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By Alameda County Environmental Health 3:20 pm, Oct 11, 2017

2101 Williams Associates, LLC
2228 Livingston Street
Oakland, CA 94606
Telephone (510) 261-5500

October 10, 2017

Mr. Mark Detterman
Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN CERTIFICATION
County Case # RO 2468
Former James River Corporation Site
2101 Williams Street
San Leandro, CA

Dear Mr. Detterman:

You will find enclosed one copy of the following document prepared by P&D Environmental, Inc. for the subject site.

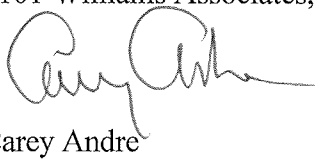
- Subsurface Investigation Work Plan (B1 Through B3) dated October 10, 2017.

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

Please do not hesitate to call me if you have any questions.

Sincerely,

2101 Williams Associates, LLC



Carey Andre

0660.L12

P&D ENVIRONMENTAL, INC.

55 Santa Clara Avenue, Suite 240
Oakland, CA 94610
(510) 658-6916

October 10, 2017
Work Plan 0660.W6

Mr. Mark Detterman
Alameda County Department of Environmental Health
1131 Harbor Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN
(B1 THROUGH B3)
County Case # RO 2468
James River Corporation
2101 Williams Street
San Leandro, California

Dear Mr. Detterman:

P&D Environmental, Inc. (P&D) has prepared this work plan to further evaluate the presence and extent of of tetrachloroethene (PCE) beneath the subject site building. This work plan has been prepared following discussion with the Alameda County Department of Environmental Health (ACDEH) to evaluate soil conditions beneath portions of the floor slab where replacement of the floor slab is proposed for site improvements.

A Site Plan Aerial Photograph Detail showing the proposed borehole locations is attached as Figure 1, and a Site Plan Aerial Photograph Detail showing soil and soil gas PCE concentrations and the proposed borehole locations is attached as Figure 2. All work will be performed under the direct supervision of an appropriately licensed California professional.

BACKGROUND

PCE that originates from sources offsite and upgradient of the subject site has been detected in groundwater on the upgradient and downgradient sides of the building on subject site. The presence of the PCE groundwater plume has been well-documented on the adjacent upgradient property at 2075 Williams Street in San Leandro and is recognized by the San Francisco Bay Regional Water Quality Control Board (SFRWQCB) to originate from some unknown upgradient location.

Vapor Pins VP1 through VP6 were installed on November 4, 2014 and were sampled on November 5, 2014. Based on the initial sample results, Vapor Pins VP3 through VP6 were sampled a second time on December 10, 2014. Following discussions with the ACDEH regarding the sample results and related data gaps, Vapor Pins VP7 through VP12 were installed on February 3, 2015 and sampled on February 16 and 17, 2015. The ACDEH had

approved the locations for Vapor Pins VP7 through VP12 in an e-mail dated January 29, 2015. The historical Vapor Pin sub-slab soil gas sample results with the highest detected PCE concentrations at each location are shown on Figure 2 of this report.

Based on the sub-slab soil gas sample results and existing groundwater data for the site, the ACDEH required submittal of a work plan for sampling of indoor air in existing site structures, as well as further subsurface sampling designed to identify the extent of contamination at the site. In response, P&D prepared an Indoor Air Investigation Work Plan (document 0660.W2) dated May 13, 2015 and, following a May 24, 2015 meeting with the ACDEH, a Subsurface Investigation Work Plan (document 0660.W3) dated May 26, 2015. The May 13, 2015 Indoor Air Investigation Work Plan was conditionally approved in a letter from the ACDEH dated June 1, 2015.

Indoor air samples IA1 through IA3 and ambient air sample AA1 were collected during a 24-hour period from August 24, 2015 to August 25, 2015. Further discussion of indoor and ambient air sample collection and the results of the investigation are provided in P&D's Indoor Air Investigation Report dated October 29, 2015 (document 0660.R2).

Between August 31, 2015 and September 10, 2015 P&D personnel oversaw drilling at six locations designated as M1 through M6 to a depth of 40 feet below the ground surface (bgs) using a MiHpt probe, which combines a Membrane Interface Probe (MIP), a Hydraulic Profiling Tool (HPT), and an Electrical Conductivity Probe (EC). Additionally, depth-discrete groundwater samples were collected at two different depths at each of locations M1 through M6 using Geoprobe continuous coring for collection of first-encountered groundwater samples and a Geoprobe Hydropunch for collection of deeper depth-discrete groundwater samples. The objective of the investigation was to evaluate the extent of PCE in soil gas and groundwater along the upgradient property boundary and at the center of the site. A discussion of the investigation and sample results is provided in P&D's Subsurface Investigation Report dated October 30, 2015 (document 0660.R3).

