



2500 Camino Diablo, Walnut Creek, CA 94597
tel 800-801-3224
fax 925-944-2895

ENVIRONMENTAL & ENGINEERING SERVICES

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May 8, 2008

Alameda County Health Care Services Agency
Attn: Jerry Wickham
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

RECEIVED

2:08 pm, May 13, 2008

Alameda County
Environmental Health

Subject: Work Plan for Pilot Study - Addendum
10700 MacArthur Boulevard
Oakland, California
AEI Project No. 261829
Toxics Case No. RO0002580

Dear Mr. Wickham:

This workplan addendum has been prepared by AEI for the property located at 10700 MacArthur Boulevard, Oakland, California (Figure 1: Site Location Map). The original workplan was required by the Alameda County Health Care Services (ACHCS) in a letter dated January 10, 2008 relating to the release of tetrachloroethylene (PCE) from historical dry-cleaning activities at the former Young's Cleaners location on the subject property. Subsequently, AEI submitted a *Work Plan for Pilot Study* dated March 7, 2008 to address the contamination at the site. The ACHCS responded to the work plan in a letter dated April 10, 2008, and seven specific technical comments were raised by the ACHCS. Subsequently, AEI and the client met with the ACHCS on April 22, 2008 to discuss the technical comments in the April 10, 2008 letter and to better determine a course of action for the subject site. This work plan addendum has been prepared to address the technical comments by the ACHCS, and to, based on the discussion during the April 22, 2008 meeting, move this site into the remedial pilot testing phase of cleanup in a timely manner.

The ACHCS April 10, 2008 response letter contained 7 technical comments (shown by *italics* below), and AEI's response to each of these comments is included following the comment:

1. Concrete Slab Entry Points

The ACHCS has requested that the existing concrete slab be inspected for potential vapor entry points. AEI concurs that this may be prudent and plans to perform a site inspection prior to pilot testing construction activities. During the site inspection, AEI will use a parts per billion range photoionization detector to determine potential locations where a preferential pathway for vapor intrusion may exist. If detected, these locations will be sealed with a non-porous, low volatile

organic compound (VOC), concrete sealer. The inspection results will be documented in the pilot study report.

2. Proposed Sub-Slab Vapor Extraction System Configuration

The ACHCS has questioned the design of the remediation system in regards to its effectiveness to reduce vapor intrusion particularly beneath the southern portion of the building (within the former excavation). The bulk of the extraction system is located within the northern portion of the property which coincides with the portion of the building currently vacant and planned to be remodeled. Therefore, access for trenching and installation activities is possible in this area, which includes the location with the highest concentrations of VOCs. The southern portion of the building currently contains three operating businesses, therefore heavy construction activities are not feasible in this area. AEI has designed the sub-slab depressurization system with the intent to sufficiently create a negative vacuum beneath the entire building from north to south. Vapor monitoring points VM-3, VM-4, VM-6, and VM-7 will assure that this is occurring to the south (Figure 3). As stated in the original work plan, following the pilot test, if the radius of influence is found to be insufficient, additional measures will be implemented at that time. Such measures could include additional extraction points, or increasing blower size which would be outlined in the report.

3. Extraction Well

The ACHCS has requested specifications of the proposed vapor extraction well at the site. The proposed specifications are included in Appendix A. In addition, the ACHCS has expressed concern on how the vapor monitoring points will be installed to prevent air flow between the building and the sub-slab. The top of each monitoring point, coinciding with the existing concrete slab, will be completed with Type I/II neat cement grout in order to fully seal the top of the sampling port. The top of the sampling points will include Swagelok fittings for easy sampling access which will be set within the neat cement. A Swagelok plug will be installed when the points are not being sampled. Diagrams for the sampling points, as well as a photograph of a completed vapor monitoring probes, are included in Appendix A.

4. Sub-Slab Monitoring

The ACHCS has requested that the location for the sub-slab monitoring probes be moved from outside the building foundation to inside the building foundation. The revised locations for the monitoring points, inside the building foundation (with the exception of VM-10), are included on Figure 3. Monitoring point VM-10 is located outside the foundation to verify if the radius of influence extends beyond the load bearing walls.

