PROLOGIS®

Duke Realty Foundry LP
7825 San Leandro Street
Oakland, California 94621

May 13, 2024

Ms. Dilan Roe
Alameda County Health Care Services Agency
Environmental Health Department
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RE: AB&I Redevelopment – Acknowledgement Statement
7825 San Leandro Street
Oakland, California 94621
ACEHD Case No. RO0003535

Dear Ms. Roe:

Duke Realty Foundry LP has retained the environmental consultant referenced on the attached *Revised Site Conceptual Model and Data Gap Investigation Work Plan* dated May 13, 2024, for the project referenced above. The attached report is being submitted on behalf of Duke Realty Foundry LP.

I have read and acknowledge the content, recommendations, and/or conclusions contained in the attached document or report submitted on my behalf to the State Water Resources Control Board GeoTracker website.

Sincerely,

DocuSigned by:
F1100758A2414F7...

Gavin Polite Fisco
Director, Global Environmental & Engineering Services
Duke Realty Foundry LP

cc: Blair Rushing, Duke Realty Foundry LP
Andrew York, Alameda County Environmental Health Department
Joshua Osborne, PG, Roux Associates, Inc.
Richard Maxwell, Roux Associates, Inc.

Revised Site Conceptual Model and Data Gap Investigation Work Plan

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AB&I Redevelopment
7825 San Leandro Street
Oakland, California
Alameda County LOP Case No. RO0003535

May 13, 2024

Prepared for:

Duke Realty Foundry LP
(Prologis)

Prepared by:

Roux Associates, Inc.
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1793.0030S116/CV

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Oakland, California

May 13, 2024
Project Number 1793.0030S000

This Site Revised Conceptual Model and Data Gap Investigation Work Plan was prepared by Roux Associates, Inc., under the professional supervision of Joshua Osborne, PG. The specifications and/or professional opinions presented in this study were prepared in accordance with generally accepted professional practice, and within the scope of the project. There is no other warranty, either expressed or implied.

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1. Introduction

On behalf of Duke Realty Foundry LP (Prologis), Roux Associates, Inc. (Roux) has prepared this *Revised Site Conceptual Model and Data Gap Investigation Work Plan* (Revised Work Plan) for the proposed redevelopment at the former American Brass & Iron (AB&I) Foundry Site located at 7825 San Leandro Street in Oakland, California (Site; Figure 1).

The Alameda County Department of Environmental Health Department (ACEHD) Local Oversight Program (LOP) for Hazardous Materials Releases is the lead regulatory agency for the Site. Environmental investigations and clean-up actions at the Site are being undertaken under the oversight of that agency's Site Clean-up Program (SCP), with GeoTracker Global ID T10000019792 and ACEHD Case Number RO0003535.

Roux conducted a Passive Soil Gas and Groundwater Investigation (2023 Investigation) in August 2023. The results of the 2023 Investigation were presented in the *Passive Soil Gas and Groundwater Investigation Report* dated and submitted to ACEHD on October 4, 2023 (Roux, 2023a). Roux prepared a Site Conceptual Model (SCM) detailing information from the 2023 Investigation and previous investigations and identifying relevant environmental data gaps (Appendix A). The results and findings provide data sufficient to guide additional site characterization activities. This Revised Work Plan has been prepared to further:

1) Delineate volatile organic compounds (VOCs) in passive soil gas at the Site;
2) Assess benzene in soil vapor (soil gas) in three distinct areas at the Site;
3) Assess active soil vapor and bioattenuation through the installation of soil vapor probes; and
4) Analyze the extent of potential vapor intrusion in soil vapor beneath the Site.

The scope of work included herein was discussed in meetings between Roux, Prologis, Craig Communications, and the ACEHD on October 17, 2023, March 25, 2024, April 19, 2024, and April 23, 2024. This Revised Work Plan has been prepared to address ACEHD's comments related to the 2023 Investigation and our proposed scope of work presented in the *Conceptual Supplemental Subsurface Investigation Memorandum* dated October 16, 2023 (Roux, 2023b). Additionally, revisions implemented throughout this Revised Work Plan have considered comments provided by ACEHD, dated March 7, 2024, and May 9, 2024.

2. Background

2.1 Site Description and Historical Use

The Site consists of the former AB&I Foundry located at 7741, 7825, and 7929 San Leandro Street in Oakland, California (Figure 1). For simplicity and consistency with regulatory communication, 7825 San Leandro Street will be used to reference the location. The Site consists of approximately 14.5 acres in a mixed commercial/industrial land use area. The Site was previously developed with a two-story office building, multiple warehouses, a foundry and manufacturing building, a material storage area, and a parking lot. Demolition of all aboveground/vertical structures was completed in December 2023 as part of the planned redevelopment.

The Site is bounded by commercial/industrial properties to the north, south, east, and west. Union Pacific Railroad is located to the west, Oakland Truck Stop to the east, Elmhurst Creek along the southeast property corner, and San Leandro Bay is located approximately one mile to the west. The nearest residential areas are located approximately 810 feet northeast of the Site and 680 feet southwest of the Site.

The former Site owner and operator (AB&I) operated at the Site from at least 1940 until October 2022. During foundry operations, the Site was utilized for the manufacture of pipe and pipe fittings. Operations at the Site included the production of cast iron for the manufacturing of fittings and pipe from recycled scrap iron. The facility accepted scrap iron, pig iron, and steel, which it stockpiled on-Site to produce cast iron for fitting and piping manufacturing operations. Major operations involved scrap metal melting, mold making, fitting and pipe casting, and final finishing and coating of pipes and fittings. A majority of the Site is covered with concrete and asphalt/concrete pavement, except the area where scrap metal was stockpiled (AB&I, 2011a). AB&I ceased foundry operations in October 2022 and vacated the Site in April 2023.

2.2 Previous Environmental Activities

A summary of previous environmental investigation activities and associated results are provided below.

2.2.1 Leaking Underground Storage Tank Removal

Seven underground storage tanks (USTs) were previously located on the Site, including:

- One 8,000-gallon UST used for storing unleaded gasoline;
- One 8,000-gallon UST used for the storage of mineral spirits, and later 1,1,1-trichloroethane (1,1,1-TCA);
- One 550-gallon UST used for storing regular leaded gasoline;
- One 10,000-gallon UST used for storing diesel; and
- Three 10,000-gallon USTs used for storing gasoline.

All USTs were removed from the Site between 1982 and the early 1990s. The ACEHD provided regulatory oversight of the Leaking Underground Storage Tank (LUST) case (RO0000092) and closed the case in November 2011 with a covenant and environmental restriction that limits future land use to industrial purposes (AB&I, 2010a; AB&I, 2011a).

2.2.2 Soil and Groundwater Assessment – 2006

In July/August 2006, an assessment of soil and groundwater was conducted as part of a property transfer. The assessment consisted of sampling three existing monitoring wells (MW-1, MW-3, and MW-4); abandoning damaged well MW-2; and installing and sampling six new groundwater monitoring wells (MW-2R, and MW-5 through MW-9). Soil samples were collected at various depth intervals during the installation of monitoring wells MW-5 through MW-8. Results of the assessment were presented in the Preliminary Groundwater Investigation Report,[1] which indicated that five of the nine wells had concentrations of at least one compound that exceeded their respective United States Environmental Protection Agency (USEPA) maximum contaminant level (MCL) or California Regional Water Quality Control Board (RWQCB) environmental screening level (ESL) for groundwater, impacting a current or potential source of drinking water (BSK, 2007).

2.2.3 Groundwater and Soil Vapor Investigations – 2007 to 2010

On behalf of AB&I, the Source Group, Inc. (SGI), conducted additional soil, groundwater, and soil vapor investigations in 2007, 2008, 2009, and 2010. The results of these investigations indicated that groundwater in the vicinity of the parking lot area (located in the vicinity and northwest of former well MW-8; Figure 2) was impacted with volatile organic compounds (VOCs), including 1,1,1-TCA; 1,1-dichloroethane; 1,1-dichloroethene (1,1-DCE); chloroethane; cis-1,2-dichloroethene (cis-1,2-DCE); trans-1,2-dichloroethene; and vinyl chloride. Groundwater in the vicinity of the former three 10,000-gallon USTs (located in the vicinity of former well MW-9) was impacted with petroleum hydrocarbons, including benzene; toluene; ethylbenzene; and xylenes (BTEX), TPH-g, and TPH-d (AB&I, 2008a; AB&I, 2008b; AB&I, 2008c; AB&I, 2009a; AB&I, 2009b; AB&I, 2009c; AB&I, 2009d; AB&I, 2010a; AB&I, 2010b).

Results of the soil vapor analysis indicated that benzene, ethylbenzene, vinyl chloride, and tetrachloroethene (PCE) were detected at concentrations exceeding 2007 RWQCB ESLs[2] under the commercial/industrial land use scenario. SGI conducted a site-specific risk assessment, which concluded that the risks posed by soil gas concentrations were acceptable, and no further action was recommended (AB&I, 2009b). The ACEHD concurred with the report conclusions in a letter dated May 20, 2009 (ACEHD, 2009).

2.2.4 In Situ Remediation – 2009

In order to address residual petroleum hydrocarbons and VOCs in groundwater, enhanced anaerobic biodegradation injections occurred in June 2009 beneath the parking lot area (near former MW-3 and MW-8) and aerobic biodegradation injections occurred near the former three 10,000-gallon USTs (near former MW-9). Groundwater monitoring was performed between 2009 and 2010 to track the progress of bioremediation in the subsurface (AB&I, 2009c; AB&I, 2009d; AB&I, 2010a; AB&I, 2010b). In a letter dated March 2, 2010, the ACEHD indicated that no further active remediation was required at that time (ACEHD, 2010).

2.2.5 Request for Site Closure

On behalf of AB&I, SGI prepared a semi-annual report that described the results of first and second quarter 2010 groundwater monitoring activities, and formally requested Site closure. The closure request concluded

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[1] The *Preliminary Groundwater Investigation Report* dated June 11, 2007, prepared by BSK Associates, Inc. on behalf of AB&I, was not available for download from the State Water Resources Control Board GeoTracker website.

[2] Soil gas results were compared to ESLs issued by the RWQCB entitled *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final – November 2007*, updated May 2008.

that known UST sources had been removed from the Site, soil gas impacts were low and did not warrant remediation or monitoring, and groundwater concentrations of VOCs and petroleum hydrocarbons were stable or had declined. As such, AB&I proposed preparation of a risk management plan and deed restriction (AB&I, 2010a). In a letter dated April 28, 2011, the ACEHD accepted their proposed course of action and requested submittal of a deed restriction and Site Management Plan (ACEHD, 2011).

2.2.6 Well Decommissioning Report

On October 11, 2011, nine monitoring wells (MW-1, MW-2R, MW-3, MW-4, MW-5, MW-6, MW-7, MW-8, and MW-9) located on the Site were destroyed via tremie grout method in accordance with Alameda County Public Works Agency (ACPWA) requirements. The necessary well destruction permits were obtained, and all well destruction activities were performed under the oversight of SGI and the ACPWA. As required by the California Department of Water Resources, well destruction reports were completed following the destruction of the monitoring wells (AB&I, 2011b).

2.2.7 Phase I Environmental Assessment and Limited Phase II Investigation

As part of the pre-acquisition due diligence process, Haley & Aldrich, Inc. (H&A) completed a Phase I Environmental Assessment at the Site, dated April 2022 (Phase I; H&A, 2022a). The Phase I identified several recognized environmental conditions, which H&A subsequently investigated during a limited Phase II Environmental Investigation, dated May 2022 (Phase II; H&A, 2022b), in which they advanced four soil borings (E-2, E-4, E-5, and E-6) (see Figure 2) and collected soil, soil vapor, and groundwater samples. The 2022 Phase II investigation collected and analyzed a total of eight soil samples, two groundwater samples, and two soil vapor samples.

Soil sample analytical results indicated that shallow soil in the vicinity of E-4, E-5, and E-6 contained benzene in exceedance of 2019 RWQCB Commercial/Industrial ESLs (RWQCB, 2019). Arsenic was detected below the background arsenic concentrations in the region (Duvergé, Dylan Jacques, 2011).

The following compounds were detected in soil vapor in exceedance of their respective Commercial/Industrial ESLs:

- Chloroform (E-2) – 21 micrograms per cubic meter (µg/m^3)
- Benzene (E-4) – 11,000 µg/m^3
- Ethylbenzene (E-4) – 2,600 µg/m^3
- Trichloroethene (TCE) (E-4) – 760 µg/m^3
- Vinyl chloride (E-4) – 74 µg/m^3
- Total Petroleum Hydrocarbons as Gasoline (TPH-g) (E4) – 820,000 µg/m^3

Vinyl chloride was also detected in groundwater at concentrations exceeding its Commercial/Industrial ESL of 0.14 micrograms per liter (µg/L) for groundwater vapor intrusion human health risk (E-2, 8.87 µg/L); however, vinyl chloride was not detected in soil vapor sample E-2, which was collected from the same boring as the groundwater sample.

2.2.8 Passive Soil Gas and Groundwater Investigation

Between July 24 and August 9, 2023, Roux conducted the 2023 Investigation at the Site. The purpose of this investigation was to determine if potential Site contaminants have impacted soil vapors and groundwater underlying the Site that may require mitigation or remediation.

To evaluate soil vapor and groundwater at the Site, Roux installed sixty-four (64) passive soil gas samplers and eight (8) groundwater monitoring wells. During well installation activities, soil samples were also collected from varying discrete depths at each well location. The monitoring well locations are shown in Figure 2. The passive soil gas results indicated that PCE, TCE, benzene, and 1,4-dioxane were detected at concentrations exceeding their respective RWQCB Commercial/Industrial ESLs. Heat maps provided by Beacon Environmental (Beacon) are included in Appendix B. The groundwater results indicated that metals (arsenic, barium, chromium, cobalt, lead, and nickel) were detected at concentrations exceeding their respective California MCLs in two or more wells. No other analytes, including pesticides and polychlorinated biphenyls (PCBs) were detected in groundwater above their respective California MCLs or RWQCB Commercial/Industrial ESLs. A groundwater elevation contour map is provided in Figure 3. The soil results indicated that arsenic, lead, and total petroleum hydrocarbons as diesel (TPH-d) were detected at concentrations exceeding their respective RWQCB Commercial/Industrial ESLs. Further details are available in the *Passive Soil Gas and Groundwater Investigation Report* (Roux, 2023a).

2.3 Proposed Site Development

Prologis intends to redevelop the Site with the construction of an approximately 320,000-square-foot warehouse building and associated parking lot. The proposed warehouse building footprint is shown in Figure 2. The Data Gap Investigation proposed herein is meant to further define the extent of subsurface impacts to soil, soil gas, and groundwater. Additionally, this investigation will support the redevelopment of the Site so that potential contaminants (if any) can be effectively remediated and/or mitigated to prevent exposure by construction workers and/or future Site workers.

3. Site Conceptual Model (SCM)

This section discusses the Site Conceptual Model (SCM), which was prepared based on the results of the 2023 Investigation completed in July/August 2023 and previous investigations. The SCM is provided in Appendix A.

3.1 Site History

For details regarding the Site history, see Section 2.0 above and the SCM in Appendix A.

3.2 Site Geology and Hydrogeology

3.2.1 Site Geology

The Site is a flat parcel ranging in elevation between 11.5 and 14.5 feet.[3] As discussed above, the Site is located approximately one mile east of the San Francisco Bay and is bounded to the south by Elmhurst Creek. The Arroyo Viejo Creek lies to the northwest of the Site across Hegenberger Road. The Site is within an area identified as the East Bay Plain. The East Bay Plain is situated on the east side of the San Francisco Bay depression. The alluvial sediments of the East Bay Plain consist of a mixture of gravel, sand, and clay deposited by coalescing alluvial fans. In the vicinity of the Site, alluvial and estuarine deposits have been mapped (Helley et. al., 1979). The fluvial deposits are described as “unconsolidated, moderately sorted, fine sand and silt, with clayey silt and occasional thin beds of coarse sand” (Muir, K.S., 1993). The near-shore deposits are described as “a well-sorted, fine to medium grained sand and silt, with lenses of sandy clay and clay” (AB&I, 2010a).

Borings advanced at the Site between 1993 and 2023 have extended to a total approximate depth of 81 feet bgs. Soils encountered in the unsaturated and saturated zones beneath the Site are predominantly fill material (well graded sand) and lean/fat clay with interfingered lenses of mixtures that include sand, silt, clay, and gravel to the maximum depth explored. Borings logs completed by Roux and others indicate that lean and fat clays dominate the lithology below the Site with lesser amounts of gravel, sand, and silt as shown in the cross sections (Appendix C). Little correlation between coarse grained units is observed from the available boring logs at the Site. Available boring logs are provided in Appendix D.

3.2.2 Site Hydrogeology

As detailed in Section 2.2.8, Roux installed eight groundwater monitoring wells (MW-10 through MW-17) in 2023 to evaluate groundwater conditions across the Site. The wells were installed around the perimeter of the Site to establish the groundwater gradient and flow direction. MW-10 through MW-17 were screened across the first encountered zones of groundwater based on soils logged from each borehole. Due to the complex shoreline lithology at the Site, the wells were screened across a range of depths as shown on the cross sections (Appendix C) and boring logs (Appendix D). Although the wells have unique screening intervals, potentiometric surface measurements across the Site likely indicate that six out of eight of the wells (MW-10, MW-11, and MW-13 through MW-15, and MW-17) are screened across an aquifer of similar confining pressure, and as such, are hydraulically connected to each other. MW-12 and MW-16 have demonstrated slightly lower groundwater levels during monitoring events suggesting that they may not be hydraulicly connected to the other existing wells at the Site.

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[3] All vertical elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Shallow groundwater conditions are observed at the Site with water levels in historical (prior to well destruction in 2011) and existing monitoring wells (August 2023) ranging between 4.55 and 7.91 feet bgs. Based on August 2023 groundwater level monitoring data collected from existing wells MW-10 through MW-17, the Site-specific groundwater flow direction and gradient appears radial (Figure 3). Gradients under these assumptions across the Site ranged between 0.0027 and 0.067 feet/feet based on the monitoring well data. The groundwater gradient at the Site is suspected to be partially influenced by Elmhurst Creek and Arroyo Viejo Creek and the proximity of the Site to the historical San Leandro Bay margin also suggests that tidal influence may be contributing to the variable flow directions observed in monitoring data. Historical groundwater monitoring data indicated that groundwater generally flowed to the northwest at a hydraulic gradient of approximately 0.006 feet per foot (ft/ft) (AB&I, 2010a), however, these wells were spatially limited relative to the overall footprint of the Site. Although radial groundwater flow conditions are suggested by the monitoring well data collected in August 2023, interpretation and modeling by Roux and ACEHD indicate that monitoring data from MW-12 and MW-16 may not be representative of the shallowest aquifer at the Site and, as a result, altering the perceived gradient.

As radial groundwater conditions are unlikely at this Site due to the absence of any significant hydraulic sink (i.e., groundwater extraction wells), the groundwater flow direction at the Site has been interpreted based on modeling conducted by ACEHD (ACEHD subsurface modeling figure set presented in Appendix A) and the regional geologic framework flowing to the northwest. For the purposes of this investigation, this interpreted groundwater flow direction has been assumed informing the location of targeted groundwater samples across the Site. The interpreted northwesterly groundwater flow direction is generally consistent with observations made during historical groundwater monitoring events by others (BSK, 1993, AB&I, 2010a, AB&I, 2010b).

Based on lithologic data shown in the cross sections, it appears that the water bearing zone consists of discontinuous lenses of coarse-grained materials between 10 and 25 feet bgs across the Site, however, ACEHD modeling results (Appendix A) suggest that multiple sand layers at the Site are more continuous than previously interpreted. Based on observations during well installation and monitoring and analysis of lithology across the Site by Roux and ACEHD, confined groundwater conditions may be present at the Site.

Although groundwater in the East Bay Plain is generally considered a potential future source of drinking water, there are no permitted drinking water wells within one mile of the Site, nor is the shallow groundwater in this area likely to be used as a public drinking water source in the foreseeable future (AB&I, 2008a).

3.3 Potential Contaminants of Concern

Based on historical and nearby Site operations as well as analytical data associated with previous investigation activities, the following potential contaminants of concern (PCOCs) have been identified, and/or may be present, at the Site. The table below lists the PCOCs associated with the Site, as well as their potential source(s).

PCOC	Potential Source(s)
Metals (primarily lead, arsenic, barium, chromium, cobalt, and nickel) in soil and/or groundwater	Historical use of the Site as a foundry and former residential dwellings and other buildings present on the Site since 1925.
TPH-g, TPH-d in soil and/or groundwater	Historical industrial use of the Site as a foundry and petroleum hydrocarbons stored/released proximate to the former USTs, fuel dispensers, aboveground storage tanks (ASTs), and storage facility and yard areas.

PCOC	Potential Source(s)
VOCs, including benzene, 1,1-dichloroethane, 1,2-dichloroethane, 1,4-dioxane, vinyl chloride, and naphthalene, in soil gas and/or groundwater possibly posing a vapor intrusion risk	Historical industrial use of the Site as a foundry and VOC-containing chemicals stored/released proximate to the former USTs, ASTs, wastewater treatment plant, and special finishing storage facility. VOCs were detected at concentrations exceeding screening criteria in soil gas and/or groundwater in multiple locations across the Site.

3.4 Data Gaps

During the development of the SCM, various data gaps were identified. Table 1 outlines a proposed Sampling Analysis Plan (SAP) with proposed sampling locations illustrated on Figures 4 and 5. The SAP is designed to address the data gaps related to soil and soil vapor impacts previously identified at the Site, and for the proposed development of the Site.

- In order to delineate elevated concentrations of chlorinated volatile organic compounds (cVOCs) observed proximate to PSG-10, PSG-25, PSG-41 and PSG-62, Roux proposes to install and sample additional passive soil gas (PSG) samplers on a denser grid spacing (25-foot x 25-foot) in those areas. Active soil gas samples will also be collected from permanent soil vapor probes co-located at PSG-10, PSG-25, PSG-41, and PSG-62 to: (1) confirm the accuracy of the PSG results; (2) obtain fixed gas data; and (3) assess the vertical extent of cVOC impacts in soil vapor;
- Benzene was observed in multiple areas at concentrations above 2019 RWQCB Commercial ESLs, based on an attenuation factor of 0.03. Roux proposes to collect active soil gas samples from probes installed in 10 areas near PSG-06, PSG-13, PSG-25, PSG-32, PSG-35, PSG-52, PSG-45, PSG-53, PSG-57and PSG-61 to confirm the accuracy of the PSG results and to collect fixed gas data so that bioattenuation can be assessed;
- Elevated concentrations of arsenic, lead, and TPH-d have been identified in soil; in preparation of the anticipated redevelopment of the Site, Roux proposes to characterize the soil on a 150-foot x 150-foot grid pattern throughout the Site. Soil characterization will include advancing soil boings to 5 to 10 feet bgs. Soil characterization sampling will also characterize areas of proposed soil disturbance including utility corridors and bio swales;
- Elevated vinyl chloride has been detected in groundwater from MW-12. Roux proposes to advance four dual depth grab groundwater borings (GW-1 through GW-4) to the north, west, and south of MW-12 to delineate vinyl chloride impacts in shallow groundwater in the vicinity of MW-12;
- Following Site demolition activities in 2023, 12 pits were identified extending below the existing grade at the Site. To investigate any potential impacts associated with these pits, eight soil and grab groundwater sample locations have been proposed;
- Elevated detections of PCE and TCE have been detected in passive soil gas samples PSG-25 and PSG-41. Roux proposes to advance grab groundwater borings (G-5 and GW-6) in the vicinity of each of these elevated cVOCs to assess impacts to groundwater in these areas; and,
- In addition, quarterly groundwater monitoring will continue to be conducted to further assess the cVOC, TPH, and metal impacts in groundwater beneath the Site.

For additional information regarding data gaps, see Sections 1.0 through 5.0 of the SCM (Appendix A).

4. Data Gap Investigation

This section provides details regarding the scope of work for the Data Gap Investigation.

4.1 Health and Safety Plan

Roux will prepare a Site-specific Health and Safety Plan (HASP) to provide guidelines to all Site workers and visitors during fieldwork. The HASP will be kept on-Site at all times when fieldwork is occurring and will be reviewed and signed by all Site workers prior to work each day.

4.2 Utility Location and Borehole Clearance

Roux will contact Underground Service Alert (USA) a minimum of 48 hours prior to subsurface activities to notify utility operators of the planned work and to request the marking of nearby utilities (i.e., natural gas, electric, water, sewer, telephone, fiber optic, etc.). Additionally, Roux will contract with a private geophysical services and utility locating firm to evaluate the proposed boring locations and mitigate the risk of disrupting potential subsurface utility lines. In addition, all soil and soil vapor boring locations will be hand cleared to 3 to 5 feet bgs using a hand auger per Roux's safety requirements.

4.3 Permits

Prior to any subsurface investigations, Roux will obtain permits for all borings from the ACPWA.

4.4 Additional Soil Gas Sampling

Additional investigation is needed in four areas due to elevated concentrations of cVOCs detected in soil gas. Further assessment of benzene in soil gas is warranted in three distinct areas of the Site. A summary of the proposed soil gas sampling is shown in Table 1.

4.4.1 Proposed Additional Passive Soil Gas Sampling

In order to delineate elevated concentrations of cVOCs observed proximate to PSG-10, PSG-25, PSG-41, and PSG-62, Roux proposes to install and sample additional PSG samplers on a denser grid spacing (25-foot x 25-foot) in those areas. Similar to the 2023 Investigation, PSG samplers will be provided by Beacon Environmental (Beacon). Sample locations are depicted in Figures 4A though 4D. PSG samplers utilize adsorbent media placed within the subsurface to identify VOCs in the shallow vadose zone over a time-integrated sampling period. Roux will install and collect the PSG samplers, per the standard operation procedure (SOP) provided by Beacon and included in Appendix E for reference. The samples will be submitted to Beacon for analytical testing. Roux will document all installation and sample collection using field forms as shown in Appendix F.

Installation of Passive Soil Gas Sampling Points

The drilling contractor will advance a 1.5-inch-diameter boring to a depth of 1-foot bgs using a rotary hammer drill. The borings will then be advanced to terminal depths of approximately 3 feet below the bottom of the hardscape (concrete/asphalt) or below the surface in soil/gravel areas using a 0.5-inch diameter drill bit. Roux will install the PSG samplers in accordance with the Standard Operating Procedure for Installation and Collection of Passive Soil Gas Samplers for Laboratory Analysis (SOPs; Appendix E). Once installed, the PSG sampler borings will be sealed at the surface and covered with concrete to avoid the flow of ambient air into the subsurface during sampling as described in the SOPs.

Passive Soil Gas Sample Collection and Chemical Analysis

Roux will collect the PSG samplers after a minimum exposure period of 14 days and each will be properly labeled, packaged, and sealed as described in the SOPs.

To document the quality of the data being collected, control checks for both laboratory and field data will be performed. A total of two (2) field duplicate samples will be analyzed to check for sampling and analytical reproducibility. Duplicate analysis can be performed for any field sample because each PSG sampler contains two sets of adsorbent cartridges. To select field sample duplicates, Roux staff will note them on the chain-of-custody (COC) form in accordance with Beacon procedures. Additionally, one trip blank will be included with the PSG samplers during shipment to detect potential contamination introduced during the shipping process.