SCOPE OF WORK

To further evaluate the extent of subsurface PCE concentrations at the subject site, P&D proposes to perform the following activities.

- Prepare a health and safety plan, mark proposed drilling locations with white paint, notify Underground Service Alert for underground utility location, and obtain a drilling permit.
- Continuously core at 3 locations, designated as B1 through B3, to a depth of first-encountered groundwater for the collection of soil samples from each borehole and one groundwater sample from one of the boreholes.
- Arrange for sample analysis.
- Prepare a subsurface investigation results summary.

Each of these is discussed below.

Health and Safety Plan, Underground Utility Clearance, and Permitting

A health and safety plan will be prepared for the scope of work identified in this work plan. The drilling locations will be marked with white paint and Underground Service Alert will be notified for underground utility location. A permit will be obtained from the Alameda County Public Works Agency (ACPWA) for drilling. Notification of the scheduled drilling dates will be provided to the ACPWA and the ACDEH prior to drilling.

Continuous Coring and Sample Collection

Drilling at locations B1 through B3 will performed beginning directly beneath the concrete floor slab using a Geoprobe drill rig to push a Geoprobe Macrocore barrel sampler lined with transparent PVC liners using dual tube drilling methods to first-encountered groundwater. Groundwater is anticipated to be entountered at a depth of approximately 17 to 20 feet below the ground surface (bgs).

The soil from the boreholes will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System, and evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb that is calibrated with a 100 parts per million (ppm) isobutylene standard. The soil will also be evaluated for other evidence of petroleum hydrocarbon and solvent contamination, including odors, staining, and discoloration.

Soil samples will be retained for laboratory analysis from each of boreholes B1, B2, and B3 at 2.0 foot intervals beginning at a depth of 2.0 feet bgs to first-encountered groundwater. A 6-inch long section of transparent PVC tube soil core corresponding to the desired sample depth will be cut from the Macrocore barrel core liner, the ends of the tube will be evaluated with the PID, and then will be sequentially covered with aluminum foil and plastic endcaps. The samples will then be labeled and placed into a cooler with ice pending delivery to the laboratory. Chain of custody procedures will be observed for all sample handling.

Following verification of the presence of groundwater in borehole B2 a temporary 1-inch diameter slotted PVC pipe will be placed into the borehole. A groundwater grab sample will be collected from the temporary PVC pipe using a peristaltic pump and new polyethylene tubing with new silicone tubing in the pump rollers.

The groundwater sample will be collected by purging approximately 0.1 gallons of groundwater and then collecting the sample directly from the discharge tubing into 40-milliliter Volatile Organic Analysis (VOA) vials that contain hydrochloric acid; 40-milliliter amber unpreserved VOA vials which are sealed with Teflon-lined screw caps; and into an unpreserved one 1-liter amber glass bottle. The VOA vials will be overturned and tapped to ensure that no air bubbles are present, and the bottles will then be labeled and

transferred to a cooler with ice until they are transported to the laboratory. Chain of custody documentation will accompany the samples to the laboratory.

Following soil and groundwater sample collection, the boreholes will be grouted with neat cement using a tremie pipe. All drilling and sampling equipment will be cleaned with an Alconox solution followed by a clean water rinse prior to use in each borehole, and all temporary PVC casing and tubing used for sample collection will be new and unused. All soil and water generated during subsurface investigation will be stored in 55-gallon drums at the site and labeled pending characterization and proper disposal.

Sample Analysis

All of the soil groundwater grab samples will be analyzed at McCampbell Analytical, Inc. of Pittsburg California for VOCs using EPA Method 8260B.

Sample Result Summary

Upon receipt of the laboratory analytical results, a summary consisting of summary tables, a figure showing the sample collection locations, boring logs, and the laboratory reports and chain of custody will be prepared with a cover page with the stamp of an appropriately registered professional. A copy of the information will be uploaded to the County ftp site and to GeoTracker.

Should you have any questions, please do not hesitate to contact us at (510) 658-6916.

Sincerely,

P&D Environmental, Inc.

