



City Manager's Office

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August 6, 2015



1098.007.01.001

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502
Attention: Mr. Mark Detterman, PG, CEG

Transmittal
Work Plan for Supplemental Site Investigation
39155 and 39183 State Street
Fremont, California

Dear Mr. Detterman:

Submitted herewith for your review is the *Work Plan for Supplemental Site Investigation, 39155 and 39183 State Street, Fremont, California* prepared by PES Environmental, Inc.

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

Very truly yours,

A handwritten signature in blue ink, appearing to read "Clifford Nguyen".

Clifford Nguyen
Urban Initiatives Manager
City of Fremont
cnguyen@fremont.gov
510.284.4017

cc: Carl Michelsen, PES Environmental, Inc.



August 6, 2015

1098.007.01.001

A Report Prepared for:

Regis Homes Bay Area, LLC
Attention: Mr. Dave Hopkins
901 Mariners Island Boulevard, #700
San Mateo, California 94404

For Submittal to Oversight Agency:

Alameda County Environmental Health
Attention: Mr. Mark Detterman, PG, CEG
1131 Harbor Bay Parkway
Alameda, California 94502

Received by: _____

Date: _____

**Subject: Work Plan for Supplemental Site Investigation
39155 and 39183 State Street
Fremont, California**

Dear Mr. Hopkins:

This *Work Plan for Supplemental Site Investigation* (Work Plan) has been prepared by PES Environmental, Inc. (PES) on behalf of Regis Homes Bay Area, LLC (REGIS) for the currently vacant properties at 39155 and 39183 State Street in Fremont, California (the site or subject property). The site location is shown on Plate 1, and the subject property and vicinity are shown on Plate 2. The site, which covers an area of approximately 6.9 acres, consists of two adjacent asphalt-paved lots with several landscaped areas. The site was formerly occupied by a Nob Hill grocery store/Payless drug store building which was demolished in 2001. The site has been vacant since then and is currently owned by the City of Fremont (City). PES understands that REGIS is considering acquisition of the site from the City and plans to redevelop the site with commercial buildings with subsurface parking along the northwestern portion of the site, and slab-on-grade residential buildings to the southeast¹.

PES completed three phases of site investigations at the subject property in October and December 2014, and January 2015. A corresponding work plan for each phase of site investigation was submitted to the Alameda County Water District (ACWD) on

¹ KTG Y Group, Inc., 2013. *Conceptual Site Plan- Alternate 2 - Downtown Fremont*.

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September 26, 2014, December 2, 2014, and January 26, 2015². The investigations included completing 40 borings (B1 through B40) for soil and/or soil vapor sample collection. The approximate locations of the borings are shown on Plate 2. The objective of the investigations was to evaluate the chemical characteristics of the soil and soil vapor beneath the site to assess if they have been impacted by prior site usage or potential offsite sources of contamination.

As described in a memorandum dated February 12, 2015³, soil vapor sampling within the State Street right of way adjacent to and northeast of the site, and on a limited area on the northeastern portion of the site has identified the presence of a tetrachloroethylene (PCE) soil vapor plume. The soil vapor appears to be the result of discharges of PCE into the sanitary sewer and/or storm drain by a prior dry cleaning establishment, Norge Cleaners, located at 39067 State Street. In addition, benzene was detected in a single location (boring B4) that exceeded the site-specific soil vapor screening level on the southern portion of the site. Testing in the vicinity of this location was unable to identify a source area or widespread contamination.

Based on the planned redevelopment of the subject property, and the May 13, 2015 letter from ACWD⁴, the objectives of this investigation are as follows: (1) to further evaluate the chemical characteristics of the soil and soil vapor in the vicinity of boring B4 and confirm that the benzene identified in soil vapor at this location represents an isolated occurrence for which there is no evidence of a material on-site source of contamination; and (2) to confirm that shallow soils are oxygenated and conducive to benzene degradation.

PROPOSED SCOPE OF WORK

The scope of work for the investigation includes the following activities: (1) field preparation tasks; (2) collection and analysis of soil and shallow soil vapor samples; and (3) submittal of laboratory analytical reports.