All samples will be submitted under proper COC procedures to Beacon for analysis of the same target chemical list included in the 2023 Investigation, which included cVOCs and volatile hydrocarbons (i.e., benzene, toluene, ethylbenzene, xylenes, and naphthalene), by USEPA Method 8260C (Roux, 2023a).

4.4.2 Proposed Active Soil Gas Sampling

Roux also proposes to install and collect active soil gas samples from permanent soil vapor probes.

Installation of Active Soil Gas Sampling Points

Twenty-six co-located soil vapor probes will be constructed at 13 locations in accordance with the Department of Toxic Substances Control (DTSC) Advisory, Active Soil Gas Investigations guidance (Soil Gas Advisory; DTSC, 2015), and will consist of 13 probes installed at 5 ft bgs and 13 probes installed at 8 feet bgs within co-located 2.25-inch minimum diameter borings. As shown in Figure 4A through 4D, thirteen co-located soil vapor probes will be located near former PSG sample locations PSG-06, PSG-10, PSG-13, PSG-25, PSG-32, PSG-36, PSG-41, PSG-45, PSG-52, PSG-53, PSG-57, PSG-61, and PSG-62. Roux will retain a California licensed drilling contractor to perform all subsurface drilling activities. Active soil vapor sample collection from the probes will be conducted in accordance with Roux SOPs and the Soil Gas Advisory.

Each probe will consist of a new stainless steel filter probe tip with a ¼-inch push-to-connect fitting attached to ¼-inch diameter Teflon tubing. The probes will be installed using a small-diameter downhole guide rod to support the well tubing and probe in the borehole during the placement of annular materials and ensure that the probe tip is placed at the target sampling depth. After installation of the soil gas tubing and probe, the downhole guide rod will be removed from the borehole.

To construct each soil gas sampling point, a 12-inch sand pack consisting of #3 sand will be placed surrounding the probe tip, which will be set at 5 or 8 feet bgs. A 12-inch-thick layer of dry granular bentonite will be emplaced above the deep sand pack, which will be overlaid with bentonite grout or neat cement up to within approximately 6-inches of the ground surface. Each soil gas probe will be completed at the surface with a flush-with-grade traffic rated well box.

Although depth-to-water measurements appear to indicate that the deep soil vapor probes may intersect the water table, potentiometric groundwater elevations suggest that the water bearing zone is under pressure and will not be encountered at depths of approximately 8 feet bgs. However, if water is observed in the soil gas probes, then soil gas samples will not be collected.

<u>Active Soil Gas Sample Collection and Chemical Analysis</u>

After installation, each soil vapor probe will be allowed to equilibrate for at least two days prior to sampling per the Soil Gas Advisory. Protocols and procedures utilized by Roux will be in accordance with the Soil Gas Advisory and the SOPs included in Appendix E.

Prior to the collection of soil vapor samples, a “shut-in” test will be performed to check for leaks in the aboveground soil vapor sampling equipment. Following the shut-in test, approximately three purge volumes will be purged from the sampling tubing using a sample syringe, a calibrated air pump, or a purge SUMMA® canister before soil gas sample collection begins. Purge activities will be conducted at the same flow rate used for soil gas sample collection (approximately 150 milliliters per minute). During purging and soil vapor sample collection activities, a leak test will be performed using a shroud, which will enclose the soil gas probe vault, probe tubing, and the entire sampling manifold, and will allow for the utilization of helium as a leak check gas during purging and sampling. A minimum helium concentration of 20 percent will be maintained within the shroud during the purging and soil vapor sample collection period. Soil vapor samples will be collected from the new soil vapor probes after verifying that a leak check meets the acceptable quantitative air leakage conditions (i.e., <5% total atmospheric concentration air leak when sampling with a shroud). Data quality control procedures are presented in detail in Section 4.10. If soil vapor samples do not meet the acceptable air leak conditions, a new soil vapor probe will be installed using the methodology described in this section.

Soil vapor samples will be collected in one-liter evacuated SUMMA® canisters, labelled, and shipped under COC protocols to a California-certified laboratory in accordance with Roux SOPs and the Soil Gas Advisory for the following analysis:

- VOCs by USEPA Method TO-15;
- TPH-g via USEPA Method TO-3; and
- Fixed gases (helium, carbon monoxide, carbon dioxide, methane, nitrogen, and oxygen) by American Society for Testing and Materials (ASTM) standard D-1946.

Field sampling criteria, including location, time, sample container and manifold IDs, sampler(s), pressure readings, and helium shroud percentage, will be recorded on the soil vapor sampling logs. Soil gas sampling forms are included in Appendix F. A summary of the proposed soil gas sampling is shown in Table 1.

4.5 Additional Soil Sampling

In preparation for the anticipated redevelopment of the Site, Roux proposes to characterize near-surface soil by collecting soil samples on a 150-foot by 150-foot grid pattern throughout the Site. Proposed soil sampling locations provide coverage of the entire Site, including the areas of proposed disturbance related to the development (i.e., proposed utility corridors and stormwater bioswales). Soil characterization will include:

- Advancing a total of 35 soil borings to a depth of 5 feet bgs (total depths may vary based on co-located sample point; see Table 1 for more detail) in areas outside of the utility corridors. Non-utility corridor soil samples will be collected at five depth intervals: 0.5-1, 1-2, 2-3, 3-4, and 4-5 feet bgs;
- Advancing a total of 13 soil borings to a depth of 10 feet bgs (total depths may vary based on co-located sample point; see Table 1 for more detail) within the utility corridors. Soil samples within the utility corridors will be collected at eight depth intervals: 0.5-1, 1-2, 2-3, 3-4, 4-5, 7-8, and 9-10 feet bgs.

Table 1 summarizes the soil depth intervals that are proposed for analysis and the soil depths to be placed on hold pending initial analytical results. The initial batch of soil samples to be analyzed will be analyzed for the following:

- VOCs via USEPA Method 8260B (with preservation via USEPA Method 5035);
- Semi-volatile organic compounds (SVOCs) by USEPA Method 8270C;
- TPH-g, TPH-d, and TPH as motor oil (TPH-mo) via USEPA Method 8260B and/or 8015B;
- California Assessment Manual (CAM17) Metals via USEPA Method 6020; and,
- Polychlorinated biphenyls (PCBs) by USEPA Method 8082.

Soil samples from depth intervals not proposed for initial analysis will be held pending the results of the shallow soil samples. If necessary, extractions for analytes with short hold times may be run to extend the hold period. If impacts are suspected to extend below the deepest shallow sample interval analyzed, additional soil analysis will be conducted until the extent of impacts are identified or the deepest sample is found to be impacted.

In addition, soil characterization will also include (all depths are considered approximate; actual sample depths will be determined in the field based on observed lithology and observed first encountered groundwater) advancing 14 borings to first encountered groundwater and the collection of one soil sample from the groundwater interface. The soil samples collected from the groundwater interface will be submitted for the following laboratory analyses:

- VOCs via USEPA Method 8260B (with preservation via USEPA Method 5035); and
- TPH-g, TPH-d, and TPH-mo via USEPA Method 8260B and/or 8015.

Soil borings will be advanced to 5 feet bgs using a hand auger or direct-push technology (DPT). Soil will be captured in Macro-Core sleeves through the center of the DPT drill stem. The Macro-Core sleeves will be opened and soil will be logged by the Field Geologist, Engineer, or Scientist under the supervision of a California Licensed Professional Geologist using the Unified Soil Classification System (USCS). Soil lithology, field screening readings utilizing a photoionization detector (PID), and sampling depths will be recorded on boring logs. If stained/discolored soil is observed or an elevated PID response greater than 10 parts per million is measured while logging subsurface soils, additional soil samples will be collected.

To minimize volatilization during transport following sampling, soil samples for VOCs will be collected into EnCore-type, or equivalent, sample containers in accordance with USEPA Method 5035. All samples will be appropriately labelled, packaged, and placed on ice for submittal under COC protocols to a California-certified laboratory for environmental analyses.

SOPs for soil sampling are presented in Appendix E. Roux will document soil sample collection methods and activities using field forms as shown in Appendix F. A summary of the proposed soil sampling and analysis plan is shown in Table 1.

4.6 Grab Groundwater Sampling

Roux proposes to collect grab groundwater samples from a total of 14 locations across the Site targeting data gaps identified following the 2023 Investigation of soil vapor and the demolition of the historical structures in 2023.Twelve pits were identified following demolition activities at the Site in 2023. Roux proposes to advance eight groundwater borings downgradient of each pit or cluster of closely located pits. An initial investigation of elevated detections of vinyl chloride in MW-12 will be conducted by the advancement of four groundwater borings (GW-1 through GW-4). Finally, two groundwater borings (GW-5 and GW-6) will be advanced in the vicinity of elevated detections of cVOCs. All proposed groundwater sampling locations are shown on Figures 4A through 4D and 5A and 5B.

A total of fourteen borings will be advanced to the first encountered water bearing zone for the collection of grab groundwater for purposes detailed above (Figures 4A through 5B; Table 1). Following shallow groundwater sample collection, the four borings (GW-1 through GW-4) investigating vinyl chloride surrounding MW-12 and the two borings investigating cVOC impacts observed in passive soil vapor (GW-5 and GW-6) will be advanced to the second observed groundwater bearing zone for the collection of grab groundwater in a co-located borehole to prevent cross contamination of the water bearing zones.

In preparation for sampling, ten feet of pre-pack screen will be emplaced into the borehole at a depth extending across the measured depth of the top of the groundwater table. Prior to sampling, a low flow pump will be utilized to purge at least one casing volume of water from the temporary well casing to limit suspended sediment in the sample. Once the purge has been completed, grab groundwater samples will be collected in laboratory-provided bottles using low-flow sampling methodology and appropriately labeled, packaged, and placed on ice for submittal under COC protocols to a California-certified laboratory for analyses. Once the grab groundwater sampling is complete, the temporary casing will be removed, and the sampling point will be backfilled with neat cement grout in accordance with ACPWA requirements and patched at the surface as necessary to match the surrounding Site conditions.

All grab groundwater samples will be submitted for the following laboratory analyses:

- VOCs via USEPA Method 8260B;
- TPH-g, TPH-d, and TPH-mo via USEPA Method 8260B and/or 8015; and
- CAM 17 Metals via USEPA Method 6020 (filtered [0.45 micron] and unfiltered).

A summary of the proposed grab groundwater sampling is shown in Table 1. SOPs for groundwater sampling are presented in Appendix E and groundwater sampling field forms are presented in Appendix F.

4.6 Quarterly Groundwater Monitoring Activities

Quarterly groundwater monitoring has been conducted at the Site since the fourth quarter of 2023. As part of the 2023 Investigation, Roux installed eight monitoring wells around the perimeter of the Site to monitor groundwater quality, groundwater flow direction, and hydraulic gradient at the Site. Based on the groundwater results of the 2023 Investigation and subsequent quarterly groundwater monitoring events during the fourth quarter of 2023 and first quarter of 2024, Roux will continue to monitor concentration trends for VOCs, TPHs, and metals to evaluate groundwater quality and potential for vapor intrusion at the Site. The existing monitoring wells (MW-10 through MW-17) will be sampled through the third quarter of 2025.

4.7 Waste Management

Investigation-derived waste (IDW) will be temporarily stored on-site in Department of Transportation-approved 55-gallon drums throughout the field portion of the Data Gap Investigation. IDW will be sampled and analyzed according to the requirements of the selected disposal facility. At a minimum, it is assumed that solid and liquid waste characterization samples will be submitted for the following laboratory analyses:

- VOCs via USEPA Method 8260B;

- CAM17 Metals via USEPA Method 6020; and
- TPH-g, TPH-d, and TPH-mo by USEPA Method 8260B and/or 8015.

Supplemental leachability analyses will be conducted as appropriate based on the initial sampling results to provide for a complete hazardous waste classification. Corresponding trigger levels for each compound based on the Total Threshold Limit Concentration (TTLC) for further analysis using Soluble Threshold Limit Concentration (STLC) and Toxic Characteristic Leaching Procedure (TCLP) are specified in Appendix G.

Following receipt of the analytical results, IDWs will be disposed upon the generator's selection of the disposal facility, obtaining a USEPA Identification Number (if needed), signing waste manifests, and determining waste characteristics and classification.

4.8 Field Quality Control

Field duplicate samples will be collected to check for sampling and analytical reproducibility. The general level of quality control (QC) effort will be one field duplicate collected for every ten (10) investigative samples. Duplicate samples will be collected, numbered, packaged, and sealed in the manner as the primary samples laid out in the sample collection procedures described above. Any duplicate sample will be submitted blind to the laboratory.

Each sample will be labelled with a unique sample number (based on sample location, media, and/or depth) that will facilitate tracking and cross-referencing of sample information. Field duplicate samples will also be numbered with a unique sample number to prevent analytical bias of field QC samples.

A COC record will be completed during sample collection and will accompany the samples to the laboratory. The field personnel collecting the samples will be responsible for the custody of the samples until the samples are relinquished to the laboratory. In accordance with typical COC protocols, sample transfer will require the individuals relinquishing and receiving the samples to sign, date, and note the time of sample transfer on the chain-of-custody record.

4.9 Surveying

A State-registered surveyor will measure the horizontal coordinates and vertical elevation of all sample locations, in accordance with the State of California requirements.

4.10 Data Quality Evaluation

In accordance with ACEHD requirements, Roux will perform all data quality collection and evaluation procedures detailed below.

4.10.1 Leak Check

Roux will perform a shut -in test and helium shroud test at each active soil vapor sampling location prior to sample collection:

4.10.1.1 Negative Pressure Shut-in Test

Roux will perform a negative pressure shut-in test conducted by assembling the sampling apparatus (sample canister and manifold) and then putting the sampling apparatus under negative pressure using a 3-way valve and a syringe. Once placed under negative pressure, the sampling manifold will be monitored for a minimum

6-min interval (equivalent to the anticipated duration of sampling) to determine if there is any loss of vacuum pressure, which would indicate the presence of a leak between the canister valve and the connection point to the sample probe. Where failures occur, Roux will document corrections that are implemented (i.e., tighten fittings, replace manifolds, replace canisters).

4.10.1.2 Helium Shroud Test

Roux will perform a helium shroud test throughout the duration of purging and sampling, verifying the following:

- The complete sample apparatus and surface completion of the vapor probe assembly is encapsulated in a plastic shroud.
- The atmosphere of the shroud is enriched to a minimum 20% constant helium atmosphere.
- In-line helium meters will be used to verify that there is less than 0.1% helium prior to proceeding with sampling (0.1% helium in the effluent pump would equate to a 0.5% helium leak).
- Analysis of samples at an analytical laboratory for helium as verification of sample integrity. Where laboratory analytical reports indicate a helium concentration greater than 0.75%, complete a leak check calculation to determine if the samples meet an acceptance criteria of less than 5% leak (e.g., detected helium concentration was 0.482%, which would equate to an approximately 2% leak).

4.10.2 Downhole Vacuum & Sample Duration

Roux will perform an analysis of sample bias and non-representative samples relative to:

- Downhole vacuum greater than 100 inches of water column (in-WC) [equivalent to 7.3 inches of mercury (in-Hg)], which can result in analytical sample bias due to either volatilization of liquid phase or sorbed mass (for compounds with low vapor pressure) or condensing of compounds within the sample canister.
- Flow rates below 100 milliliters per minute (ml/min) [e.g., sample durations greater than 12 minutes per 1-L canister] which can be indicative of flow restrictions and may indicate that there were impediments to flow within the vapor pore spaces, thus leading to vapor samples being non-representative of the average area. Note: At locations where duplicate samples are collected, the sample volume is doubled (two 1-L canisters).

4.10.3 Canister Pressure: Initial

Roux will perform an analysis of canister integrity during sampling including verification that initial canister pressure is less than absolute vacuum (at standard temperature [0ºC], absolute vacuum is measured at -29.92 in-Hg) to determine potential for bias in the sample result in the event that constituents of concern may be present within the sample canister prior to sample collection, or may dilute soil vapor results if a portion of the sample canister volume contains vapor without the specified constituents of concern. Calculation of the percent relative error introduced by null existing gas (e.g., existing gas that is absent constituents of concern) uses the following equation:

$$\% \text{ Relative Error} = (P_A – P_I)/(P_A - P_F)$$

Where P_A = absolute vacuum pressure, P_I = initial vacuum pressure within the canister at the start of sampling, and P_F = final vacuum pressure within the canister at the end of sampling. Assuming a final vacuum pressure 5-in-Hg and an absolute vacuum pressure of 30 in-Hg, the break point for 10% relative error is at 27.5 in-Hg.

4.10.4 Canister Pressure: Laboratory Receipt

Rou will confirm that sample integrity is maintained during transport to the analytical laboratory by comparison of absolute pressure in each canister recorded by the analytical laboratory at the time of sample receipt to the sample canister pressure at the end of sample collection and barometric pressure at the time of sample receipt.

4.10.5 Hold-Time

Roux will verify that all analytical samples are analyzed within the standard laboratory hold time applicable for USEPA Method TO-3, TO-15 and ASTM D1946.

4.10.6 Dilution Factors and Reporting Limits

Roux will review dilution factors in laboratory analytical reports for evidence of potential bias in reported results or elevated detection or reporting limits resulting from dilution during laboratory sample analysis.

4.10.7 Canister and Laboratory Certification

Rouw will verify that all sample canisters and sample manifolds used for the collection of analytical samples were individually certified as clean.

4.10.8 Surrogate & Laboratory Control Sample Recovery

Roux will verify that surrogate recovery was not out of the acceptable tolerance range for any samples and no Lab Control Sample % recovery were outside acceptance criteria.

Surrogate recovery and Lab Control Sample recovery represents extraction efficiency for groups of analytes within a sample. The standard tolerance is 100% ± 30%. A high bias should be assumed when surrogate recovery is greater than 130% and a low bias should be assumed when surrogate recovery is less than 70%.

4.10.9 Method Blanks

Roux will perform an analysis of analytes that are present in the method blank that can indicate potential presence of false positive results. This can be particularly relevant when reporting between the laboratory reporting limit and the practical quantification limit (e.g., J flag estimates).

Roux will also perform an evaluation if the reported detections are within 10% of the applicable risk-based screening level to support that the detections of non-COC analytes in method blanks does not represent a data quality issue and no further actions are necessary.

4.10.10 Duplicate/Replicate Samples

Roux will perform an analysis of duplicate sample results to evaluate reproducibility of analytical data. Calculation of a standard acceptance criteria of 30% relative percent difference (RPD) is as follows:

$$RPD = ABS\ VAL\ (A-B)/\ (A+B/2)$$

Where A and B are the respective concentrations reported in duplicate samples.

Roux will compare RPDs to a standard acceptance criterion of 30% relative percent difference. Samples reported at concentrations that were non-detect at the laboratory reporting limit (e.g., j-flag values) will not be evaluated due to these values being estimated values outside the bounds of calibration data.

4.10.11 Field Note Validation

Roux will review field notes collected during each sampling event and verify accuracy of field notes using photographs with time stamps, photo-logs, COCs, and the laboratory analytical report to identify any potential data collection or transcription errors. Where more than two reference sources are available (e.g., time stamp on photos, time recorded in field notes, time recorded on chain of custody, and time recorded on sample label), resolve discrepancies based on the prevailing weight of the sources.

5. Reporting

After the Data Gap Investigation is complete, a Data Gap Investigation Report (Report) will be prepared and submitted to the ACEHD and uploaded to GeoTracker with all of the associated data deliverables within 60 days of the receipt of analytical results as shown in the most recent project schedule (Roux, 2024). The report will include a summary of the field activities, field observations, boring logs, data quality review, deviations from the workplan (if any), laboratory analytical results, a comparison of the analytical results to applicable regulatory standards, soil gas isoconcentration map (heat map), assessment of the findings, conclusions, and recommendations for next steps. A data validation review of the analytical results will be performed in accordance with USEPA guidance (USEPA, 2020a; USEPA, 2020b), which will include reviewing all laboratory receiving information, sample conditions, COC forms, reporting units and required sensitivity, holding times, and sample-related QC such as method blanks, laboratory control samples, and duplicate and spike results. During this process, Roux will determine which of the advisory data qualifiers will be used to alert end users as to uncertainties associated with the data.

Based on the objectives of this investigation, analytical data will be screened against the following criteria for each specific sampling media:

- For waste profiling of soil and groundwater, sample results will be screened against California and Federal hazardous waste screening criteria.
- Soil sample results will be screened against the 2019 RWQCB ESLs for direct contact for Commercial/Industrial and worker exposure scenarios.
- Passive and active soil gas samples will be screened against the 2019 RWQCB Soil Gas ESLs for potential vapor intrusion risk for Commercial/Industrial land use.

6. Scheduling

Upon approval of this Revised Work Plan, Roux will coordinate with Prologis to prepare a fact sheet and perform the necessary public notifications regarding the investigation field work. In conjunction with the public notification requirements, Roux will perform pre-field activities and mobilize to the field within 30 days assuming there are no delays associated with access, equipment availability, or weather. As discussed in the most recent meeting between Roux, Prologis, ACEHD, and Craig Communications (May 9, 2024), it is anticipated that the Data Gap Investigation will commence on May 20, 2024, and the Report will be submitted to the ACEHD approximately 60 days following receipt of final laboratory analytical results. The anticipated delivery of the DGI Summary Report is September 2024.

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TABLE

1. Proposed Sampling Analysis Plan (SAP)

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths(1)	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
Proposed Soil and Grab Groundwater Sampling Locations																	
G-A1-1	A1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid A1.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G/BS-A2-1	A2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid A2 and the extent of the proposed bio swale and evaluate magnitude and extent of previous investigation.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
UC-A2-1	A2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions in the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
G/BS-A3-1	A3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid A3 and the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
UC-A3-1	A3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions in the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths(1)	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
BS-B1-1	B1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G/UC-B1-1	B1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid B1 and the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
G-B2-1	B2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid B2.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-B3-1	B3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid B3.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
GW-5	B3	GW interface	●		●												Assess TCE impacts in groundwater proximate to PSG-41.
		1st Encountered GW						●	●	●							
		2nd Encountered GW						●	●	●							
G/UC-B4-1	B4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid B4 and the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths(1)	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
UC-B4-2	B4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions in the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
BS-C1-1	C1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G/UC-C1-1	C1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid C1 and the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
G-C2-1	C2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid C2.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-C3-1	C3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid C3.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	**Sample Grid**	**Sample Depths(1)**	**VOCs**	**SVOCs**	**TPH g/d/mo**	**CAM 17 Metals**	**PCBs**	**VOCs**	**TPH g/d/mo**	**CAM 17 Metals**	**VOCs**	**TPH C4 - C9**	**TPH C10 - C15**	**TO-3**	**TO-15**	**Fixed Gases**	**Purpose/Rationale**
G/UC-C4-1/P-10	C4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid C4 and the utility corridor. Following the collection of the utility corridor shallow soil samples, an additional soil sample will be collected at the observed groundwater interface. Grab groundwater will be collected to assess groundwater conditions immediately downgradient of PIT-10.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
		GW interface	●		●												
		1st Encountered GW						●	●	●							
BS-D1-1	D1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-D1-1	D1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid D1.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-D2-1	D2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid D2.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-D3-1	D3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid D3.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G/BS-D4-1	D4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid D4 and the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths(1)	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
BS-E1-1/GW-1	E1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale and at the groundwater interface. **Co-located boring with GW-1.** Following the collection of theproposed bio swale soil samples, an additional soil sample will be collected at the observed groundwater interface. Grab groundwater will be collected at two depth intervals to assess vinyl chloride impacts in groundwater proximate to MW-12.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		Groundwater interface	●		●												
		1st Encountered GW						●	●	●							
		2nd Encountered GW						●	●	●							
G-E1-1/GW-2	E1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions and evaluate magnitude and extent of previous investigation. **Co-located boring with GW-2.** Following the collection of theproposed bio swale soil samples, an additional soil sample will be collected at the observed groundwater interface. Grab groundwater will be collected at two depth intervals to assess vinyl chloride impacts in groundwater proximate to MW-12.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		GW interface	●		●												
		1st Encountered GW						●	●	●							
		2nd Encountered GW						●	●	●							
GW-3	E1	GW interface	●		●												Further assess vinyl chloride impacts in groundwater proximate to MW-12.
		1st Encountered GW						●	●	●							
		2nd Encountered GW						●	●	●							
G-E2-1	E2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid E2.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-E3-1	E3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid E3.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G/BS-E4-1	E4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid E4 and the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
P-11	E4	GW interface	●		●												Assess groundwater conditions immediately downgradient of PIT-11.
		1st Encountered GW						●	●	●							

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses$^{(2)}$														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths$^{(1)}$	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
BS-F1-1	F1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-F1-1	F1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid F1.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
GW-4	F1	GW interface	●		●												Further assess vinyl chloride impacts in groundwater proximate to MW-12.
		1st Encountered GW						●	●	●							
		2nd Encountered GW						●	●	●							
G-F2-1	F2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid F2.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
P-02	F2	GW interface	●		●												Assess groundwater conditions immediately downgradient of PIT-02.
		1st Encountered GW						●	●	●							
G-F3-1/P-03	F3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid F3. Following the collection of the baseline shallow soil samples, an additional soil sample will be collected at the observed groundwater interface. Grab groundwater will be collected to assess groundwater conditions immediately downgradient of PIT-3.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		GW interface	●		●												
		1st Encountered GW						●	●	●							
G/BS-F4-1	F4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid F4 and the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
BS-G1-1	G1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths(1)	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
G-G1-1	G1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid G1.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-G2-1	G2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid G2.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-G3-1	G3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid G3.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G-G4-1/P-12	G4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid G4. Following the collection of the utility corridor shallow soil samples, an additional soil sample will be collected at the observed groundwater interface.Grab groundwater will be collected to assess groundwater conditions immediately downgradient of PIT-12.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		GW interface	●		●												
		1st Encountered GW						●	●	●							
G/BS-H1-1	H1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid H1 and the proposed bio swalen.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
UC-H1-1	H1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions in the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
P-01	H1	GW interface	●		●												Assess groundwater conditions immediately downgradient of PIT-01.
		1st Encountered GW						●	●	●							

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	**Sample Grid**	**Sample Depths(1)**	**VOCs**	**SVOCs**	**TPH g/d/mo**	**CAM 17 Metals**	**PCBs**	**VOCs**	**TPH g/d/mo**	**CAM 17 Metals**	**VOCs**	**TPH C4 - C9**	**TPH C10 - C15**	**TO-3**	**TO-15**	**Fixed Gases**	**Purpose/Rationale**
G-H2-1	H2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid H2.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
GW-6	H2	GW interface	●		●												Assess benzene, PCE, and TCE impacts in groundwater proximate to PSG-25. See above for soil sampling depths and analyses.
		1st Encountered GW						●	●	●							
		2nd Encountered GW						●	●	●							
G-H3-1	H3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid H3.
		1.0 - 2.0	●	●	○	●	●										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
P-06	H3	GW interface	●		●												Assess groundwater conditions immediately downgradient of PIT-04, -05, and -06.
		1st Encountered GW						●	●	●							
G/UC-H4-1	H4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid H4 and the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
P-08	H4	GW interface	●		●												Assess groundwater conditions immediately downgradient of PIT-08 and -09.
		1st Encountered GW						●	●	●							
BS-I1-1	I1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G/UC-I1-1	I1	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid I1 and the extent of the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths(1)	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
BS-I2-1	I2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G/UC-I2-1	I2	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid I2 and the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
BS-I3-1	I3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within the extent of the proposed bio swale.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	●	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
G/UC-I3-1	I3	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid I3 and the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										
G/UC-I4-1	I4	0.5 - 1.0		●	○	●	●										Establish baseline shallow soil conditions within grid I4 and the proposed utility corridor.
		1.0 - 2.0	●	●	○	●	○										
		2.0 - 3.0	○	●	●	●	○										
		3.0 - 4.0	○	○	○	○	○										
		4.0 - 5.0	●	○	●	○	○										
		7.0 - 8.0	○	○	○	○	○										
		9.0 - 10.0	●	○	○	○	○										

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths(1)	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
Proposed Passive Soil Gas Step Out Sample Locations																	
PSG-10A		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-10.
PSG-10B		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-10.
PSG-10C		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-10.
PSG-10D		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-10.
PSG-25A		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-25.
PSG-25B		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-25.
PSG-25C		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-25.
PSG-25D		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-25.
PSG-41A		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-41.
PSG-41B		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-41.
PSG-41C		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-41.
PSG-41D		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-41.
PSG-62A		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-62.
PSG-62B		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-62.
PSG-62C		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-62.
PSG-62B		3 feet below surface or bottom of hardscape									●	●	●				Further delineation of soil gas proximate to PSG-62.

