MADISON PARK
FINANCIAL CORPORATION

Madison Park Financial Corporation

Lake Merritt Tower
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Oakland, California 94612

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RECEIVED
By Alameda County Environmental Health 10:41 am, Jul 13, 2017

July 12, 2017

Ms. Dilan Roe
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN CERTIFICATION
County File # RO 3160
Former Precision Cast Products Site (1549 32nd Street)
2868 Hannah Street
Oakland, CA

Dear Ms. Roe:

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

- Subsurface Investigation Work Plan dated July 12, 2017 (document 0741.W3).

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.

Should you have any questions, please do not hesitate to contact me at (510) 452-2944.

Sincerely,

2868 Hannah Street LLC

John Protoppapas
Managing Member

P&D ENVIRONMENTAL, INC.

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

July 12, 2017
Work Plan 0741.W3

Ms. Dilan Roe
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

SUBJECT: SUBSURFACE INVESTIGATION WORK PLAN
County File # RO 3160
Former Precision Cast Products Site (1549 32nd Street)
2868 Hannah Street
Oakland, CA

Dear Ms. Roe:

P&D Environmental, Inc. (P&D) has prepared this site investigation work plan to obtain information for assessment of risk associated with tetrachloroethene (PCE) in soil and groundwater and lead in soil at the subject site. The work scope includes installation of permanent soil gas wells and soil gas sample collection for evaluation of potential vapor intrusion at and near the subject site, and the collection of shallow soil samples to evaluate the vertical extent of elevated lead concentrations detected in soil at the surface of the subject site.

Based on the sample results, a risk assessment will be performed to evaluate potential PCE vapor intrusion risk at and near the subject site, and the need for vapor intrusion mitigation in conjunction with PCE source area removal for development of the subject site for residential land use. In addition, a risk assessment will also be performed for the onsite consolidation of elevated lead concentrations in soil prior to the development of the property for residential land use.

All work will be performed under the direct supervision of a California professional geologist. A Site Map showing proposed soil gas well locations is attached as Figure 1, a Site Map showing historical surface soil sample lead results is attached as Figure 2, and a Site Aerial Photograph Detail showing geologic cross section locations and the proposed PCE source removal area is attached as Figure 3.

BACKGROUND

Review of the case summary at the State Water Resources Control Board (SWRCB) Geotracker website shows that the site consists of parcel numbers 7-589-1 and 7-589-24 and has street addresses of 1549 32nd Street and 2868 Hannah Street. From the 1940's to 1983 the site heat-treated metal products, and from 1983 to 2002 operated as a steel foundry. A putty and paint factory also operated at the site until 1985.

Construction of the route 880 Cypress Street Viaduct (the Cypress Structure, which was a two-tiered elevated portion of route 880 located in West Oakland) was completed in 1957 and was located approximately two blocks to the west of the subject site. A portion of the Cypress Structure collapsed during the Loma Prieta earthquake in 1989, and the structure was subsequently removed and replaced with the existing state highway 880. Review of historical aerial photographs from 1993 to present shows that at some time between February 2004 and September 2004 the putty and paint factory building was demolished.

The Geotracker case summary states that the lead regulatory agency is the Alameda County Department of Environmental Health (ACDEH) with case RO 3160, but that the case number was formerly identified as RO 2508. The new ACDEH case number was assigned when a new development was proposed for the site. Review of the ACDEH Local Oversight Program (LOP) website for the former case RO 2508 shows that there is no case closure summary for the RO 2508 case. Review of the ACDEH LOP website for the current case (RO 3160) shows a letter dated February 6, 2015 from Madison Park Financial Corporation of Oakland, California that describes the proposed redevelopment of the site, and a letter from the ACDEH dated February 25, 2015 that first refers to the subject site using the current RO designation. The proposed development of the site is a multi-story multi-unit residential structure with a slab-on-grade foundation and one elevator.

Based on discussions with Madison Park Financial personnel, it is P&D's understanding that prior to demolition of the site buildings asbestos and lead surveys were performed in March 2015 and any necessary abatement of asbestos and lead was performed in May 2015. The buildings at the site were demolished by the property owner in preparation for residential site development between June 1 and June 14, 2015. It is P&D's understanding that prior to demolition of the site buildings there were reports of trespassers at the property. It is also P&D's understanding that following demolition of the buildings a perimeter fence was installed for the property and that trespassers have not been reported at the property since that time. Visual inspections of the property by P&D personnel in June and July 2016 did not reveal conditions that would indicate evidence of historical site contamination associated with occupation of the site by the trespassers.

ACDEH staff Dilan Roe and caseworker Kit Soo met with P&D and property owner representatives on July 28, 2016 to review historical site investigations to identify data gaps and steps necessary for residential development of the subject site. Based on the meeting it was determined that a Data Gap and Subsurface Investigation Work Plan would be prepared to evaluate any data gaps associated with future residential use of the property, and also to investigate PCE in the southern portion of the property for verification of the proposed remedial solution associated with the PCE. Further background information is provided in P&D's Data Gap Evaluation and Subsurface Investigation Work Plan dated November 28, 2016.

Based on the data gaps identified by P&D, a subsurface investigation was performed in December 2016. Documentation of the investigation and results is provided in P&D's January 26, 2017

DRAFT Data Gap Evaluation and Subsurface Investigation Report (document 0741.R2). ACDEH staff Dilan Roe and caseworker Kit Soo met with P&D, and a property owner representative on February 9, 2017 to review P&D's January 26, 2017 DRAFT report. During the meeting the following items were discussed:

- The extent of PCE in groundwater originating from the southern portion of the subject site appears to be adequately defined.
- PCE detected at the north end of the property appears to originate from a nearby offsite upgradient PCE release that is identified on GeoTracker.
- Residual petroleum in soil and groundwater associated with historically excavated areas at the site was discussed to have been adequately remediated at the time of excavation.
- Fill material used to backfill excavated areas was determined to have been adequately characterized and acceptable for residential site development.
- Further characterization of the vertical extent of elevated lead concentrations detected in site surface soil will be required.
- Source area removal of PCE will be necessary.
- Assessment of risk by an ACDEH-approved risk assessor with peer review by an ACDEH-approved risk assessor will be required for the following:
    - Potential vapor intrusion of PCE for the offsite downgradient property and for the proposed residential development of the property,
    - Residual risk associated with onsite consolidation of soil with elevated lead concentrations.

