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August 29, 2016

Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Attention: Mr. Mark Detterman, PG, CEG, Senior Hazardous Materials Specialist

**TRANSMITTAL LETTER
WORK PLAN FOR OFF-SITE SUBSURFACE INVESTIGATION
6701, 6705, and 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA
Fuel Leak Case No. RO0000548
Geotracker Global ID T0600100894**

Dear Mr. Detterman:

Submitted herewith for your review is the *Work Plan for Off-Site Subsurface Investigation, 6701, 6705, and 6707 Shellmound Street, Emeryville, California* dated August 29, 2016, prepared by PES Environmental, Inc.

I declare, under penalty of perjury, that the information and/or recommendations contained in the above-referenced document for the subject property are true and correct to the best of my knowledge.

Very truly yours,

ANTON EMERYVILLE, LLCRachel Green
Development Manager



August 29, 2016

1448.001.01.035

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Attention: Mr. Mark Detterman, P.G., C.E.G.

**WORK PLAN FOR OFF-SITE SUBSURFACE INVESTIGATION
6701, 6705, AND 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA
FUEL LEAK CASE NO. RO000548
GEOTRACKER GLOBAL ID T0600100894**

Dear Mr. Detterman:

On behalf of Anton Emeryville, LLC (Anton), PES Environmental, Inc. (PES) has prepared this Work Plan for Off-Site Subsurface Investigation (Off-Site Investigation Work Plan) at the property located at 6601-6603 Shellmound Street, Emeryville, California (off-site property). In a letter to Anton dated April 26, 2016, ACEH requested delineation of the extent of volatile organic compound (VOC) contamination potentially affecting soil, soil gas, and groundwater at the off-site property¹ based in part on review of PES' April 8, 2016 *Pre-Construction Subsurface Investigation Report* (Investigation Report), which documented the presence of elevated VOCs in soil vapor and soil adjacent to the shared property boundary between 6701, 6705, and 6707 Shellmound Street (collectively, the subject property or site) and the off-site property. The site location is shown on Plate 1. Numerous investigations have been conducted at the subject property to assess conditions in soil, soil gas, and groundwater as part of pre-construction site characterization activities.

The subject property is currently listed as an open Spills, Leaks, Investigation and Cleanup (SLIC) case with ACEH as the lead environmental regulatory agency. The case is listed under Mike Roberts Color Production (6707 Bay Street), and the database lists other solvents and non-petroleum hydrocarbons as the potential contaminants of concern. PES is assisting Anton in working with ACEH to obtain SLIC case closure as part of the site redevelopment process.

The subject property is also listed under Mike Roberts Color Production (6707 Bay Street) in the Leaking Underground Storage Tank (LUST) database due to the reported release from the

¹ Alameda County Environmental Health (ACEH), 2016. *Conditional Interim Remedial Plan Approval and Work Plan Request; SCP Case RO000548 and Geotracker Global ID T0600100894, Mike Roberts Color Production, 6707 Bay Street, Emeryville, CA 94608. April 26.*

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former underground storage tanks (USTs). The LUST case (ACEH fuel leak case number RO0000548) has been conditionally closed by ACEH under conditions associated with a deed notice.

BACKGROUND INFORMATION

Current Site and Vicinity Characteristics

The present-day off-site building was constructed by 1959 with a slab-on-grade concrete flooring and has wood framing and pre-fabricated concrete walls. The exterior of the subject property consists of asphalt paved parking and driving areas on the south and west sides of the building. Historical information indicates the building was initially in use as a warehouse and wholesale distribution facility for sugar and liquor items. The original warehouse building was converted to office space during various renovations during the 1970s to 1990s. The site was occupied by Sybase in the early 1990s and Ex'pression College for Digital Arts occupied the off-site building beginning in 1998.