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	Sample Grid	Sample Depths(1)	VOCs	SVOCs	TPH g/d/mo	CAM 17 Metals	PCBs	VOCs	TPH g/d/mo	CAM 17 Metals	VOCs	TPH C4 - C9	TPH C10 - C15	TO-3	TO-15	Fixed Gases	Purpose/Rationale
Proposed Soil Vapor Probe Locations																	
SVP-06-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-06 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-10-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-10 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-13-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-13 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-25-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-25 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-32-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-32 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-36-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-36 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-41-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-41 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-45-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-45 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-52-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-52 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-53-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-53 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	

Table 1. Proposed Sampling and Analysis Plan (SAP)
7825 San Leandro Street, Oakland, California

			Analyses(2)														
			Soil					Water			Soil Gas						
Location / Sample ID	**Sample Grid**	**Sample Depths(1)**	**VOCs**	**SVOCs**	**TPH g/d/mo**	**CAM 17 Metals**	**PCBs**	**VOCs**	**TPH g/d/mo**	**CAM 17 Metals**	**VOCs**	**TPH C4 - C9**	**TPH C10 - C15**	**TO-3**	**TO-15**	**Fixed Gases**	**Purpose/Rationale**
SVP-57-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-57 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-61-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-61 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
SVP-62-5/-8		5.0												●	●	●	Confirm the accuracy of the PSG-62 results, collect fixed gas data to assess bio-attenuation and assess the vertical extent of chlorinated VOC impacts in soil gas.
		8.0												●	●	●	
IDW Samples																	
IDW-SOIL		--	●		●	●											IDW characterization.
IDW-WATER		--						●	●	●							

Notes:

"●" indicates discrete sample to be collected from this location and depth and run for the given analysis.

"○" indicates discrete sample to be collected from this location and depth and HELD for the given analysis.

"feet bgs" indicates feet below ground surface.

"GW" indicates groundwater.

"IDW" indicates investigation-derived waste.

"--" indicates not applicable.

(1) "Sample Depths" indicates approximate feet below current ground surface (ft bgs) of top of sample unless otherwise specified.
Samples will also be taken at signs of contamination and at changes in lithology.

(2) "Analyses" indicates laboratory anlytical methods as follows:

"TO-3" indicates total petroleum hydrocarbons as gasoline by USEPA Method TO-3.

"TO-15" indicates volatile organic compounds by USEPA Method TO-15.

"Fixed Gases" for soil gas analyses indicates helium, carbon monoxide, carbon dioxide, methane, nitrogen and oxygen by ASTM Method D-1946.

"VOCs" for soil and groundwater analyses indicates Volatile Organic Compounds by USEPA Method 8260B.

"SVOCs" for soil analysis indicates Semi-Volatile Organic Compounds by USEPA Method 8270C.

"CAM 17 Metals" for soil and groundwater analyses indicates the Title 22/CAM 17 list of Metals by USEPA Method 6020. Water samples will be filtered (0.45 micron) and unfiltered.

"TPH g/d/mo" for soil and groundwater analyses indicates Total Petroleum Hydrocarbons as gasoline, diesel and motor oil by USEPA Method 8260B and/or 8015.

"PCBs" for soil analyses indicates Polychlorinated biphenyls by USEPA Method 8082A.

"VOCs, TPH C4-C9, and TPH C10-15" for soil gas analyses indicates chlorinated volatile organic compounds and volatile hydrocarbons by USEPA Method 8260C.

*All borings will be continuously logged by a Roux geologist or engineer and screened for VOCs with a photoionization detector (PID). In addition to the scope described above, soil samples will be collected at depths where elevated PID readings are observed (greater than 10 parter per million) and immediately beneath the potentially impacted zone, at the next depth without elevated readings. Soil samples will not be colelcted below the groundwater interface. Multi-depth grab groundwater samples will be collected from co-located borings noted as "1st Encountered GW" and "2nd Encountered GW".

FIGURES

N

0 2000'

SOURCE:
USGS; Oakland East, CA (2021)
and San Leandro, CA (2021)
7.5-Minute Topographic Quadrangles

\2968L0018LTEMP\2968.0018LTEMP.01.CDR

Title:

SITE LOCATION MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

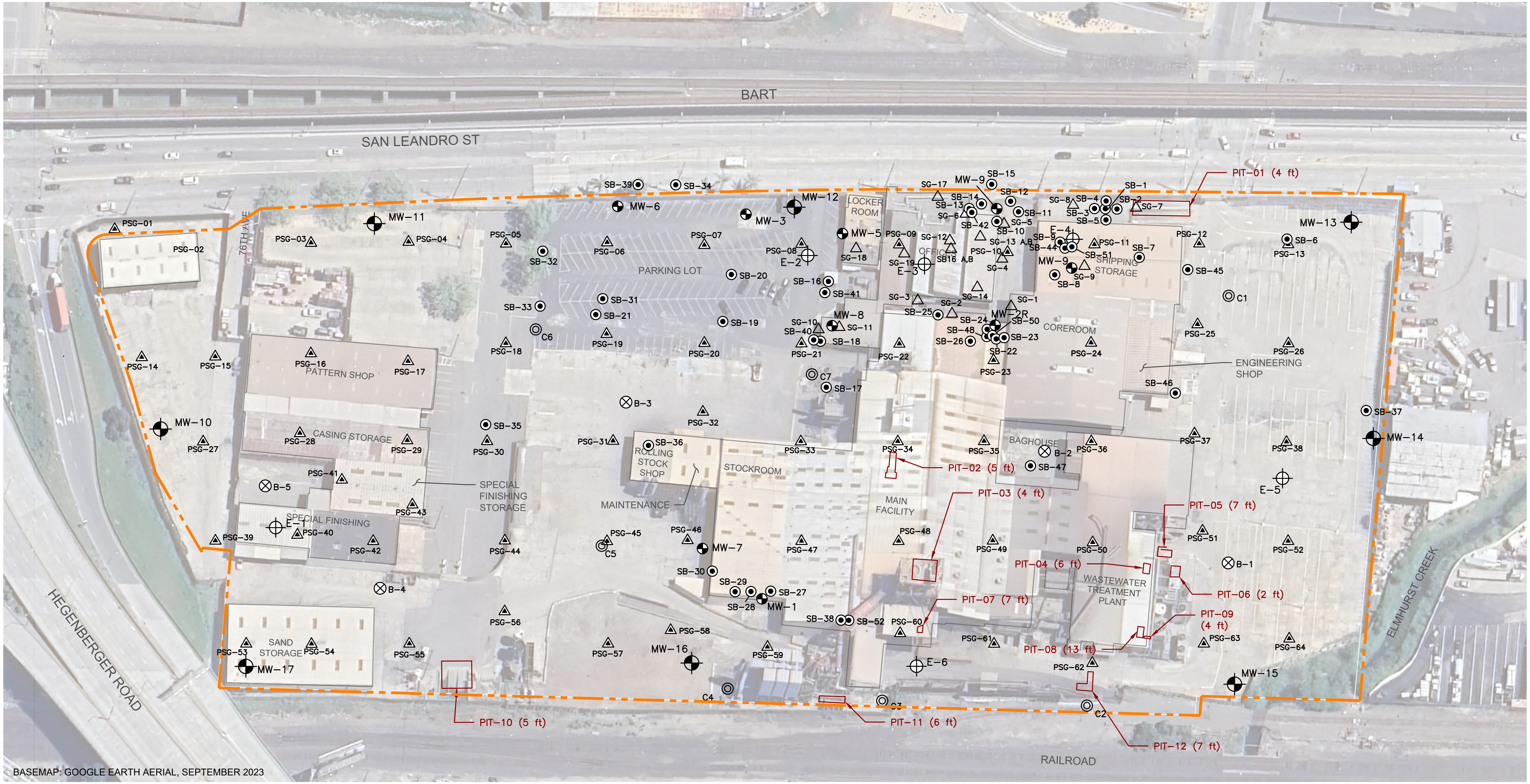
DUKE REALTY FOUNDRY LP

ROUX

Compiled by: H.R.
Prepared by: B.H.C.
Project Mgr: H.R.
Date: 08JUL22
Scale: AS SHOWN
Project: 2968.0018L000
File: 2968.0018LTEMP.01.CDR

FIGURE
1

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG CBELLO

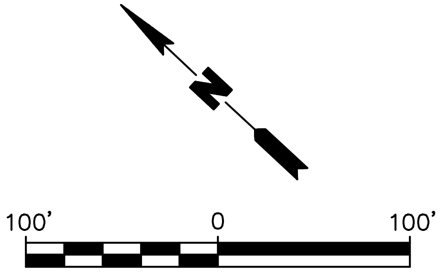


LEGEND

SITE BOUNDARY
⊕ ENVIRONMENTAL SOIL BORING SAMPLE LOCATIONS (HALEY & ALDRICH, 2002)
⊗ GEOTECH SOIL BORING (IWASA, 2022)
⊕ EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)
● DECOMMISSIONED GROUNDWATER MONITORING WELL (BSK, 1993; BSK, 2006)
⊙ SOIL BORING (THE SOURCE GROUP, INC., 2008)
▲ PASSIVE SOIL GAS SAMPLING LOCATIONS (ROUX, 2023)
◎ CPT BORINGS (IWASA, 2022)
△ SOIL GAS SAMPLING LOCATIONS (SGI, 2007; SGI, 2008; SGI, 2009)
▭ IDENTIFIABLE PIT LOCATION
PIT–0X
(DEPTH OF PIT)

NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.



Title:

SITE PLAN WITH HISTORICAL SAMPLING LOCATIONS

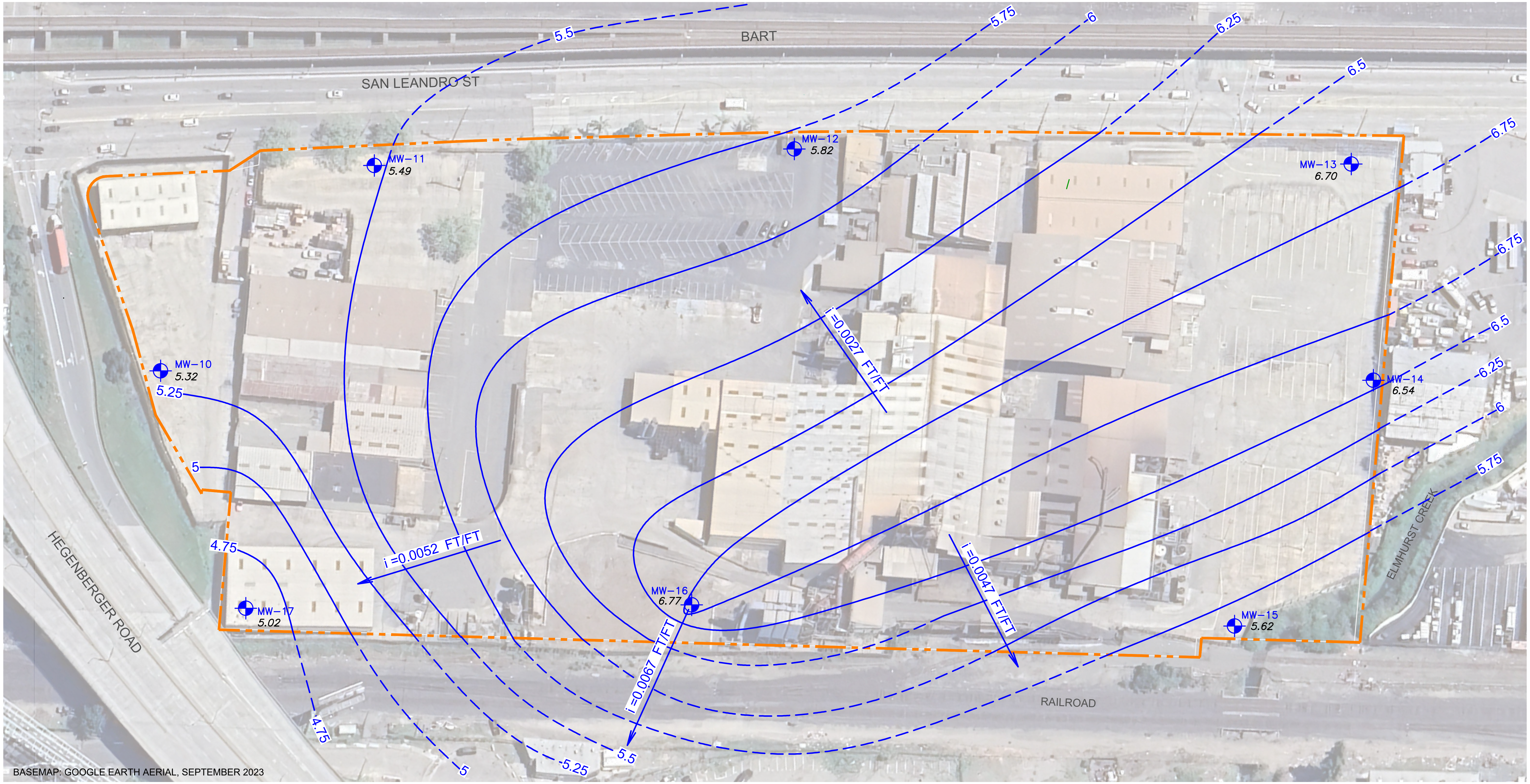
7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 30APR2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	2
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		



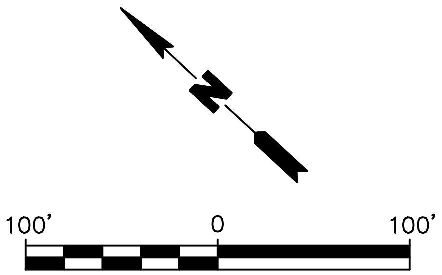
BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

LEGEND

- ▬ ▪ ▬ SITE BOUNDARY
- ⊕ GROUNDWATER MONITORING WELL (ROUX, 2023)
- ── GROUNDWATER ELEVATION CONTOUR
- ← INFERRED GROUNDWATER FLOW DIRECTION

NOTES

1. GROUNDWATER ELEVATIONS REPORTED IN FEET ABOVE MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD88).
2. DASHED INDICATES INFERRED CONTOUR.
3. i = APPROXIMATE HYDRAULIC GRADIENT
4. GROUNDWATER WELL GAUGING DATA WAS COLLECTED AUGUST 9, 2023.
5. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.



Title:

GROUNDWATER CONTOUR MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 30APR2024	FIGURE 3
Prepared by: ET	Scale: AS SHOWN	
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		

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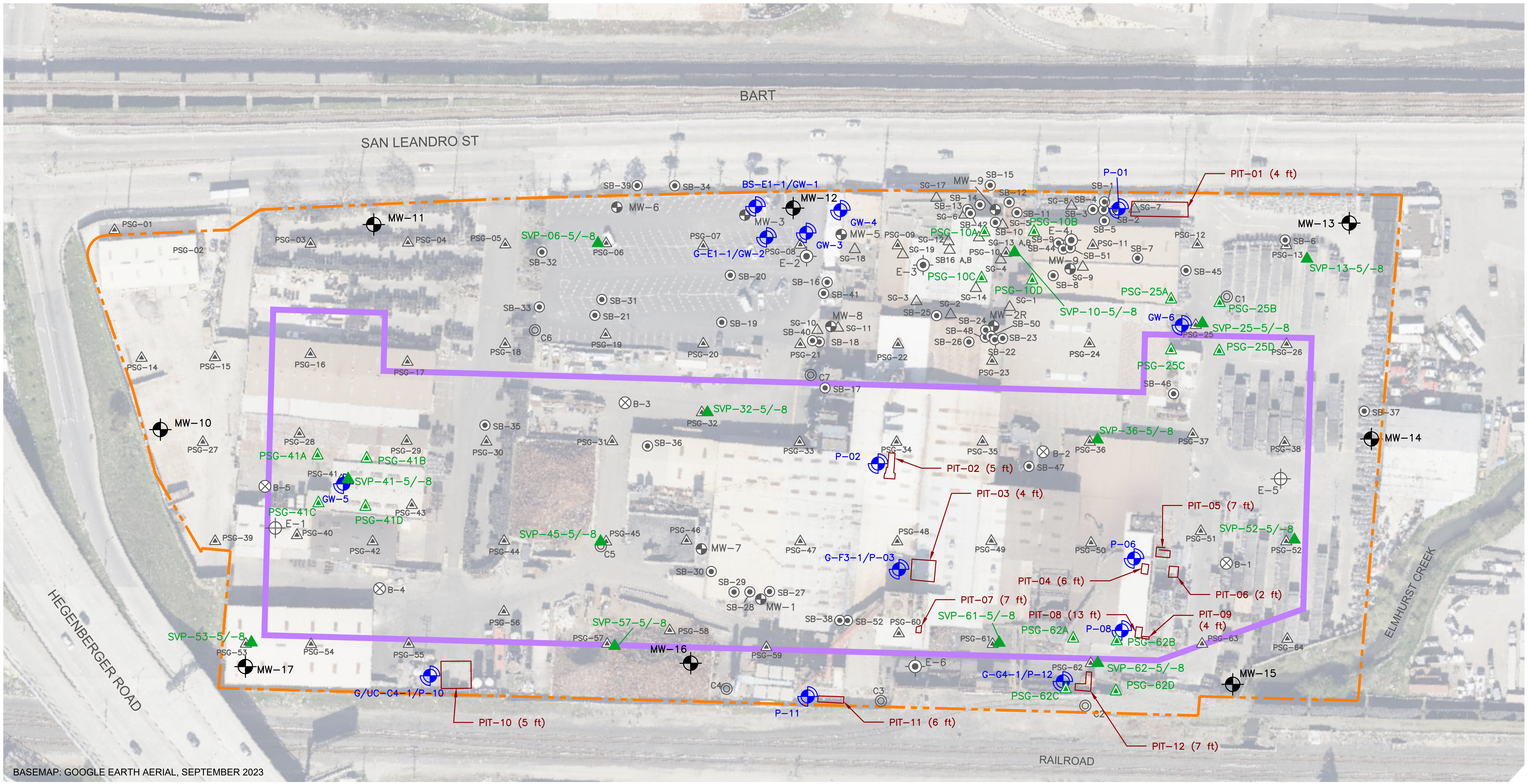


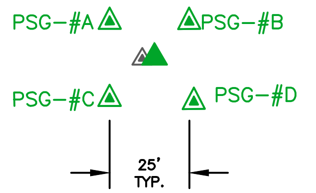
LEGEND

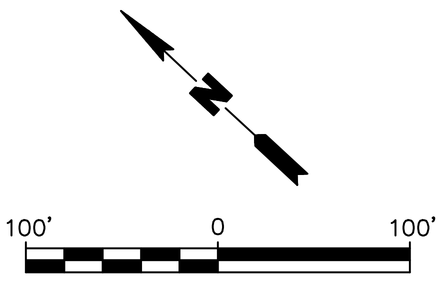
— —	SITE BOUNDARY
——	PROPOSED BUILDING FOOTPRINT
⌖	ENVIRONMENTAL SOIL BORING SAMPLING LOCATIONS (HALEY & ALDRICH, 2002)
⊗	GEOTECH SOIL BORING (IWASA, 2022)
⌖	EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)
◕	DECOMMISSIONED GROUNDWATER MONITORING WELL (BSK, 1993; BSK, 2006)
◉	SOIL BORING (THE SOURCE GROUP, INC., 2008)
△	PASSIVE SOIL GAS SAMPLING LOCATIONS (ROUX, 2023)
◎	CPT BORINGS (IWASA, 2022)
△	SOIL GAS SAMPLING LOCATIONS (SGI, 2007; SGI, 2008; SGI, 2009)
▲	PROPOSED SOIL VAPOR PROBE LOCATION
△	PROPOSED PASSIVE SOIL GAS STEP OUT SAMPLE LOCATION
⌖	PROPOSED SOIL AND GRAB GROUNDWATER SAMPLING LOCATIONS
▭	IDENTIFIABLE PIT LOCATION

PIT-0X
(DEPTH OF PIT)

NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.
2. TYPICAL STEP-OUT SAMPLING LAYOUT:





Title:

PROPOSED GRAB GROUNDWATER AND SOIL VAPOR SAMPLING LOCATIONS

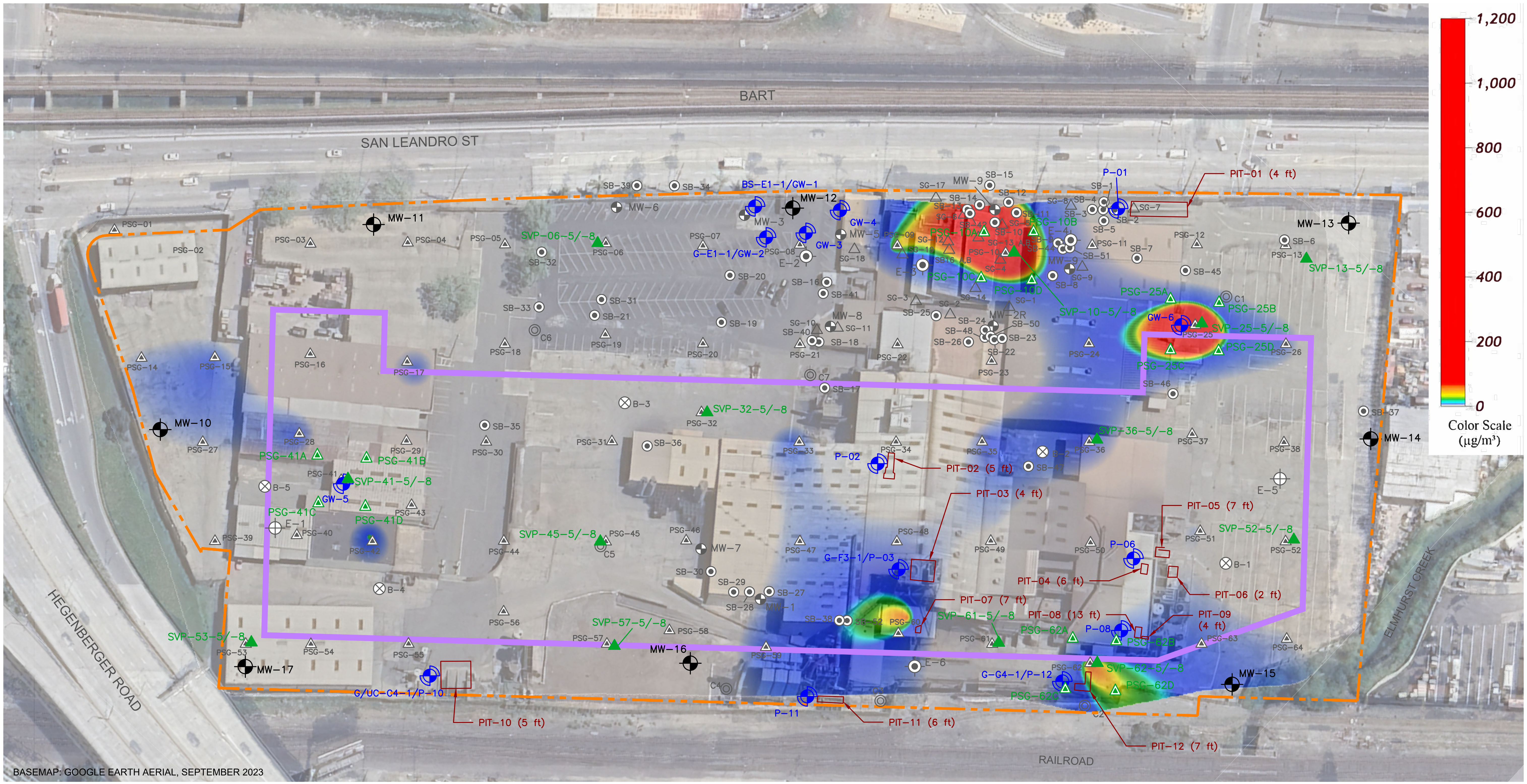
7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 10MAY2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	4A
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		



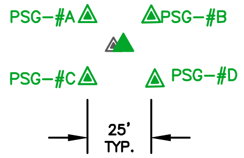
BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

LEGEND

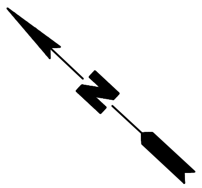
- ▬ ▬ ▬ SITE BOUNDARY
- ▬ PROPOSED BUILDING FOOTPRINT
- ⌖ ENVIRONMENTAL SOIL BORING SAMPLING LOCATIONS (HALEY & ALDRICH, 2002)
- ⊗ GEOTECH SOIL BORING (IWASA, 2022)
- ⌖ EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)
- ◐ DECOMMISSIONED GROUNDWATER MONITORING WELL (BSK, 1993; BSK, 2006)
- ◉ SOIL BORING (THE SOURCE GROUP, INC., 2008)
- ◬ PASSIVE SOIL GAS SAMPLING LOCATIONS (ROUX, 2023)
- ◎ CPT BORINGS (IWASA, 2022)
- △ SOIL GAS SAMPLING LOCATIONS (SGI, 2007; SGI, 2008; SGI, 2009)
- ▲ PROPOSED SOIL VAPOR PROBE LOCATION
- ◬ PROPOSED PASSIVE SOIL GAS STEP OUT SAMPLE LOCATION
- ⌖ PROPOSED SOIL AND GRAB GROUNDWATER SAMPLING LOCATIONS
- ▭ IDENTIFIABLE PIT LOCATION
  PIT–0X
  (DEPTH OF PIT)