5. Building Space East of Former Young's Dry Cleaners

While it is noted that no elevated concentrations in soil vapor have been detected east of the former dry cleaner, the ACHCS has requested that additional monitoring points be installed east of the former Young's Cleaners to monitor soil vapor concentrations and system effectiveness east of the site. AEI has proposed two additional monitoring points (VM-8 and VM-9). The location of these points is shown on Figure 3.

6. Extent of VOCs in Vapor to West

The ACHCS has requested further evaluation of soil vapor to the west of the subject site based on elevated concentrations in VB-3. In order to fully characterize the soil vapor to the west, AEI has proposed the installation of 2 additional soil vapor borings west of the site. The borings will be advanced to a depth of approximately 5 feet below ground surface (bgs), at which time a soil vapor sample will be collected and analyzed for halogenated volatile organic compounds (HVOCs) using EPA Method 8260. Soil vapor sampling will be conducted in accordance with DTSC standard protocol. Field procedures will be completed as previously performed and outlined in several investigation reports and workplans for the site; however as vapor intrusion is the concern at the site, AEI does not plan to collect soil vapor samples deeper than 10 feet bgs as has been previously performed.

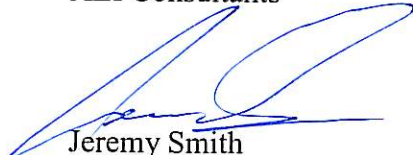
Should analytical results indicate elevated HVOCs, AEI plans to advanced additional borings (labeled contingent) until the site has been fully characterized. Data will be compared to the appropriate environmental screening levels (ESLs) to determine the need to step out and complete contingent borings. The locations for the proposed and contingent borings are included on Figure 2. The additional soil vapor investigation is scheduled to occur in conjunction with the pilot testing activities, however is anticipated to be completed before construction activities have begun.

7. Extent of VOCs in Vapor to South

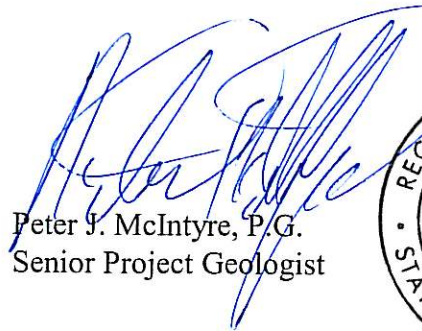
The ACHCS has requested further evaluation of soil vapor to the south of the subject site based on elevated concentrations in VB-8 and VB-9. In order to fully characterize the soil vapor to the south, AEI has proposed the installation of 2 additional soil vapor borings south of the site. The borings will be advanced to a depth of approximately 5 feet bgs and analyzed as described above. Should analytical results indicate elevated HVOCs, AEI plans to advanced additional borings (labeled contingent) until the site has been fully characterized. The location for the proposed and contingent borings is included on Figure 2.

AEI plans to proceed with the final characterization activities upon approval from the ACHCS. Following completion of the additional characterization activities, AEI plans to proceed with pilot testing activities. If you have any questions regarding this work plan addendum, please do not hesitate to contact one of us at (925) 944-2899.