Site Geology and Hydrogeology

Based on the results of investigations performed on the subject property and in the vicinity, the subject property is underlain by fill material overlying deposits of native silts and clays known locally as Old Bay Mud. The fill material ranges in thickness from approximately 10 to 19 feet and consists primarily of coarse-grained sands and gravels that contain varying amounts of fines, and fine-grained silts and clay. The fill material often contains debris (e.g., brick, concrete, metal, asphalt, glass, wood, fabric, and rubber). Fine-grained soils are present directly below the fill material, and generally consisted of dark-colored clays and occasional silts with organic material that represent Old Bay Mud deposits.

As reported in the Investigation Report, shallow groundwater in the southwestern portion of the site was encountered at depths ranging from approximately 12.75 to 13.5 feet bgs. Based on topography and the results of historical groundwater investigations performed at the site and in the vicinity, the predominant groundwater flow direction beneath the site is to the south-southwest toward the San Francisco Bay with localized flow towards the west-northwest in the area of the former USTs in the eastern portion of the site.

Contamination attributable to the non-native fill materials originally used to create the land along the bay-shore area of Emeryville, including the site and immediate vicinity, includes detectable concentrations in soil and shallow groundwater resultant from the presence of VOCs, total petroleum hydrocarbons (TPH), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals² in the non-native fill materials.

² PES, 2015. Conceptual Site Model, 6701 – 6707 Shellmound Street, Emeryville, California, Fuel Leak Case No. RO0000548, GeoTracker Global ID T0600100894. February 6.

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2015 Pre-Construction Subsurface Investigation and 2016 Supplemental Investigation

As documented in the Investigation Report, during November 30 through December 3, 2015, PES conducted pre-construction subsurface investigation activities, including soil vapor and soil sampling activities at 65 locations at the site, including 24 soil vapor sampling locations, 28 soil sampling locations, and 13 multi-purpose soil vapor and soil sampling locations to evaluate the subsurface for the presence of VOCs, TPH, SVOCs, PCBs, metals, and/or asbestos-containing material (ACM) related to historical deposition of fill material beneath the site or previous industrial activities conducted at the site.

Following receipt and evaluation of the initial November/December 2015 investigation results and a meeting held January 6, 2016 between ACEH, Anton, and PES, additional soil vapor, soil, and groundwater sampling activities were completed on February 1 through 4, 2016. Sampling activities were conducted at an additional 28 locations (primarily in the southwestern portion of the site), including six soil vapor sampling locations, seven soil sampling locations, one grab groundwater sampling location, five soil and grab groundwater sampling locations, and nine locations for collection of both soil vapor and soil samples. The supplemental investigation activities were conducted with the primary objective of further evaluating the subsurface for the presence of VOCs, particularly vinyl chloride, to evaluate for potential source areas and provide data in support of developing remedial or mitigation measures appropriate for the proposed development.

Soil vapor and soil analytical results presented in the Investigation Report were generally consistent with historical deposition of fill material beneath the subject property and vicinity, with the exception of chlorinated VOCs (in particular, vinyl chloride) detected in the southwestern portion of the site. Elevated concentrations of vinyl chloride in soil vapor and soil were detected beneath the western portion of the alleyway located between the warehouse building and southern property boundary. PES concluded that, based on the results of the two investigations, the magnitude and extent of VOCs in soil vapor, soil, and groundwater at the site had been well characterized, however, the observed on-site distribution of VOCs suggested the subsurface of the adjacent 6601/6603 Shellmound Street property to the south may also be affected.

The objective of the proposed off-site investigation is to evaluate the subsurface beneath the 6601-6603 Shellmound Street property for the presence of chlorinated VOCs previously identified in the southwestern portion of the subject property. The primary components of the proposed off-site investigation include:

- Multi-depth soil gas sampling, with select companion soil sampling to assess conditions associated with chlorinated VOCs reported for soil and soil gas samples collected near the subject property's southern property boundary; and

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- Grab groundwater sampling to assess conditions beneath the off-site property and downgradient of the southern subject property boundary.