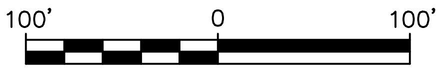
NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.
2. TYPICAL STEP-OUT SAMPLING LAYOUT:



3. HEAT MAP ESTABLISHED FROM ROUX PASSIVE SOIL VAPOR DATA INVESTIGATION (2023)
4. $\mu g/m^3$ = MICROGRAM PER CUBIC METER
5. PCE = TETRACHLOROETHENE





Title:

PROPOSED GRAB GROUNDWATER AND SOIL VAPOR SAMPLING LOCATIONS WITH PCE SOIL VAPOR HEAT MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

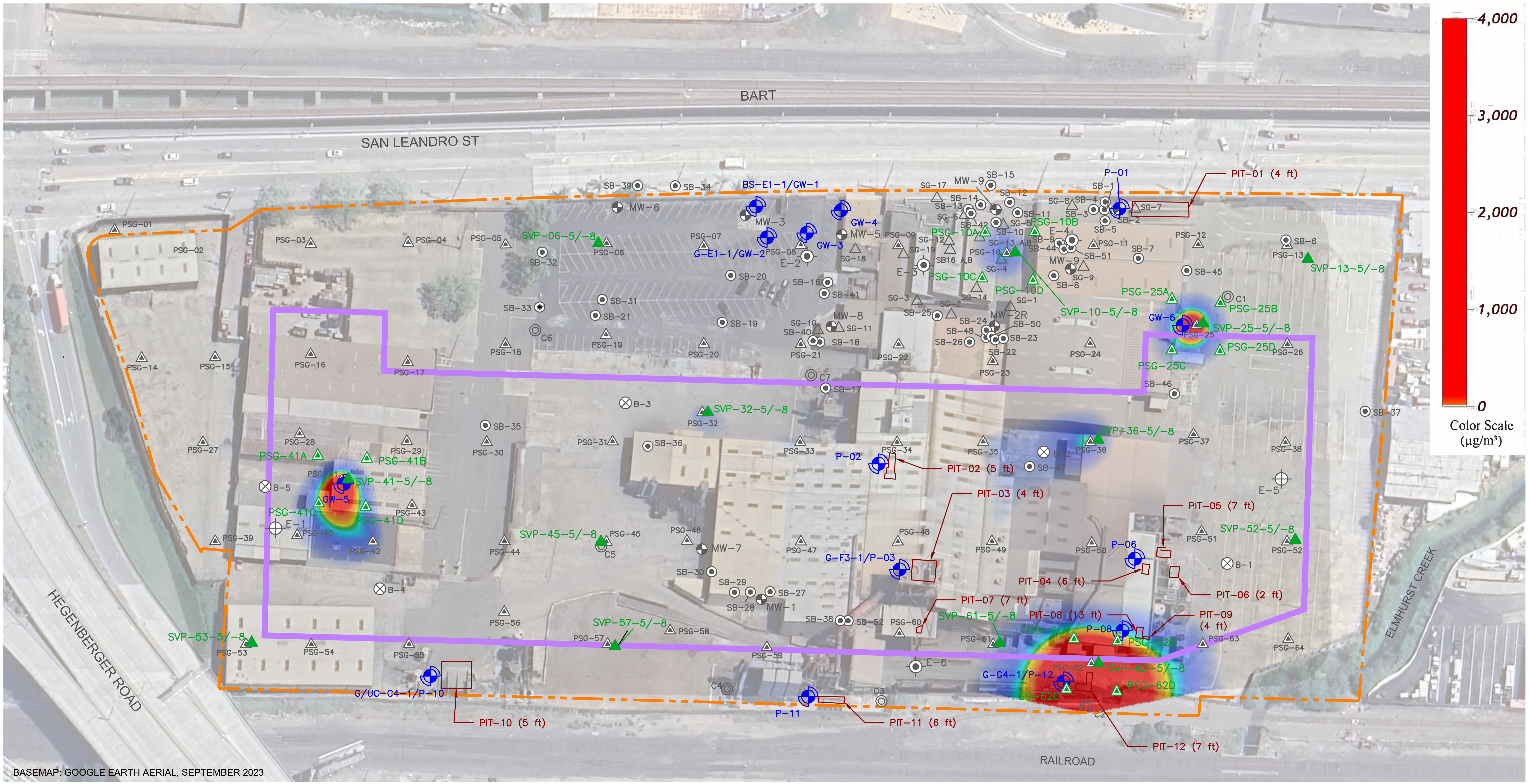
Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 30APR2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	4B
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG CBELLO



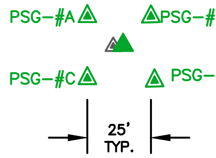
LEGEND

- ▬ ▬ · SITE BOUNDARY
- ▬ PROPOSED BUILDING FOOTPRINT
- ⌖ ENVIRONMENTAL SOIL BORING SAMPLING LOCATIONS (HALEY & ALDRICH, 2002)
- ⊗ GEOTECH SOIL BORING (IWASA, 2022)
- ⊕ EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)
- ◐ DECOMMISSIONED GROUNDWATER MONITORING WELL (BSK, 1993; BSK, 2006)
- ◉ SOIL BORING (THE SOURCE GROUP, INC., 2008)
- ◬ PASSIVE SOIL GAS SAMPLING LOCATIONS (ROUX, 2023)
- ◎ CPT BORINGS (IWASA, 2022)
- △ SOIL GAS SAMPLING LOCATIONS (SGI, 2007; SGI, 2008; SGI, 2009)
- ▲ PROPOSED SOIL VAPOR PROBE LOCATION
- ◬ PROPOSED PASSIVE SOIL GAS STEP OUT SAMPLE LOCATION
- ⊕ PROPOSED SOIL AND GRAB GROUNDWATER SAMPLING LOCATIONS
- ▭ IDENTIFIABLE PIT LOCATION

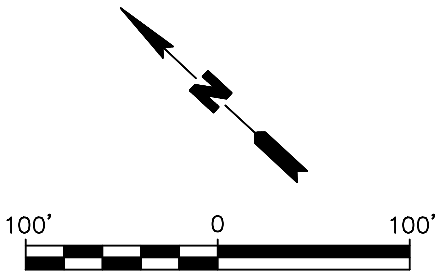
PIT–OX
(DEPTH OF PIT)

NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.
2. TYPICAL STEP-OUT SAMPLING LAYOUT:



3. HEAT MAP ESTABLISHED FROM ROUX PASSIVE SOIL VAPOR DATA INVESTIGATION (2023)
4. $\mu g/m^3$ = MICROGRAM PER CUBIC METER
5. TCE = TRICHLOROETHENE



Title:

PROPOSED GRAB GROUNDWATER AND SOIL VAPOR SAMPLING LOCATIONS WITH TCE SOIL VAPOR HEAT MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 25APRIL2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	4C
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		

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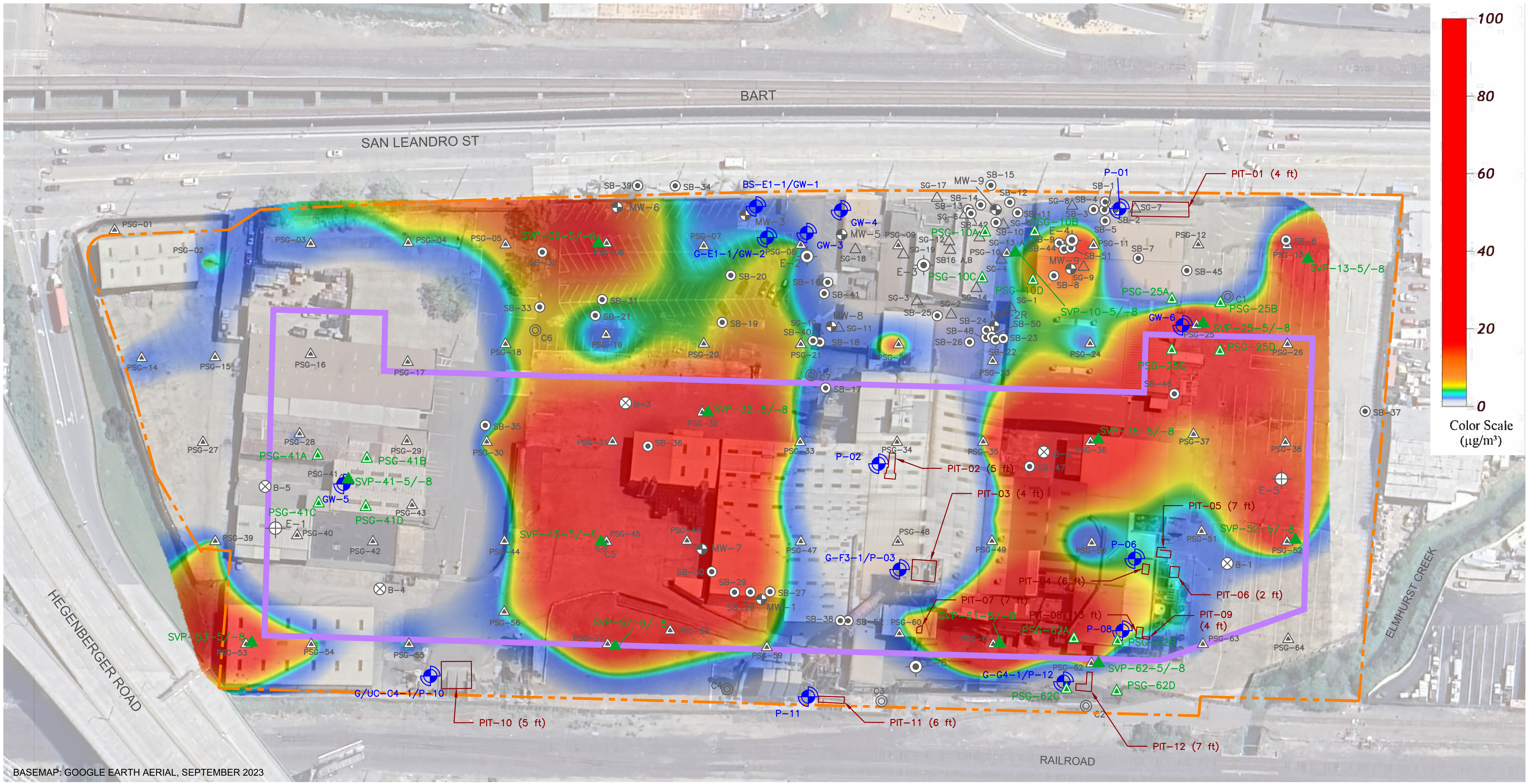


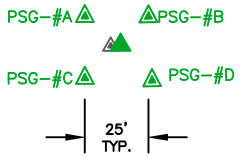
BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

LEGEND

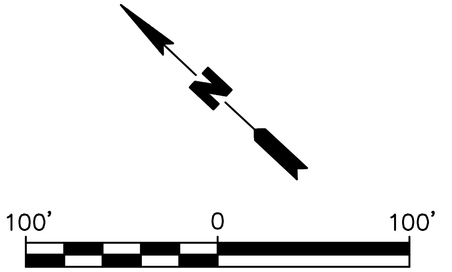
▬ ▬	SITE BOUNDARY	▲	PASSIVE SOIL GAS SAMPLING LOCATIONS (ROUX, 2023)
▬	PROPOSED BUILDING FOOTPRINT	◎	CPT BORINGS (IWASA, 2022)
⌖	ENVIRONMENTAL SOIL BORING SAMPLING LOCATIONS (HALEY & ALDRICH, 2002)	△	SOIL GAS SAMPLING LOCATIONS (SGI, 2007; SGI, 2008; SGI, 2009)
⊗	GEOTECH SOIL BORING (IWASA, 2022)	▲	PROPOSED SOIL VAPOR PROBE LOCATION
⌖	EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)	▲	PROPOSED PASSIVE SOIL GAS STEP OUT SAMPLE LOCATION
◕	DECOMMISSIONED GROUNDWATER MONITORING WELL (BSK, 1993; BSK, 2006)	⌖	PROPOSED SOIL AND GRAB GROUNDWATER SAMPLING LOCATIONS
◉	SOIL BORING (THE SOURCE GROUP, INC., 2008)	▭	IDENTIFIABLE PIT LOCATION PIT–0X (DEPTH OF PIT)

NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.
2. TYPICAL STEP-OUT SAMPLING LAYOUT:



3. HEAT MAP ESTABLISHED FROM ROUX PASSIVE SOIL VAPOR DATA INVESTIGATION (2023)
4. $\mu g/m^3$ = MICROGRAM PER CUBIC METER



Title:

PROPOSED GRAB GROUNDWATER AND SOIL VAPOR SAMPLING LOCATIONS WITH BENZENE SOIL VAPOR HEAT MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

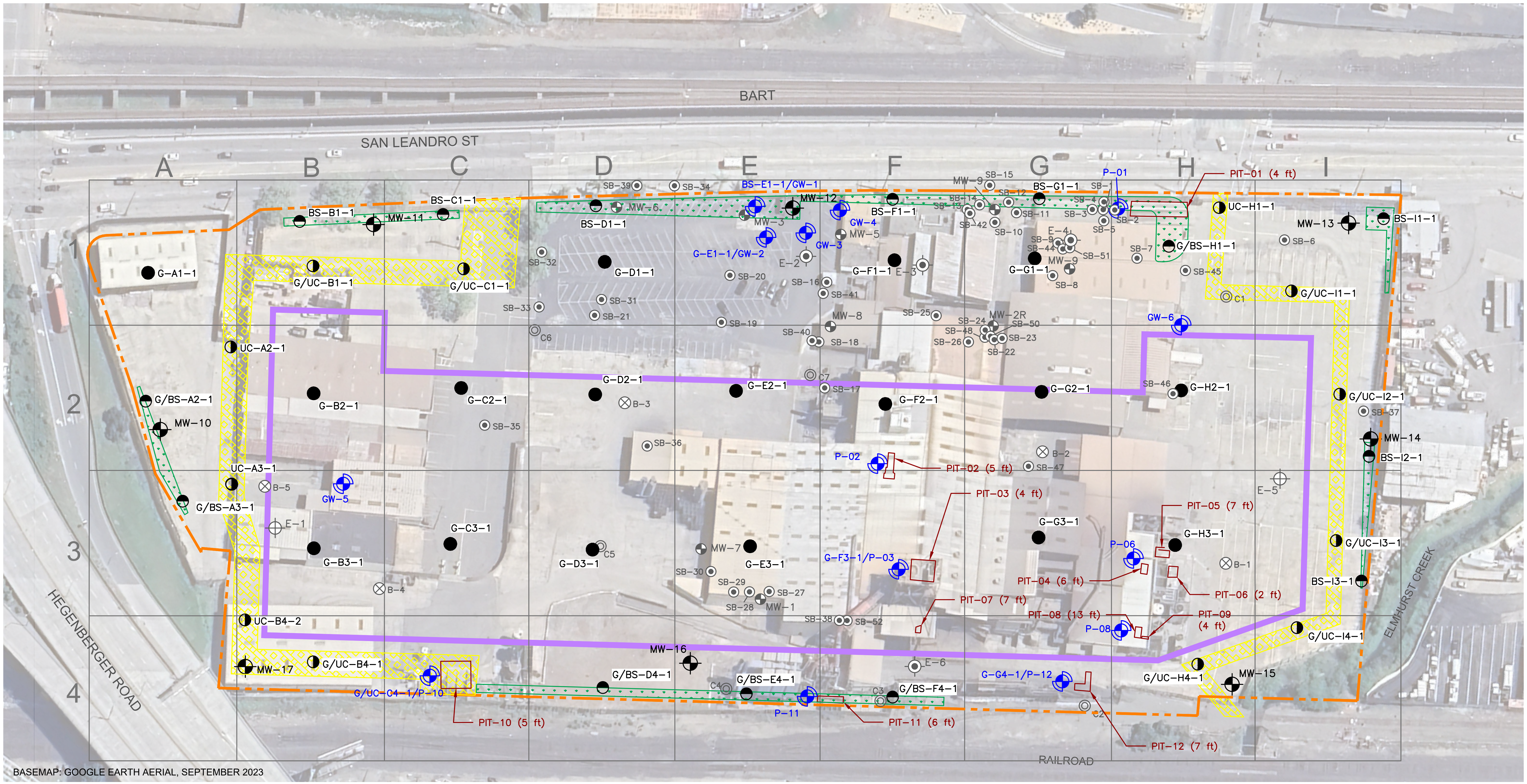
Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 25APR2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	4D
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG CBELLO



BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

LEGEND

▬ ▬	SITE BOUNDARY
▬	PROPOSED BUILDING FOOTPRINT
⊕	ENVIRONMENTAL SOIL BORING SAMPLE LOCATIONS (HALEY & ALDRICH, 2002)
⊗	GEOTECH SOIL BORING (IWASA, 2022)
⊕	EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)
◍	DECOMMISSIONED GROUNDWATER MONITORING WELL (BSK, 1993; BSK, 2006)
⊙	SOIL BORING
◎	CPT BORINGS (IWASA, 2022)
⊕	PROPOSED SOIL AND GRAB GROUNDWATER SAMPLING LOCATIONS
●	PROPOSED 150' GRID SOIL BORING
◒	PROPOSED BIO SWALE SOIL BORING
◐	PROPOSED UTILITY CORRIDOR SOIL BORING
🟩	PROPOSED BIO SWALE
🟨	PROPOSED UTILITY CORRIDOR
☐	IDENTIFIABLE PIT LOCATION

PIT–0X
(DEPTH OF PIT)

NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.
2. 150' X150' GRID ESTABLISHED ACROSS THE SITE.

N

100' 0 100'

Title:

PROPOSED SOIL AND GROUNDWATER SAMPLING LOCATIONS

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 25APR2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	5A
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		

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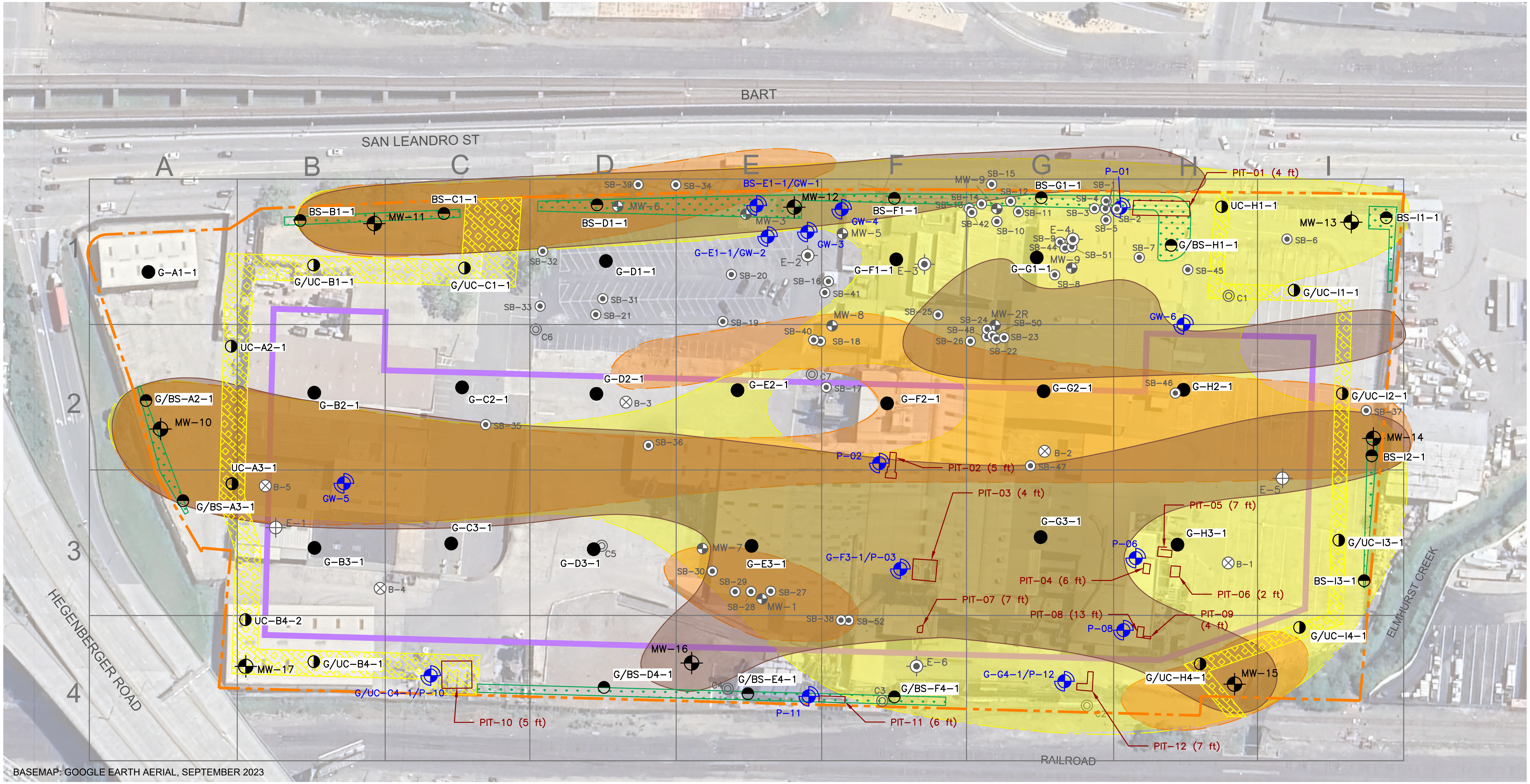

BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

LEGEND

- - -	SITE BOUNDARY	●	PROPOSED 150' GRID SOIL BORING
▬	PROPOSED BUILDING FOOTPRINT	◒	PROPOSED BIO SWALE SOIL BORING
⊕	ENVIRONMENTAL SOIL BORING SAMPLE LOCATIONS (HALEY & ALDRICH, 2002)	◐	PROPOSED UTILITY CORRIDOR SOIL BORING
⊗	GEOTECH SOIL BORING	🟩	PROPOSED BIO SWALE
⊕	EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)	▨	PROPOSED UTILITY CORRIDOR
◕	DECOMMISSIONED GROUNDWATER MONITORING WELL	☐	IDENTIFIABLE PIT LOCATION
◉	SOIL BORING		PIT-0X (DEPTH OF PIT)
◎	CPT BORINGS (IWASA, 2022)	🟫	LAYER 1 SAND - 0 TO 15 FT-BGS
⊕	PROPOSED SOIL AND GRAB GROUNDWATER SAMPLING LOCATIONS	🟧	LAYER 2 SAND - 15 TO 20 FT-BGS
		🟨	LAYER 3 SAND - 20 TO 30 FT-BGS

NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.
2. 150'X150' GRID ESTABLISHED ACROSS THE SITE.
3. ACEHD = ALAMEDA COUNTY ENVIRONMENTAL HEALTH DEPARTMENT
4. SAND LAYERS PRESENTED ON THIS FIGURE BASED ON ACDEH SUBSURFACE MODELING PRESENTED IN APPENDIX A.

N

100' 0 100'

Title:

PROPOSED SOIL AND GROUNDWATER SAMPLING LOCATIONS WITH ACEHD MODELED SAND LAYERS

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO
Date: 25APR2024
Prepared by: CB
Scale: AS SHOWN
Project Mgr: JO
Project: 1793.0030S000
File: 7825 SAN LEANDRO ST.DWG

FIGURE
5B

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG CBELLO

APPENDICES

APPENDIX A

Site Conceptual Model

Sec No	Section / Sub-Section Name	Details	References	Data Gap	Method to Address Data Gap
1	**Introduction**				
		This Site Conceptual Model (SCM) was prepared by Roux Associates, Inc. (Roux) on behalf of Duke Realty Foundry LP (Prologis) for the 7825 San Leandro Street property located in Oakland, California case. Alameda County Department of Environmental Health (ACDEH) is the lead regulatory oversight agency for this case. Case identifiers are provided below:			
		Site Name: AB&I Redevelopment **GeoTracker ID:** T10000019792		No	
		Site Address: 7825 San Leandro Street, Oakland, California **ACDEH Case No.:** RO0003535		No	
		This SCM was prepared in accordance with industry best practices.			
1.1	**Change log**				
		This document is established using the recent data collected for the Site. No previous versions of SCM for the Site have been established.			
1.2	**Responsible Party Identification**				
		Responsible Party Name: Duke Realty Foundry LP **Relationship:** Developer **Method of Identification:** VRAA		No	
		NOR: Notice of Responsibility; VRAA: Voluntary Remedial Action Agreement			

Sec No	Section / Sub-Section Name	Details	References	Data Gap	Method to Address Data Gap
2	Site Location and Land Use				

2.1 Site Location

		References	Data Gap	Method to Address Data Gap
APN (s)	41-4175-18; 41-4175-19; 41-4208-1; 41-4209-1-1; 41-4209-3-2; 41-4209-8-1; 41-4209-1-2; 41-4209-7; 41-4175-16; 41-4175-17; 41-4175-3-2; 41-4175-5; 41-4175-6; 41-4175-10	Figures 1 through 3; References 2 and 3	No	
Physical Address	7825 San Leandro Street, Oakland, California	Figures A-1 through A-3; References 2 and 3	No	
Cross Street(s)	Hegenberger Rd and San Leandro St	Figures A-1 through A-3; Reference 2	No	
Site Size (square feet)	631,620	Figure A-2; Reference 2	No	

2.2 Surrounding Property Descriptions and Land Use

Direction & Distance from Site (feet)	Property and Operations Description	Address	Sensitive Receptors	Use(s)	Tenants	References	Data Gap	Method to Address Data Gap
North 100	Union Pacific Railroad followed by Hegenberger Road	NA	None Identified	Railroad & Roadway	NA	Reference 2; Figure A-2	No	
East 200	San Leandro Street and Bay Area Rapid Transit train tracks followed by industrial warehouses	800 75th ave through 851 81st Ave A	None Identified	Roadway & Industrial	NA	Reference 2; Figure A-2	No	
South 30 to 300	Commercial space including Estrellas De Sinaloa (restaurant), U.S. Spring Service, and automotive service store, SF Oakland Truck Shop, and a truck repair business	8119 San Leandro St	None Identified	Commercial	NA	Reference 2; Figure A-2	No	
West Adjacent	Union Pacific Railroad followed by Elmburst Creek	NA	None Identified	Roadway & Surface Water Body	NA	Reference 2; Figure A-2	No	

2.3 Description of Site Improvements and Land Use

		References	Data Gap	Method to Address Data Gap
Total Building Footprint	~230,000 square feet (buildings were demolished in 2023)	Reference 2; Figure A-3	No	
Hardscape	~354,420 square feet	Reference 2; Figure A-3	No	
Landscape	~27,000 square feet	Reference 2; Figure A-3	No	
Exposed Earth	~20,200 square feet	Reference 2; Figure A-3	No	