Paul H. King
Professional Geologist #5901
Expires: 12/31/17

Attachments:

Figure 1 - Site Vicinity Aerial Photograph Showing Proposed Borehole Locations
Figure 2 - Site Vicinity Aerial Photograph Showing Soil and Soil Gas PCE Concentrations and Proposed Borehole Locations

Cc: Ms. Carey Andre, 2101 Williams Associates LLC

PHK/sjc
0660.W6

FIGURES

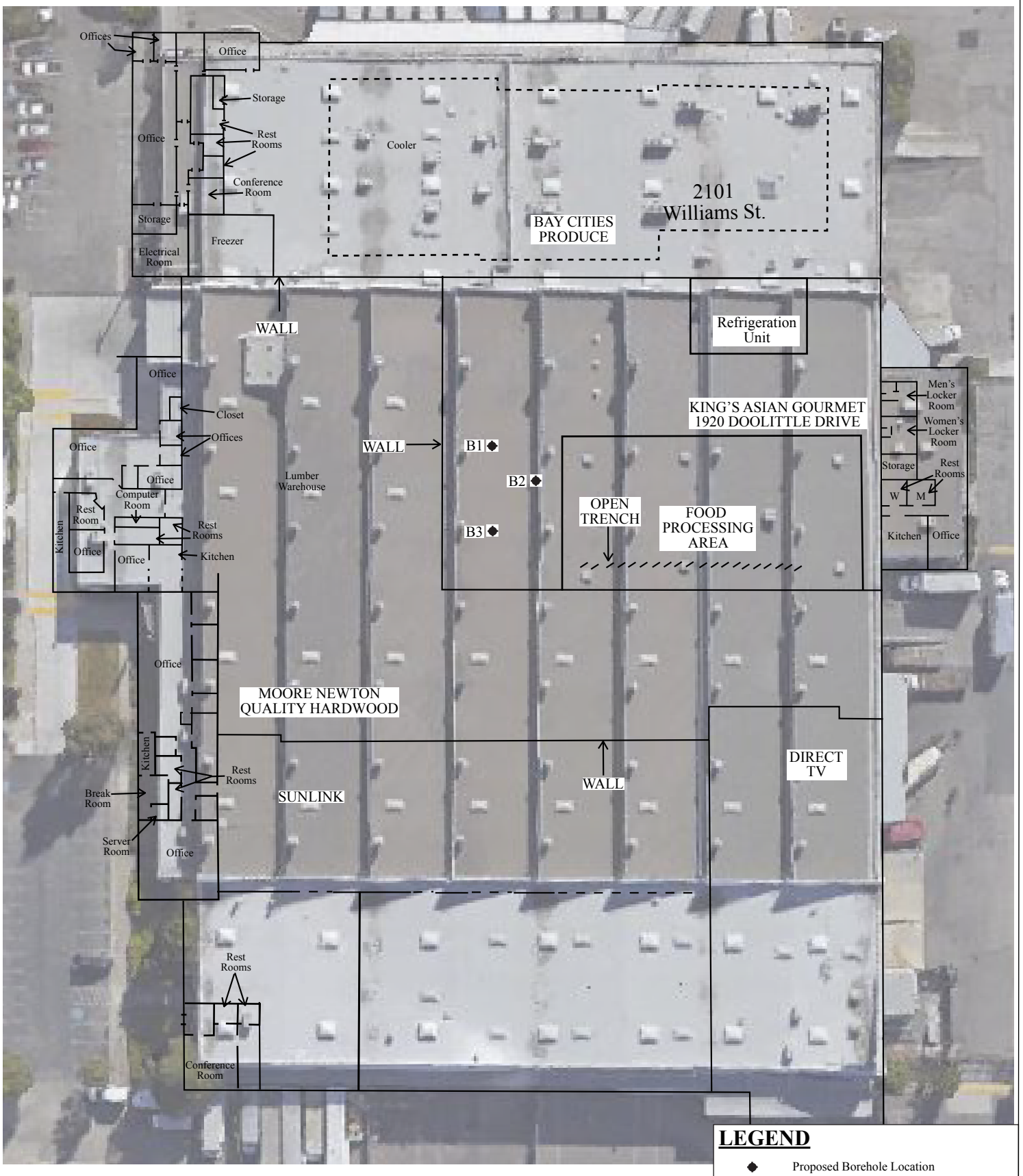


Figure 1
Site Plan Aerial Photograph Detail Showing Proposed Borehole Locations
2101 Williams Street
San Leandro, California