SCOPE OF WORK

The scope of work to be conducted is presented below. A site plan showing the proposed soil, soil gas and groundwater sampling locations at the off-site property building are shown on Plate 2. The scope of work includes collection and analysis of soil gas samples from eleven (11) locations, and soil and grab groundwater samples from five locations at the off-site property. Where feasible, soil gas and soil samples will be collected from the same boring. Table 1 presents the sample name, depth, elevation, rationale, and proposed analytical program for each proposed soil, soil gas, and groundwater sample. A site walk was conducted by representatives of PES, Anton, and Ex'pressions College on August 19, 2016, to assess proposed boring locations. Based on the presence of sensitive building areas (e.g., recording studios and classroom spaces with custom acoustic flooring systems), all intrusive sampling activities will be conducted in common areas (e.g., building hallways).

As shown on Plate 2, with the exception of one exterior groundwater sample location, the proposed soil, soil gas and groundwater sampling will be conducted in the western half of the 6601-6603 Shellmound Street building interior.

Field Planning Activities

Prior to initiating field activities at the site, PES will update our site-specific Health and Safety Plan (HASP). The HASP will comply with applicable federal and California Occupational Safety and Health Administration (OSHA) guidelines. A drilling permit will be obtained from the Alameda County Public Works Agency, Water Resources Section (ACPWA).

Underground Service Alert will be contacted to schedule visits by public and private utility companies to locate their underground utilities. In addition, a private underground utility locating service will be contracted to conduct a subsurface electromagnetic survey to screen the proposed sampling locations for the presence of subsurface utilities. Access to the off-site property will be arranged by Anton.

Soil Gas Investigation

An active soil gas investigation will be conducted to further assess the distribution of VOCs within the vadose zone at off-site locations. The active soil gas investigation will be conducted in accordance with the procedures outlined in the *Advisory – Active Soil Gas Investigations* published by the Department of Toxic Substances Control, the Regional Water Quality Control Board, Los Angeles Region and the RWQCB dated July 2015. As shown on Plate 2, soil gas samples will be collected at eleven proposed locations. PES will attempt to collect soil gas

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samples at depths of 5 and 10³ feet below the top of the interior concrete slab. It is anticipated that the soil gas samples will be collected from temporary soil gas probes installed using a dolly-mounted, limited access drilling rig equipped with direct push technology (DPT). At interior locations where limited access conditions preclude the use of a DPT drilling rig, vapor samples may be collected from temporary vapor probes installed using hand-held equipment, as necessary.

Soil Gas Probe Installation and Sampling

Soil gas samples will be collected by installing a 1-inch diameter, hollow, stainless-steel, soil gas probe to the required sampling depth (5 feet bgs or 10 feet bgs [conditions permitting]). If wet soil is observed at depths above 10 feet bgs, the deeper soil gas probe installation depth will be adjusted to sample soil gas within the vadose zone (above the capillary fringe). The probe will be installed at the required depth using a track or dolly-mounted direct-push rig. Upon reaching the target depth of 10.25 feet bgs at each location, a new ceramic soil vapor probe will be placed at approximately 10 feet bgs within a #2/12 sand pack extending 3 inches above and below the sampling interval, and attached to new ¼-inch diameter Teflon™ tubing extending to ground surface. One foot of dry granular bentonite will be placed on top of the sand pack to preclude the infiltration of hydrated bentonite grout into the sand pack. The borehole annular space between approximately 8.75 and 5.25 feet bgs will be filled with hydrated bentonite.

A shallower soil vapor probe will be installed within the same borehole as the deeper probe at each location scheduled for soil gas sampling. The shallow probe tip will be placed at approximately 5 feet bgs within a #2/12 sand pack extending 3 inches above and below the sampling interval, and attached to new ¼-inch diameter Teflon™ tubing extending to ground surface. One foot of dry granular bentonite will be placed on top of the sand pack. The borehole annular space from approximately 3.75 feet bgs to ground surface will be filled with hydrated bentonite. The upper end of the tubing for each probe will be capped with a vapor-tight fitting and marked at the surface to identify the probe location and depth. Each soil gas probe will be allowed to equilibrate for a minimum of 2 hours prior to purging and gas sampling.