Building ID	Footprint (square feet)	No. Floors	Foundation Type	Subgrade Components	Year of Construction / Demolition	References	Data Gap	Method to Address Data Gap
Building 1 (demolished 2023)	~5,022	1	Unknown	NA	1993 / 2023	Reference 6 and 15	No	
Building 2 (demolished 2023)	~36,293	1	Unknown	NA	<1960 / 2023	Reference 6 and 15	No	
Building 3 (demolished 2023)	~12,240	1	Unknown	NA	<1960 / 2023	Reference 6 and 15; Attachments B	No	
Building 4 (demolished 2023)	~2,602	1	Unknown	NA	<1960 / 2023	Reference 7 and 15; Attachments B	No	
Building 5 (demolished 2023)	~156,962	2	Unknown	NA	<1960 / 2023	Reference 6 and 15; Attachments B	No	
Building 6 (demolished 2023)	~772	NA	Slab-on-Grade	NA	<1980 / 2023	Reference 6 and 15	No	

		References	Data Gap	Method to Address Data Gap
Anthropogenic Preferential Pathways	NA		No	
Other Improvements	construction of an approximately 320,000 square-foot warehouse building and associated parking lot			

Sec No	Section / Sub-Section Name	Details	References	Data Gap	Method to Address Data Gap
2.4	Site Use History				

		References	Data Gap	Method to Address Data Gap
Known previous historical environmental and geotechnical reports that have been uploaded to GeoTracker:	Yes	See Geotracker		

Time Period	Operation Description	Tenant / Operator Name	Building IDs or Location	Associated Primary PCOCs	Associated Environmental Cases	References	Data Gap	Method to Address Data Gap
1925-1940	mostly undeveloped; three single-family dwellings;	Unknown	Dwelling #1; Dwelling #2; Dwelling #3	NA	No	Reference 6; Attachment A	No	
1941-1959	foundry buildings, oil reclaiming plant, truck spray painting, shed, and storage areas for scrap iron piles; the construction of a railroad spur leading onto the Subject Property from the Union Pacific Railroad to the west	McWane, Inc.; Bosely Investments LTD; Ciudad Holdings LLC; Boscacci Allan J & Mark Melvyn I Trs	Foundry Buildings; oil reclaiming plant; truck spray painting area; Complex	Total petroleum hydrocarbons (TPH) as gasoline and diesel (TPH-g, TPH-d); polycyclic aromatic hydrocarbons (PAHs); volatile organic compounds (VOCs)	No	Reference 6	No	
1960-1980s	no significant changes; the southeastern corner of the Subject Property is used as a truck yard and has a small building for truck maintenance	McWane, Inc.; Boscacci, Allan J & Mark Melvyn I Trs; and others.	Foundry Buildings; oil reclaiming plant; truck spray painting area; Complex	TPH-g; TPH-d; PAHs; VOCs	No	References 6	No	
1993-2022	the main foundry building was expanded to the north, and the current sand storage building was constructed at the northwest corner of the Subject Property	McWane, Inc.; Boscacci, Allan J & Mark Melvyn I Trs; and others.	Foundry Buildings	TPH-g; TPH-d; PAHs; VOCs	Yes, GeoTracker Case Number T0600100065 (closed case); T10000019792 (current case)	References 1 and 4	No	
2022-2023	The operator of the foundry, AB&I, ceased production at the site in October of 2022 and vacated the site in April 2023. The aforementioned buildings were demolished by November 2023.	Duke Realty Foundry LP	NA	NA	Yes, GeoTracker Case Number T0600100065 (closed case); T10000019792 (current case)	Reference 15	No	

Sec No	Section / Sub-Section Name
2.5	UST Systems Infrastructure

System Component	Material Stored/Conveyed	Size/Quantity	Status	Installation Date	URF Filing Date	Figure A-3		
UST	Unleaded Gasoline Fuel	8,000/gallon	Removed	Unknown	NA	References 4 and 6	No	
UST	Regular Leaded Gasoline Fuel	550/gallon	Removed	Unknown	NA	References 4 and 6	No	
UST	Regular Leaded Gasoline Fuel	3*10,000/gallon	Removed	Unknown	NA	References 4 and 6	No	
UST	Diesel Fuel	10,000/gallon	Removed	Unknown	NA	References 4 and 6	No	
UST	Initially Mineral Spirits and Later 1,1,1-trichloroethane (1,1,1-TCA)	8,000/gallon	Removed	Unknown	NA	References 4 and 6	No	

Sec No	Section / Sub-Section Name	Details	References	Data Gap	Method to Address Data Gap

2.6 Other Hazardous Materials or Waste Infrastructure

System Component	Material Stored/Conveyed	Size/Quantity	Status	Installation Date	Removal Date	References	Data Gap	Method to Address Data Gap
AST	Diesel Fuel	1,000/gallon	Removed			Reference 6	No	
AST	Diesel Fuel	1,000/gallon	Removed			Reference 6	No	
Drum	Universal Waste	55/gallon	Removed			Reference 6	No	
Drums	Mobiltherm 603, SAE 30 Motor Oil, DTE 24/25/26 Hydraulic Oil, B-230 Cosmolubric, Rando HD 46, CalFoam ES-303, Multifak EP 2	Several 55/gallon	Unknown			Reference 6	No	
Compressed Gas Cylinders	MagneGas, Propylene, Petroleum Gases Liquified	Unknown	Unknown			Reference 6	No	
Tank	Propane	Several~20lb	Unknown			Reference 6	No	
Drum	Silver 70 Multi-Purpose EP Grease	Several 15/gallon	Unknown			Reference 6	No	
Poly Container	Used Oil	200- or 250- gallon	Unknown			Reference 6	No	

2.7 Subsurface Fill and Excavations

Backfill Purpose	Description	Location	Date of Fill	Certified Clean Documentation on GeoTracker	Date of Certification	References	Data Gap	Method to Address Data Gap
UST System	Three 10,000-gallon USTs were removed in 1987 and the remaining USTs were removed between August 1991 and June 1992, approximately 680 cubic yards of affected soil was removed	USTs	1987-1992	No	NA	Reference 6	No	

2.8 Other Recognized Environmental Conditions (RECs)

REC Type	Description	References	Data Gap	Method to Address Data Gap
On-Site REC	TPH in soil	References 6 and 8	No	
On-Site REC	TPH and VOCs in groundwater	References 6 and 8	No	
On-Site REC	TPH and VOCs in soil gas	References 6 and 8	No	
On-Site REC	Aluminum and magnesium in stormwater at levels exceeding the Level 2 Numeric Action Levels (NAL)	Reference 6	No	
On-Site REC	Industrial use of the Subject Property as a foundry since 1940	Reference 6	No	

2.9 Exposure Controls and Remediation Systems

		References	Data Gap	Method to Address Data Gap
Engineering controls currently employed at the Site to control otherwise complete exposure pathways:	None	Reference 6	No	
Institutional controls currently employed at the Site to control otherwise complete exposure pathways or to protect identified engineering controls:	None	Reference 6	No	
Identify remediation systems and remediation system components at the Site:	None	Reference 6	No	

Sec No	Section / Sub-Section Name	Details	References	Data Gap	Method to Address Data Gap
3	**Physical Setting**				
3.1	**Regional Geology and Hydrogeology**				
		The Site is located in the San Francisco Bay geologic region approximately 12 miles east-southeast of San Francisco and 4.5 miles southeast of Down Town Oakland, California. The Site lies with the East Bay Plain groundwater basin. The region is defined by numerous faults trending roughly northwest-southeast along the foothills of the East Bay, most notably, the Hayward Fault located approximately 2.25 miles northeast of the Site. The East Bay Plains consists of alluvial sediments associated with coalescing alluvial fans from the nearby East Bay Hills and estuarine sedimentary deposits as a result of changes in sea level over geologic time. These unconsolidated sedimentary deposits are described at depth as unconsolidated, moderately sorted, fine sand, and silt, with clayey silt and occasional thin beds of coarse sand. The estuarine deposits are described as a well sorted, fine to medium grained sand and silt, with lenses of sandy clay and clay.	Reference 3	No	
3.2	**Local Geology and Hydrogeology**				
		Subsurface Lithology: Borings advanced at the Site between 1993 and 2023 have extended to a total approximate depth of 81 feet bgs. Soils encountered in the unsaturated and saturated zones beneath the Site are predominantly fill material (well graded sand) and lean/fat clay with interfingered lenses of mixtures that include sand, silt, clay, and gravel to the maximum depth explored. Shallow groundwater conditions are observed at the Site with water levels in historical (prior to well destruction in 2011) and existing monitoring wells (August 2023) ranging between 4.55 and 7.91 feet bgs. Based on August 2023 groundwater level monitoring data collected from existing wells MW-10 through MW-17, the Site-specific groundwater flow direction and gradient appears radial (Figure 5). Gradients under these assumptions across the Site ranged between 0.0027 and 0.067 feet/feet based on the monitoring well data. The groundwater gradient at the Site is suspected to be partially influenced by Elmhurst Creek and Arroyo Viejo Creek and the proximity of the Site to the historical San Leandro Bay margin also suggests that tidal influence may be contributing to the variable flow directions observed in monitoring data. Historical groundwater monitoring data indicated that groundwater generally flowed to the northwest at a hydraulic gradient of approximately 0.006 feet per foot (ft/ft), however, these wells were spatially limited relative to the overall footprint of the Site. Although radial groundwater flow conditions are suggested by the monitoring well data collected in August 2023, interpretation and modeling by Roux and ACDEH indicate that the measured gradient may . As radial groundwater conditions are unlikely at this Site due to the absence of any significant hydraulic sink (i.e., groundwater extraction wells), the groundwater flow direction at the Site has been interpreted based on modeling conducted by ACDEH (ACDEH subsurface modeling figure set presented in Attachment C) and the regional geologic framework flowing to the northwest. The interpreted northwesterly groundwater flow direction is generally consistent with observations made during historical groundwater monitoring events . Based on lithologic data shown in the cross sections, it appears that the water bearing zone consists of discontinuous lenses of coarse-grained materials between 10 and 25 feet bgs across the Site, however, ACDEH modeling results (Attachment C) suggest that multiple sand layers at the Site are more continuous than previously interpreted. Based on observations during well installation and monitoring and analysis of lithology across the Site by Roux and ACDEH, confined groundwater conditions may be present at the Site. Although groundwater in the East Bay Plain is generally considered a potential future source of drinking water, there are no permitted drinking water wells within one mile of the Site, nor is the shallow groundwater in this area likely to be used as a public drinking water source in the foreseeable future.	References 2, 4, 5, 8, 13, 14; Figure A-5; Attachment C	Yes	Continued quarterly groundwater monitoring.

Water Bearing Zone ID	Media Type and Classification	Prevailing Hydraulic Gradient Direction and Magnitude	Top & Bottom of Zone [feet bgs]	Min & Max Static Depth to Groundwater in Wells [feet bgs]	Min & Max Depth to First Encountered Groundwater [feet bgs]	References	Data Gap	Method to Address Data Gap
Shallow	There are eight (8) groundwater monitoring wells at the Site that were installed and surveyed in July/August 2023. Depths to water from top of casing (TOC) were measured and groundwater flow direction and gradient were calculated. Groundwater has been encountered at depths between approximately 4.5 and 8 feet below ground surface.	Groundwater measurements from existing monitoring wells deomnstrate radial groundwater flow ranging between north, west, and south. Previously inferred to be variable between northwest and west. Modeling performed by ACDEH interprets groundwater flow direction to the northwest following sand units between	NA	4.55 to 7.91	NA	Reference 8 and 12	Yes	Additional groundwater sampling and quarterly groundwater monitoring.

Sec No	Section / Sub-Section Name	Details		References	Data Gap	Method to Address Data Gap
		Groundwater Sources and Sinks:	Unknown			
		Variations in Magnitude and Direction of Lateral and Vertical Groundwater Gradient Within Each Water Bearing Zone:	Based on August 2023 data, groundwater gradient ranges from 0.0027 ft/ft to 0.0067 ft/ft.	Figure A-5	No	

3.3 Monitoring Well Network Evaluation

Monitoring Well ID	Screened Interval & Associated Water Bearing Zone ID(s)	Is the well appropriately screened to evaluate LNAPL?	Is the well appropriately screened to evaluate DNAPL?	Is the well appropriately developed and maintained?	Is the well location known, accessible and survey data is uploaded to GeoTracker?	References	Data Gap	Method to Address Data Gap
MW-10	4.5 - 14.5 feet below ground surface (ft bgs)	No	No	Yes	Yes	Reference 8	No	
MW-11	4.5 - 14.5 ft bgs	No	No	Yes	Yes	Reference 8	No	
MW-12	14.5 - 24.5 ft bgs	No	No	Yes	Yes	Reference 8	No	
MW-13	9.5 - 19.5 ft bgs	No	No	Yes	Yes	Reference 8	No	
MW-14	4.5 - 14.5 ft bgs	No	No	Yes	Yes	Reference 8	No	
MW-15	4.5 - 14.5 ft bgs	No	No	Yes	Yes	Reference 8	No	
MW-16	4.5 - 14.5 ft bgs	No	No	Yes	Yes	Reference 8	No	
MW-17	4.5 - 14.5 ft bgs	No	No	Yes	Yes	Reference 8	No	

Identify wells that are routinely excluded from calculations of potentiometric surface or groundwater elevation:	NA		No	
Identify wells that are excluded from calculation of isoconcentration contours in for each water bearing zone:	NA		No	
Is the monitoring well network sufficient to delineate the lateral extents of the groundwater plume that exceeds water quality standards?	No	Reference 8 and 12	Yes	Vinyl chloride plume at MW-12 to be further investigated with found grab groundwater sampling locations surrounding MW-12
Is the monitoring well network sufficient to delineate the vertical extents of the groundwater plume that exceeds water quality standards?	No	Reference 8 and 12	No	Vinyl chloride plume at MW-12 to be further investigated with found grab groundwater sampling locations surrounding MW-12

Sec No	Section / Sub-Section Name	Details		References	Data Gap	Method to Address Data Gap
4	**Release and Source**					
4.1	**Release Occurrence**					
		Releases #1 Material:	Gasoline and diesel in soil and groundwater	References 3 through 8	No	
		Release #1 Date:	Prior to 1992	References 3 through 8	No	
		Release #1 Source:	Former USTs and former fuel dispenser islands: - Three 10,000-gallon gasoline USTs	References 3 through 8	No	
		#1 Description:	Samples collected from the August 2023 investigation conducted by Roux indicated detectable concentrations of TPHg and TPHd.	References 3 through 8	No	
		Releases #2 Material:	VOCs in soil gas and groundwater	References 3 through 8	Yes	Additional groundwater and soil vapor sampling is proposed in the Data Gap Investigation Work Plan
		Release #2 Date:	Prior to October 1991	References 3 through 8	No	
		Release #2 Source:	8,000-gallon mineral spirits/1,1,1-TCA UST	References 3 through 8	No	
		#2 Description:	Samples collected from the August 2023 investigation conducted by Roux indicated detectable concentrations of VOCs	References 3 through 8	Yes	Additional groundwater and soil vapor sampling is proposed in the Data Gap Investigation Work Plan
		Releases #3 Material:	Dissolved metals in soil and groundwater	References 3 through 8	No	
		Release #3 Date:	Unknown	References 3 through 8	No	
		Release #3 Source:	Historical industrial use of the Site as a foundry for the manufacture of cast pipe and fittings, and naturally occurring metals	References 3 through 8	No	
		#3 Description:	Samples collected from the August 2023 investigation conducted by Roux indicated detectable concentrations of metals	References 3 through 8	No	

Sec No	Section / Sub-Section Name	Details		References	Data Gap	Method to Address Data Gap
4.2	**Constituents of Concern and Data Quality Objectives**					
		An evaluation summary table for potential constituents of concern (PCOCs) has been prepared:	Yes	Tables 1 through 13; References 7 and 8	No	
		Data quality objectives (DQO) been clearly identified and reported for each PCOC and potentially impacted media: (i.e., sample collection, handling methods, and analytical methods; laboratory quality assurance and quality control [QAQC] criteria; field QAQC [e.g. duplicate sampling schedule, leak check testing]; Laboratory reporting objectives; Reporting objectives [e.g. reported precision, non-detect reporting])	Yes		No	
		Data that does not meet data quality objectives is denoted as indefensible in summary tables and figures:	No		No	
		Data that does not meet DQOs is not relied upon for the delineation or risk evaluation portions of this SCM:	NA		No	

	PCOCs have been evaluated in the following media:						
Potential Chemicals of Concern that drive risk and/or closure (PCOCs)	**Soil**	**Groundwater**	**Soil Vapor**	**Surface Water**	**References**	**Data Gap**	**Method to Address Data Gap**
TPH-g	Yes	Yes	Yes	Unevaluated	Tables 1 through 13; References 7 and 8	Yes	More soil borings will be advanced for soil and soil vapor sampling.
TPH-d	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
TPH-mo	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
Benzene	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
Toluene	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
Ethylbenzene	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
Xylene	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
MTBE	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
PCE	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
TCE	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
1,1-DCA	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
1,1-DCE	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
1,2-DCA	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
1,1,1-TCA	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
Naphthalene	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil and soil vapor sampling.
Vinyl chloride	Yes	Yes	Yes	Unevaluated		Yes	More soil borings will be advanced for soil, soil vapor and groundwater sampling.
PCBs	No	Yes	No	Unevaluated		Yes	More soil borings will be advanced for soil sampling.
Title 22 Metals	Yes	Yes	No	Unevaluated		Yes	More soil borings will be advanced for soil sampling.
Lead	Yes	Yes	No	Unevaluated		Yes	More soil borings will be advanced for soil sampling.

Sec No | **Section / Sub-Section Name** | **Details** | **References** | **Data Gap** | **Method to Address Data Gap**

4.3 Distribution and Transport of Potential Contaminants of Concern:Soil

		References	Data Gap	Method to Address Data Gap
Comprehensive Soil Analytical Table(s) and Figure(s) are provided for all PCOCs:	Yes	Tables 4, 5, 12, and 13; Attachments D through F; References 7 and 8; Figure A-4	Yes	More soil borings will be advanced for soil sampling.
Soil analytical data used for delineation or risk assessment meets DQOs:	No		No	
Laterally delineated PCOCs:	No		Yes	More soil borings will be advanced for soil sampling.
Laterally undelineated PCOCs:	Yes		No	
Vertically delineated PCOCs:	Yes		No	
Vertically undelineated PCOCs:	No		No	

Maximum concentration reported in untreated/unremoved soil	**Surface Soil ≤ 5 ft bgs (mg/kg)**	**Sample ID/ Depth (ft bgs)**	**Subsurface Soil 5 - 20 ft bgs (mg/kg)**	**Sample ID / Depth (ft bgs)**	References	Data Gap	Method to Address Data Gap
TPH-g	580	E-4/3	150	MW-13/6	Tables 4, 5, 12, and 13; References 7, 8, and 10; Figure A-4; Attachments D through F	Yes	More soil borings will be advanced for soil sampling.
TPH-d	3400	MW-13/3	3200	MW-13/6		Yes	More soil borings will be advanced for soil sampling.
Benzene	3.85	E-4/3	ND	Various locations		Yes	More soil borings will be advanced for soil sampling.
PCE	0.118	E-4/3	ND	Various locations		Yes	More soil borings will be advanced for soil sampling.
TCE	0.328	E-4/3	ND	Various locations		Yes	More soil borings will be advanced for soil sampling.
Vinyl chloride	ND	Various locations	0.0128	E-2/11		Yes	More soil borings will be advanced for soil sampling.
Arsenic	65	MW-13/3	16	MW-12/25		Yes	More soil borings will be advanced for soil sampling.
Lead	630	MW-16/5	17	MW-12/25		Yes	More soil borings will be advanced for soil sampling.

NAPL PCOCs	**Location(s) and weathering**	**Source**	**Direct Evidence of NAPL**	**Indirect Evidence of NAPL**	**Mobility**	References	Data Gap	Method to Address Data Gap
None	NA	NA	NA	NA	NA		No	

		References	Data Gap	Method to Address Data Gap
Preferential pathways capable of intercepting and conveying mobile NAPL are present:	No	Tables 4, 5, 12, and 13; References 7 and 8	No	
Preferential pathways within the extents of soil contamination that are capable of intercepting and conveying vapor phase PCOCs are present:	No		No	
Preferential pathways located beneath the extents of soil contamination that are capable of intercepting and conveying leachate are present:	No		No	

		References	Data Gap	Method to Address Data Gap
Describe any of the preferential pathways identified above:	NA		No	

Sec No	Section / Sub-Section Name	Details		References	Data Gap	Method to Address Data Gap
4.4	**Distribution and Transport of Potential Contaminants of Concern: Groundwater**					
		Comprehensive groundwater analytical table(s)/figure(s) are provided for all PCOCs:	Yes	Tables 2 and 3, 7 though 11; References 7 and 8	No	
		Groundwater analytical data used for delineation or risk assessment meets DQOs:	No		No	
		Indicate PCOCs that are sufficiently delineated laterally:	TPH, VOCs, and metals		No	
		Indicate PCOCs that are undelineated laterally:	None		No	
		Indicate PCOCs that are sufficiently delineated vertically:	TPH, VOCs, and metals		No	
		Indicate PCOCs that are undelineated vertically:	None		No	
		Sufficient groundwater data has been collected to demonstrate that the groundwater plume is stable or decreasing in size:	No		Yes	Quarterly groundwater monitoring events will be conducted.
		Hydro- and chemo-graphs have been provided for each monitoring well:	N/A		No	
		Describe any observed patterns in groundwater concentrations (e.g., seasonal variations, effects of groundwater elevation, natural attenuation):	N/A		Yes	Quarterly groundwater monitoring events will be conducted.
		Describe evidence to indicate that microbial communities capable of metabolizing aqueous phase PCOCs to a safe endpoint are present:	N/A		Yes	Quarterly groundwater monitoring events will be conducted.

Maximum concentration reported in stable groundwater for each water bearing zone (i.e., concentrations are in equilibrium and not undergoing rebound)	**Water bearing Zone**	**Sample ID**	**Sample Date**	**Concentration (µg/L)**	References	Data Gap	Method to Address Data Gap
TPH-g	Shallow	MW-11	8/9/2023	1,100	Tables 2 and 3, 7 though 11; References 7, 8, and 10; Figures A-4	Yes	Quarterly groundwater monitoring events will be conducted.
TPH-d	Shallow	E-6	3/25/2022	892 J		Yes	Quarterly groundwater monitoring events will be conducted.
TPH-mo	Shallow	E-6	3/25/2022	819 J		Yes	Quarterly groundwater monitoring events will be conducted.
Benzene	Shallow	Various Locations	8/9/2023	<0.5		Yes	Quarterly groundwater monitoring events will be conducted.
Toluene	Shallow	Various Locations	8/9/2023	<0.5		Yes	Quarterly groundwater monitoring events will be conducted.
Ethylbenzene	Shallow	MW-11	8/9/2023	2.3		Yes	Quarterly groundwater monitoring events will be conducted.
Xylene	Shallow	Various Locations	8/9/2023	<0.5		Yes	Quarterly groundwater monitoring events will be conducted.
MTBE	Shallow	MW-15	8/9/2023	3.5		Yes	Quarterly groundwater monitoring events will be conducted.
PCE	Shallow	MW-17	8/9/2023	0.8		Yes	Quarterly groundwater monitoring events will be conducted.
TCE	Shallow	MW-17	8/9/2023	1.0		Yes	Quarterly groundwater monitoring events will be conducted.
1,1-DCA	Shallow	E-2	3/25/2022	3.63		Yes	Quarterly groundwater monitoring events will be conducted.
1,1-DCE	Shallow	MW-12	8/9/2023	200		Yes	Quarterly groundwater monitoring events will be conducted.
1,2-DCA	Shallow	MW-11	8/9/2023	0.8		Yes	Quarterly groundwater monitoring events will be conducted.
1,1,1-TCA	Shallow	Various Locations	8/9/2023	<0.5		Yes	Quarterly groundwater monitoring events will be conducted.
Naphthalene	Shallow	MW-11	8/9/2023	2.8		Yes	Quarterly groundwater monitoring events will be conducted.
Vinyl chloride	Shallow	E-2	3/25/2022	8.87		Yes	Quarterly groundwater monitoring events will be conducted.
Arsenic	Shallow	MW-17	8/9/2023	39		Yes	Quarterly groundwater monitoring events will be conducted.
Barium	Shallow	MW-17	8/9/2023	1600		Yes	Quarterly groundwater monitoring events will be conducted.
Chromium	Shallow	MW-17	8/9/2023	440		Yes	Quarterly groundwater monitoring events will be conducted.
Cobalt	Shallow	MW-17	8/9/2023	120		Yes	Quarterly groundwater monitoring events will be conducted.
Lead	Shallow	MW-17	8/9/2023	88		Yes	Quarterly groundwater monitoring events will be conducted.
Nickel	Shallow	MW-17	8/9/2023	460		Yes	Quarterly groundwater monitoring events will be conducted.

