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9:16 am, Nov 18, 2011

Alameda County Environmental Health

July 6, 2011

Reference: Work Plan for Sub-slab Vapor Sampling and Source Area Subsurface Investigation Rodding Cleaning Services 2585 Nicholson Street, San Leandro, CA Fuel Leak Case No. RO00000020 Versar Project No. 104422.4422.007

### PERJURY STATEMENT

As the Responsible Party (RP) for this Site, I declare that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Fred Schifferle, Vice President Responsible Party

7-12-11

Date



November 17, 2011

Mr. Mark E. Detterman, PG, Senior Hazardous Materials Specialist Alameda County Health Services Agency Environmental Health Department Environmental Protection 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502-6577

Subject: Response to Letter: Request for Work Plan Addendum; Fuel Leak Case No. RO00000020 (Global ID# T0600101153), Rodding Cleaning Services, 2585 Nicholson Street, San Leandro, CA 94577. Dated 5 October 2011

Dear Mr. Detterman:

In response to your letter comments addressing Versar's *Work Plan for Sub-slab Vapor Sampling and Source Area Subsurface Investigation*, dated July 6, 2011 (received July 28, 2011) - with the exception of one item, Versar has duly incorporated all requested technical comments in an addendum to the Work Plan. The requested exception pertains to the adjoining property at 2591 Nicholson Street, comprising a one-story warehouse type building occupied by a print shop, in which the Alameda County Environmental Health Department (ACEHD) has required the installation of sub-slab soil vapor monitoring wells.

On behalf of the Sketchley Trust, Versar respectfully requests release from this requirement at this time. Our request is based on two concerns: 1) obtaining access to the property for this purpose will result in substantial delay due to concerns of the print shop owner that the data may result in liability; and 2) data collected at the point of another potential source of VOCs will not be representative of Rodding Cleaning Services VOC release extent and character. Furthermore, we believe the ACEHD stated intent of obtaining soil vapor samples that "account for the generally dryer soil beneath building envelopes" will be realized at the property boundary locations proposed in the Work Plan, as these locations are within a 3-inch concrete slab of good condition beneath a roof – conditions that are analogous to the adjoining property building slab. In light of these circumstances and the very limited remaining assets off the Trust, we respectfully submit that the Work Plan be limited to the proposed on-site program as amended herein.

The Sketchley Trust is prepared to begin implementation of the work proposed and amended in the attached addendum. We believe the delay of obtaining an access agreement and the potentially inconclusive value of the data collected is outweighed at this time by the benefit of expediently performing the remainder of the work.

## • SACRAMENTO AREA OFFICE •



Thank you for considering this request to modify the Work Plan requirements. If you have any questions or concerns regarding this letter, please contact me at (916) 863-9323, and TBerger@Versar.com; or Mr. David Trotter at (925) 935-3300 and DTrotter@BowlesVerna.com.

Sincerely,

Ti Berge

Tim Berger, P.G. Supervising Geologist Versar – Etech Pacific

cc: Mr. Fred Schifferle, Manager - Sketchley Trust, Versar, Inc., 2000 Clayton Road, Building D, Concord, CA 94520 (sent electronically to Frederick.A.Schifferle@bankofamerica.com)

David Trotter, Bowles & Verna LLP, 2121 N. California Blvd, Suite 875, Walnut Creek, CA 94596 (sent via electronic mail to dtrotter@bowlesverna.com)

Mr. Randy Muller, Bank of America, 2650 Ashbourne Drive Lawrenceville, GA 30043 (sent via electronic mail to randy.muller@bankofamerica.com)



November 17, 2011

Mr. Mark E. Detterman, PG, CEG Hazardous Materials Specialist Alameda County Health Care Service Agency Environmental Health Department 1131 Harbor Bay Parkway, Suite 250 Alameda, California 94502-6577

Subject: Work Plan Addendum for Sub-slab Vapor Sampling and Source Area Subsurface Investigation Former Rodding Cleaning Services 2585 Nicholson Street, San Leandro, California Fuel Leak Case No. RO0000020

