May 2008 by P&D Environmental, Inc. at two locations northeast (presumed upgradient) of the existing dry cleaning machines. PCE was detected in one of the soil samples, and in both ground water samples. In addition, chloroform was detected in both ground water samples. Both PCE detections in ground water were higher than the State's Maximum Contaminant Level (MCL) and RWQCB (San Francisco) screening level of 5 µg/L. The source of these upgradient detections is unknown. However, one possibility is a former dry cleaning facility previously located adjacent to and northeast of the current Red Hanger Kleaners location at 6251 College Avenue. Basics Environmental (Basics) conducted a local regulatory agency file review for the two dry cleaning facilities. According to the Basics report, the 6251 address originally housed a

dry cleaning operation called Kay's Cleaners, and that facility was apparently later utilized by Red Hanger Kleaners, which apparently moved their operations in 1987 to the current location. Currently, the 6251 College Avenue address is occupied by a nail salon.

In October 2009, ERM-West, Inc. (ERM) conducted soil and ground water sampling to assess the vertical extent of PCE impacts in soil and ground water near the dry cleaning machines and to assess whether TPH impacts are present in soil and ground water in the vicinity of the suspected UST location. The results were documented in a report entitled 2009 Site Characterization Summary Report, dated January 20, 2010. The assessment identified concentrations of acetone, chloroform, PCE and toluene in soils at concentrations less than the San Francisco Regional Water Quality Control Board (SF RWQCB) environmental screening levels (ESLs). In addition, ground water samples were also reported with chloroform and PCE concentrations that were less than the SF RWQCB ESLs.

In June 2011, ACEH requested an assessment of soil vapors beneath the Red Hanger Kleaners building and along the sanitary sewer located adjacent to the north side of the building.

Conceptual Site Model

Based on the most recent sampling data, acetone, chloroform, PCE and toluene were present in onsite soil at concentrations less than the SF RWQCB ESLs in October and December 2009. Impacted soils ranged from 6.5 feet below ground surface (bgs) to 30 feet bgs.

Chloroform and PCE were also present in groundwater at concentrations less than the SF RWQCB ESLs. Groundwater is approximately 35 feet bgs at this site. No phase-separated compounds have been encountered in the subsurface at this site.

Soils beneath the site include silts, sandy silts and silty sands, sandy/gravelly silts to clayey silts and gravelly clays to clays. VOCs from both the soil and groundwater have the potential to migrate through these soils to the surface. Inhalation of vapors is considered a potential pathway for human exposure.

Sample and Analysis Plan

The objective of this soil gas survey is to evaluate the presence and concentrations of VOCs in soil vapors beneath the current building and along an adjoining sanitary sewer line.

Equipment calibration and soil gas sampling will be conducted in general accordance with the DTSC and RWQCB's "Advisory - Active Soil Gas Investigation" dated April 2012.

Sample Collection

Soil gas samples will be collected from four onsite locations (SV-1 through SV-4; Figure 1). Soil gas samples will be collected at 4 feet bgs to address potential vapor migration along a subsurface sewer line and from 5 feet bgs inside the Red Hanger Kleaners' building. Additional

sampling locations, if needed on account of refusal conditions, will be placed within 5 feet of the original planned probe location.

The vapor probes will be driven into the ground with an electric rotary hammer to the target depth. If the alleyway is not accessible, one additional boring will be placed in the interior northeast corner of the Red Hangar Kleaners building as close to the building wall as possible in an attempt to get near the sewer line in the alleyway.

A stainless steel vapor implant with new Teflon tubing will be placed at the target depth. A filter pack consisting of #3 Monterey Sand (or equivalent) will be placed in the annular space surrounding the entire screened interval. The sand pack will be covered with hydrated bentonite (placed in 6-inch lifts) to within 1 foot of ground surface. Each probe location will be completed with cement and/or grout from the top of the seal to the ground surface. The tubing will be capped with a gas-tight cap (such as a Swagelok cap) at the ground surface to prevent the potential for barometric pressure fluctuations to induce vapor transport between the subsurface and the atmosphere. The excess length of Teflon tubing with the gas-tight cap will be coiled up inside a well box. Each probe location will be finished with a water tight well box installed at grade.

Soil gas sampling will not be conducted during the rain or immediately after a significant rain event (1/2 inch or greater).

The equilibration time to be used, or the duration between installation and sampling, will be at least 30 minutes. The equilibration time will be documented at the time of the site investigation. The probe placement time, beginning and ending purge time, sample collection time, and sample analysis time will also be recorded for each sampling location. This data will be presented as a summary table within the final investigation report.

Soil Gas Analysis

The soil gas samples will be analyzed by an onsite mobile laboratory provided by TEG Northern California. Each collected soil gas sample will be analyzed for VOCs (including acetone, chloroform, PCE and toluene) using EPA Method 8260B. The laboratory's analyst will abide by all applicable sampling procedures outlined above.

At each sampling location, the Teflon tubing will be purged prior to the collection of a soil gas sample. The purge volume will be based on the method specified in the DTSC's soil gas sampling guidelines. A purge test will initially be conducted at location SV-1. The purge test will include using one, three, and seven purge volumes as a means to determine the purge volume to be applied at all sampling points. If VOCs are not detected in any of the purge tests, a default of three purge volumes will be used in the remaining sample locations.

During purging and sampling, a tracer gas such as isopropyl alcohol will be introduced into ambient air at ground surface at the sampling point to verify that the tracer gas is not detected

when the sample is analyzed. Gas tight glass syringes will be used to collect soil gas from the tubing. The soil gas samples will be collected at a rate less than 200 milliliters per minute. Following collection, the samples will immediately be analyzed by an onsite laboratory.

To determine if the area is pressurized by migration gases, pressure readings of each sampling tube system will be recorded during sampling and will be reported with the VOC concentrations.

One soil gas duplicate sample will be collected during the site investigation. One field blank will also be collected. The field blank will contain ambient air collected onsite prior to the beginning of sampling. The final laboratory report will include all QA/QC required for the analysis.

Reporting and Schedule

Upon completion of the field activities, EFI will prepare a report summarizing the results of the field activities, including a description of the work performed, an evaluation of the analytical results (including comparison to current applicable regulatory screening levels), a data quality review and conclusions. Supporting information will be provided in tables, figures and appendices. EFI will submit the soil gas survey report to the ACEH electronically.

The field activities will begin immediately upon approval by the ACEH of the workplan. The projected schedule is as follows:

ACTIVITY	SCHEDULE
Obtain Alameda County Public Works well permits; Underground Service Alert (USA) notification	Days 1 through 15
Field Sampling	Day 16
Data Evaluation and Report Preparation	Days 17 through 31

* * *

If you have any questions or require further information regarding this work plan, please contact either of us indicated below at 832.518.5145.

Sincerely,
EFI Global, Inc.



Quin Kinnebrew P. G.
Senior Project Manager



Gary L. Bates
Director
Environmental and Remediation Services