Field Preparation Activities

The following activities will be performed prior to the commencement of field sampling activities:

² PES, 2014a. *Work Plan for Limited Site Investigation, 39155 and 39183 State Street, Fremont, California.* September 26; PES, 2014b. *Work Plan for Supplemental Site Investigation, 39155 and 39183 State Street, Fremont, California.* December 2; PES, 2015. *Work Plan for Supplemental Soil Vapor Investigation, 39155 and 39183 State Street, Fremont, California.* January 26.

³ PES, 2015. *Report of Results, Subsurface Investigation, 39155 and 39183 State Street, Fremont, California.* February 12.

⁴ Alameda County Water District (ACWD), 2015. *Contamination Detected at 39155 and 39183 State Street, Fremont (ACWD Site #690).* May 13.

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- Update as necessary the Site-specific Health and Safety Plan in accordance with applicable occupational safety and health requirements;
- Obtain drilling permits from ACWD;
- Contact Underground Services Alert for public utility clearance;
- Retain and schedule drilling and laboratory subcontractors; and
- Perform utility clearances at sampling locations.

Field Investigation

General Procedures

Borehole drilling and sampling services will be provided by a licensed contractor possessing a valid C-57 water well contractor's license issued by the State of California, and in accordance with California Department of Water Resource Water Well Standards (Bulletin 74-90).

The soil and soil vapor sampling locations are shown on Plate 2. All subsurface investigation work will be conducted under the supervision of a California-registered geologist or engineer. A PES geologist or engineer will observe the borehole drilling and will prepare a lithologic log for select borings using the Unified Soil Classification System. Soil samples will be field screened for volatile organic compounds (VOCs) using a photoionization detector (PID), and the PID readings will be recorded on the lithologic log. Soil sampling depths and analyses may be modified based on the results of field screening, observations of changes in lithology, or visual or olfactory indications.

Filled soil sample containers will be labeled for identification and immediately placed in a chilled, thermally insulated cooler (containing either bagged ice or blue ice) and delivered under chain-of-custody protocol to the project laboratory. Analysis of the samples will be performed on a standard one-week turn-around time by a California state-certified laboratory.

To reduce the potential for cross-contamination between sampling locations, downhole drilling and sampling equipment will be thoroughly cleaned prior to initiating work and between sampling locations. Sampling equipment will be washed in a dilute Alconox (or equivalent) solution, rinsed with potable water, and final rinsed with distilled water between each sampling location. Direct-push drilling equipment will be decontaminated as necessary with a high-pressure hot water wash between sampling locations.

Soil cuttings and decontamination fluids will be temporarily stored on-site pending characterization and proper off-site disposal. Upon completion of sampling activities, each

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borehole will be grouted to the surface using neat cement under the oversight of ACWD staff. A tremmie pipe will be utilized in deeper borings.

Soil Vapor Sampling Methodology and Procedures

Soil vapor sampling procedures will be consistent with the California Environmental Protection Agency - Department of Toxic Substances Control (DTSC), California Regional Water Quality Control Board (RWQCB) – Los Angeles Region, and RWQCB – San Francisco Region, *Advisory – Active Soil Gas Investigations* prepared in 2012⁵. Prior to sampling, PES will verify that no significant rainfall event (of greater than 0.5 inches, as described in the *Advisory*) has occurred within a 5-day period of the soil vapor sampling event.

Soil vapor sampling locations are shown on Plate 2. An additional soil gas sample will be collected at a depth of 10 feet below ground surface (bgs) adjacent to boring B4 where an elevated concentration of benzene was detected previously. In addition, three (3) soil gas samples will be collected at depths of 5 feet bgs in the vicinity of boring B4. Soil vapor will be obtained using a Geoprobe-type sampling device outfitted for soil vapor sample collection. Soil vapor samples will be collected by installing a 1-inch diameter, hollow, stainless-steel soil vapor probe to the required sampling depth. The probes will be equipped with a hardened, reverse-threaded steel tip. The probe will be driven using the hydraulic direct-push rig. A hydrated bentonite seal will be placed around the rods to minimize the potential for ambient air entering the sample. Upon reaching the desired depth, a continuous length of inert 1/4-inch outer diameter polypropylene Nylaflow[®] tubing will be inserted down the center of the probe and threaded onto the sampling port. The probe will be then raised approximately 4 inches to expose the soil vapor sampling ports.