Dear Mr. Detterman:

As requested, Versar, Inc. (Versar) has prepared this work plan addendum, on behalf of the Sketchley Trust (Trust), to the Alameda County Health Care Service Agency, Environmental Health Department (ACEH) for supplemental characterization of total petroleum hydrocarbons (TPH) and related constituents of concern in the subsurface at the subject property (Site). This work plan addendum has been prepared in response to the ACEH letter, dated October 5, 2011, requesting revisions to the proposed soil vapor well locations, vapor probe construction, tracer shroud use, and analytical suite. This work plan addendum is intended to supplement and clarify the methods and procedures to be used to implement the work plan dated July 6, 2011, and includes those portions of the work plan requiring modification.

## PURPOSE AND SCOPE

The work proposed in the work plan and this work plan addendum is to further assess the Site through additional soil vapor, grab-groundwater and sediment sampling, bearing in mind that the Trust's remaining assets are very limited. Tasks proposed are: 1) define the lateral extent of elevated soil vapor along the south property boundary with 2591 Nicholson Street; 2) define the lateral extent of elevated soil vapor beneath the on-Site office area; 3) further define the limit of the TPH plume to the east; 4) assess the former fuel dispenser location with a soil and grab-groundwater sampling boring; and 5) address vertical and lateral data gaps in sedimentary units influencing the distribution of TPH in soil vapor and shallow groundwater.

Completion of this work will be used to 1) define and characterize subsurface features controlling residual TPH lateral and vertical extents; 2) identify solutions to reduce residual on–Site contamination; 3) confirm and monitor soil vapor concentrations; and 4) identify solutions to mitigate soil vapor conditions adjacent to occupied buildings.



# TASKS

The following tasks, proposed to address the goals of this investigation, have been modified or addended as presented to meet the requirements of ACHCA:

## Task 1 – Supplemental Sub-Slab Soil Vapor Assessment

Five (5) sub-slab soil vapor well points are proposed. Three are proposed within the office and fabrication area of the Site, and two are proposed along the property line adjacent to the adjoining building to the south. Underground utilities comprising natural gas, water and sewer enter the offices of the 2585 Nicholson Street building at various locations along the northeast end. Electrical power enters the building above ground. Prior to installing the wells a private utility locator will identify the location of subslab laterals. Figure 3 in Attachment 1 includes the entry points and approximate locations of subslab utilities.

Soil vapor wells are proposed to be installed at the five (5) locations depicted on Figure 3 to a depth of 8 inches below the concrete surface. Each well will be constructed of a six-inch by 0.5-inch stainless steel mesh screen set within the granular sub-base material beneath the concrete apron, with a 4-inch long, 0.25-inch diameter Teflon tube extending through the concrete slab to the surface. Each screen is set within a sand pack comprising #2/12 sand with hydrated bentonite granules between the sand and concrete slab. The wells will be inserted into one-inch diameter borings cored with a concrete bit through the slab. The surface will be completed within the concrete slab using a flush-mount fixture with O-ring seal. The surface mount is set in cement. A diagram of the sub-slab vapor well system is attached; Versar's well installations will include the described 4-inch Teflon tube and mesh screen (with sand pack) placed within granular base material beneath the bottom of the slab.

Sub-slab soil gas samples will be collected from each of the five soil vapor wells a minimum of 48 hours after installation. A purge test is not required for sub-slab sample wells; three volumes is the default per the 2010 DTSC Advisory – Active Soil Gas Investigation. Samples will be collected in one-liter summa canisters at a maximum rate of 100 milliliters per minute (ml/m) at a maximum vacuum of 100 inches water. Soil gas sample data sheets will be prepared during the sampling. Versar's standard operating procedures for soil gas sampling are included as Attachment 3.