Sec No	Section / Sub-Section Name	Details	References	Data Gap	Method to Address Data Gap

NAPL PCOCs	Location(s) and weathering	Source	Direct Evidence of NAPL	Indirect Evidence of NAPL	Mobility	References	Data Gap	Method to Address Data Gap
NA	No	NA	NA	NA	NA		No	

		References	Data Gap	Method to Address Data Gap
Submerged (fully, partially, or seasonally) preferential pathways capable of intercepting and conveying free phase, aqueous phase, or vapor phase PCOCs are present within the extents of the groundwater plume:	No	References 7 and 8	No	
Preferential pathways capable of intercepting and conveying vapor phase PCOCs are present above the extents of the volatile groundwater contamination plume:	No		No	
The lateral distribution of PCOCs in groundwater concurs with identified historic groundwater gradient direction:	Yes		No	
The vertical distribution of PCOCs in groundwater concurs with identified historic groundwater gradient direction:	Yes		No	

4.5 Distribution and Transport of Potential Contaminants of Concern: Soil Vapor

		References	Data Gap	Method to Address Data Gap
Vapor probe network adequacy:	Inadequate	Table 1 and 6; Figure A-4; References 7 and 8	Yes	Active soil gas samples and stepout passive soil gas samples will be collected
Preferential pathways evaluation complete:	N/A		No	
Comprehensive soil vapor analytical table(s) and figure(s) are provided for all PCOCs:	Yes		No	
Soil Vapor analytical data used for delineation or risk assessment meets DQOs:	No		No	
Indicate PCOCs that are sufficiently delineated laterally:	PCE, TCE, benzene, 1,1-DCA, 1,4-Dioxane, Naphthalene, chloroform		No	
Indicate PCOCs that are undelineated laterally:	None		No	
Indicate PCOCs that are sufficiently delineated vertically:	PCE, TCE, benzene, 1,1-DCA, 1,4-Dioxane, Naphthalene		No	
Indicate PCOCs that are undelineated vertically:	None		No	
Soil vapor plumes for PCOCs are spatially and temporally stable or decreasing in size:	Unknown		No	
Chemo-graphs for each soil vapor probe have been provided:	No		No	
Describe any observed patterns in soil vapor concentrations (e.g., seasonal variations, effects of groundwater elevation, natural attenuation):	Unknown		No	
Describe evidence to indicate that microbial communities capable of metabolizing vapor phase PCOCs to a safe endpoint are present:	Unknown		No	
Identify the vapor intrusion scenario that is applicable for the Site:	Not Applicable		No	

Maximum concentration reported in soil vapor	Soil Vapor	Sample ID/Depth (ft bgs)	Sample Date	Concentration (µg/m3)	References	Data Gap	Method to Address Data Gap
TPH-g	Active	E-4/4	3/28/2022	820,000 J	Table 1 and 6; Figure A-4; References 7, 8, and 10	No	
Benzene	Active	E-4/4	3/28/2022	11,000		No	
PCE	Passive	PSG-25	7/25/2023	1,170		Yes	Step-out samples will be collected.
TCE	Passive	PSG-62	7/25/2023	3,920		Yes	Step-out samples will be collected.
1,1-DCA	Passive	PSG-22	7/26/2023	336		No	
Chloroform	Active	E-2/5	3/28/2022	21		No	
Ethylbenzene	Active	E-4/4	3/28/2022	2,600		No	
1,4-Dioxane	Passive	PSG-59	7/25/2023	110		No	
Vinyl chloride	Active	E-4/4	3/28/2022	63		No	
Naphthalene	Passive	PSG-11	7/26/2023	188		No	

Sec No	Section / Sub-Section Name	Details		References	Data Gap	Method to Address Data Gap
4.6	Distribution of Potential Contaminants of Concern: Indoor Air					
		Comprehensive indoor air analytical table(s) and figure(s) are provided for all PCOCs:	No		No	
		Indoor air analytical data used to evaluate risk meets DQO:	No		No	
		A hazardous materials survey has been completed for the Site and updated during each indoor air sampling event:	No		No	
		Tenants and occupants have been provided with appropriate notification:	No		No	
		Indoor air has been evaluated during HVAC on and HVAC off conditions:	No		No	
		PCOCs in indoor air are temporally stable:	No		No	
		Sampling has been conducted to evaluate migration of subsurface contaminants into indoor air via identified preferential pathways:	No		No	

Maximum concentration reported in Indoor Air	Concentration ($\mu g/m^3$)	Sample Date	Building ID	Sample ID	References	Data Gap	Method to Address Data Gap
NA	NA	NA	NA	NA		No	

Sec No	Section / Sub-Section Name	Details	Distance (feet)	Description/Name	References	Data Gap	Method to Address Data Gap
5	**Points of Exposure and Receptors**						
		Water utility servicing the Site and Surrounding Properties		East Bay Municipal Utility District	Reference 11	No	
		Nearest *known* water supply well:	NA	No groundwater supply wells are located within 1/4-mile (1,320 feet) of the Site. Well records show the nearest water supply wells are more than 2,000 feet north of the Site.	References 4 and 9	No	
		Nearest *potential* water supply well, unknown if consturction ever occurred:	NA	NA		No	
		Nearest surface water body:	4,224	San Leandro Bay	Reference 4	No	
		Nearest discharge to surface water body (e.g., storm drain, creek):	0	Elmhurst Creek	Reference 4	No	
		Identified sensitive receptors or conditions atypical of the assumptions of standard exposure scenarios:	NA	NA		No	

	Potentially complete exposure pathways	**Residential**	**Occupational**	**Construction/ Excavation**	**Ecological Receptors**	References	Data Gap	Method to Address Data Gap
Surface Soils (i.e. 0-5 feet below ground surface)	**Inhalation**	Complete	Complete	Complete	Incomplete	References 7 and 8	No	
	Ingestion	Complete	Complete	Complete	Incomplete			
	Dermal Contact	Complete	Complete	Complete	Incomplete			

Appendix A
TABLES

Table A-1
Summary of Soil Vapor Analytical Results (H&A, 2022)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Depth (feet bgs)	Sample Collection End Date	VOCs					
			PCE µg/m³	Chloroethane µg/m³	Benzene µg/m³	Toluene µg/m³	Ethylbenzene µg/m³	m,p-xylene µg/m³
Commercial/Industrial ESLs [1]			*6.7E+01*	*1.5E+06*	*1.4E+01*	*4.4E+04*	*1.6E+02*	*1.5E+04*
E-2 (Primary)	5	3/28/2022	< 6.8	< 11	< 3.2	< 3.8	< 4.4	< 4.4
E-2 (Secondary)	5	3/28/2022	< 7	< 11	< 3.3	< 3.9	< 4.5	< 4.5
E-4 (Primary)	4	3/28/2022	< 130	< 200	**11000**	< 73	**2600**	**1000**

Notes:

PCE = tetrachloroethene

µg/m^3 - micrograms per cubic meter

bgs = below ground surface

<X- Not detected at or above laboratory reporting limit X

[1] San Francisco Bay Regional Water Quality Control Board 2019. Environmental Screening Levels (ESLs): Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1) Commercial/Industrial. January 2019 (Revision 2).

Bold text indicates a concentration detected above the laboratory reporting limit

Yellow highlighted concentrations indicate an exceedance of the Commercial/Industrial ESL for Vapor Intrusion Ris

VOCs analyzed by USEPA Method TO-15 and ASTM D-1946.

USEPA = United States Environmental Protection Agency

Table A-2
Summary of Groundwater Analytical Results - Metals (H&A, 2022)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

			Metals																
Sample ID	**Depth (feet bgs)**	**Sample Date**	**Antimony, Total** µg/L	**Arsenic, Total** µg/L	**Barium, Total** µg/L	**Beryllium, Total** µg/L	**Cadmium, Total** µg/L	**Chromium, Total** µg/L	**Cobalt, Total** µg/L	**Copper, Total** µg/L	**Lead, Total** µg/L	**Mercury, Total** µg/L	**Molybdenum, Total** µg/L	**Nickel, Total** µg/L	**Selenium, Total** µg/L	**Silver, Total** µg/L	**Thallium, Total** µg/L	**Vanadium, Total** µg/L	**Zinc, Total** µg/L
MCL Priority List[1]			*6.0E+00*	*1.0E+01*	*1.0E+03*	*4.0E+00*	*5.0E+00*	*5.0E+01*	*6.0E+00*	*1.0E+03*	*1.5E+01*	*2.0E+00*	*1.0E+02*	*1.0E+02*	*5.0E+01*	*1.0E+02*	*2.0E+00*	--	*5.0E+03*
E-2	11.75	03/25/22	< 1.03	**1.81 J**	**163**	< 1.48	**0.628 J**	**15.2 J**	**5.69 J**	**14.6**	**5.48**	< 0.1	**9.78 J**	**20.7**	**0.32 J**	**0.215 J**	< 0.121	**38.9 J**	**16.6 J**
E-6	7.75	03/25/22	**11**	**6.05**	**321**	< 1.48	**0.268 J**	**31.8 J**	**7.48 J**	**21.6**	**37.3**	**0.192 J**	**341**	**39.1**	**0.731 J**	< 0.07	< 0.121	**22.8 J**	**38.8**

Notes:

-- = not established or not analyzed

µg/L = micrograms per liter

<X = Not detected at or above laboratory reporting limit X.

Bold text indicates a concentration detected above the laboratory reporting limit.

Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs

J = estimated result

Metals analyzed by USEPA Method 6010B, 6020, and 7470A

USEPA = United States Environmental Protection Agency

bgs = below ground surface

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

Table A-3
Summary of Groundwater Analytical Results - Organics (H&A, 2022)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

			TPH					VOCs												
Sample ID	Depth (feet bgs)	Sample Date	TPH-Gasoline (TPH-g) µg/L	TPH-Diesel (TPH-d) µg/L	TPH-d, Silica Gel µg/L	TPH- Motor Oil (TPH-mo) µg/L	TPH-mo, Silica Gel µg/L	1,1,1-Trichloroethane µg/L	1,1-Dichloroethane µg/L	1,1-Dichloroethene µg/L	1,2,3-Trimethylbenzene µg/L	1,2-Dichlorobenzene µg/L	2-Butanone (Methyl Ethyl Ketone) µg/L	Acetone µg/L	Benzene µg/L	Chloroethane µg/L	cis-1,2-Dichloroethene µg/L	Ethylbenzene µg/L	Isopropylbenzene (Cumene) µg/L
MCL Priority List[1]			*7.6E+02*	*2.0E+02*	--	--	--	*2.0E+02*	*5.0E+00*	*6.0E+00*	--	*1.0E+02*	--	*1.4E+04*	*1.0E+00*	*2.1E+04*	*6.0E+00*	*3.0E+01*	--
Commercial/Industrial ESLs[2]			--	--	--	--	--	*6.3E+03*	*3.3E+01*	*2.8E+02*	--	*1.1E+04*	--	*9.7E+07*	*1.8E+00*	*9.7E+04*	*2.1E+02*	*1.5E+01*	--
E-2	11.75	03/25/22	**146 J**	**236 J**	< 36.6 J	**111 J**	< 36.6 J	< 0.149	**3.63**	**195**	< 0.104	< 0.107	< 1.19	< 11.3	< 0.0941	< 0.192	**2.36**	< 0.137	< 0.105
E-6	7.75	03/25/22	< 100 J	**892 J**	**55.4 J**	**819 J**	**43.7 J**	< 0.149	**0.325 J**	< 0.188	**0.407 J**	< 0.107	**5.01 J**	**25.2 J**	**0.463 J**	< 0.192	**0.215 J**	**0.147 J**	**0.125 J**

Notes:

VOC = Volatile Organic Compund

TPH = Total Petroleum Hydrocarbons

MCLs = California Maximum Contaminant Level

ESLs = Environmental Screening Levels

-- = not established

<X = not detected at or above laboratory reporting limit X.

NA = Analyte not sampled for

µg/L = micrograms per liter

Bold text indicates a concentration detected above the laboratory reporting limit.

Gray highlighted concentrations indicate the laboratory reporting limit is above the MCL Priority ESLs

Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs

Green highlighted concentrations indicate an exceedance of both the MCL Priority ESLs and the GW Vapor Intrusion Commercial/Industrial ESLs

VOCs analyzed by Environmental Protection Agency (USEPA) Method 8260B.

TPHg, TPH-d, and TPH-mo analyzed by EPA Method 8015B.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

[2] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3) Commercial/Industrial.* January 2019 (Revision 2).

Table A-3
Summary of Groundwater Analytical Results - Organics (H&A, 2022)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

			VOCs						
Sample ID	**Depth (feet bgs)**	**Sample Date**	**Methyl Tert Butyl Ether (MTBE)** µg/L	**Naphthalene** µg/L	**Tert Butyl Alcohol (TBA)** µg/L	**Toluene** µg/L	**Trichloroethene (TCE)** µg/L	**Vinyl Chloride** µg/L	**Xylenes, Total** µg/L
MCL Priority List[1]			*5.0E+00*	*1.7E-01*	--	*4.0E+01*	*5.0E+00*	*5.0E-01*	*2.0E+01*
Commercial/Industrial ESLs[2]			*2.0E+03*	*2.0E+01*	--	*4.9E+03*	*7.5E+00*	*1.4E-01*	*1.6E+03*
E-2	11.75	03/25/22	**0.27 J**	< 1	NA	< 0.278	< 0.19	**8.87**	< 0.174
E-6	7.75	03/25/22	< 0.101	**2.61 J**	NA	< 0.278	< 0.19	< 0.234	**0.224 J**

Notes:

VOC = Volatile Organic Compund

TPH = Total Petroleum Hydrocarbons

MCLs = California Maximum Contaminant Level

ESLs = Environmental Screening Levels

-- = not established

<X = not detected at or above laboratory reporting limit X.

NA = Analyte not sampled for

µg/L = micrograms per liter

Bold text indicates a concentration detected above the laboratory reporting limit.

Gray highlighted concentrations indicate the laboratory reporting limit is above the MCL Priority ESLs

Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs

Green highlighted concentrations indicate an exceedance of both the MCL Priority ESLs and the GW Vapor Intrusion Commercial/Industrial ESLs

VOCs analyzed by Environmental Protection Agency (USEPA) Method 8260B.

TPHg, TPH-d, and TPH-mo analyzed by EPA Method 8015B.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

[2] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3) Commercial/Industrial.* January 2019 (Revision 2).

Table A-4
Summary of Soil Analytical Results - Metals (H&A, 2022)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Depth (ft bgs)	Sample Date	Antimony mg/kg	Arsenic[2] mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Lead mg/kg	Mercury mg/kg	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg
Commercial/Industrial ESLs[1]			*1.6E+02*	*1.1E+01*	*2.2E+05*	*2.3E+02*	*1.1E+03*	--	*3.5E+02*	*4.7E+04*	*3.2E+02*	*1.9E+02*	*5.8E+03*	*1.1E+04*	*5.8E+03*	*5.8E+03*	*1.2E+01*	*5.8E+03*	*3.5E+05*
E-2	6	03/25/22	**2.27 J**	**3.74**	**321**	**1.05**	< 0.0651	**88.3**	**13.3**	**45.9**	**10.5**	**0.0569**	**0.199 J**	**68.2**	< 1.06	< 0.176	< 0.545	**93.7**	**71.7**
E-2	11	03/25/22	**2.37 J**	**5.57**	**269**	**0.562**	**0.287 J**	**63.3**	**21.4**	**42**	**8.69**	**0.0585**	**0.387 J**	**66.5**	**1.57 J**	< 0.167	< 0.518	**68.6**	**65.9**
E-4	3	03/25/22	**1.8 J**	**5.66**	**211**	**0.491**	**2.44**	**44.1**	**13**	**40**	**232**	**1.52**	**1.95**	**73.8**	**0.973 J**	< 0.157	< 0.488	**45.2**	**124**
E-4	13	03/25/22	< 0.702	**3.19**	**164**	**0.478**	**0.216 J**	**47.8**	**11.3**	**25.3**	**7.07**	**0.0696**	< 0.141	**81.4**	< 0.986	< 0.164	< 0.508	**34**	**53**
E-5	0	03/25/22	**6.6**	**7.33**	**211**	**0.256**	**1.64**	**40.5**	**9.31**	**56**	**219**	**0.304**	**8.74**	**33.8**	< 0.951	< 0.158	< 0.490	**41.2**	**295**
E-5	3	03/25/22	**1.25 J**	**5.75**	**131**	**0.271**	**1.03**	**31.3**	**7.35**	**65.7**	**85.2**	**0.145**	**0.912**	**38.2**	**1.56 J**	< 0.159	< 0.494	**32.4**	**352**
E-6	2	03/25/22	**2.16 J**	**2.91**	**210**	**0.732**	**0.519 J**	**84.9**	**8.36**	**85.4**	**38.3**	**0.156**	**17.8**	**105**	**2.81**	**0.807 J**	< 0.476	**53**	**60.6**
E-6	5	03/25/22	**1.1 J**	**1.38 J**	**347**	**0.72**	**0.374 J**	**59.9**	**18.2**	**46.2**	**10.2**	**0.143**	< 0.145	**67.1**	**1.44 J**	< 0.169	< 0.524	**52.2**	**78.4**

Notes:

ESLs = Environmental Screening Levels

-- = not established

mg/kg = milligrams per kilogram

ft bgs = feet below ground surface

<X = Not detected at or above laboratory reporting limit X.

J = estimated result

Bold text indicates a concentration detected above the laboratory reporting limit.

Metals analyzed by United States Environmental Protection Agency (USEPA) Methods 6010B/7471A

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table S-1) Commercial/Industrial: Shallow Soil Exposure.* January 2019 (Revision 2).

[2] Arsenic concentrations are compared to the accepted background concentration for the San Francisco Bay Region as presented in "*Establishing Background Arsenic in Soil of The Urbanized San Francisco Bay Region*" by Dylan Jacques Duverge, December 2011.

Table A-5
Summary of Soil Analytical Results - Organics (H&A, 2022)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

			TPH					VOCs												
Sample ID	**Depth (ft bgs)**	**Sample Date**	**TPH-Gasoline** mg/kg	**TPH-Diesel** mg/kg	**TPH-Diesel, Silica Gel** mg/kg	**TPH-Motor Oil** mg/kg	**TPH-Motor Oil, Silica Gel** mg/kg	**1,1-Dichloroethane** mg/kg	**1,1-Dichloroethene** mg/kg	**1,2,3-Trimethylbenzene** mg/kg	**1,2,4-Trimethylbenzene** mg/kg	**1,2-Dichlorobenzene** mg/kg	**1,3,5-Trimethylbenzene** mg/kg	**1,3-Dichlorobenzene** mg/kg	**1,4-Dichlorobenzene** mg/kg	**2-Phenylbutane (sec-Butylbenzene)** mg/kg	**Benzene** mg/kg	**Chloroethane** mg/kg	**cis-1,2-Dichloroethene** mg/kg	**Cymene (p-Isopropyltoluene)** mg/kg
Commercial/Industrial ESLs[1]			*2.0E+03*	*1.2E+03*	--	*1.8E+05*	--	*1.6E+01*	*3.5E+02*	--	--	*9.4E+03*	--	--	*1.2E+01*	--	*1.4E+00*	*5.9E+04*	*8.5E+01*	--
E-2	6	03/25/22	< 1.55	< 1.01	< 1.01	**10.9 J**	**10.6 J**	< 0.000916	< 0.00113	< 0.00295	< 0.00295	< 0.000792	< 0.00373	< 0.00112	< 0.00131	< 0.00537	< 0.000871	< 0.00317	< 0.00137	< 0.00475
E-2	11	03/25/22	< 1.40	**0.971 J**	**1.18 J**	**8.33 J**	**7.62 J**	< 0.000831	**0.00623**	< 0.00267	< 0.00267	< 0.000719	< 0.00339	< 0.00102	< 0.00118	< 0.00487	< 0.00079	< 0.00288	< 0.00124	< 0.00432
E-4	3	03/25/22	**580**	**482 J-**	**428**	**4580**	**4400**	< 0.00618	< 0.00764	**0.882**	**4.61**	**0.0158 J**	**1.66**	< 0.00756	< 0.00882	**1.37**	**3.85**	< 0.0214	**0.0473**	**0.462**
E-4	13	03/25/22	**262**	**41.7**	**40.4**	**148**	**157**	< 0.000793	< 0.000979	**0.046**	**0.0488**	**0.0176**	**0.118**	**0.00481 J**	**0.00428 J**	**0.297**	**0.426**	< 0.00275	< 0.00119	**0.165**
E-5	0	03/25/22	**11.3**	**27.1**	**21.9**	**232**	**186**	**0.00432 J**	< 0.00119	**0.0412**	**0.0603**	< 0.000834	**0.0176**	< 0.00118	**0.00236 J**	**0.00726 J**	**0.00324**	< 0.00334	< 0.00144	**0.00647 J**
E-5	3	03/25/22	**1.51 J**	**6.22 J**	**3.84 J**	**73.5**	**51.7**	**0.00445**	< 0.000952	**0.00362 J**	**0.00401 J**	< 0.000668	< 0.00314	< 0.000943	< 0.0011	< 0.00452	**0.00122 J**	< 0.00268	< 0.00115	< 0.00401
E-6	2	03/25/22	< 1.22	**6.52**	**5.05**	**41.3**	**39.2**	< 0.00072	< 0.000887	< 0.00231	< 0.00231	< 0.000623	< 0.00293	< 0.000879	< 0.00103	< 0.00423	**0.00325**	< 0.00249	< 0.00107	< 0.00373
E-6	5	03/25/22	**2.17 J**	**1.06 J**	**1.2 J**	**2.64 J**	**2.17 J**	< 0.00107	< 0.00133	< 0.00345	< 0.00345	< 0.00093	< 0.00438	< 0.00131	< 0.00153	< 0.0063	< 0.00102	< 0.00372	< 0.00161	< 0.00558

Notes:

ESLs = Environmental Screening Levels

TPH = Total Petroleum Hydrocarbons

VOC = Volatile Organic Compound

-- = not established

J = estimated result

ft bgs = feet below ground surface

mg/kg = milligrams per kilogram

<X = Not detected at or above laboratory reporting limit X.

Bold text indicates a concentration detected above the laboratory reporting limit.

TPH analyzed by Environmental Protection Agency (USEPA) Method 8015/8015B.

VOCs analyzed by EPA Method 8260B.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table S-1) Commercial/Industrial: Shallow Soil Exposure.* January 2019 (Revision 2).

Table A-6
Summary of Passive Soil Gas Analytical Results- Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID[1]	Sample Collection Start Date	Sample Collection End Date	TPH		VOCs																
			TPH-Gasoline µg/m³	TPH-Diesel µg/m³	Tetrachloroethene (PCE) µg/m³	Trichloroethene (TCE) µg/m³	Benzene µg/m³	1,1-Dichloroethane (1,1-DCA) µg/m³	1,4-Dioxane µg/m³	Naphthalene µg/m³	1,1,1,2-Tetrachloroethane µg/m³	1,1,1-Trichloroethane µg/m³	1,1,2-Trichloroethane µg/m³	1,1,2-Trichlorotrifluoroethane (Freon 113) µg/m³	1,1-Dichloroethene µg/m³	1,2,3-Trichlorobenzene µg/m³	1,2,3-Trichloropropane µg/m³	1,2,4-Trichlorobenzene µg/m³	1,2,4-Trimethylbenzene µg/m³	1,2-Dibromoethane µg/m³	1,2-Dichlorobenzene µg/m³
Commercial/Industrial ESLs[2]			*8.3E+04*	*3.7E+04*	*6.7E+01*	*1.0E+02*	*1.4E+01*	*2.6E+02*	*5.3E+01*	*1.2E+01*	*5.5E+01*	*1.5E+05*	*2.6E+01*	*--*	*1.0E+04*	*--*	*4.4E+01*	*2.9E+02*	*--*	*6.8E-01*	*2.9E+04*
Trip 1	--	--	<387	<331	<1.11	<1.38	<2.16	<0.54	<1.11	<1.43	<1.11	<0.44	<1.38	<0.51	<1.38	<1.17	<0.61	<1.17	<1.38	<0.59	<0.61
PSG-01	07/24/23	08/08/23	<392	<335	<1.13	<1.40	<2.18	<0.54	<1.13	<1.45	<1.13	<0.44	<1.40	<0.52	<1.40	<1.19	<0.62	<1.19	<1.39	<0.59	<0.62
PSG-02	07/24/23	08/08/23	<392	**887**	<1.13	<1.40	**5.67**	<0.54	<1.13	<1.45	<1.13	<0.44	<1.40	<0.52	<1.40	<1.19	<0.62	<1.19	**1.59**	<0.59	<0.62
PSG-03	07/25/23	08/08/23	<416	**959**	<1.20	<1.49	**3.8**	<0.58	<1.20	<1.53	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.65	<1.26	<1.48	<0.63	<0.65
PSG-04	07/25/23	08/08/23	<415	**400**	<1.20	<1.49	**4.41**	<0.58	<1.20	<1.53	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.65	<1.26	<1.48	<0.63	<0.65
PSG-05	07/24/23	08/08/23	**884**	**6,550**	<1.14	<1.41	**7.57**	<0.55	<1.14	**1.84**	<1.14	<0.44	<1.41	<0.52	<1.41	<1.20	<0.62	<1.20	**4.6**	<0.60	<0.62
PSG-06	07/24/23	08/08/23	**4,120**	**26,000**	<1.14	<1.41	**15.3**	<0.55	<1.14	**4.65**	<1.14	<0.44	<1.41	<0.52	<1.41	<1.20	<0.62	<1.20	<1.41	<0.60	<0.62
PSG-07	07/24/23	08/08/23	<396	**1,130**	<1.14	<1.41	**4.07**	<0.55	<1.14	<1.46	<1.14	<0.44	<1.41	<0.52	<1.41	<1.20	<0.62	<1.20	<1.41	<0.60	<0.62
PSG-08	07/24/23	08/08/23	<396	**873**	<1.14	<1.42	**6.07**	**2.79**	<1.14	**2.07**	<1.14	<0.44	<1.42	<0.52	**2.09**	<1.20	<0.62	<1.20	**1.72**	<0.60	<0.62
PSG-09	07/26/23	08/09/23	<420	**431**	**30.7**	<1.50	<2.34	<0.58	<1.21	<1.55	<1.21	**0.48**	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.49	<0.64	<0.66
PSG-10	07/26/23	08/09/23	**657**	**1,990**	**427**	**33.5**	**4.25**	<0.58	<1.21	**5.53**	<1.21	**1.38**	<1.50	<0.56	**2.97**	<1.27	<0.66	<1.27	<1.50	<0.64	<0.66
PSG-11	07/26/23	08/09/23	**14,500**	**21,500**	**1.65**	<1.50	**15.4**	<0.58	<1.21	**188**	<1.21	<0.47	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.51	<0.64	<0.66
PSG-12	07/26/23	08/09/23	<415	**789**	<1.19	<1.48	<2.31	<0.58	<1.19	<1.53	<1.19	**2.42**	<1.48	<0.55	**1.71**	<1.25	<0.65	<1.25	<1.52	<0.63	<0.65
PSG-13	07/26/23	08/09/23	**4,320**	**4,690**	<1.19	<1.48	**18.1**	<0.58	<1.19	<1.53	<1.19	**1.24**	<1.48	<0.55	<1.48	<1.25	<0.65	<1.25	<1.53	<0.63	<0.65
PSG-14	07/24/23	08/08/23	<393	**801**	**1.84**	<1.40	**4.77**	<0.55	<1.13	<1.45	<1.13	<0.44	<1.40	<0.52	<1.40	<1.19	<0.62	<1.19	<1.54	<0.59	<0.62
PSG-15	07/24/23	08/08/23	<393	**354**	**8.86**	<1.40	**2.28**	<0.55	<1.13	<1.45	<1.13	<0.44	<1.40	<0.52	<1.40	<1.19	<0.62	<1.19	<1.55	<0.59	<0.62
PSG-15-Dup	07/24/23	08/08/23	<393	<336	**5.91**	<1.40	<2.19	<0.55	<1.13	<1.45	<1.13	<0.44	<1.40	<0.52	<1.40	<1.19	<0.62	<1.19	<1.56	<0.59	<0.62
PSG-16	07/26/23	08/09/23	<420	**652**	<1.21	<1.50	<2.34	<0.58	<1.21	<1.55	<1.21	<0.47	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.57	<0.64	<0.66
PSG-17	07/26/23	08/09/23	<420	<359	**7.27**	<1.50	<2.34	<0.58	<1.21	<1.55	<1.21	**0.5**	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.58	<0.64	<0.66
PSG-18	07/24/23	08/08/23	<396	**936**	<1.14	<1.41	**5.09**	<0.55	<1.14	<1.46	<1.14	<0.44	<1.41	<0.52	<1.41	<1.20	<0.62	<1.20	<1.59	<0.60	<0.62
PSG-19	07/24/23	08/08/23	<396	**6,060**	<1.14	<1.42	**3.24**	<0.55	<1.14	**2.35**	<1.14	<0.44	<1.42	<0.52	<1.42	<1.20	<0.62	<1.20	<1.60	<0.60	<0.62
PSG-20	07/25/23	08/08/23	**565**	**3,350**	<1.20	<1.49	**6**	<0.58	<1.20	<1.53	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.65	<1.26	<1.61	<0.63	<0.65
PSG-20-Dup	07/25/23	08/08/23	**527**	**3,070**	<1.20	<1.49	**5.61**	<0.58	<1.20	<1.53	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.65	<1.26	<1.62	<0.63	<0.65
PSG-21	07/25/23	08/08/23	**874**	**2,680**	<1.20	<1.48	**6.77**	**4.84**	<1.20	**1.76**	<1.20	<0.47	<1.48	<0.55	<1.48	<1.26	<0.65	<1.26	<1.63	<0.63	<0.65
PSG-22	07/26/23	08/09/23	**20,400**	**2,850**	<1.21	<1.50	**11.7**	**336**	**77.5**	<1.55	<1.21	**110**	<1.50	<0.56	**438**	<1.27	<0.66	<1.27	<1.64	<0.64	<0.66
PSG-23	07/26/23	08/09/23	<420	<359	<1.21	<1.50	**3.14**	**0.82**	<1.21	<1.55	<1.21	**0.73**	<1.50	<0.56	**2.14**	<1.27	<0.66	<1.27	<1.65	<0.64	<0.66
PSG-24	07/26/23	08/09/23	<420	**534**	**11**	<1.50	**3.72**	<0.58	**1.56**	<1.55	<1.21	**2.56**	<1.50	<0.56	**1.91**	<1.27	<0.66	<1.27	<1.66	<0.64	<0.66
PSG-25	07/25/23	08/08/23	**6,980**	**2,360**	**1,170**	**689**	**79**	<0.58	<1.20	<1.54	<1.20	<0.47	<1.49	<0.55	**4.31**	<1.26	<0.66	<1.26	<1.67	<0.63	<0.66
PSG-25-Dup	07/25/23	08/08/23	**12,700**	**2,740**	**1,110**	**584**	**125**	<0.58	<1.20	<1.54	<1.20	<0.47	<1.49	<0.55	**2.83**	<1.26	<0.66	<1.26	<1.68	<0.63	<0.66
PSG-26	07/25/23	08/08/23	**3,940**	**1,210**	**5.16**	<1.49	**8.22**	<0.58	<1.20	<1.54	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.66	<1.26	<1.69	<0.63	<0.66
PSG-27	07/24/23	08/08/23	<393	**336**	**1.14**	<1.41	<2.19	<0.55	<1.13	<1.45	<1.13	<0.44	<1.41	<0.52	<1.41	<1.19	<0.62	<1.19	<1.70	<0.59	<0.62
PSG-28	07/25/23	08/08/23	<417	**421**	**10**	<1.49	**2.72**	<0.58	<1.20	<1.54	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.66	<1.26	<1.71	<0.63	<0.66
PSG-29	07/25/23	08/08/23	**2,670**	**1,860**	<1.20	<1.49	<2.32	<0.58	<1.20	**3.97**	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.66	<1.26	<1.72	<0.63	<0.66
PSG-30	07/25/23	08/09/23	<387	**4,290**	<1.11	<1.38	**6.97**	<0.54	<1.11	**1.75**	<1.11	<0.44	<1.38	<0.51	<1.38	**12.2**	<0.61	**30.6**	<1.73	<0.59	<0.61
PSG-31	07/25/23	08/08/23	**4,800**	**30,300**	<1.20	<1.49	**23.9**	**9.34**	<1.20	**31.5**	<1.20	<0.47	<1.49	<0.55	**6.71**	<1.26	<0.65	<1.26	<1.74	<0.63	<0.65
PSG-32	07/25/23	08/08/23	**2,090**	**5,700**	<1.20	**3.55**	**29**	**2.36**	<1.20	**3.97**	<1.20	<0.47	<1.49	<0.55	**4.23**	<1.26	<0.65	<1.26	<1.75	<0.63	<0.65
PSG-33	07/25/23	08/08/23	**481**	**878**	**7.55**	**1.69**	**8.25**	**2.15**	<1.20	<1.53	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.65	<1.26	<1.76	<0.63	<0.65
PSG-34	07/26/23	08/09/23	<420	<359	<1.21	<1.50	<2.34	**4.23**	<1.21	**2.33**	<1.21	**7.48**	<1.50	<0.56	**14.5**	<1.27	<0.66	<1.27	<1.77	<0.64	<0.66