ACDEH staff Dilan Roe met with P&D, and a property owner representative on June 28, 2017 to further review steps necessary for development of the site. During the meeting the following items were discussed:

- A borehole designated as P12 will be drilled to a depth of 10 feet below the ground surface (bgs) at the proposed elevator pit and water levels will be measured in the three existing onsite groundwater monitoring wells to determine if groundwater conditions at the site are confined or unconfined to evaluate current site conditions prior to preparation of a work plan to gather information for site risk assessment.
- The existing onsite groundwater monitoring wells will be sampled to determine current groundwater quality conditions.
- A DRAFT work plan for soil gas well installation and sampling, lead in soil vertical characterization, and existing groundwater monitoring well sampling will be provided to the ACDEH and risk assessors for review followed by a conference call with ACDEH and the risk assessors to confirm agreement regarding the proposed work scope.

On July 5, 2017 borehole P12 was hand augered to a depth of 9.0 feet bgs at location P12 shown on Figure 1. A copy of the boring log is attached with this report as Appendix A (although the

materials encountered in the borehole are suspected of consisting of fill material, the materials were not identified as fill material on the boring log). In addition, water levels were measured multiple times in the three existing onsite groundwater monitoring wells to verify that groundwater levels in the wells had equilibrated. The results of the investigation showed that groundwater was initially encountered at a depth of approximately 8.1 feet bgs while hand augering, and was subsequently measured at a depth of approximately 5.6 feet bgs. The depth to groundwater in the groundwater monitoring wells was corrected for the well pipe stickup and was determined to be approximately 6.5 feet bgs in all of the groundwater monitoring wells.

A detailed discussion of the site and vicinity geology and hydrogeology is provided in P&D's January 26, 2017 DRAFT Data Gap Evaluation and Subsurface Investigation Report. The groundwater flow direction at and near the site appears to be southwesterly. The locations of onsite groundwater monitoring wells MW-1, MW-2 and MW-3 are shown on Figure 1 and also on Figure 3. Geologic cross section locations are shown on Figure 3, and geologic cross sections A-A' and C-C' are shown on Figures 4 and 5, respectively. Historical groundwater levels measured in the three onsite groundwater monitoring wells are provided in Table 1, including the final July 5, 2017 measurements. The proposed area of PCE source area removal is shown in Figures 3, 4 and 5.

SCOPE OF WORK

To obtain information for site development risk assessment, P&D will perform the following activities.

- Obtain permits and access to the public right-of-way, prepare a health and safety plan (HASP), and mark drilling locations with white paint and notify Underground Service Alert (USA) for underground utility location.
- Hand augering to construct eight soil gas wells each to a depth of 5 feet bgs.
- Collect one soil gas sample from each soil gas well and one duplicate soil gas sample.
- Collect soil samples at depths of 0.5, 1.0 and 2.0 feet bgs at each of locations S1 through S6 shown on Figure 2.
- Purge and sample existing onsite wells MW-1 through MW-3.
- Arrange for sample analysis.
- Prepare a report.

Each of these is discussed below.

Permits, Site Access, HASP, and USA,

Permits will be obtained from the Alameda County Public Works Agency (ACPWA) for soil gas well construction and from the City of Oakland for obstruction and excavation in the public right-of-way. All necessary permit-related notifications will be made to the permitting agencies prior to drilling. In addition, notification will be provided to the ACDEH of the scheduled

drilling and soil gas well sampling dates. A health and safety plan will be prepared for the scope of work identified in this work plan. In addition, the drilling locations will be marked with white paint and Underground Service Alert will be notified for underground utility location.

Soil Gas Well Construction and Soil Gas Sample Collection

The proposed soil gas wells will be constructed and the soil gas samples will be collected in accordance with procedures recommended in the following Department of Toxic Substances Control (DTSC) documents:

- July 2015 Advisory - Active Soil Gas Investigations.
- August 2015 - FAQ for the 2012 Active Soil Gas Investigations Advisory.
- October 2011 - Vapor Intrusion Guidance.
- October 2011 - Vapor Intrusion Mitigation Advisory.

Eight permanent soil gas wells will be constructed each to a depth of 5 feet bgs at locations SG1 through SG8 (see Figure 1) with a 3.5-inch outside diameter hand auger. The depth of 5 feet bgs for each well is based on the measured depth to water in borehole P12 and onsite groundwater monitoring wells MW1 through MW3 on July 5, 2017. The soil from each boring will be logged in the field in accordance with standard geologic field techniques and the Unified Soil Classification System (USCS). All of the soil from the boreholes will be evaluated with a Photoionization Detector (PID) equipped with a 10.6 eV bulb and calibrated using a 100 ppm isobutylene standard.

One soil sample will be collected from each of three of the soil gas well boreholes, designated as SG2, SG3, and SG7 (see Figure 1) at the depth interval of 4.5 to 5.0 feet bgs for purposes of obtaining soil physical parameter values for vapor intrusion risk assessment using the following methods. At each location a hand auger will be used to remove soil to a depth of 4.5 feet bgs. A slide hammer will be used to drive a steel sampler lined with a 2-inch diameter 6-inch long stainless steel tube for a distance of 0.5 feet into the bottom of the borehole. The stainless steel tube will be removed from the sampler and the ends of the tube will be sequentially covered with aluminum foil and plastic endcaps. The tube will then be labeled and stored in a box or a cooler pending delivery to the laboratory.