Sincerely,
AEI Consultants



Jeremy Smith
Project Manager



Peter J. McIntyre, P.G.
Senior Project Geologist



Figures

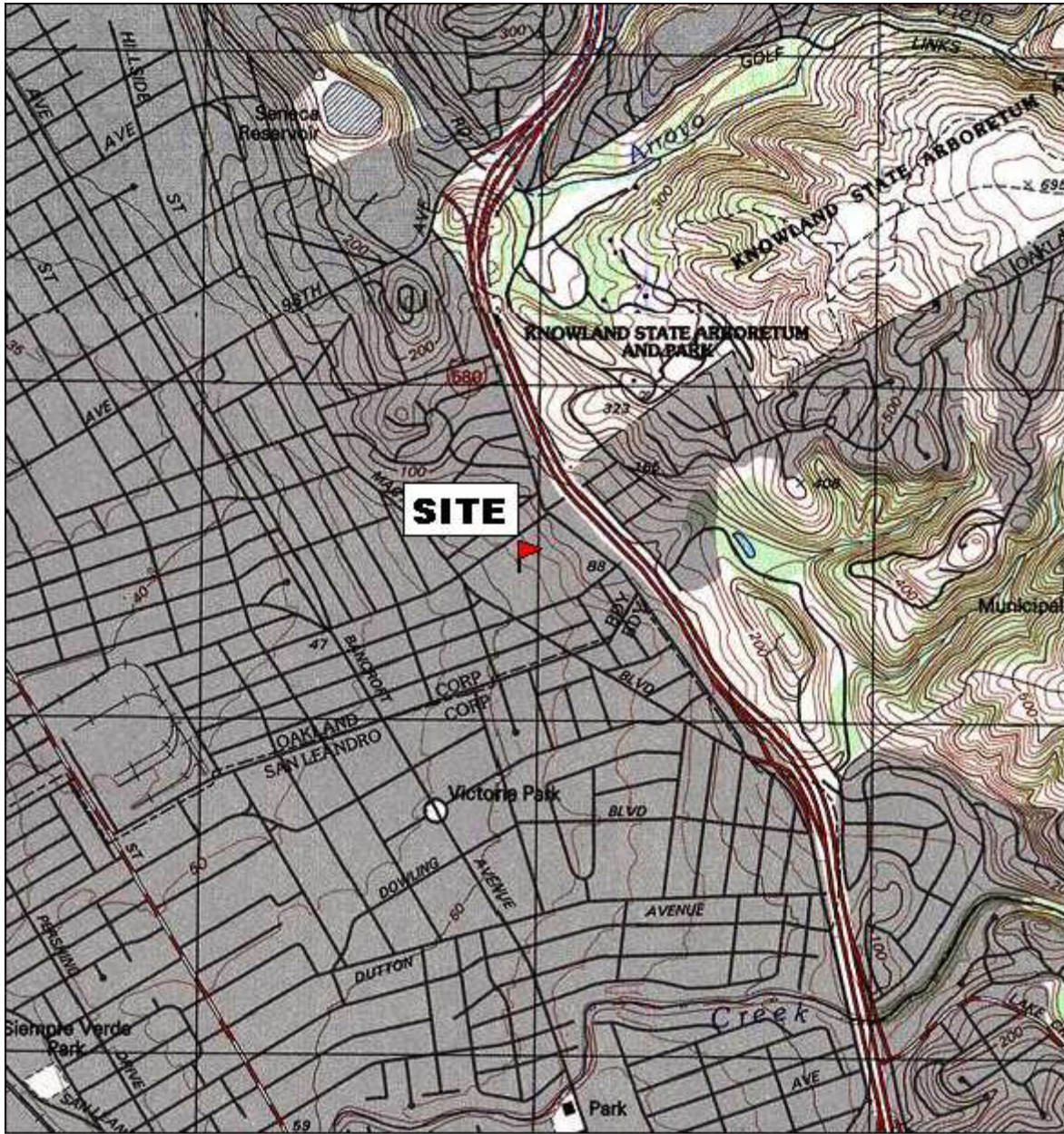
- Figure 1: Site Location Plan
- Figure 2: Site Plan
- Figure 3: Proposed Vapor Extraction System Monitoring Points

- Appendix A:** Photograph of Vapor Monitoring Points
Proposed Vapor Extraction Well Construction Details
Proposed Vapor Monitoring Point Construction Details

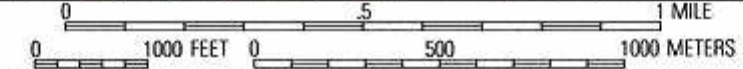
Distribution:

Jay-Phares Corp. Attn: John Jay, 10700 MacArthur Blvd., Oakland, CA 94605
Alameda County Health Care Services, Attn: Jerry Wickham, 1131 Harbor Bay Parkway, Suite 250,
Alameda, CA 94502 (Electronic Upload to ACHCS FTP)
GeoTracker Database