Table A-6
Summary of Passive Soil Gas Analytical Results- Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

			VOCs																	
Sample ID[1]	Sample Collection Start Date	Sample Collection End Date	1,2-Dichloroethane µg/m^3	1,3,5-Trimethylbenzene µg/m^3	1,3-Dichlorobenzene µg/m^3	1,4-Dichlorobenzene µg/m^3	2-Methylnaphthalene µg/m^3	Carbon Tetrachloride µg/m^3	Chlorobenzene µg/m^3	Chloroform µg/m^3	cis-1,2-Dichloroethene µg/m^3	Ethylbenzene µg/m^3	Isopropylbenzene µg/m^3	Methylene chloride µg/m^3	Methyl-t-butyl ether (MTBE) µg/m^3	o-Xylene µg/m^3	p,m-Xylene µg/m^3	Toluene µg/m^3	trans-1,2-Dichloroethene µg/m^3	Vinyl Chloride µg/m^3
Commercial/Industrial ESLs[2]			*1.6E+01*	--	--	*3.7E+01*	--	*6.8E+01*	*7.3E+03*	*1.8E+01*	*1.2E+03*	*1.6E+02*	--	*4.1E+02*	*1.6E+03*	--	--	*4.4E+04*	*1.2E+04*	*5.2E+00*
Trip 1	--	--	<0.82	<1.38	<0.61	<0.61	<1.50	<1.06	<0.54	<1.31	<0.86	<1.34	<1.38	<1.31	<2.29	<1.30	<1.30	<2.86	<1.04	<0.56
PSG-01	07/24/23	08/08/23	<0.83	<1.39	<0.62	<0.62	<1.52	<1.08	<0.54	<1.32	<0.87	<1.36	<1.39	<1.32	<2.31	<1.31	<1.31	<2.89	<1.05	<0.57
PSG-02	07/24/23	08/08/23	<0.83	<1.39	<0.62	<0.62	<1.52	<1.08	<0.54	<1.32	<0.87	<1.36	<1.39	<1.32	<2.31	<1.32	**2.35**	**3.96**	<1.05	<0.57
PSG-03	07/25/23	08/08/23	<0.88	<1.48	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.93	<1.44	<1.48	<1.40	<2.45	<1.39	<1.39	**3.24**	<1.11	<0.61
PSG-04	07/25/23	08/08/23	<0.88	<1.48	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.92	<1.44	<1.48	<1.40	<2.45	<1.39	<1.39	<3.06	<1.11	<0.61
PSG-05	07/24/23	08/08/23	<0.83	**1.49**	<0.62	<0.62	**2.06**	<1.09	<0.55	<1.33	<0.88	<1.37	<1.41	<1.33	<2.33	**1.41**	**2.38**	**6.37**	<1.06	<0.58
PSG-06	07/24/23	08/08/23	<0.83	<1.41	<0.62	<0.62	**5.04**	<1.09	<0.55	<1.33	<0.88	<1.37	<1.41	<1.33	<2.33	<1.33	<1.33	**6.47**	<1.06	<0.58
PSG-07	07/24/23	08/08/23	<0.83	<1.41	<0.62	<0.62	<1.54	<1.09	**0.86**	<1.33	<0.88	<1.37	<1.41	<1.33	<2.33	**1.73**	**4.5**	<2.92	<1.06	<0.58
PSG-08	07/24/23	08/08/23	<0.83	<1.41	<0.62	<0.62	<1.54	<1.09	<0.55	<1.33	<0.88	<1.37	<1.41	<1.33	<2.34	<1.33	<1.33	**4.93**	<1.06	<0.58
PSG-09	07/26/23	08/09/23	<0.88	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	**1.65**	<0.93	<1.46	<1.49	<1.42	<2.48	<1.41	<1.41	<3.10	<1.13	<0.61
PSG-10	07/26/23	08/09/23	<0.88	<1.49	<0.66	<0.66	**3.75**	<1.15	<0.58	<1.42	<0.94	<1.46	<1.49	<1.42	<2.48	<1.41	<1.41	<3.10	<1.13	<0.61
PSG-11	07/26/23	08/09/23	<0.88	**8.78**	<0.66	<0.66	**1,080**	<1.15	<0.58	<1.42	<0.93	**3.19**	**20.9**	<1.42	<2.48	**3.12**	**6.44**	**17.3**	<1.13	<0.61
PSG-12	07/26/23	08/09/23	<0.87	<1.47	<0.65	<0.65	**8.83**	<1.14	<0.58	<1.40	<0.92	**5.94**	<1.47	<1.40	<2.45	**11.5**	**27.1**	<3.06	<1.11	<0.60
PSG-13	07/26/23	08/09/23	<0.87	<1.47	<0.65	<0.65	**4.63**	<1.14	<0.58	<1.40	<0.92	**3.79**	<1.47	<1.40	<2.44	**3.56**	**6.76**	**18.6**	<1.11	<0.60
PSG-14	07/24/23	08/08/23	<0.83	<1.40	<0.62	<0.62	**2.46**	<1.08	<0.55	<1.32	<0.87	<1.36	<1.40	<1.32	<2.32	**2.47**	**4.9**	**5.1**	<1.05	<0.57
PSG-15	07/24/23	08/08/23	<0.83	<1.40	<0.62	<0.62	<1.53	<1.08	<0.55	<1.32	<0.87	**1.56**	<1.40	<1.32	<2.32	**3.62**	**7.99**	<2.90	<1.05	<0.57
PSG-15-Dup	07/24/23	08/08/23	<0.83	<1.40	<0.62	<0.62	<1.53	<1.08	<0.55	<1.32	<0.87	<1.36	<1.40	<1.32	<2.32	**3.16**	**7.07**	<2.90	<1.05	<0.57
PSG-16	07/26/23	08/09/23	<0.89	**5.54**	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	**6.84**	<1.49	<1.42	<2.48	**16.3**	**35.7**	<3.10	<1.13	<0.61
PSG-17	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	<1.46	<1.49	<1.42	<2.48	<1.41	**1.59**	<3.10	<1.13	<0.61
PSG-18	07/24/23	08/08/23	<0.83	<1.41	<0.62	<0.62	**2.42**	<1.09	<0.55	<1.33	<0.88	<1.37	<1.41	<1.33	<2.33	<1.33	<1.33	<2.92	<1.06	<0.58
PSG-19	07/24/23	08/08/23	<0.83	**1.71**	<0.62	<0.62	**2.98**	<1.09	<0.55	<1.33	<0.88	<1.37	<1.41	<1.33	<2.33	<1.33	<1.33	<2.92	<1.06	<0.58
PSG-20	07/25/23	08/08/23	<0.88	<1.48	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.92	<1.44	<1.48	<1.40	<2.45	<1.39	<1.39	<3.06	<1.11	<0.61
PSG-20-Dup	07/25/23	08/08/23	<0.88	<1.48	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.92	<1.44	<1.48	<1.40	<2.45	<1.39	<1.39	<3.06	<1.11	<0.61
PSG-21	07/25/23	08/08/23	<0.88	<1.48	<0.65	<0.65	**2.98**	<1.14	<0.58	<1.40	<0.92	<1.44	<1.48	<1.40	<2.45	<1.39	<1.39	**4.97**	<1.11	<0.60
PSG-22	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	**1.05**	**1.9**	<1.49	<1.42	<2.48	**1.46**	**2.58**	**10.1**	<1.13	**2.26**
PSG-23	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	<1.46	<1.49	<1.42	<2.48	<1.41	**3.44**	<3.10	<1.13	<0.61
PSG-24	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	<1.46	<1.49	<1.42	<2.48	<1.41	**2.5**	<3.10	<1.13	<0.61
PSG-25	07/25/23	08/08/23	<0.88	**2.02**	<0.66	<0.66	<1.62	<1.15	<0.58	<1.41	**14**	**9.38**	**2.94**	<1.41	<2.47	**7.74**	**13.6**	**42.2**	**3.51**	<0.61
PSG-25-Dup	07/25/23	08/08/23	<0.88	**1.74**	<0.66	<0.66	<1.62	<1.15	<0.58	<1.41	**8.93**	**8.12**	**2.33**	<1.41	<2.47	**4.91**	**10**	**52.4**	**1.96**	<0.61
PSG-26	07/25/23	08/08/23	<0.88	**2.39**	<0.66	<0.66	**1.63**	<1.15	<0.58	<1.41	<0.93	**4.03**	<1.49	<1.41	<2.47	**6.5**	**10.1**	**3.48**	<1.12	<0.61
PSG-27	07/24/23	08/08/23	<0.83	**2.66**	<0.62	<0.62	<1.53	<1.08	<0.55	<1.33	<0.88	<1.36	<1.40	<1.33	<2.32	**1.91**	**3.83**	**2.98**	<1.05	<0.57
PSG-28	07/25/23	08/08/23	<0.88	**2.23**	<0.66	<0.66	<1.62	<1.14	<0.58	<1.41	<0.93	<1.45	**1.52**	<1.41	<2.46	<1.40	<1.40	<3.08	<1.12	<0.61
PSG-29	07/25/23	08/08/23	<0.88	**44.4**	<0.66	<0.66	<1.62	<1.14	<0.58	<1.41	<0.93	<1.45	**35.1**	<1.41	<2.46	**5.19**	**10.3**	**6.41**	<1.12	<0.61
PSG-30	07/25/23	08/09/23	<0.82	<1.38	<0.61	<0.61	**1.99**	<1.06	<0.54	<1.31	<0.86	<1.34	<1.38	<1.31	<2.29	<1.30	<1.30	**3.77**	<1.04	<0.56
PSG-31	07/25/23	08/08/23	<0.88	<1.48	<0.65	<0.65	**52.4**	<1.14	<0.58	<1.40	<0.93	**2.15**	<1.48	<1.40	**4.74**	**3.4**	**3.53**	**18.8**	<1.12	**0.9**
PSG-32	07/25/23	08/08/23	<0.88	<1.48	<0.65	<0.65	**2.09**	<1.14	<0.58	<1.40	**25.3**	<1.44	**7.7**	<1.40	**2.72**	**1.9**	**3.28**	**7.56**	**7.76**	**0.73**
PSG-33	07/25/23	08/08/23	<0.88	**1.77**	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.93	<1.44	<1.48	<1.40	**3.63**	<1.39	**1.88**	**4.62**	<1.11	<0.61
PSG-34	07/26/23	08/09/23	<0.88	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.93	**2.9**	<1.49	<1.42	<2.48	**6.12**	**15.8**	<3.10	<1.13	**1.07**

Table A-6
Summary of Passive Soil Gas Analytical Results- Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

PSG-35	07/26/23	08/09/23	**5,970**	**3,950**	**14.7**	**3.11**	**16.7**	<0.58	<1.21	**2.79**	<1.21	**13.9**	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.78	<0.63	<0.66
PSG-35-Dup	07/26/23	08/09/23	**4,990**	**3,170**	**7.68**	**3.42**	**14.9**	<0.58	<1.21	**2.75**	<1.21	**9.37**	<1.50	<0.56	**2.28**	<1.27	<0.66	<1.27	<1.79	<0.63	<0.66
PSG-36	07/26/23	08/09/23	**13,000**	**4,660**	**13.8**	**36.4**	**38**	<0.58	<1.21	**6.81**	<1.21	<0.47	<1.50	<0.56	**20.3**	**2.18**	<0.66	<1.27	<1.80	<0.64	**1.52**
PSG-37	07/25/23	08/08/23	**427**	**613**	<1.20	<1.50	**6.51**	**0.86**	<1.20	<1.54	<1.20	**0.98**	<1.50	<0.56	**1.57**	<1.27	<0.66	<1.27	<1.81	<0.63	<0.66
PSG-38	07/25/23	08/08/23	**1,900**	**3,550**	<1.20	<1.49	**10.6**	<0.58	<1.20	**2.04**	<1.20	**0.81**	<1.49	<0.55	<1.49	<1.26	<0.66	<1.26	<1.82	<0.63	<0.66
PSG-39	07/24/23	08/08/23	<393	<336	<1.13	<1.41	**7.85**	<0.55	<1.13	<1.45	<1.13	<0.44	<1.41	<0.52	<1.41	<1.19	<0.62	<1.19	<1.83	<0.60	<0.62
PSG-40	07/26/23	08/09/23	<420	<359	<1.21	**1.62**	<2.34	<0.58	<1.21	<1.55	<1.21	<0.47	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.84	<0.64	<0.66
PSG-41	07/26/23	08/09/23	<420	<359	<1.21	**915**	<2.34	<0.58	<1.21	<1.55	<1.21	<0.47	<1.50	<0.56	**3.88**	<1.27	<0.66	<1.27	<1.85	<0.64	<0.66
PSG-42	07/26/23	08/09/23	<420	<359	**32**	**14.6**	<2.34	<0.58	<1.21	<1.55	<1.21	**1.57**	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.86	<0.64	<0.66
PSG-43	07/26/23	08/09/23	<420	<359	<1.21	<1.50	<2.34	<0.58	<1.21	<1.55	<1.21	<0.47	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.87	<0.64	<0.66
PSG-43-Dup	07/26/23	08/09/23	<420	<359	<1.21	<1.50	<2.34	<0.58	<1.21	<1.55	<1.21	<0.47	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.88	<0.64	<0.66
PSG-44	07/25/23	08/08/23	<415	**855**	<1.19	<1.48	**3.57**	<0.58	<1.19	<1.53	<1.19	<0.47	<1.48	<0.55	<1.48	<1.26	<0.65	<1.26	<1.89	<0.63	<0.65
PSG-45	07/25/23	08/08/23	**1,400**	**3,750**	<1.20	<1.49	**41.8**	<0.58	<1.20	**7.99**	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.65	<1.26	<1.90	<0.63	<0.65
PSG-46	07/25/23	08/08/23	**4,300**	**5,280**	<1.20	<1.49	**42.2**	<0.58	<1.20	**3.53**	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.65	<1.26	<1.91	<0.63	<0.65
PSG-47	07/26/23	08/09/23	**1,320**	**1,730**	**1.91**	<1.50	**4.11**	<0.58	<1.21	<1.55	<1.21	<0.47	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.92	<0.64	<0.66
PSG-48	07/26/23	08/09/23	**1,690**	**1,010**	**1.52**	<1.50	<2.34	<0.58	<1.21	<1.55	<1.21	**0.62**	<1.50	<0.56	<1.50	<1.27	<0.66	<1.27	<1.93	<0.64	<0.66
PSG-49	07/26/23	08/09/23	**6,840**	**20,300**	**1.3**	**1.49**	**6.67**	**0.98**	**2.77**	**2.24**	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.66	<1.26	<1.94	<0.63	<0.66
PSG-50	07/26/23	08/09/23	<420	**620**	<1.21	<1.50	**2.78**	**8.95**	<1.21	<1.55	<1.21	**128**	<1.50	<0.56	**161**	<1.27	<0.66	<1.27	<1.95	<0.64	<0.66
PSG-51	07/25/23	08/08/23	<417	**702**	**1.29**	<1.49	**3.11**	**1.31**	<1.20	<1.54	<1.20	**131**	<1.49	<0.55	**184**	<1.26	<0.66	<1.26	<1.96	<0.63	<0.66
PSG-52	07/25/23	08/08/23	**777**	**1,130**	<1.20	**1.52**	**22.9**	**19.3**	<1.20	**2.3**	<1.20	<0.47	<1.49	<0.55	**3.92**	<1.26	<0.66	<1.26	<1.97	<0.63	<0.66
PSG-53	07/24/23	08/08/23	<395	**651**	<1.14	<1.41	**26**	**2.63**	<1.14	<1.46	<1.14	**1.72**	<1.41	<0.52	<1.41	<1.19	<0.62	<1.19	<1.98	<0.60	<0.62
PSG-54	07/24/23	08/08/23	<395	**462**	<1.14	<1.41	**9.48**	**40.4**	**4.14**	<1.46	<1.14	**21.1**	<1.41	<0.52	**22.4**	<1.19	<0.62	<1.19	<1.99	<0.60	<0.62
PSG-55	07/24/23	08/08/23	**1,260**	**431**	<1.14	<1.41	**6.46**	**6.45**	<1.14	<1.46	<1.14	<0.44	<1.41	<0.52	**1.56**	<1.19	<0.62	<1.19	<1.100	<0.60	<0.62
PSG-56	07/24/23	08/08/23	<395	**582**	<1.14	<1.41	**4.78**	<0.55	<1.14	<1.46	<1.14	<0.44	<1.41	<0.52	<1.41	<1.19	<0.62	<1.19	<1.101	<0.60	<0.62
PSG-57	07/25/23	08/08/23	**3,630**	**902**	<1.20	<1.49	**22.4**	**17.2**	<1.20	<1.53	<1.20	**10.6**	<1.49	<0.55	**3.81**	<1.26	<0.65	<1.26	<1.102	<0.63	<0.65
PSG-58	07/25/23	08/08/23	<416	**643**	<1.20	<1.49	**17.4**	**1.09**	<1.20	<1.53	<1.20	**3.42**	<1.49	<0.55	**1.77**	<1.26	<0.65	<1.26	<1.103	<0.63	<0.65
PSG-59	07/25/23	08/08/23	<416	**1,090**	**8.53**	<1.49	**5.63**	**72.9**	**110**	<1.53	<1.20	**5.35**	<1.49	<0.55	**2.29**	<1.26	<0.65	<1.26	<1.104	<0.63	<0.65
PSG-60	07/26/23	08/09/23	<418	<358	**40.1**	<1.50	**7.11**	<0.58	<1.20	<1.54	<1.20	<0.47	<1.50	<0.55	<1.50	<1.27	<0.66	<1.27	<1.105	<0.63	<0.66
PSG-61	07/25/23	08/08/23	**4,390**	**3,460**	<1.20	**1.71**	**100**	**19.1**	**10.3**	**6.43**	<1.20	**3.19**	<1.49	<0.55	**3.18**	<1.26	<0.65	<1.26	<1.106	<0.63	<0.65
PSG-61-Dup	07/25/23	08/08/23	**3,800**	**3,230**	<1.20	<1.49	**78.7**	**17.8**	**9.44**	**6.27**	<1.20	**2.95**	<1.49	<0.55	**3.58**	<1.26	<0.65	<1.26	<1.107	<0.63	<0.65
PSG-62	07/25/23	08/08/23	**7,030**	**25,100**	**43**	**3,920**	**9.55**	<0.58	<1.20	**1.92**	<1.20	<0.47	<1.49	<0.55	**25.1**	<1.26	<0.65	<1.26	<1.108	<0.63	<0.65
PSG-63	07/25/23	08/08/23	<417	**1,080**	**7.03**	**5.39**	**3.59**	<0.58	**2.64**	<1.54	<1.20	**1.15**	<1.49	<0.55	**2.73**	<1.26	<0.66	<1.26	<1.109	<0.63	<0.66
PSG-64	07/25/23	08/08/23	<417	**758**	**1.28**	<1.49	<2.32	<0.58	<1.20	<1.54	<1.20	<0.47	<1.49	<0.55	<1.49	<1.26	<0.66	<1.26	<1.110	<0.63	<0.66

Table A-6
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PSG-35	07/26/23	08/09/23	<0.88	**1.79**	<0.66	<0.66	**2.52**	<1.15	<0.58	<1.41	<0.93	**2.71**	<1.49	<1.41	<2.48	**4.2**	**6.91**	**20.4**	<1.13	<0.61
PSG-35-Dup	07/26/23	08/09/23	<0.88	**2.04**	<0.66	<0.66	**2.32**	<1.15	<0.58	<1.41	<0.93	**2.09**	<1.49	<1.41	<2.48	**3.66**	**5.93**	**18.4**	<1.13	<0.61
PSG-36	07/26/23	08/09/23	<0.89	**25.3**	<0.66	<0.66	**8.58**	<1.15	<0.58	<1.42	**27**	**8.21**	**7.9**	<1.42	<2.48	**15**	**23**	**41.4**	**3.42**	**4.97**
PSG-37	07/25/23	08/08/23	<0.88	<1.49	<0.66	<0.66	<1.62	<1.15	<0.58	<1.41	<0.93	**2.06**	<1.49	<1.41	<2.47	**3.96**	**8.6**	**3.87**	<1.12	<0.61
PSG-38	07/25/23	08/08/23	<0.88	**4.8**	<0.66	<0.66	**2.04**	<1.14	<0.58	<1.41	<0.93	<1.45	**1.64**	<1.41	<2.46	**2.92**	**4.65**	**6.4**	<1.12	<0.61
PSG-39	07/24/23	08/08/23	<0.83	<1.40	<0.62	<0.62	<1.53	<1.08	<0.55	<1.33	<0.88	**1.73**	<1.40	<1.33	<2.32	**2.95**	**6.54**	**7.81**	<1.06	<0.57
PSG-40	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	<1.46	<1.49	<1.42	<2.48	<1.41	**3.14**	<3.10	<1.13	<0.61
PSG-41	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	**2.42**	<1.46	<1.49	<1.42	<2.48	<1.41	<1.41	<3.10	<1.13	<0.61
PSG-42	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	**3.31**	<1.49	<1.42	<2.48	**4.8**	**13.8**	<3.10	<1.13	<0.61
PSG-43	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	<1.46	<1.49	<1.42	<2.48	**2.68**	**3.81**	<3.10	<1.13	<0.61
PSG-43-Dup	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	<1.46	<1.49	<1.42	<2.48	**2.6**	**3.78**	<3.10	<1.13	<0.61
PSG-44	07/25/23	08/08/23	<0.87	<1.48	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.92	<1.44	<1.48	<1.40	<2.45	<1.39	<1.39	<3.06	<1.11	<0.60
PSG-45	07/25/23	08/08/23	<0.88	**22.4**	<0.65	<0.65	**8.95**	<1.14	<0.58	<1.40	<0.93	**12.4**	**11.5**	<1.40	<2.45	**28.7**	**30.4**	**53.8**	<1.12	<0.61
PSG-46	07/25/23	08/08/23	<0.88	**11.6**	<0.65	<0.65	**3.97**	<1.14	<0.58	<1.40	**1.4**	**4.62**	**6.78**	<1.40	<2.45	**8.63**	**8.81**	**30.3**	<1.12	<0.61
PSG-47	07/26/23	08/09/23	<0.88	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.94	**10.6**	<1.49	<1.42	<2.48	**16.1**	**45.1**	**4.14**	<1.13	<0.61
PSG-48	07/26/23	08/09/23	<0.88	**6.71**	<0.66	<0.66	<1.63	<1.15	<0.58	<1.42	<0.93	**59.9**	**3.74**	<1.42	<2.48	**123**	**225**	<3.10	<1.13	<0.61
PSG-49	07/26/23	08/09/23	<0.88	<1.48	<0.66	<0.66	<1.62	<1.14	<0.58	<1.41	**1.55**	<1.45	<1.48	<1.41	<2.46	<1.40	**2.85**	**4.88**	<1.12	<0.61
PSG-50	07/26/23	08/09/23	<0.89	<1.49	<0.66	<0.66	<1.63	<1.15	<0.58	**6.35**	<0.94	<1.46	<1.49	<1.42	<2.48	<1.41	**2**	<3.10	<1.13	**2.58**
PSG-51	07/25/23	08/08/23	<0.88	<1.48	<0.66	<0.66	<1.62	<1.15	<0.58	<1.41	<0.93	**2.52**	<1.48	<1.41	<2.46	**5.13**	**11.8**	**3.99**	<1.12	**1.26**
PSG-52	07/25/23	08/08/23	<0.88	**2.43**	<0.66	<0.66	**3.23**	<1.15	<0.58	<1.41	<0.93	**3.32**	<1.48	<1.41	<2.46	**7.28**	**14.7**	**10.4**	<1.12	**1.97**
PSG-53	07/24/23	08/08/23	<0.83	<1.40	<0.62	<0.62	<1.53	<1.08	<0.55	<1.33	<0.88	<1.37	<1.40	<1.33	<2.33	<1.32	**1.69**	**6.63**	<1.06	<0.57
PSG-54	07/24/23	08/08/23	<0.83	<1.40	<0.62	<0.62	<1.53	<1.08	<0.55	<1.33	<0.88	<1.37	<1.40	<1.33	<2.33	**2.35**	**4.51**	<2.91	<1.06	**3.21**
PSG-55	07/24/23	08/08/23	<0.83	<1.40	<0.62	<0.62	<1.53	<1.08	<0.55	<1.33	**35.6**	<1.37	**1.7**	<1.33	<2.33	<1.32	<1.32	<2.91	**5.97**	**3.58**
PSG-56	07/24/23	08/08/23	<0.83	<1.40	<0.62	<0.62	<1.53	<1.08	<0.55	<1.33	<0.88	<1.37	<1.40	<1.33	<2.33	**1.44**	**3.03**	**3.32**	<1.06	<0.58
PSG-57	07/25/23	08/08/23	<0.88	**8.46**	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.93	<1.44	<1.48	<1.40	<2.45	**3.22**	**3.56**	**13.5**	<1.12	**0.65**
PSG-58	07/25/23	08/08/23	<0.88	**6.97**	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.93	<1.44	**2.03**	<1.40	<2.45	**2.17**	**3.53**	**8.54**	<1.11	<0.61
PSG-59	07/25/23	08/08/23	<0.88	<1.48	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	<0.93	**4.2**	<1.48	<1.40	<2.45	**9.54**	**19.3**	**4.23**	<1.12	**1.41**
PSG-60	07/26/23	08/09/23	<0.88	<1.49	<0.66	<0.66	<1.62	<1.15	<0.58	<1.41	<0.93	<1.45	<1.49	<1.41	<2.47	<1.40	<1.40	<3.09	<1.12	<0.61
PSG-61	07/25/23	08/08/23	<0.88	**32.2**	<0.65	<0.65	**4.32**	<1.14	<0.58	<1.40	<0.93	**9.1**	**15.7**	<1.40	<2.45	**42.2**	**28.6**	**57.4**	<1.12	<0.61
PSG-61-Dup	07/25/23	08/08/23	<0.88	**31.3**	<0.65	<0.65	**3.94**	<1.14	<0.58	<1.40	<0.93	**7.98**	**15.8**	<1.40	<2.45	**41.6**	**29**	**43.3**	<1.12	**0.97**
PSG-62	07/25/23	08/08/23	<0.88	**2.73**	<0.65	<0.65	<1.61	<1.14	<0.58	<1.40	**63.7**	<1.44	<1.48	<1.40	<2.45	**2.11**	**2.49**	**9.81**	**16.6**	<0.61
PSG-63	07/25/23	08/08/23	<0.88	<1.48	<0.66	<0.66	<1.62	<1.14	<0.58	**2.56**	<0.93	<1.45	<1.48	<1.41	<2.46	**1.67**	**3.02**	<3.08	<1.12	<0.61
PSG-64	07/25/23	08/08/23	<0.88	<1.48	<0.66	<0.66	<1.62	<1.14	<0.58	<1.41	<0.93	<1.45	<1.48	<1.41	<2.46	<1.40	<1.40	<3.08	<1.12	<0.61

Table A-6
Summary of Passive Soil Gas Analytical Results- Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Notes:

TPH = Total Petroleum Hydrocarbons

VOCs = Volatile Organic Compounds

-- = not analyzed, not applicable, or not established

µg/m^3 = micrograms per cubic meter

<X = not detected at or above laboratory reporting limit X.