Each soil gas well will be constructed with a 1-foot long filter pack in the bottom of the borehole consisting of #2/12 Lonestar sack sand. A 0.250-inch outside diameter (0.187-inch inside diameter) Teflon or polyethylene tube with a HDPE filter at the bottom of the tube will be placed in the center of the borehole during placement of the sand so that the HDPE filter is located in the center of the sand interval. With the exception of the proposed soil gas well SG8 in the public right-of-way, the annular space above the sand will be filled with hydrated bentonite to a height of 0.5 feet above the top of the sand, and the remaining borehole annular space will be filled with neat cement to approximately 0.5 feet below the ground surface. The top of the tubing for each soil gas

well will be enclosed with a Swagelok nut and the top of each soil gas well will be enclosed in a well box with a lid that is secured with bolts. Based on the time necessary to obtain an encroachment permit for construction of a soil gas well in the public right-of-way, soil gas well SG8 will be constructed as a temporary well in the public right-of-way using hydrated bentonite to seal the annular space from the top of the soil gas well sand pack to 0.5 feet below the ground surface. Following the completion of soil gas sample collection from soil gas well SG8 the soil gas well will be destroyed and the borehole filled with neat cement in accordance with ACPWA requirements.

Following construction, the soil gas well will not be sampled for a minimum of 48 hours. In addition, soil gas samples will not be collected if more than ½ inch of precipitation has occurred during the five days prior to the scheduled sampling date.

A soil gas sampling manifold with a 1-liter Summa canister as the sampling canister for each location (see Figure 6) will be assembled in a shroud consisting of a 35-gallon Rubbermaid bin that has been modified by cutting viewing ports into the sides of the shroud and covering the viewing ports with transparent polycarbonate sheets. A hole measuring approximately two inches square in the bottom of the shroud allows the shroud to cover the soil gas well while still allowing access to the soil gas well through the bottom of the shroud. At the time that the sampling manifold is assembled, the vacuum for the sample canister will be verified with a vacuum gauge and recorded.

Prior to sampling each soil gas well, a 10 minute shut-in test of the sampling manifold will be performed by closing the valve located between the filter and the pressure gauge, opening the purge canister valve, and recording the manifold system vacuum (see Figure 6). Following successful verification of the manifold shut-in test, a default of 3 purge volumes will be purged prior to sample collection. The purge time will be calculated using a nominal flow rate provided by the flow controller of 150 cubic centimeters per minute.

Following completion of the soil gas well purging, a lid will be placed onto the shroud and a tracer gas 1,1-Difluoroethane (DFA) will be sprayed into the shroud interior for one second through a tube connected to a hole in the side of the shroud. Gloves in the lid of the shroud will be used to open the sample canister valve. An air sample will be collected from the shroud atmosphere to quantify the shroud tracer gas concentration while the soil gas sample is being collected. The shroud atmosphere sample will be collected into a Tedlar bag that is placed into a vacuum chamber with the Tedlar bag inlet connected to a new piece of Teflon or polyethylene tubing that is inserted into the shroud atmosphere through a hole in the side of the shroud. Following completion of Tedlar bag shroud air sample collection the Tedlar bag will be placed in a cooler with the lid closed pending delivery to the laboratory.

Once the vacuum for the sample canister valve has decreased to 5 inches of mercury, the gloves in the lid of the bin will be used to close the sample canister valve. The pressure gage on the inlet side

of the flow controller (see Figure 6) will be monitored during sample collection to ensure that the vacuum applied to the soil gas well does not exceed 100 inches of water.

One duplicate soil gas sample will be collected into a 1-liter Summa canister from one of the soil gas wells using a stainless steel sampling tee for the Summa canisters using methods described above. Following soil gas sample collection, a PID will be connected to the Teflon tubing to obtain a preliminary field value for the sample collection location. The soil gas Summa canister samples will be stored in a box and promptly shipped to the laboratory for extraction and analysis. Chain of custody procedures will be observed for all sample handling. Measurements of vacuums, purging and equilibration time intervals, and PID readings will be recorded on Soil Gas Sampling Data Sheets.

All hand augering equipment will be cleaned with an Alconox solution wash followed by a clean water rinse prior to use at each location. New Teflon or polyethylene tubing and a new filter will be used for each soil gas well construction. Clean, unused vacuum gages and a stainless steel sampling manifolds will be used at each sample collection location. All soil and water generated during soil gas well construction will be stored in a 55-gallon drum at the site and labeled pending characterization and proper disposal.

Vertical Extent of Lead in Soil Delineation

Soil samples will be collected at each of locations S1 through S6 shown on Figure 2 at depths of 0.5, 1.0 and 2.0 feet bgs to evaluate the vertical extent of elevated lead concentrations detected in surface soil samples at the site. At each location a hand auger will be used to remove soil to a depth of 0.5 feet bgs. A slide hammer will be used to drive a steel sampler lined with a 2-inch diameter 6-inch long stainless steel tube for a distance of 0.25 feet into the bottom of the borehole. The stainless steel tube will be removed from the sampler and the ends of the tube will be sequentially covered with aluminum foil and plastic endcaps. The tube will then be labeled and stored in a box or a cooler pending delivery to the laboratory. The augering and sampling process will then be repeated at the same locations at depths of 1.0 and 2.0 feet bgs. Chain of custody procedures will be observed for all sample handling.

Subsurface materials encountered in the boreholes will be recorded on boring logs in accordance with the USCS. All hand augering equipment will be cleaned with an Alconox solution wash followed by a clean water rinse prior to use at each location. All soil and water generated during soil gas well construction will be stored in a 55-gallon drum at the site and labeled pending characterization and proper disposal.

Groundwater Monitoring Well Sample Collection

Existing onsite groundwater monitoring wells MW-1 through MW-3 will be monitored for depth to water to the nearest 0.01 foot using an electric water level indicator and will be purged and sampled in accordance with U.S. EPA low flow sampling methods. Well purging will be performed at a rate of approximately 200 to 300 milliliters per minute for a minimum of 15 minutes and until field parameters referenced below stabilize using a peristaltic pump and polyethylene tubing where the bottom of the tubing is placed directly above the top of the screened interval of the well. New polyethylene tubing and new silicon tubing will be used in the peristaltic pump rollers for each well.

During purging operations, the field parameters of electrical conductivity, temperature, pH, dissolved oxygen, oxidation reduction potential, turbidity, and depth to water will be monitored and recorded on a groundwater monitoring/well purging data sheet for each well. Field observations of odor or sheen will also be recorded on the groundwater monitoring/well purging data sheet for each well.