To allow for the subsurface to equilibrate to representative conditions following probe placement with the direct-push method, a 2-hour equilibration period will be allowed prior to conducting the respective purge volume test and soil vapor sampling.

Leak testing will be conducted during the collection of soil vapor samples to evaluate the integrity of the sample and the potential for atmospheric leakage of ambient air. Leak testing will be performed using 2-propanol applied to a towel which will be fitted around the probe at the surface while purging.

After reaching the specified sampling depth and installing the soil gas sampling equipment as described above, soil vapor will be withdrawn from the inert tubing using a syringe connected via a three-way valve. 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 purge volume versus

⁵ Cal EPA, 2012. *Advisory – Active Soil Gas Investigations*. April 2012.

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contaminant concentration test will be performed at the first sampling location prior to collection of the first field sample to determine the appropriate volume of vapor to be purged from each probe installation prior to sample collection. The appropriate purge volume will be selected based on the highest concentration of VOCs.

Soil Vapor Analyses

Soil vapor samples will be analyzed by an on-site mobile laboratory (California-certified for the specified analyses) for VOCs by U.S. Environmental Protection Agency (U.S. EPA) Test Method 8260B. In addition, oxygen concentrations will be measured by the laboratory at each of the four soil vapor borings located adjacent to boring B4 utilizing a thermal conductivity detector.

Soil Sampling Methodology and Procedures

Four (4) soil borings will be advanced in the vicinity of boring B4 to a depth of 10 feet bgs. The soil borings will be sampled at three depth intervals (e.g., 2 to 3 feet bgs, 5 to 6 feet bgs, and 9 to 10 feet bgs) for chemical analysis. The location of the planned soil borings are shown on Plate 2. One boring will be located adjacent to boring B4, and three (3) borings will be located at a distance of approximately 40 feet from boring B4.

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 one 4-foot long, clear acetate sample sleeve. Soil samples will be collected in the acetate sample sleeve. The acetate sample sleeve will be cut at the appropriate depth interval into a 6-inch long section, and sealed with Teflon liners and plastic end caps to prevent moisture and/or contaminant loss.

Soil Sample Analyses

Soil samples will be analyzed for VOCs by U.S. EPA Test Method 8260B, total petroleum hydrocarbons (TPH) quantified as gasoline (TPHg) by U.S. EPA Test Method 8015B, and TPH quantified as diesel and motor oil (TPHd/mo) by U.S. EPA Test Method 8015B with a silica gel cleanup included with the analysis.

REPORTING AND SCHEDULE

Copies of the final laboratory analytical reports will be transmitted to ACEH and ACWD within 30 days of receipt.

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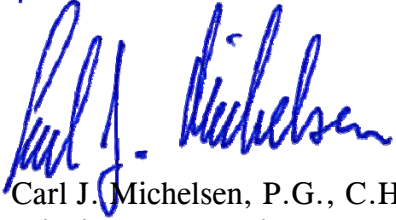
We trust that this is the information you require at this time. Please call either of the undersigned if you have any questions.

Yours very truly,

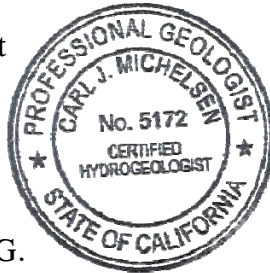
PES ENVIRONMENTAL, INC.