FIGURES

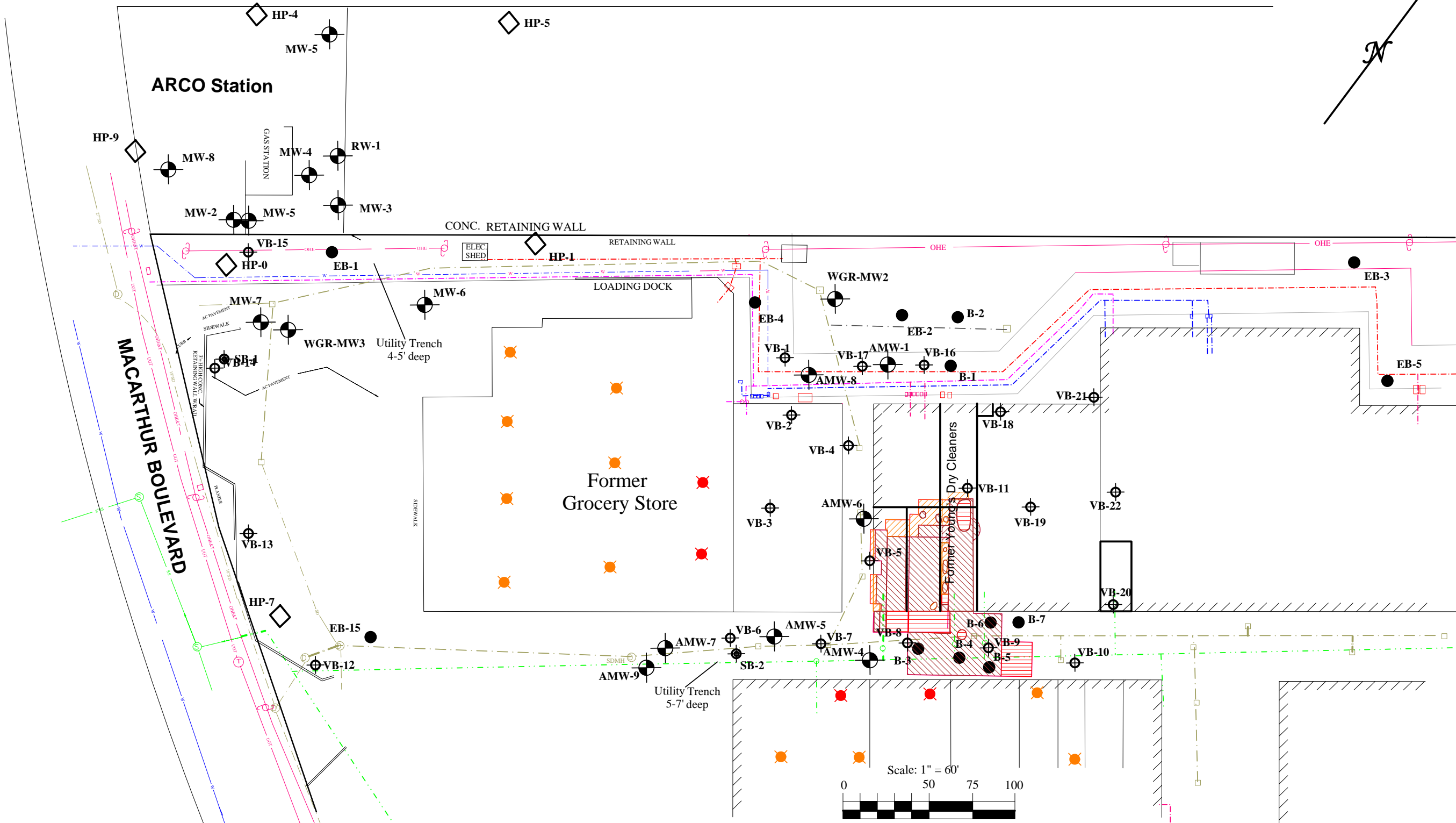
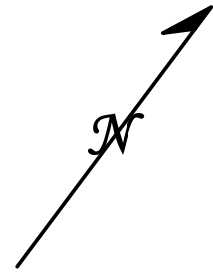