The water sample for each well will be transferred directly from the peristaltic pump tubing to clear 40-milliliter glass VOA vials containing hydrochloric acid and to amber VOAs that did not contain preservative. All of the VOAs will be sealed with Teflon-lined screw caps and overturned and tapped to ensure that no air bubbles are present. The VOA vials will then be labeled and transferred to a cooler with ice pending transportation to the laboratory. Chain of custody documentation will accompany the samples to the laboratory.

Sample Analysis

The soil gas samples collected into Summa canisters will be analyzed either at Eurofins Air Toxics of Folsom, California, or at K Prime of Santa Rosa, California with detection limits less than or equal to RWQCB February 2016 (Revision 3) Table SG-1 residential subslab and soil gas vapor intrusion human health risk screening levels as follows:

- Volatile Organic Compounds (VOCs), including PCE and associated decomposition products Trichloroethene (TCE), cis-1,2-Dichloroethene (cis-1,2-DCE), trans-1,2-Dichloroethene (trans-1,2-DCE), and Vinyl Chloride, and for the tracer gas DFA by EPA Method TO-15.

The shroud air samples collected into Tedlar bags will be analyzed at Eurofins Air Toxics of Folsom, California, or at K Prime of Santa Rosa, California as follows:

- The tracer gas DFA by EPA Method TO-15 or by EPA Method TO-3.

The shallow soil samples collected at locations S1 through S6 will be analyzed at McCampbell Analytical, Inc. in Pittsburg, California as follows:

- Total lead using EPA Method 6020.

The groundwater samples collected from existing onsite wells MW-1 through MW-3 will be analyzed at McCampbell Analytical, Inc. in Pittsburg, California as follows:

- VOCs using EPA Method 8260B.
- TPH-G using EPA Method 5030B in conjunction with EPA Method 8021B and/or modified EPA Method 8015B.
- TPH-D, TPH-BO, and TPH-MO using EPA Method 3510 in conjunction with EPA Method 8015B.

The three soil samples collected from the soil gas well boreholes SG2, SG3, and SG7 for purposes of obtaining soil physical parameter values for vapor intrusion risk assessment will be analyzed at PTS Laboratories in Santa Fe Springs, California as follows:

- Bulk & grain density.
- Total porosity.
- Moisture content.
- Volumetric air & moisture.
- TOC/foc.
- Grain size distribution.

Report Preparation

Upon completion of the investigation, site maps showing sample collection locations, the boring logs, field forms, laboratory reports, and summary tables of the sample results will be provided to the risk assessors for an assessment of risk at the site. Following completion of the risk assessment, a report will be prepared. The report will document sample collection procedures and field observations, and will include a map showing the investigation sample collection locations, boring logs, copies of the laboratory reports, summary tables of the results, and the assessment of risk provided by the risk assessors. The report will also include recommendations for site remediation and risk mitigation based on the investigation and risk assessment results, and the stamp of a professional geologist.

July 12, 2017
Work Plan 0741.W3

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

Sincerely,

P&D Environmental, Inc.

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

Attachments:

Table 1 - Summary of Groundwater Elevation Data

Figure 1 - Site Map Showing PCE Concentrations in Groundwater and Proposed Soil Gas Well Locations
Figure 2 - Site Map Showing Lead Concentrations in Surface Soil
Figure 3 - Site Map Showing Geologic Cross Section Locations and Proposed PCE Source Removal Area
Figure 4 - Geologic Cross Section A-A'
Figure 5 - Geologic Cross Section B-B'
Figure 6 - Typical Soil Gas Sampling Manifest