Justin J. Patterson
Senior Environmental Scientist



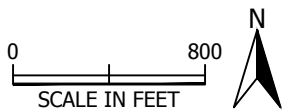
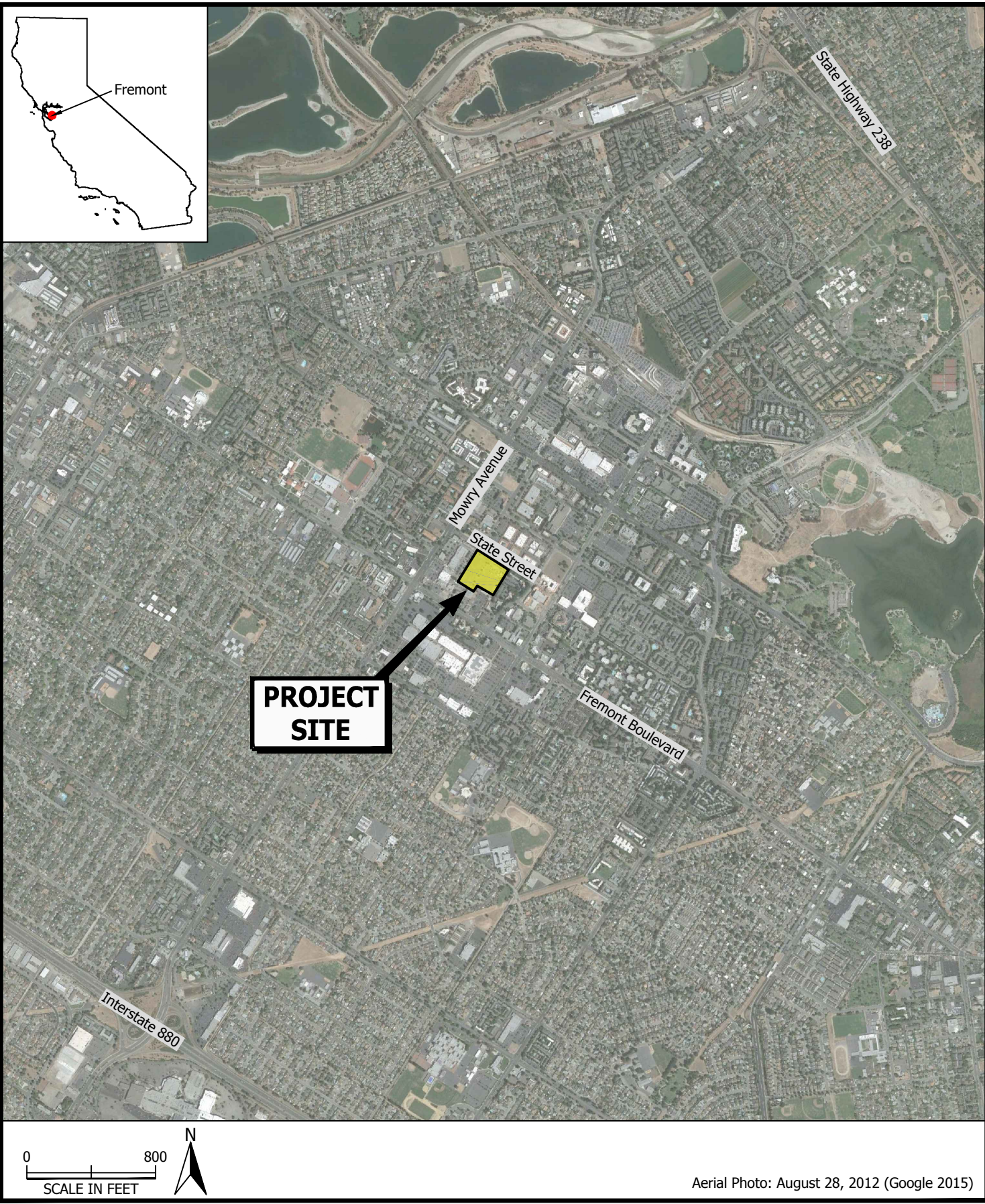
Carl J. Michelsen, P.G., C.H.G.
Principal Geochemist



cc: Mr. Selim Zeyrek (Alameda County Water District)

Attachments: Plate 1 – Site Location
Plate 2 – Site Plan and Proposed Sample Locations