Prior to purging and collecting soil gas samples, shut-in leak testing will be performed. The shut-in test will consist of assembling the above-ground sampling apparatus (e.g., valves, lines and fittings downstream from the top of the probe) and evacuating the lines to a measured vacuum of approximately 100 inches of water column (in-H₂O), then shutting the vacuum in with closed valves on opposite ends of the sampling train. A vacuum gauge will be used to assess if there is any observable loss of vacuum (for at least one minute) prior to purging and the collection of soil gas samples. If observable vacuum loss is noted, the sample train will be

³ The presence of shallow groundwater may require modification of the soil gas sampling depths.

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re-assembled and the shut-in test will be repeated. This process will be repeated as necessary until a successful shut-in test has been performed.

The purge volumes of the sampling tubing and void within the bottom of the exposed portion of the soil gas probes will be calculated. A default of three probe volumes will be purged prior to the collection of the soil gas samples. The stagnant air will be purged with a six-liter SUMMA™ canister. A 1-liter SUMMA™ canister that is batch-certified clean by a California-certified analytical laboratory will be utilized to collect the soil gas sample.

Following completion of the shut-in leak test and purging, sample train leak testing will be performed using helium gas (or equivalent) as a tracer in combination with a shroud box. A leak test will be performed each time a soil gas sample is collected to evaluate whether a good seal has been established in the sampling train, ground surface, and probe interface.

The tracer shroud box will consist of a polycarbonate box equipped with a sampling port. The bottom of the shroud box will be positioned over the wellhead with the sample collection tubing passing through the bottom. Once in position, the sample train will be connected to the SUMMA™ canisters, and the shroud box will be placed over entire sample train. The shroud box will be equipped with an access port to allow charging of the box with the tracer. Prior to opening the SUMMA™ canister, the shroud box will be charged by spraying the tracer gas into the shroud box using a regulator. The shroud box will be allowed to remain in place for the duration of sampling.

Following collection of the soil gas sample at each location, the soil gas sampling probe will be removed from the borehole and decontaminated. A new soil gas sampling probe and new tubing will be used for the collection of each soil gas sample. Following completion of the soil gas sampling from each probe, the boreholes will be grouted with a bentonite/cement slurry.

Sub-Slab Vapor Port Installation and Sampling

Sub-slab soil gas samples will be co-located and collected at each soil vapor sample location. Each sub-slab sampling port will be installed by drilling a 5/8-inch diameter hole through the concrete slab and into the underlying fill material using a hand-operated rotary hammer drill. A sub-slab implant, consisting of a 3-inch long purpose-made brass barb fitting and silicone sleeve (Vapor Pin™, manufactured by Cox-Colvin & Associates of Plain City, Ohio), will be advanced into the drill hole. Each implant barb will be fitted with a vapor- and water-tight rubber cap. Each sub-slab vapor sampling point will be allowed to equilibrate for a minimum of two hours after installation.

Each implant will be connected to a clean laboratory-provided vapor purging and sampling apparatus using new Teflon™ tubing, followed by a shut-in test on each sampling apparatus for a minimum one minute period, as described above. Following a successful shut-in test, the sample tubing and sub-slab implant will be purged of a minimum of three volumes. Purging and collection of sub-slab vapor samples will be performed using a flow rate of

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100 to 200 milliliters per minute (mL/min) and maintaining a vacuum of less than 100 in-H₂O to mitigate ambient air breakthrough into the samples. Sample train leak testing will be performed using the tracer gas in combination with a shroud box as described above. Each sample canister will be filled until the vacuum gauge reads approximately 5 inches mercury (in-Hg).

Following the completion of the sub-slab vapor sampling at each location, the sub-slab vapor port will be removed and the slab will be sealed with neat cement and concrete and repaired to match the surrounding surface.

