

February 28, 2018

Dilan Roe, P.E.
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Keith Nowell, P.G. C.H.G.
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Re: ACDEH Responsive Environmental Investigation Workplan
Red Hanger Kleaners (T10000000416)
6235-6239 College Avenue, Oakland, CA 94618

Dear Ms. Roe and Mr. Nowell:

EnviroAssets, Inc. (“EnviroAssets”) is pleased to present this workplan for the above referenced Site to respond to the requests for new soil, soil vapor, and groundwater data communicated by Ms. Roe of the Alameda County Department of Environmental Health (“ACDEH”) during a January 29, 2018, meeting. During that meeting, Ms. Roe expressed that additional sampling is needed to address the ACDEH concern that former dry cleaning operations at the Property may have released the dry cleaning solvent tetrachloroethene (“PCE”) to the environment.

SCOPE OF WORK

The scope of work for this investigation that is responsive to the ACDEH request for data includes:

- Scope I: Collecting samples of soil, soil gas, and groundwater samples from two locations and multiple depths within the 307 63rd Street tenant space during seismic retrofit activities (Figure 1).
- Scope II: Collecting a shallow soil gas sample within the small limited access area between 6251 College Avenue and 6241 College Avenue.
- Scope III: Subslab vapor samples will be collected from three existing vapor pins installed beneath 6251, 6253, and 6255 College Avenue.

Soil, soil gas, and groundwater will be analyzed for the family of chlorinated volatile organic compounds associated with historical dry cleaning operations - PCE, trichloroethylene (TCE), dichloroethylenes (cis- and trans-1,2-DCE), and vinyl chloride (VC), or collectively, “CVOCs” – by EPA methods applicable to the specific sample media, as detailed below.

SCOPE I: MULTIPLE SAMPLES WITHIN 307 63RD STREET

Samples of soil, soil gas, and groundwater samples are proposed for collection from two locations within the 307 63rd Street tenant space during seismic retrofit activities (Figure 1). The following information was used to identify targeted sample depths for the investigation:

- First encountered groundwater was reported at “17 to 24 feet [below ground surface] bgs” with stabilized groundwater was reported at “16.15 to 17.8 feet bgs” in the *Supplemental Remedial Investigation Report* (LRM, September 27, 2017).
- During the sewer replacement work in the tenant space adjoining 307 63rd Street, the Property sewer lateral is expected to be at approximately five to six feet below grade.

Prior to sampling, a sewer video and location survey will be conducted to confirm the location and depth of the sanitary sewer serving the Property including any identifiable sewer lateral connections. Additionally, the utility survey will include identifiable utilities in the alleyway between the Property and 309 63rd Street, per request of the ACDEH. The following depths are anticipated for soil, soil vapor, and groundwater samples:

- Soil samples from the first native soil encountered beneath the concrete slab and base materials, anticipated for approximately 0.5-1-foot bgs. These samples will be used to support characterization of excavation soils during seismic retrofit activities that are anticipated to involve removal of approximately 12-inches of soil across the approximately 310 sf footprint of 307 63rd Street – or approximately 12 cubic yards of soil;
- Soil samples from beneath the sanitary sewer invert at approximately 7-foot bgs;
- Soil vapor samples from 7 and 15-foot bgs; and
- Grab groundwater samples at first groundwater at approximately 17-foot bgs.

Samples will be roughly co-located and completed with limited access direct push methods and submitted for chlorinated volatile organic compounds by an offsite analytical laboratory. Soil borings will be continuously cored and lithologically logged for soil type and characteristics including USCS descriptions. Soil will be collected with EnCore® or Terra Core™ samplers per EPA Method 5035A and analyzed for CVOCs in accordance with SW-846 method 8260B. Groundwater samples will be analyzed for CVOCs in accordance with SW-846 method 8260. A groundwater trip blank will be provided for analysis. Soil vapor samples will be collected using post-run tubing (“PRT”) methodology (Figure 2) in accordance with the *Advisory Active Soil Gas Investigations* (“Advisory”, DTSC, July 2015) and analyzed for CVOCs with EPA Method TO-15. As discussed in the Advisory, the PRT methodology allows soil vapor sampling within two hours of probe installation, and subsequent removal of the temporary probe. Helium will be used for leak check compound.

SCOPE II: SHALLOW SOIL GAS SAMPLE BETWEEN 6251 COLLEGE AVENUE AND 6241 COLLEGE AVENUE

A small limited access space exists between 6251 College Avenue and 6241 College Avenue, accessible by ladder and side-roof traverse (Figure 1). Due to the very limited access, a single shallow soil vapor sample is proposed for this location. The soil vapor sample will be collected using PRT equipment with a targeted depth from 6.5-7 feet bgs in accordance with the *Advisory Active Soil Gas Investigations* and analyzed for CVOCs with EPA Method TO-15. Helium will be used for leak check compound.