PLATES



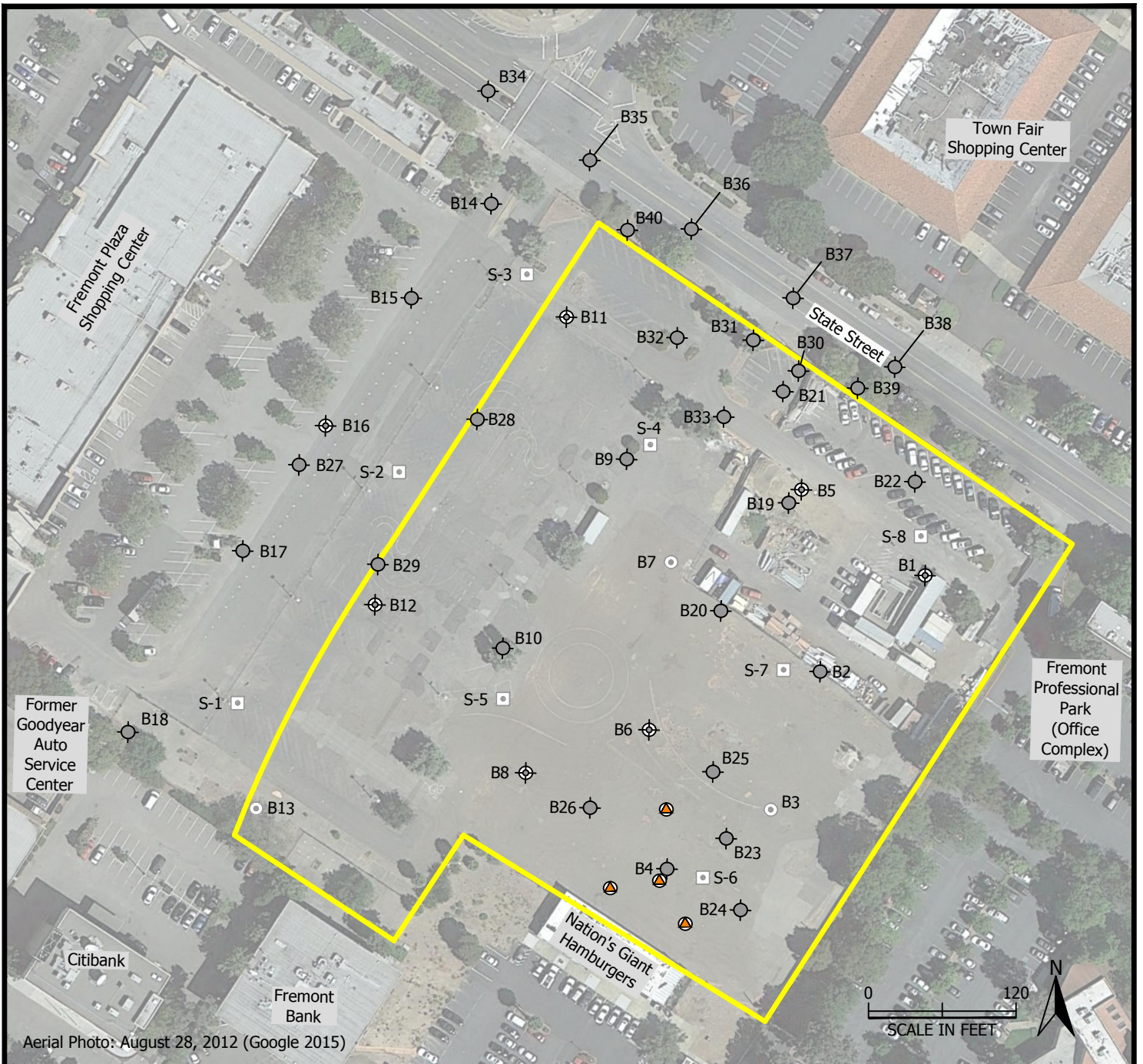
Aerial Photo: August 28, 2012 (Google 2015)









PES Environmental, Inc.
Engineering & Environmental Services

Site Location
39155 and 39183 State Street
Fremont, California

PLATE
1



Explanation

-  Approximate Property Boundary
-  B17 Soil Vapor Sampling Location (PES, 2014)
-  B6 Soil Vapor and Soil Sampling Location (PES, 2014)
-  B13 Soil Sampling Location (PES, 2014)
-  S-1 Soil Sampling Location (ENGE0, 2015)
-  Proposed Soil and Soil Vapor Sample Location



PES Environmental, Inc.
Engineering & Environmental Services

Site Plan and Proposed Sample Locations
39155 and 39183 State Street
Fremont, California

PLATE

2