Soil Vapor and Sub-Slab Vapor Sample Analysis

Following completion of soil vapor and sub-slab vapor sampling, each SUMMA™ canister will be transported under chain-of-custody protocol to a stationary State of California-certified analytical laboratory. The soil gas and sub-slab vapor samples will be analyzed for VOCs using U.S. Environmental Protection Agency (U.S. EPA) Method TO-15 and helium, oxygen, and carbon dioxide using ASTM International (ASTM) Method D1946. Sample depth, elevation, rationale, and proposed analytical program for each soil gas sample location are presented on Table 1.

Soil Sampling

As shown on Plate 2, soil samples will be collected at 5 proposed locations closest to the shared property line.

Continuous soil cores will be collected by driving a 4-foot long by 2-inch outside-diameter open-tube sampler into undisturbed soil. The open-tube sampler will be lined with a new clear acetate sample sleeve with integral soil catcher. Soil samples to be submitted for analysis of volatile compounds will be collected in accordance with U.S. EPA Method 5035 using Terracore™ samplers or equivalent.

Soil cores will be field screened for VOCs using a photoionization detector (PID) with a 10.6 electron volt (eV) lamp and recorded on the soil boring log. PES will prepare lithologic logs for the continuously cored borings using the Unified Soil Classification System (USCS) and Munsell Color Index.

Sample containers will be labeled to indicate project location, job number, sample location and identification number, and time and date of collection. The samples will be immediately placed in a thermally-insulated cooler containing ice and transported under chain-of-custody protocol to a State of California-certified analytical laboratory for analysis of VOCs by U.S. EPA Test Method 8260B. Additional information for the proposed sampling and analytical program for each soil sample location are presented on Table 1.

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Reusable downhole drilling and sampling equipment will be decontaminated using a high-pressure, hot water wash or Alconox™ wash and triple rinse prior to collecting each soil sample. Upon completion of soil sampling activities, each borehole will be grouted to the ground surface with neat cement grout in accordance with ACPWA requirements, and the surface will be restored using concrete dyed to match the surrounding material.

Grab Groundwater Sampling

Grab groundwater samples will be collected at five boring locations, as shown on Plate 2. These borings will be advanced to a depth of approximately 12 to 15 feet bgs to allow for the collection of groundwater samples. The soil borings will be continuously cored and logged consistent with the methods described above for soil sampling. Depth to groundwater is anticipated to range from approximately 7 to 13 feet bgs. To facilitate sample collection, a 5- to 10-foot section of temporary well screen will be installed at each grab groundwater sample location. Groundwater samples will be collected using a new disposable polyethylene bailer or a decontaminated stainless steel bailer lowered through the well screen. Samples will be collected by slowly filling the appropriate laboratory supplied sample containers.

Groundwater sample containers will be labeled to indicate project location, sample number, and time and date collected. The samples will be immediately placed in a thermally-insulated cooler containing ice and transported under chain-of-custody protocol to the project laboratory.

The groundwater samples will be analyzed for VOCs by U.S. EPA Test Method 8260B.

Handling, Storage, and Disposal of Investigation-Derived Waste

Investigation-derived waste (IDW) generated during the off-site subsurface investigation will be temporarily stored on the subject site. The IDW will be stored in secured, labeled 55-gallon steel drums until proper off-site management in accordance with applicable State and Federal laws can be arranged. The IDW will be disposed or recycled based on the results of the laboratory analyses.

Reporting

A description of the methods and procedures of the above-referenced scope of work will be presented in a report along with the results of the sampling activities. The report will also provide tabulated data, illustrations showing select contaminant concentrations, laboratory reports, findings of the completed scope of work, and recommendations, as appropriate.

The report will also be submitted electronically to the State Water Resources Control Board Geotracker database and ACEH file transfer protocol (ftp) site.

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SCHEDULE

The project schedule has been developed as follows: (1) field preparation activities will be completed within one to two weeks of ACEH-approval of the work plan; (2) the off-site subsurface investigation will be completed within approximately one to three weeks following acquisition of the permit from ACPWA, and pending execution of an access agreement with the ownership of 6601-6603 Shellmound Street; (3) waste disposal to be conducted within approximately four weeks following receipt of the IDW sampling laboratory results; and (4) a report will be submitted to ACEH three to four weeks after receipt of final analytical results.