SCOPE III: SUB-SLAB VAPOR SAMPLING

Subslab vapor samples are proposed to be collected from three existing vapor pins installed beneath 6251, 6253, and 6255 College Avenue. The vapor pin currently installed in the slab at 307 63rd Street will be removed when the slab is demolished for the planned seismic retrofit and is not proposed for sampling. Samples will be collected for analysis in accordance with the *Advisory Active Soil Gas Investigations* and analyzed for CVOCs with EPA Method TO-15.

REPORTING

Analytical, hydrogeological, and survey data obtained during the investigation will be summarized and provided to the ACDEH, in a format that integrates newly derived data with historical data and will provide a comprehensive evaluation of site conditions.

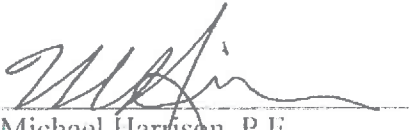
SCHEDULE

Sampling within 307 63rd Street will be coordinated with removal of the slab and façade; anticipated during the week of March 12th, subject to contractor and permit availability. Sub-slab and shallow soil gas sample between 6251 college avenue and 6241 college avenue will be conducted as soon as reasonably achievable in association with 307 63rd Street work. The ACDEH will be provided 48-hour notice prior to the start of fieldwork.

LIMITATIONS

This work plan is presented in accordance with generally accepted professional environmental practices, based on reasonably ascertainable data, and within the scope of the project. There is no other warranty, either express or implied.

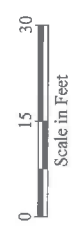
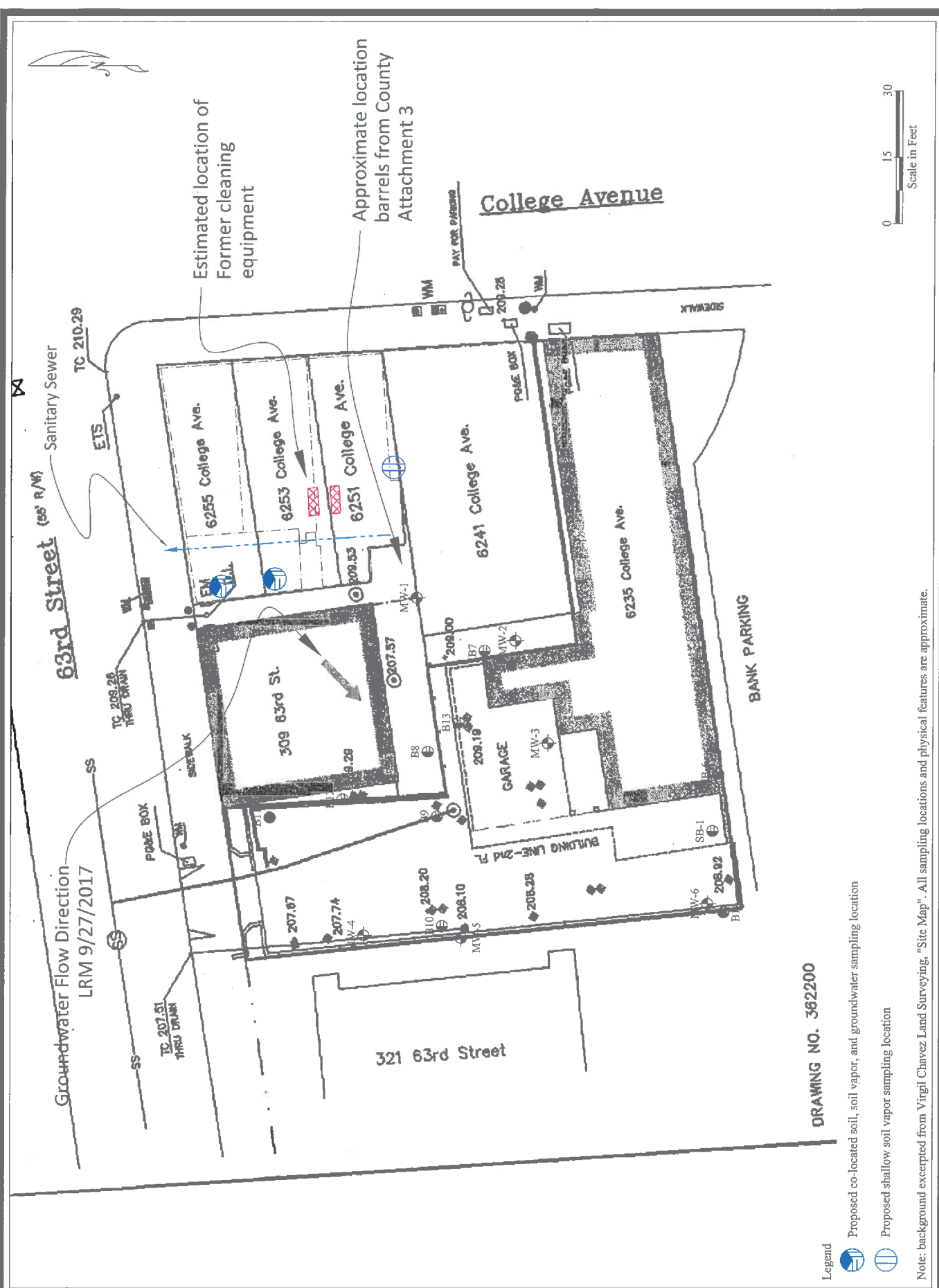
Respectfully submitted,