Appendix A - Soil Boring Log

PHK/lkd/sjc
0741.W3

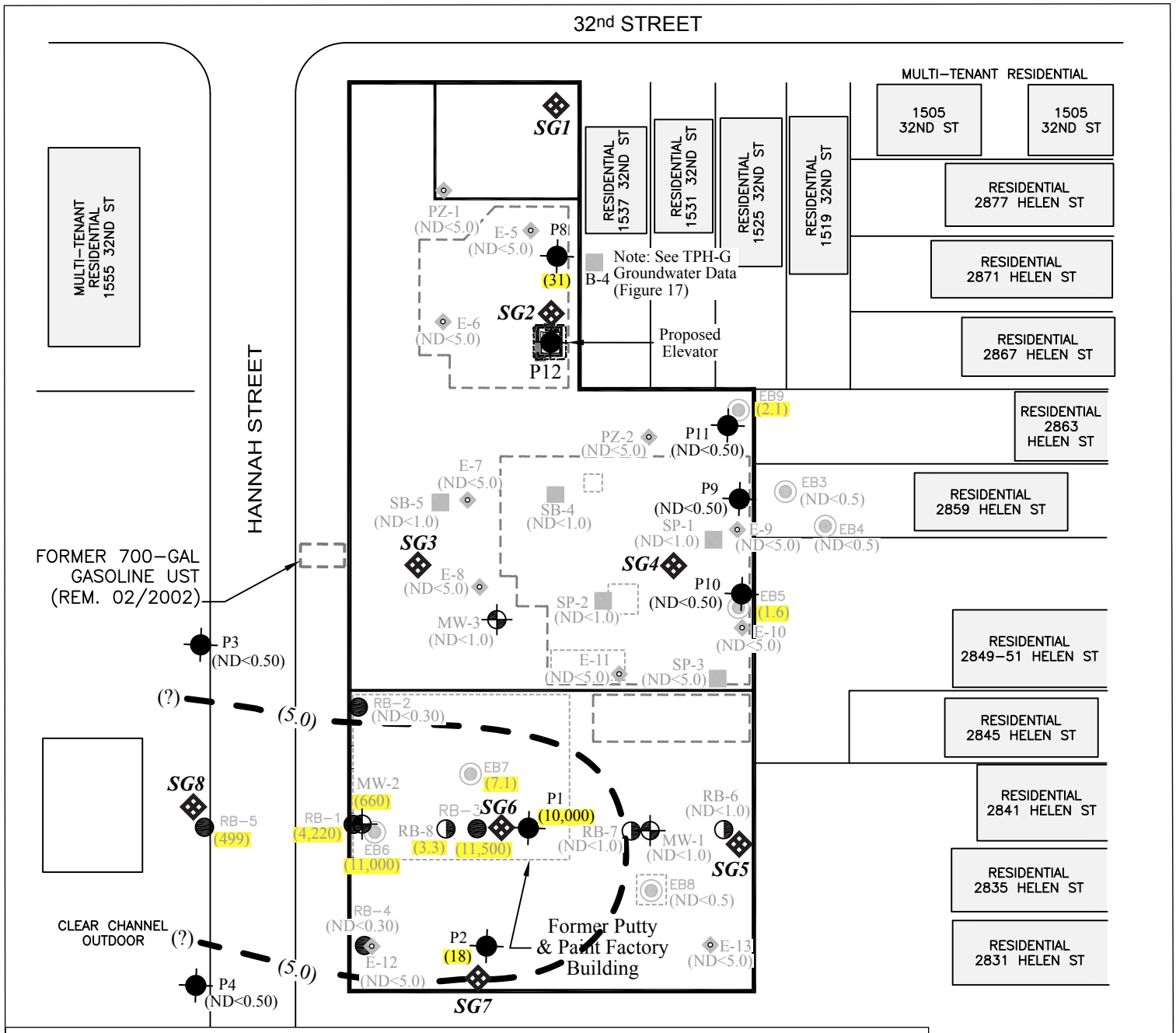
TABLE

Table 1

Summary of Groundwater Elevation Data

Well ID	Date Monitored	Top of Casing Elevation (Ft)	Top of Ground Surface Elevation (Ft)	Depth to Water from TOC (Ft)	Depth to Water from Ground Surface Elevation (Ft)	Water Table Elevation (Ft)
MW1	7/5/2017	15.81**	12.33**	10.06	6.58	5.75
	7/18/2016			10.55	7.07	5.26
	6/29/2016			10.24	6.76	5.57
	10/6/2015			11.34	7.86	4.47
	10/2/2015			11.34*	7.86	4.47
MW2	7/5/2017	14.88**	11.23**	10.11	6.46	4.77
	7/18/2016			10.65	7.00	4.23
	6/29/2016			10.23	6.58	4.65
	10/6/2015			11.32	7.67	3.56
	10/2/2015			11.30*	7.65	3.58
MW3	7/5/2017	14.88**	11.36**	9.89	6.37	4.99
	7/18/2016			10.41	6.89	4.47
	6/29/2016			9.79	6.27	5.09
	10/6/2015			10.91	7.39	3.97
	10/2/2015			10.89*	7.37	3.99
NOTES:						
* = Prior to well development.						
** = Surveyed on October 5, 2015 by Virgil Chavez Land Surveying.						

FIGURES



LEGEND

- Borehole Location By Environmental Risk Specialties
- Borehole Location By ERS
- Borehole Location By ERAS Environmental, Inc.
- Borehole Location By Roux Associates, Inc.
- Supplemental Borehole Location By Roux Associates, Inc.
- Groundwater Monitoring Well Location By Roux Associates, Inc.
- Borehole Location By P&D Environmental, Inc.
- SG8 Proposed Soil Gas Sample Collection Location
- (11,500) PCE Concentration in Groundwater (ug/L)
- (ND) Not Detected
- PCE Groundwater Isoconcentration Contour

Note: RB samples are groundwater grab samples, which can result in elevated concentrations based on sediments in the water samples.

RWQCB February 2016 (Revision 3)
Tier 1 ESL for PCE in groundwater = 3.0 ug/L

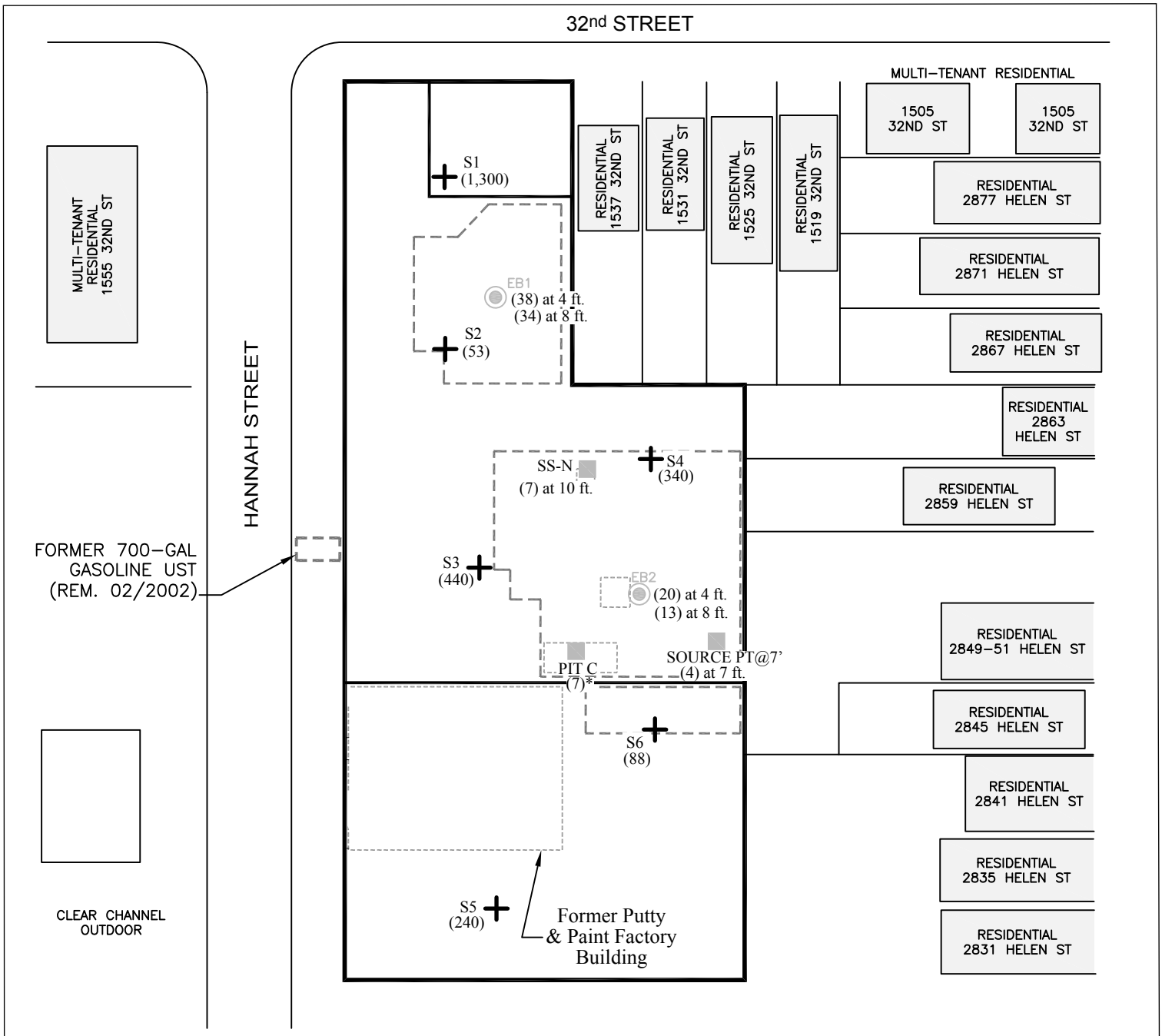
Figure 1
Site Map Showing PCE Concentrations in Groundwater and Proposed Soil Gas Well Locations
2868 Hannah Street
Oakland, California