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<p>AEI CONSULTANTS 2500 Camino Diablo, Suite 200, Walnut Creek, CA 94597</p>	
<p>SITE LOCATION MAP</p>	
<p>10700 MACARTHUR BLVD OAKLAND, CALIFORNIA</p>	<p>FIGURE 1 PROJECT No. 261829</p>



- KEY**
- EB-1 ● Soil Boring - Kaldveer 1988
 - B-1 ● Soil Boring - Augeas 1994
 - HP-8 ◊ CPT Boring/HydroPunch Sample - PES 1997
 - MW4 ⊕ Groundwater Monitoring Well
 - ⊕ Soil Vapor Sample
 - ⊙ Soil Boring - AEI 2006

- Excavated to depth of 5 to 7 feet bgs
- Excavated to depth of 8 to 13 feet bgs
- Excavated to depth of 14 to 18 feet bgs
- Proposed Soil Vapor Boring
- Contingent Soil Vapor Boring

- On Site Storm Drain
- Off Site Storm Drain
- On Site Sanitary Sewer
- Off Site Sanitary Sewer
- On Site Underground Power
- On Site Gas Line

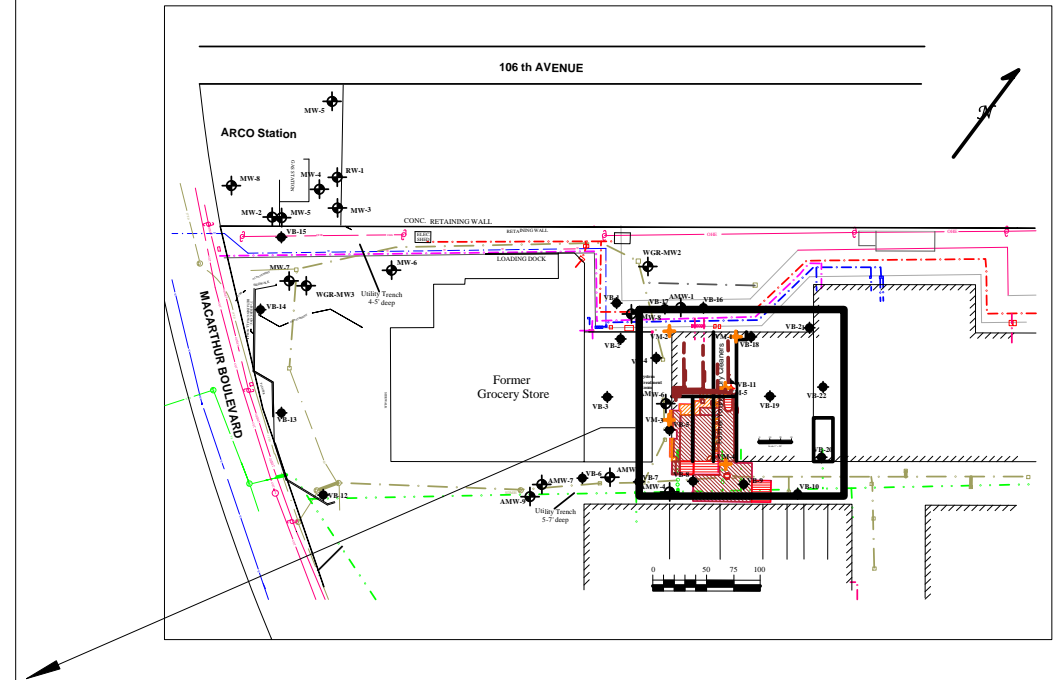
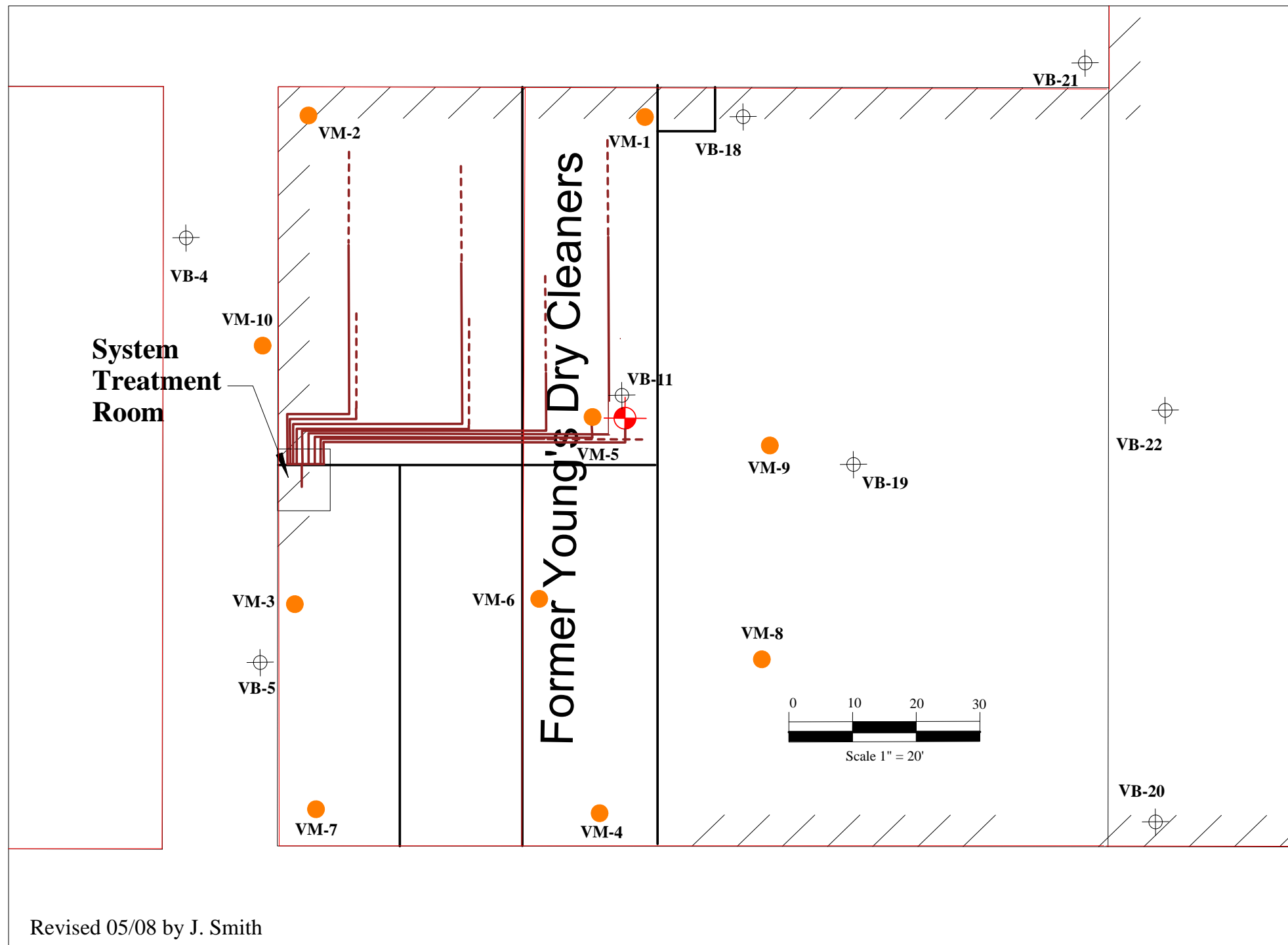
Drafted 6/30/05 - RFF on Dirk Slooten base
 Revised 05/08 by J.SMITH







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 2500 CAMINO DIABLO, WALNUT CREEK, CA

SITE PLAN

10700 MACARTHUR BLVD.
 OAKLAND, CALIFORNIA

FIGURE 2
 PROJECT NO. 261829



-  Soil Vapor Monitoring Point
-  Vapor Extraction Well
-  Previous Soil Vapor Probe
-  Extraction Line (PVC Blank)
-  Extraction Line (PVC Screen)
-  Load Bearing Wall

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2500 CAMINO DIABLO, WALNUT CREEK, CA	
PROPOSED VAPOR EXTRACTION SYSTEM AND MONITORING POINTS	
10700 MACARTHUR BLVD. OAKLAND, CALIFORNIA	FIGURE 3 PROJECT NO. 261829