Michael Harrison, P.E.
Principal Engineer



Attachments



DRAWING NO. 362200

- Legend
- Proposed co-located soil, soil vapor, and groundwater sampling location
 - Proposed shallow soil vapor sampling location

Note: background excerpted from Virgil Chavez Land Surveying, "Site Map". All sampling locations and physical features are approximate.

 www.EnviroAssets.com V: (888) 746-8820 F: (510) 346-9500	Date: 1/28/2018 Drawn: MH File Name: EA22004-17	Date: 1/28/2018 Drawn: MH File Name: EA22004-17	Figure I Project EA270
	PROPOSED ACDEH RESPONSIVE SAMPLING Red Hanger Cleaners Oakland, California		

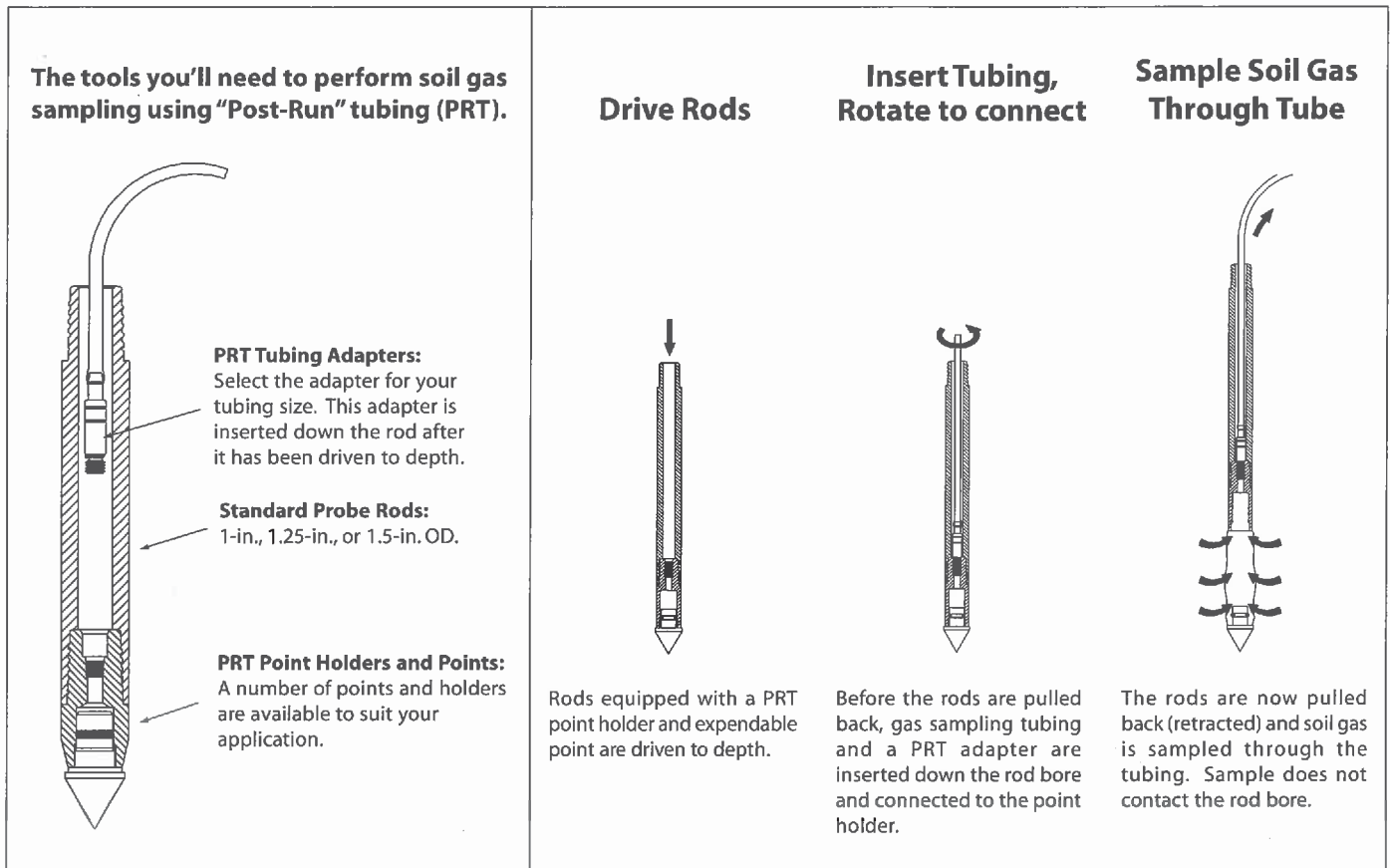


Figure 2: PRT sampling system.