Base Map from:	P&D Environmental, Inc.	0 30 60 N
Google Earth, image dated August 28, 2012	55 Santa Clara Avenue Oakland, CA 94610	Approximate Scale in Feet

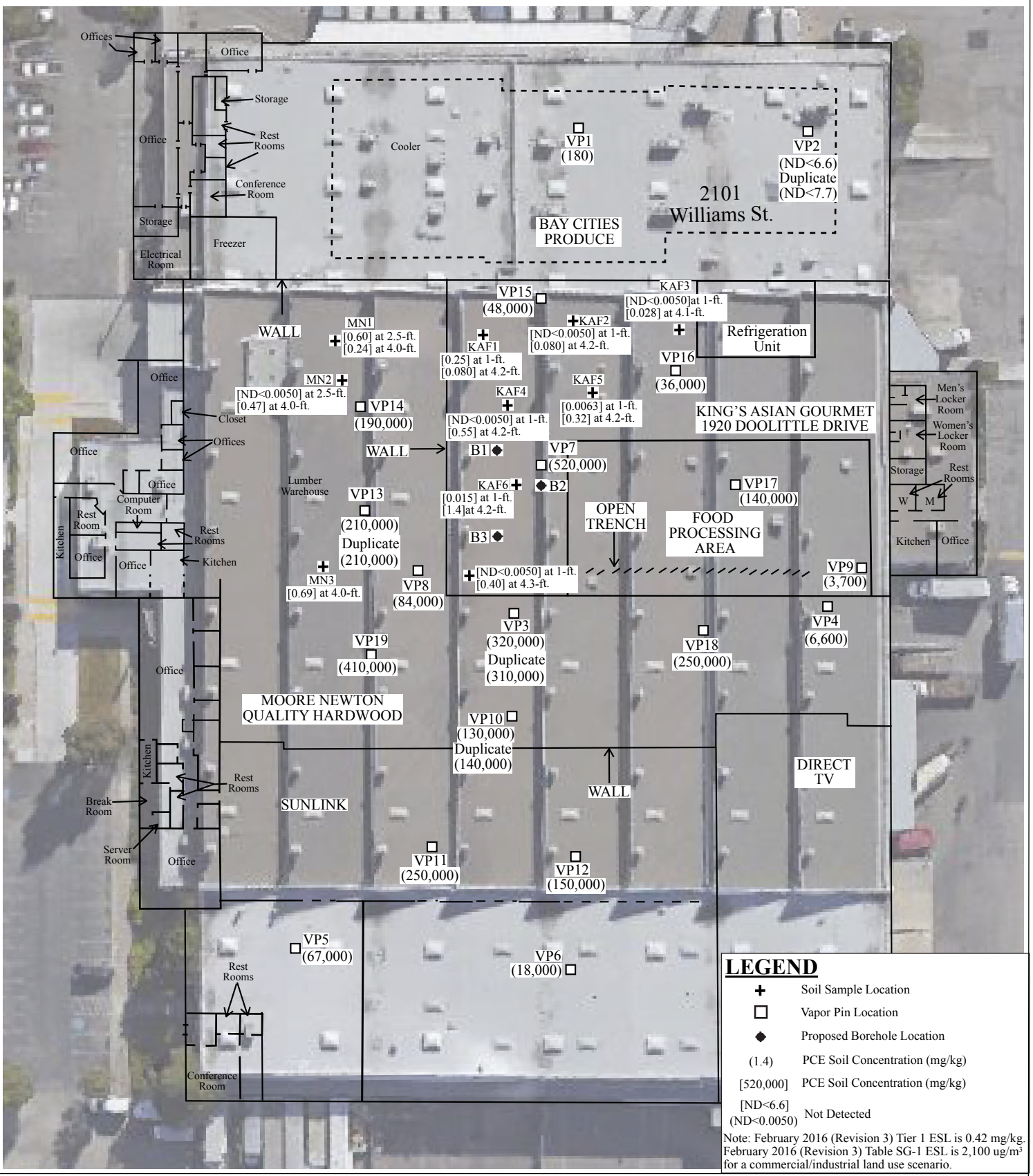


Figure 2
Site Plan Aerial Photograph Detail Showing Soil and Soil Gas PCE Concentrations and Proposed Borehole Locations
2101 Williams Street
San Leandro, California

Base Map from:	P&D Environmental, Inc.	0 30 60 N
Google Earth, image dated August 28, 2012	55 Santa Clara Avenue Oakland, CA 94610	Approximate Scale in Feet