## Task 2 – Source Area Subsurface Investigation

Based on Versar's review of historical investigations and assessment of data gaps in the subsurface conceptual site model (CSM), as summarized in Figure 4 of the work plan, eight borings (VB-1 through VB-8) to 15 feet bgs are proposed. As depicted in Figure 4, the borings are located to investigate 1) the former dispenser source area; 2) confirm the UST backfill as pea-gravel; 3) characterize the sediment profile to an estimated 15 feet bgs, which is a minimum of five feet beneath the top of a clay unit continuous across the Site; and 4) characterize the sediment units along the south and west property boundaries, down-gradient from the source



area. With this boring data, a detailed three-dimensional model of the subsurface across the source area and down gradient extent within Site will be made available.

Prior to field work, a geophysical utility location service will be used to locate and identify subsurface sanitary sewer, storm sewer, electrical, cable and gas laterals associated with and adjoining the Site, as well as the utility main locations surrounding the Site. The former fuel dispenser, UST and dispenser piping area will be screened using electromagnetic, current induction and ground penetrating radar equipment. Soil boring locations may be adjusted based on the results of the utility survey and discussion with the ACEH.

Geotechnical samples are proposed to be collected from saturated and unsaturated sediments to characterize parameters controlling contaminant migration and modeling of soil vapor transport. Proposed analyses are moisture/density, sediment gradation, carbon content and permeability. Up to nine samples representative of the UST backfill, underlying confining clay unit and waterbearing sandy silt, sand and gravel, sand and clayey sand and gravel units will be tested.

Samples for constituents of concern are proposed in soil and groundwater. Soil samples are proposed beneath the groundwater table to document attenuation of TPH with depth within the prospective confining layer. Soil samples will be collected at each boring from depths of 5 feet bgs (at the capillary fringe), and 10 and 15 feet bgs, within the underlying clay unit. Additional soil samples will be collected at any interval where staining, odor or elevated PID readings occur and at sufficient depth below the deepest indication of such in order to define the vertical extent of contamination in soil.

Groundwater grab samples will be collected from six (6) of the borings; at the former dispenser location, within the fabrication area, within the former UST excavation area, at each location along the west property line, and at the three southernmost borings along the south property line.

## Task 3 – Groundwater Monitoring

Semi-annual monitoring of well MW-1 is currently required at the Site. Per the ACEH 30 July 2010 letter, semi-annual monitoring will continue, but monitoring of all five monitoring wells is to be performed. Based on a revised MTBE action level of 13 micrograms per liter ( $\mu$ g/L) for drinking water, since last monitored, MTBE is to be included in the groundwater analytical suite. The semi-annual groundwater analyses will, therefore, comprise the following: Total Petroleum Hydrocarbons (TPH) as gasoline, diesel and motor oil ranges (-g, -d and -mo); and MTBE and the aromatic hydrocarbons benzene, toluene, ethylbenzene and xylenes (BTEX).

Field inspections of the existing wells have determined that MW-5 is in need of repair. Versar has inspected each of the existing wells and determine if additional repairs are required. At a minimum, the well cover and locking plug for MW-5 requires replacement and resurvey. To reduce cost to the Trust, inspection of the existing monitoring wells for sediment load will occur during the field work. If needed, wells having excessive sediment will be re-developed. The grab-groundwater sampling proposed herein can then coincide with semi-annual monitoring of the Site.



#### **Chemical Sample Analyses**

Soil vapor, soil and groundwater samples will be analyzed by a laboratory State ELAP-certified to perform the proposed analysis.

Based on the anticipated elevated BTEX concentrations, soil vapor samples will be analyzed by EPA Method TO-14/TO-15 for volatile organic compounds (VOCs), including MTBE and the tracer gas, and for TPH-g. Soil vapor samples will also be analyzed for atmospheric gases oxygen, nitrogen, and carbon dioxide, and methane hydrocarbons by EPA Method 3C. Soil and groundwater samples will be analyzed for TPH in the ranges of gasoline, diesel fuel and motor oil, BTEX and MTBE by EPA Methods 8015C and 8021B.