Basemap from:
Roux Associates, Inc., dated October 23, 2015

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 25 50
Approximate Scale in Feet

N



LEGEND

- Borehole Location By Environmental Risk Specialties
- Borehole Location By ERS
- + Surface Soil Sample Location By P&D Environmental, Inc.
- (1,300) Lead Soil Concentration (mg/kg)
- * Collection Depth Unknown

Note: All Sample Collection Depths Are Given in Feet, Except PIT C Which Is Unknown, And S1-S6 Which Are Surface Samples

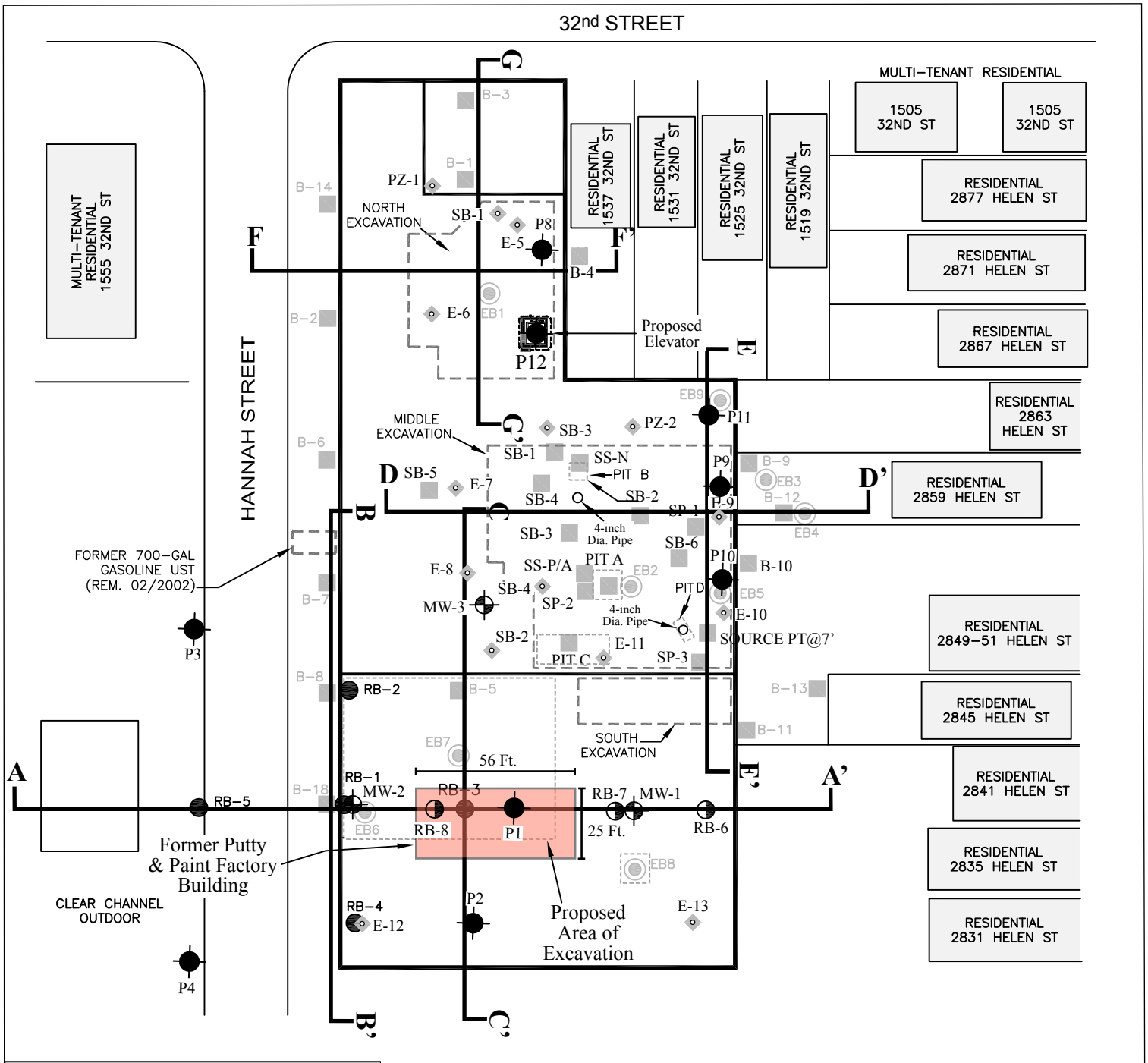
Figure 2
Site Map Showing Lead Concentrations in Surface Soil
2868 Hannah Street
Oakland, California

Basemap from:
Roux Associates, Inc., dated October 23, 2015

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 25 50
Approximate Scale in Feet

N



LEGEND

- Borehole Location By Environmental Risk Specialties
- Borehole Location By ERS
- Borehole Location By Roux Associates, Inc.
- Supplemental Borehole Location By Roux Associates, Inc.
- Groundwater Monitoring Well Location By Roux Associates, Inc.
- Borehole Location By P&D Environmental, Inc.
- \+ Surface Soil Sample Location By P&D Environmental, Inc.
- X Pit Backfill Sample Location By P&D Environmental, Inc.