Please call Kyle Flory at (415) 899-1600 if you have any questions or comments regarding this document.

Very truly yours,

PES ENVIRONMENTAL, INC.



Christopher J. Baldassari, P.G.
Senior Geologist



Kyle S. Flory, P.G.
Principal Geologist

Attachments: Table 1 – Proposed Sampling and Analysis Program
Plate 1 – Site Location Map
Plate 2 – Site Plan and Soil, Soil Gas, and Groundwater Sample Locations

cc: Rachel Green – Anton Emeryville, LLC

TABLE

Table 1
Proposed Sampling and Analysis Program
Work Plan for Off-Site Subsurface Investigation
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location ID	Sample Rationale/Feature of Interest	Proposed Sample Depth (feet bgs)	Analysis Plan		
			VOCs	Oxygen and Carbon Dioxide ¹	Tracer Gas Compound ¹
Soil Gas					
PSV1	Lateral definition of VOCs in soil vapor	0.5, 5, and 10	X	X	X
PSV2	Near vicinity of VOC in soil vapor	0.5, 5, and 10	X	X	X
PSV3	Near vicinity of VOC in soil vapor	0.5, 5, and 10	X	X	X
PSV4	Near vicinity of VOC in soil vapor	0.5, 5, and 10	X	X	X
PSV5	Near vicinity of VOC in soil vapor	0.5, 5, and 10	X	X	X
PSV6	Lateral definition of VOCs in soil vapor	0.5, 5, and 10	X	X	X
PSV7	Lateral definition of VOCs in soil vapor	0.5, 5, and 10	X	X	X
PSV8	Lateral definition of VOCs in soil vapor	0.5, 5, and 10	X	X	X
PSV9	Lateral definition of VOCs in soil vapor	0.5, 5, and 10	X	X	X
PSV10	Lateral definition of VOCs in soil vapor	0.5, 5, and 10	X	X	X
PSV11	Lateral definition of VOCs in soil vapor	0.5, 5, and 10	X	X	X
Soil					
PSV1	Assess conditions in vicinity of detected soil VOCs	5 and 10	X		
PSV2	Assess conditions in vicinity of detected soil VOCs	5 and 10	X		
PSV3	Assess conditions in vicinity of detected soil VOCs	5 and 10	X		
PSV4	Assess conditions in vicinity of detected soil VOCs	5 and 10	X		
PSV5	Assess conditions in vicinity of detected soil VOCs	5 and 10	X		
Groundwater					
PGW1	Assess off-site groundwater downgradient of groundwater VOC detections		X		
PGW2	Assess off-site groundwater downgradient of groundwater VOC detections		X		
PGW3	Assess off-site groundwater downgradient of groundwater VOC detections		X		
PGW4	Assess off-site groundwater downgradient of groundwater VOC detections		X		
PGW5	Assess off-site groundwater downgradient of groundwater VOC detections		X		

Notes:

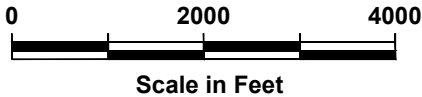
bgs = Below ground surface.

VOCs = Volatile organic compounds; laboratory analysis by USEPA Methods TO-15 (Vapor) and 8260B (soil and groundwater).

X = Scheduled for analysis.

¹ = Laboratory analysis by ASTM 1946D.