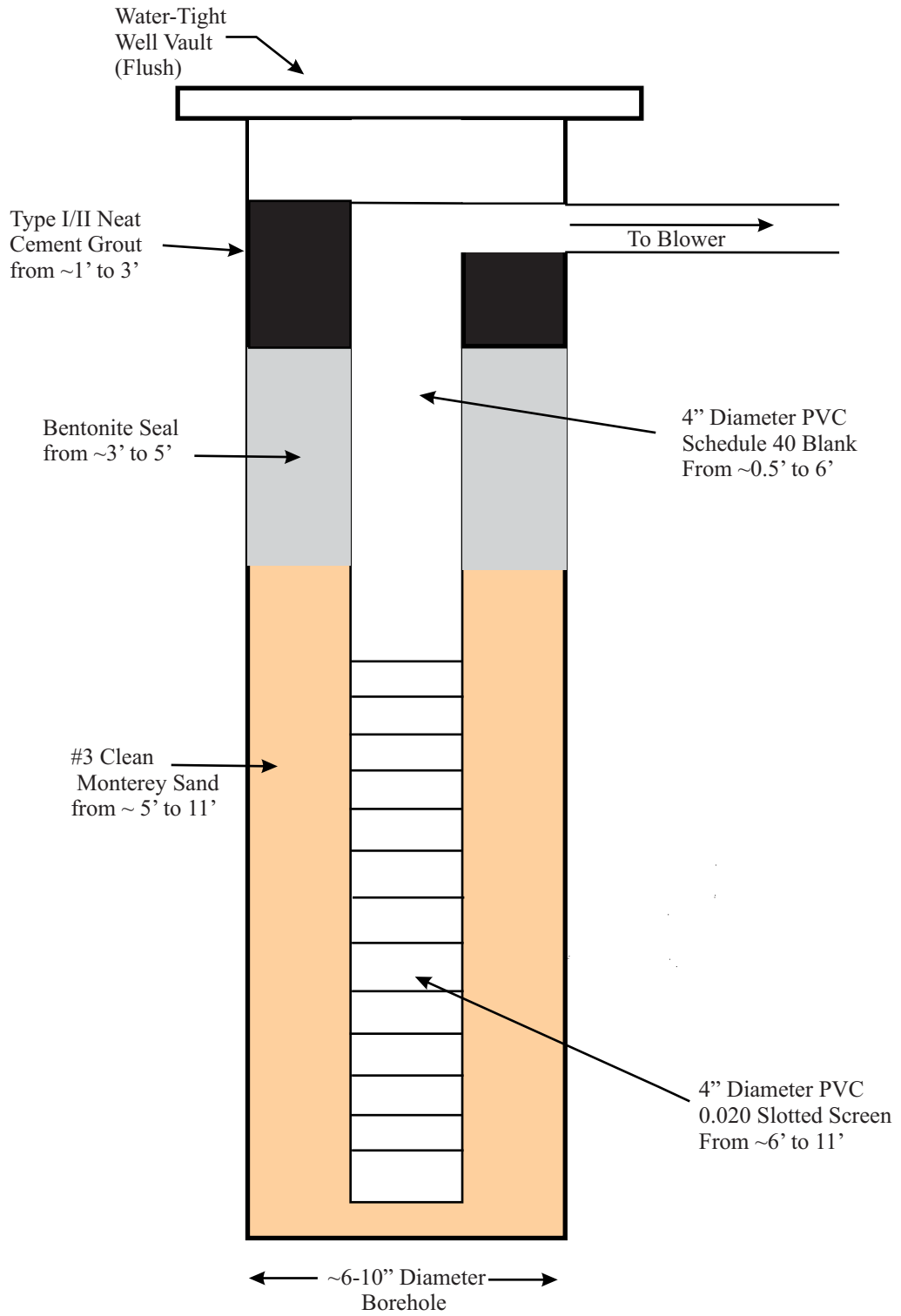
APPENDIX A



Black marker

0911

3/16" ID VINYL 0910 049543-025882 2ND 09/07/09



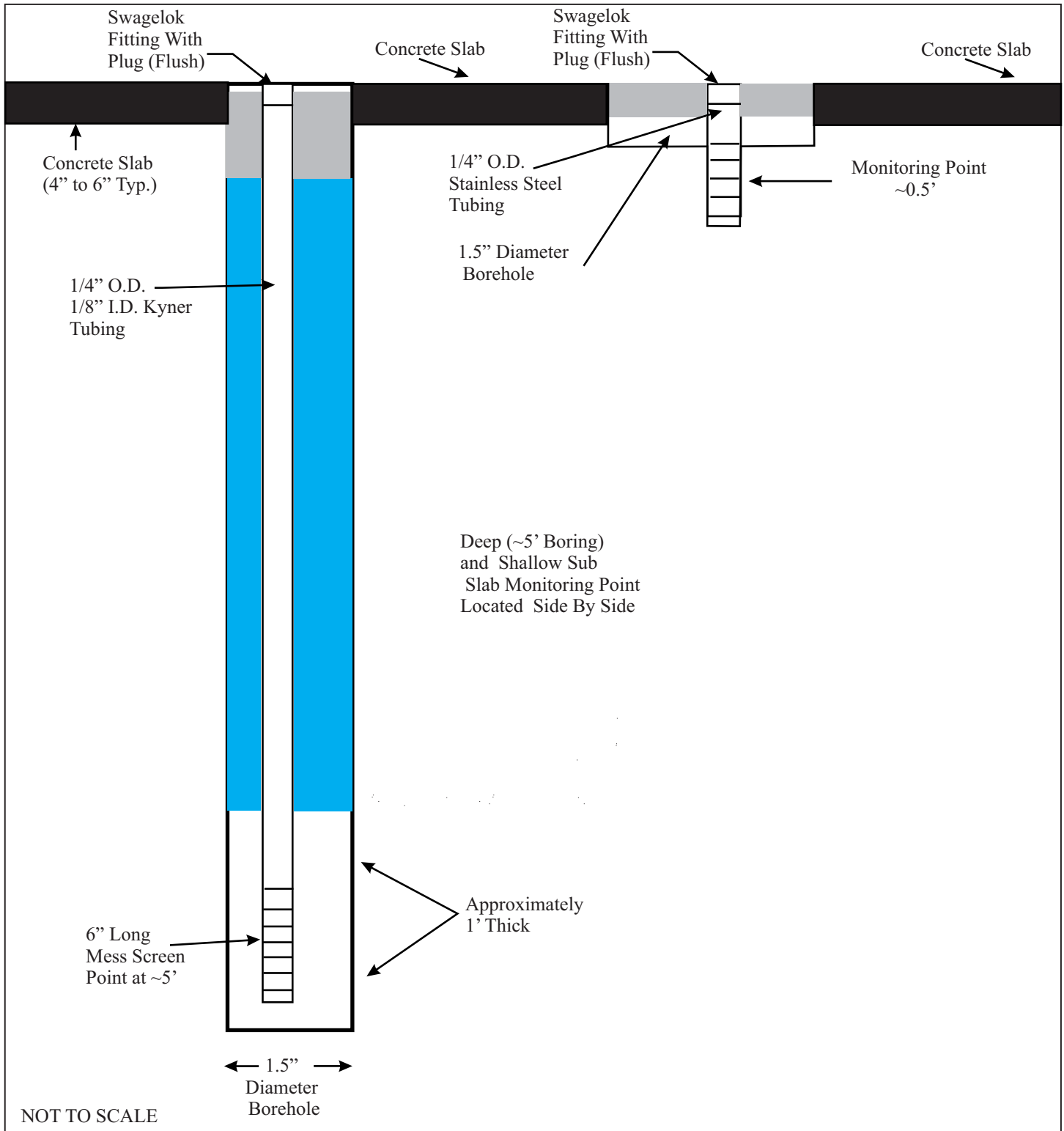
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
LEGEND

- Bentonite Seal
- Sand Filter Pack
- Monitoring Point

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**TYPICAL VAPOR EXTRACTION
 WELL DETAIL**



LEGEND	
	Neat Cement Grout Seal
	Bentonite Seal
	Sand Filter Pack
	Monitoring Point

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**TYPICAL SOIL VAPOR & SUBSLAB
MONITORING POINT DETAIL**