Figure 3
Site Map Showing Geologic Cross Section Locations and Proposed PCE Source Removal Area
2868 Hannah Street
Oakland, California

Basemap from:
Roux Associates, Inc., dated October 23, 2015

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

0 25 50
Approximate Scale in Feet

N

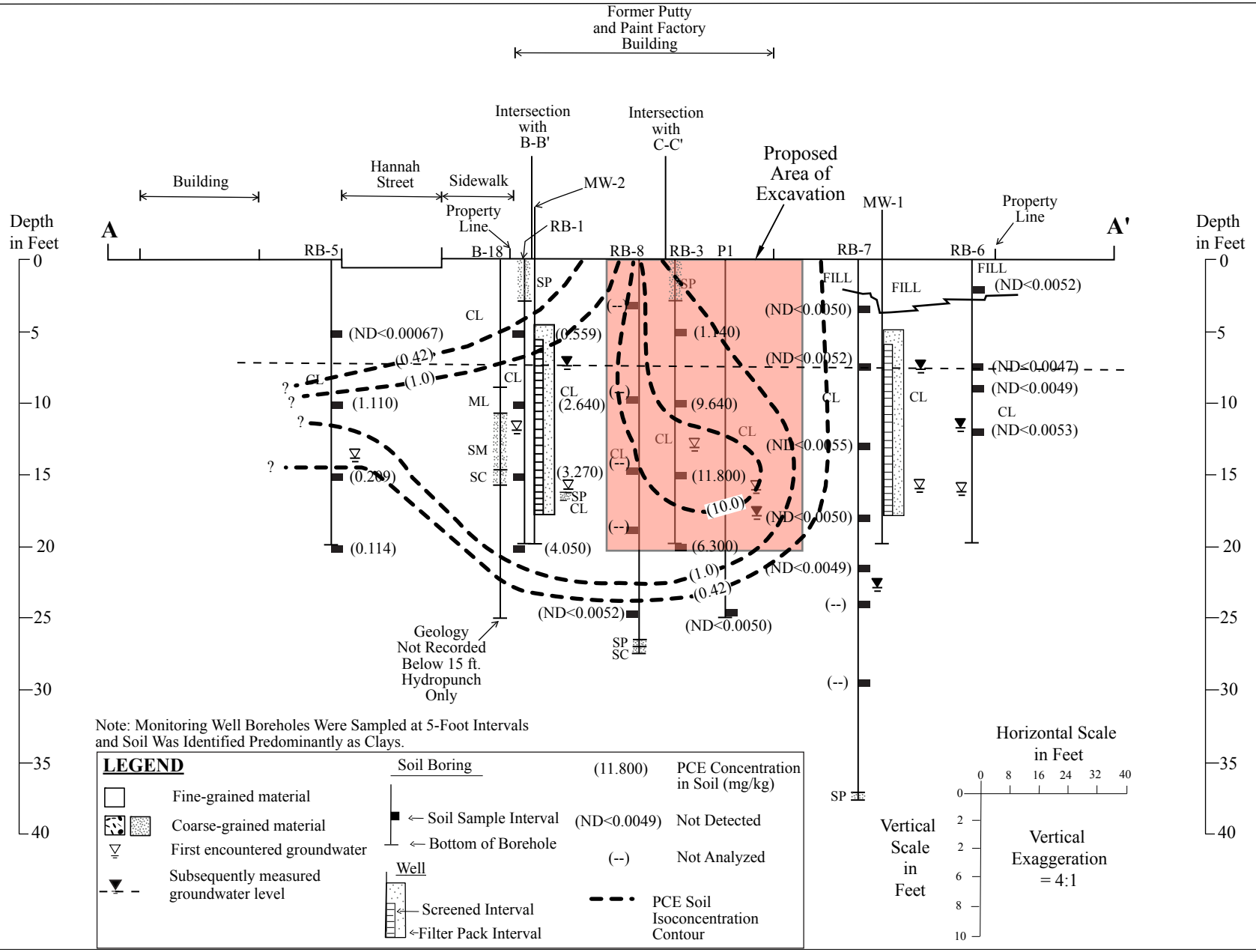
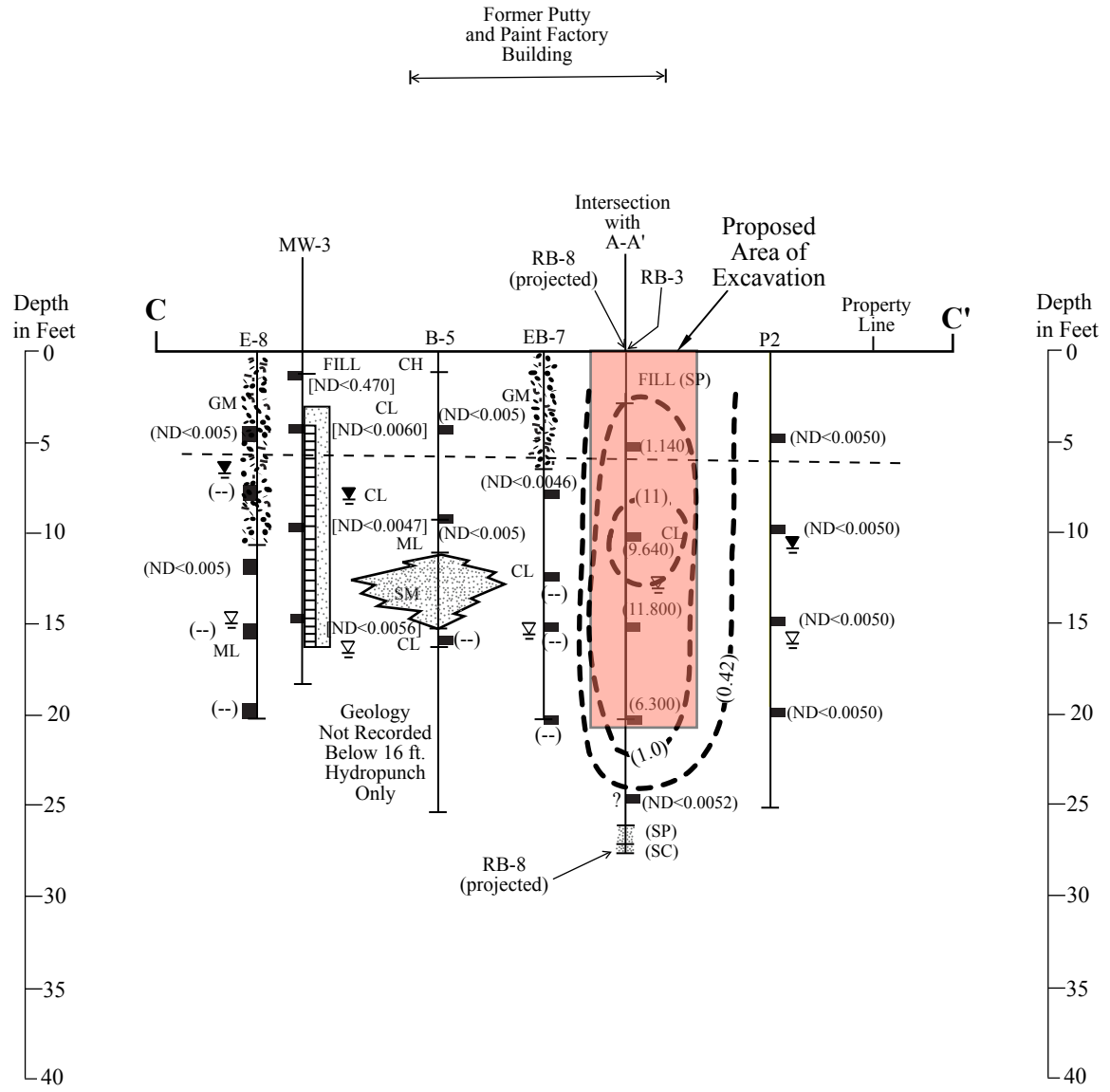