PLATES



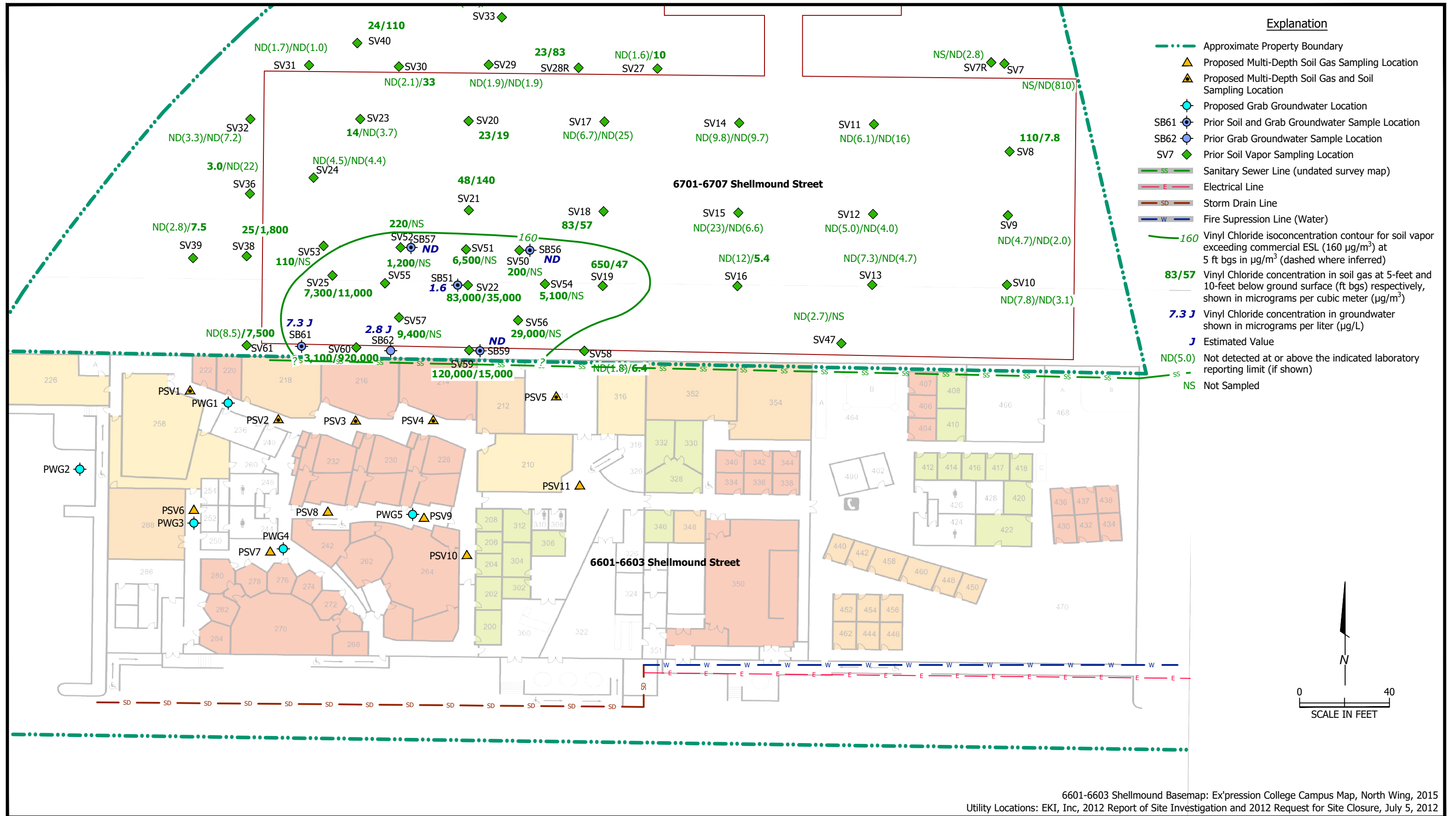
U.S.G.S. Topo Map - Oakland West, California, 7.5-minute quadrangle. 1997



Site Location Map
 Work Plan for Subsurface Off-Site Investigation
 6701, 6705, and 6707 Shellmound Street
 Emeryville, California

PLATE

1



6601-6603 Shellmound Basemap: Ex'pression College Campus Map, North Wing, 2015
 Utility Locations: EKI, Inc, 2012 Report of Site Investigation and 2012 Request for Site Closure, July 5, 2012