#### **SCHEDULE**

Upon our receipt of approval to perform the proposed work, Versar can complete the sub-slab soil vapor well installation, and soil vapor, soil and groundwater sampling and report preparation within 60 days. Based on the collected and reported data, Versar can prepare an Interim Remedial Action Plan within 90 days following submittal of the Site investigation report.

This work plan addendum has been prepared by a California-licensed professional geologist. If you have any questions or require additional information, please contact me at (916) 863-9323, or tberger@versar.com.

Respectfully submitted, Versar, Inc.

Tim Berger, P.G. Program Manager Western Region

Attachments: 1. Figure 3- Proposed Soil Vapor Well and Sample Locations

- 2. Subslab Vapor Well Point Diagram
- 3. Versar SOP for Subslab Soil Gas Sampling from Constructed Wells



45SIONAL GEOL

TIM BERGER No. 5225



FIGURE 3







SUB-SLAB VAPOR WELL POINT DIAGRAM





STANDARD OPERATING PROCEDURE for SUBSLAB SOIL GAS SAMPLING



## VERSAR SOP FOR SOIL GAS SAMPLING FROM CONSTRUCTED WELLS

#### PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to establish protocol for the collection of soil gas samples from constructed wells. The following guidelines will ensure that the soil vapor samples are collected in a high quality and consistent manner. However, this is a standard operating procedure that may be varied or changed as required, dependent on site conditions, equipment limitations, or limitations imposed by the procedure. If changes are required, field personnel will contact the task manager.

## PROCEDURES

- 1. Prepare a vapor sample collection fitting. The fitting must include a flow control device and pressure gauge. To prevent water from entering the summa canister, 1 to 2 feet of clear tubing should be placed between the flow control and pressure gauge. All connections should be sealed using silicon tape.
- 2. Perform a Shut-in Test to check for leaks in the above-ground fittings. Evacuate the lines to a measured vacuum of about 100 inches of water column, and then shut the vacuum in with closed valves on opposite ends of the vacuum train. Observe the vacuum gauge for at least one minute. If there is any observable loss of vacuum, adjust the fittings as needed until the vacuum in the fittings does not noticeably dissipate.
- 3. Calculate the purge volume for the well. One purge volume comprises the sum of the tubing volume plus the pore space in the sand pack.
- 4. Determine if a purge volume test is necessary. A default of three (3) purge volumes will be used if a summa canister is used for sampling, or for samples collected at less than five (5) feet bgs, or if VOCs are not detected during a purge volume test. If a purge volume test is necessary, refer to the Draft California EPA Advisory Active Soil Gas Investigation.
- 5. Connect the vapor-tight fitting in Step #2 to the wellhead. Connect a purge canister to the aboveground fitting. Open the purge canister valve and the valve on the down hole side of the regulator to begin purging ambient air from the sampling apparatus and borehole (record the time purging commenced). Close the purge canister valve when three volumes of air have been purged from the sample apparatus and borehole.
- 6. Open the sampling canister valve to begin sample collection (record the time sample collection begins) and place the sampling hood, or shroud, over the sample train and canisters. Immediately spray 1,1-diflouroethane aerosol into the sampling hood. Monitor the shroud tracer atmosphere using a PID. Monitoring can be accomplished by inserting the probe tip through a fitted hole in the tracer shroud during sampling.
- 7. Close the sample canister valve when the sample canister gauge indicates 2 to 5 inches of mercury vacuum remain in the canister.
- 8. Record the time sample collection was terminated and replace the tee fitting on the sample canister with the laboratory supplied brass plug.



- 9. Label the sample and record on the chain of custody form the sample name, final vacuum, and the canister and flow controller serial numbers.
- 10. Store the sample in a container that blocks sunlight, do not subject the sample to significant changes in pressure and temperature, and do not chill the samples (discard if condensation is observed in the sample tubing).
- 11. Laboratory analyses will be performed by a state-certified laboratory.