Figure 4
Geologic Cross Section A-A' Showing PCE in Soil
2868 Hannah Street
Oakland, California

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610



Note: Monitoring Well Boreholes Were Sampled at 5-Foot Intervals and Showed Predominantly clays.

LEGEND

- Fine-grained material
- Coarse-grained material
- First encountered groundwater
- Subsequently measured groundwater level

Soil Boring

- ← Soil Sample Interval
- ← Bottom of Borehole

Well

- ← Screened Interval
- ← Filter Pack Interval

(11.800)	PCE Concentration in Soil (mg/kg)
(ND<0.0049)	Not Detected
(--)	Not Analyzed
- - -	PCE Soil Isoconcentration Contour

Horizontal Scale in Feet: 0, 8, 16, 24, 32, 40

Vertical Scale in Feet: 0, 2, 2, 6, 8, 10

Vertical Exaggeration = 4:1

Figure 5
Geologic Cross Section C-C' Showing PCE in Soil
2868 Hannah Street
Oakland, California

P&D Environmental, Inc.
55 Santa Clara Ave., Suite 240
Oakland, CA 94610

APPENDIX A

Soil Boring Log

P&D ENVIRONMENTAL, INC.

BORING NO.: P12	PROJECT NO.: 0741	PROJECT NAME: 2868 Hannah Street, Oakland	
BORING LOCATION: Approx. 9 ft. west and 87 ft. south from northeast corner of the property			ELEVATION AND DATUM: None
DRILLING AGENCY: IMX, Inc.	DRILLER: Cory	DATE & TIME STARTED: 7/5/17 0945	DATE & TIME FINISHED: 7/5/17 1518
DRILLING EQUIPMENT: 3.5-Inch O.D. Hand Auger			
COMPLETION DEPTH: 9.0 Feet	BEDROCK DEPTH: Not Encountered	LOGGED BY: LKD	CHECKED BY:
FIRST WATER DEPTH: 8.1 Feet	NO. OF SAMPLES: None		

DEPTH (FT.)	DESCRIPTION	GRAPHIC COLUMN	BLOW COUNT PER 6"	WELL CONSTRUCTION LOG	PID	REMARKS
	0.0 to 2.5 ft. Black silty clay (CL); medium stiff to hard, slightly moist. No Petroleum Hydrocarbon (PHC) or solvent odors. (0,0,100)	CL		No Well Constructed	0	Borehole hand augered from 0.0 to 9.0 ft. using 3.5-inch O.D. hand auger.
	2.5 to 4.0 ft. Olive-gray silty sandy clay (CL); medium stiff, slightly moist. No PHC or solvent odors. (0,30,70)				0	No soil or groundwater samples collected.
5	4.0 to 5.0 ft. Light brown silty fine sand (SM); loose, moist. No PHC or solvent odors. (0,75,25)	SM			0	Water initially encountered during drilling at 8.1 ft. at 1125 on 7/5/17. Water subsequently measured at 5.6 ft. at 1422 on 7/5/17.
	5.0 to 6.0 ft. Brown silty fine sand (SM); loose, very moist.			▼		Borehole grouted on 7/5/17 using neat cement grout and a tremie pipe.
	6.0 to 9.0 ft. Light brown silty clayey very fine sand (SM); dense, wet to saturated. No PHC or solvent odors. (0,20,80) Wet at 6.0 ft. Saturated at 8.0 ft.			▽	0	Mr. Eneyew Amberner with Alameda County Public Works Agency onsite to observe and document grouting of the borehole.
10						Drilling Notes: 1) Field estimates of percent gravel, sand, and fines are shown in parentheses. 2) Density determinations are qualitative and are not based on quantitative evaluation.
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