Bold text indicates a concentration detected above the laboratory reporting limit.

Yellow highlighted concentrations indicate an exceedance of the Commercial/Industrial ESL for Vapor Intrusion Risk

TPH analyzed by United States Environmental Protection Agency (USEPA) Method 8260C.

VOCs analyzed by EPA Method 8260C.

[1] Sample IDs with '-Dup' indicates the sample was a duplicate sample of the sample ID listed (i.e. PSG-15-Dup is a duplicate of PSG-15).

[2] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels (Table SG-1) Commercial/Industrial.* January 2019 (Revision 2).

Table A-7
Summary of Groundwater Analytical Results - Metals (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Sample Date	Unfiltered Metals																	
		Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Cadmium µg/L	Chromium µg/L	Hexavalent Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Thallium µg/L	Vanadium µg/L	Zinc µg/L
MCL Priority List[1]		*6.0E+00*	*1.0E+01*	*1.0E+03*	*4.0E+00*	--	*5.0E+01*	*2.0E-02*	*6.0E+00*	*1.0E+03*	*1.5E+01*	*2.0E+00*	*1.0E+02*	*1.0E+02*	*5.0E+01*	*1.0E+02*	*2.0E+00*	--	*5.0E+03*
MW-10	08/09/23	<40	**31**	**1100**	**2.4**	<5.0	**270**	<1.0	**58**	**140**	**64**	<0.40	<10	**330**	<30	<5.0	<50	**260**	**280**
MW-11	08/09/23	<40	<10	**140**	<1.0	<5.0	**18**	<1.0	<5.0	**10**	<10	<0.40	**15**	**24**	<30	<5.0	<50	**22**	<50
MW-12	08/09/23	<40	<10	**140**	<1.0	<5.0	<10	<1.0	<5.0	<10	<10	<0.40	<10	**14**	<30	<5.0	<50	**9.9**	<50
MW-13	08/09/23	<40	<10	**240**	<1.0	<5.0	**20**	<1.0	<5.0	<10	<10	<0.40	<10	**27**	<30	<5.0	<50	**17**	<50
MW-14	08/09/23	<40	<10	**110**	<1.0	<5.0	**22**	<1.0	**6.1**	**12**	<10	<0.40	<10	**30**	<30	<5.0	<50	**25**	<50
MW-15	08/09/23	<40	<10	**67**	<1.0	<5.0	<10	<1.0	<5.0	<10	<10	<0.40	**16**	**13**	<30	<5.0	<50	**13**	<50
MW-16	08/09/23	<40	<10	**85**	<1.0	<5.0	<10	<1.0	<5.0	<10	<10	<0.40	**15**	<10	<30	<5.0	<50	<5.0	<50
MW-17	08/09/23	<40	**39**	**1600**	**3.1**	<5.0	**440**	<1.0	**120**	**250**	**88**	<0.40	<10	**460**	<30	<5.0	<50	**400**	**430**

Sample ID	Sample Date	Filtered Metals																	
		Antimony µg/L	Arsenic µg/L	Barium µg/L	Beryllium µg/L	Cadmium µg/L	Chromium µg/L	Hexavalent Chromium µg/L	Cobalt µg/L	Copper µg/L	Lead µg/L	Mercury µg/L	Molybdenum µg/L	Nickel µg/L	Selenium µg/L	Silver µg/L	Thallium µg/L	Vanadium µg/L	Zinc µg/L
MCL Priority List[1]		*6.0E+00*	*1.0E+01*	*1.0E+03*	*4.0E+00*	--	*5.0E+01*	*2.0E-02*	*6.0E+00*	*1.0E+03*	*1.5E+01*	*2.0E+00*	*1.0E+02*	*1.0E+02*	*5.0E+01*	*1.0E+02*	*2.0E+00*	--	*5.0E+03*
MW-10	08/09/23	<40	**15**	**59**	<1.0	<5.0	<10	**--**	<5.0	<10	<10	<0.40	**12**	<10	<30	<5.0	<50	<5.0	<50
MW-11	08/09/23	<40	<10	**65**	<1.0	<5.0	<10	**--**	<5.0	<10	<10	<0.40	<10	<10	<30	<5.0	<50	**7**	<50
MW-12	08/09/23	<40	<10	**120**	<1.0	<5.0	<10	**--**	<5.0	<10	<10	<0.40	<10	<10	<30	<5.0	<50	**5.7**	<50
MW-13	08/09/23	<40	<10	**200**	<1.0	<5.0	<10	**--**	<5.0	<10	<10	<0.40	<10	<10	<30	<5.0	<50	<5.0	<50
MW-14	08/09/23	<40	<10	**59**	<1.0	<5.0	<10	**--**	<5.0	<10	<10	<0.40	<10	<10	<30	<5.0	<50	<5.0	<50
MW-15	08/09/23	<40	<10	**44**	<1.0	<5.0	<10	**--**	<5.0	<10	<10	<0.40	<10	<10	<30	<5.0	<50	<5.0	<50
MW-16	08/09/23	<40	<10	**76**	<1.0	<5.0	<10	**--**	<5.0	<10	<10	<0.40	<10	<10	<30	<5.0	<50	<5.0	<50
MW-17	08/09/23	<40	**12**	**76**	<1.0	<5.0	<10	**--**	<5.0	<10	<10	**0.67**	<10	<10	<30	<5.0	<50	<5.0	<50

Notes:

-- = not established or not analyzed

µg/L = micrograms per liter

<X = Not detected at or above laboratory reporting limit X.

Bold text indicates a concentration detected above the laboratory reporting limit.

Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs

Metals analyzed by United States Environmental Protection Agency (USEPA) Methods 6010B/7470A. Hexavalent Chromium analyzed by EPA 218.6.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

Table A-8
Summary of Groundwater Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Sample Date	TPH			VOCs													
		TPH-Gasoline (TPH-g) µg/L	TPH-Diesel (TPH-d) µg/L	TPH-Motor Oil (TPH-mo) µg/L	1,1-Dichloroethene (1,1-DCE) µg/L	1,2-Dichloroethane (1,2-DCA) µg/L	Vinyl Chloride µg/L	1,1,1,2-Tetrachloroethane µg/L	1,1,1-Trichloroethane µg/L	1,1,2,2-Tetrachloroethane µg/L	1,1,2-Trichloroethane µg/L	1,1-Dichloroethane µg/L	1,1-Dichloropropene µg/L	1,2,3-Trichlorobenzene µg/L	1,2,3-Trichloropropane µg/L	1,2,4-Trichlorobenzene µg/L	1,2,4-Trimethylbenzene µg/L	1,2-Dibromo-3-Chloropropane µg/L
MCL Priority List[1]		*7.6E+02*	*2.0E+02*	*--*	*6.0E+00*	*5.0E-01*	*5.0E-01*	*5.7E-01*	*2.0E+02*	*1.0E+00*	*5.0E+00*	*5.0E+00*	*--*	*--*	*5.0E-03*	*5.0E+00*	*--*	*2.0E-01*
Commercial/Industrial ESLs[2]		*--*	*--*	*--*	*2.8E+02*	*9.8E+00*	*1.4E-01*	*1.7E+01*	*6.3E+03*	*1.4E+01*	*2.3E+01*	*3.3E+01*	*--*	*--*	*9.4E+01*	*1.5E+02*	*--*	*3.4E-01*
MW-10	08/09/23	<50	<110	<320	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MW-11	08/09/23	**1100**	**190**	<310	<0.5	**0.8**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MW-12	08/09/23	<50	<96	<290	**200**	<0.5	**2.9**	<0.5	<0.5	<0.5	<0.5	**3.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MW-13	08/09/23	**120**	**240**	<290	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MW-14	08/09/23	<50	**160**	<290	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MW-15	08/09/23	<50	<93	<280	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MW-16	08/09/23	<50	**700**	**350**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0
MW-17	08/09/23	<50	**240**	<310	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0

Notes:

VOC = Volatile Organic Compund

TPH = Total Petroleum Hydrocarbons

MCLs = California Maximum Contaminant Level

ESLs = Environmental Screening Levels

-- = not established

<X = not detected at or above laboratory reporting limit X.

µg/L = micrograms per liter

Bold text indicates a concentration detected above the laboratory reporting limit.

Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs

Green highlighted concentrations indicate an exceedance of both the MCL Priority ESLs and the GW Vapor Intrusion Commercial/Industrial ESLs

VOCs analyzed by Environmental Protection Agency (USEPA) Method 8260B.

TPH-g analyzed by EPA Method 8260B

TPH-d and TPH-mo analyzed by EPA Method 8015B.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

[2] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3) Commercial/Industrial.* January 2019 (Revision 2).

Table A-8
Summary of Groundwater Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

		VOCs																
Sample ID	**Sample Date**	**1,2-Dibromoethane** µg/L	**1,2-Dichlorobenzene** µg/L	**1,2-Dichloropropane** µg/L	**1,3,5-Trimethylbenzene** µg/L	**1,3-Dichlorobenzene** µg/L	**1,3-Dichloropropane** µg/L	**1,4-Dichlorobenzene** µg/L	**2,2-Dichloropropane** µg/L	**2-Butanone** µg/L	**2-Chlorotoluene** µg/L	**4-Chlorotoluene** µg/L	**4-Methyl-2-Pentanone** µg/L	**Acetone** µg/L	**Benzene** µg/L	**Bromobenzene** µg/L	**Bromochloromethane** µg/L	**Bromodichloromethane** µg/L
MCL Priority List[1]		*5.0E-02*	*1.0E+02*	*5.0E+00*	--	*6.0E+02*	--	*5.0E+00*	--	*5.6E+03*	--	--	*1.2E+02*	*1.4E+04*	*1.0E+00*	--	--	*8.0E+01*
Commercial/Industrial ESLs[2]		*7.6E-01*	*1.1E+04*	*1.0E+01*	--	--	--	*1.1E+01*	--	*9.5E+06*	--	--	*2.3E+06*	*9.7E+07*	*1.8E+00*	--	--	*3.8E+00*
MW-10	08/09/23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<20	<0.5	<1.0	<0.5	<0.5
MW-11	08/09/23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<20	<0.5	<1.0	<0.5	<0.5
MW-12	08/09/23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<20	<0.5	<1.0	<0.5	<0.5
MW-13	08/09/23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<20	<0.5	<1.0	<0.5	<0.5
MW-14	08/09/23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<20	<0.5	<1.0	<0.5	<0.5
MW-15	08/09/23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<20	<0.5	<1.0	<0.5	<0.5
MW-16	08/09/23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<20	<0.5	<1.0	<0.5	<0.5
MW-17	08/09/23	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5	<5.0	<20	<0.5	<1.0	<0.5	<0.5

Notes:

VOC = Volatile Organic Compund

TPH = Total Petroleum Hydrocarbons

MCLs = California Maximum Contaminant Level

ESLs = Environmental Screening Levels

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Bold text indicates a concentration detected above the laboratory reporting limit.

Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs

Green highlighted concentrations indicate an exceedance of both the MCL Priority ESLs and the GW Vapor Intrusion Commercial/Industrial ESLs

VOCs analyzed by Environmental Protection Agency (USEPA) Method 8260B.

TPH-g analyzed by EPA Method 8260B

TPH-d and TPH-mo analyzed by EPA Method 8015B.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

[2] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3) Commercial/Industrial.* January 2019 (Revision 2).

Table A-8
Summary of Groundwater Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

		VOCs																
Sample ID	**Sample Date**	**Bromoform** µg/L	**Bromomethane** µg/L	**Carbon Tetrachloride** µg/L	**Chlorobenzene** µg/L	**Chloroethane** µg/L	**Chloroform** µg/L	**Chloromethane** µg/L	**cis-1,2-Dichloroethene** µg/L	**cis-1,3-Dichloropropene** µg/L	**Dibromochloromethane** µg/L	**Dibromomethane** µg/L	**Dichlorodifluoromethane (Freon-12)** µg/L	**Ethylbenzene** µg/L	**Freon 113** µg/L	**Hexachlorobutadiene** µg/L	**Isopropylbenzene** µg/L	**m,p-Xylenes** µg/L
MCL Priority List[1]		*8.0E+01*	*7.5E+00*	*5.0E-01*	*7.0E+01*	*2.1E+04*	*8.0E+01*	*1.9E+02*	*6.0E+00*	--	*8.0E+01*	--	--	*3.0E+01*	--	*1.4E-01*	--	--
Commercial/Industrial ESLs[2]		*5.1E+02*	*7.3E+01*	*1.9E+00*	*1.7E+03*	*9.7E+04*	*3.6E+00*	*1.1E+03*	*2.1E+02*	--	--	--	--	*1.5E+01*	--	*1.3E+00*	--	--
MW-10	08/09/23	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.0
MW-11	08/09/23	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	**2.3**	<0.5	<2.0	**4.9**	<1.0
MW-12	08/09/23	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**2.9**	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.0
MW-13	08/09/23	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.0
MW-14	08/09/23	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.0
MW-15	08/09/23	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.0
MW-16	08/09/23	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.0
MW-17	08/09/23	<1.0	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	**0.5**	<1.0	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<1.0

Notes:

VOC = Volatile Organic Compund

TPH = Total Petroleum Hydrocarbons

MCLs = California Maximum Contaminant Level

ESLs = Environmental Screening Levels

-- = not established

<X = not detected at or above laboratory reporting limit X.

µg/L = micrograms per liter

Bold text indicates a concentration detected above the laboratory reporting limit.

Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs

Green highlighted concentrations indicate an exceedance of both the MCL Priority ESLs and the GW Vapor Intrusion Commercial/Industrial ESLs

VOCs analyzed by Environmental Protection Agency (USEPA) Method 8260B.

TPH-g analyzed by EPA Method 8260B

TPH-d and TPH-mo analyzed by EPA Method 8015B.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

[2] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3) Commercial/Industrial.* January 2019 (Revision 2).

Table A-8
Summary of Groundwater Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

		VOCs														
Sample ID	**Sample Date**	**Methyl-tert-butyl ether (MTBE)**	**Methylene Chloride**	**n-Butylbenzene**	**n-Propylbenzene**	**o-Xylene**	**para-Isopropyl Toluene**	**sec-Butylbenzene**	**Styrene**	**tert-Butylbenzene**	**Tetrachloroethene (PCE)**	**Toluene**	**trans-1,2-Dichloroethene**	**trans-1,3-Dichloropropene**	**Trichloroethene (TCE)**	**Trichlorofluoromethane**
		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
MCL Priority List[1]		*5.0E+00*	*5.0E+00*	--	--	--	--	--	*1.0E+01*	--	*5.0E+00*	*4.0E+01*	*1.0E+01*	--	*5.0E+00*	--
Commercial/Industrial ESLs[2]		*2.0E+03*	*9.4E+01*	--	--	--	--	--	*3.6E+04*	--	*2.8E+00*	*4.9E+03*	*9.2E+02*	--	*7.5E+00*	--
MW-10	08/09/23	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-11	08/09/23	<0.5	<10	**1.5**	**8.7**	<0.5	<0.5	**1.7**	<0.5	**1.2**	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-12	08/09/23	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-13	08/09/23	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-14	08/09/23	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-15	08/09/23	**3.5**	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-16	08/09/23	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
MW-17	08/09/23	<0.5	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	**0.8**	<0.5	<0.5	<0.5	**1.0**	<0.5

Notes:

VOC = Volatile Organic Compund

TPH = Total Petroleum Hydrocarbons

MCLs = California Maximum Contaminant Level

ESLs = Environmental Screening Levels

-- = not established

<X = not detected at or above laboratory reporting limit X.

µg/L = micrograms per liter

Bold text indicates a concentration detected above the laboratory reporting limit.

Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs

Green highlighted concentrations indicate an exceedance of both the MCL Priority ESLs and the GW Vapor Intrusion Commercial/Industrial ESLs

VOCs analyzed by Environmental Protection Agency (USEPA) Method 8260B.

TPH-g analyzed by EPA Method 8260B

TPH-d and TPH-mo analyzed by EPA Method 8015B.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

[2] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3) Commercial/Industrial.* January 2019 (Revision 2).

Table A-9
Summary of Groundwater Analytical Results - PAHs (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Sample Date	Naphthalene µg/L	1-Methylnaphthalene µg/L	2-Methylnaphthalene µg/L	Acenaphthene µg/L	Acenaphthylene µg/L	Anthracene µg/L	Benzo(a)anthracene µg/L	Benzo(a)pyrene µg/L	Benzo(b)fluoranthene µg/L	Benzo(g,h,i)perylene µg/L	Benzo(k)fluoranthene µg/L	Chrysene µg/L	Dibenzo(a,h)anthracene µg/L	Fluoranthene µg/L	Fluorene µg/L	Indeno(1,2,3-cd)pyrene µg/L	Phenanthrene µg/L	Pyrene µg/L
MCL Priority List[1]		*1.7E-01*	--	*3.6E+01*	*5.3E+02*	--	*1.8E+03*	*1.7E-02*	*2.0E-01*	*2.5E-01*	--	*2.5E+00*	*2.5E+01*	*2.5E-02*	*8.0E+02*	*2.9E+02*	*2.5E-01*	--	*1.2E+02*
Commercial/Industrial ESLs[2]		*2.0E+01*	--	--	--	--	--	*2.3E+02*	--	--	--	--	--	--	--	--	--	--	--
MW-10	08/09/23	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54	<0.54
MW-11	08/09/23	**2.8**	**7.4**	**4.4**	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52
MW-12	08/09/23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-13	08/09/23	<0.48	**1.2**	**0.92**	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48
MW-14	08/09/23	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48
MW-15	08/09/23	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
MW-16	08/09/23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-17	08/09/23	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52	<0.52

Notes:
PAHs = Polyaromatic Hydrocarbons
MCLs = California Maximum Contaminant Level
ESLs = Environmental Screening Levels
-- = not established
µg/L = micrograms per liter
<X = Not detected at or above laboratory reporting limit X.
Bold text indicates a concentration detected above the laboratory reporting limit.
Yellow highlighted concentrations indicate an exceedance of the MCL Priority ESLs
PAHs analyzed by Environmental Protection Agency (USEPA) Method 8270C-selected ion monitoring (SIM) mode.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

[2] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Groundwater Vapor Intrusion Human Health Risk Levels (Table GW-3) Commercial/Industrial.* January 2019 (Revision 2).

Table A-10
Summary of Groundwater Analytical Results - Pesticides (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Sample Date	4,4'-DDD µg/L	4,4'-DDE µg/L	4,4'-DDT µg/L	Aldrin µg/L	α-BHC µg/L	β-BHC µg/L	γ-BHC (Lindane) µg/L	δ-BHC µg/L	Chlordane - Technical µg/L	Dieldrin µg/L	Endosulfan I µg/L	Endosulfan II µg/L	Endosulfan sulfate µg/L	Endrin µg/L	Endrin aldehyde µg/L	Endrin ketone µg/L	Heptachlor µg/L	Heptachlor epoxide µg/L	Methoxychlor µg/L	Toxaphene µg/L
MCL Priority List[1]		*3.1E-02*	*4.6E-02*	*2.3E-01*	*9.2E-04*	--	--	*2.0E-01*	--	--	*7.1E-04*	--	--	--	*2.0E+00*	--	--	*1.0E-02*	*1.0E-02*	*3.0E+01*	*3.0E+00*
Commercial/Industrial ESLs[2]		--	*7.4E+01*	--	*1.4E+00*	--	--	--	--	--	*6.5E+00*	--	--	--	--	--	--	*7.9E-01*	*5.5E+00*	--	--
MW-10	08/09/23	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<1.0	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<2.0
MW-11	08/09/23	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<1.0	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<2.0
MW-12	08/09/23	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<1.0	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<2.0
MW-13	08/09/23	<0.09	<0.09	<0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.9	<0.09	<0.05	<0.09	<0.09	<0.09	<0.09	<0.09	<0.05	<0.05	<0.09	<1.9
MW-14	08/09/23	<0.09	<0.09	<0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.9	<0.09	<0.05	<0.09	<0.09	<0.09	<0.09	<0.09	<0.05	<0.05	<0.09	<1.9
MW-15	08/09/23	<0.09	<0.09	<0.09	<0.05	<0.05	<0.05	<0.05	<0.05	<0.9	<0.09	<0.05	<0.09	<0.09	<0.09	<0.09	<0.09	<0.05	<0.05	<0.09	<1.9
MW-16	08/09/23	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<1.0	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<2.0
MW-17	08/09/23	<0.1	<0.1	<0.1	<0.05	<0.05	<0.05	<0.05	<0.05	<1.0	<0.1	<0.05	<0.1	<0.1	<0.1	<0.1	<0.1	<0.05	<0.05	<0.1	<1.9

Notes:

MCLs = California Maximum Contaminant Level

ESLs = Environmental Screening Levels

Pesticides analyzed by Environmental Protection Agency (USEPA) Method 8081A.

-- = not established

µg/L = micrograms per liter

<X = Not detected at or above laboratory reporting limit X.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

Table A-11
Summary of Groundwater Analytical Results - PCBs (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Sample Date	Aroclor-1016 µg/L	Aroclor-1221 µg/L	Aroclor-1232 µg/L	Aroclor-1242 µg/L	Aroclor-1248 µg/L	Aroclor-1254 µg/L	Aroclor-1260 µg/L
MCL Priority List[1]		*5.00E-01*	*5.00E-01*	*5.00E-01*	*5.00E-01*	*5.00E-01*	*5.00E-01*	*5.00E-01*
MW-10	08/09/23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-11	08/09/23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-12	08/09/23	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49	<0.49
MW-13	08/09/23	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
MW-14	08/09/23	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47	<0.47
MW-15	08/09/23	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46	<0.46
MW-16	08/09/23	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
MW-17	08/09/23	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48	<0.48

Notes:

PCB = Polychlorinated biphenyl

MCLs = California Maximum Contaminant Level

PCBs analyzed by Environmental Protection Agency Method SW8082.

µg/L = micrograms per liter

<X = Not detected at or above laboratory reporting limit X.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table GW-1) MCL Priority.* January 2019 (Revision 2).

Table A-12
Summary of Soil Analytical Results - Metals (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Depth (ft bgs)	Sample Date	Antimony mg/kg	Arsenic[2] mg/kg	Barium mg/kg	Beryllium mg/kg	Cadmium mg/kg	Total Chromium mg/kg	Cobalt mg/kg	Copper mg/kg	Lead mg/kg	Mercury mg/kg	Molybdenum mg/kg	Nickel mg/kg	Selenium mg/kg	Silver mg/kg	Thallium mg/kg	Vanadium mg/kg	Zinc mg/kg
Commercial/Industrial ESLs[1]			*1.6E+02*	*1.1E+01*	*2.2E+05*	*2.3E+02*	*1.1E+03*	*--*	*3.5E+02*	*4.7E+04*	*3.2E+02*	*1.9E+02*	*5.8E+03*	*1.1E+04*	*5.8E+03*	*5.8E+03*	*1.2E+01*	*5.8E+03*	*3.5E+05*
MW-10-5.0	5	07/26/23	<0.96	**7.2**	**260**	<0.96	<0.48	**67**	**10**	**37**	**10**	<0.16	<0.96	**56**	<1.9	<0.48	<0.96	**66**	**74**
MW-10-10.0	10	07/26/23	<0.97	**8.4**	**290**	<0.97	<0.49	**67**	**12**	**34**	**9.1**	<0.15	<0.97	**57**	<1.9	<0.49	<0.97	**66**	**69**
MW-10-15.0	15	07/26/23	<0.95	**4.9**	**170**	<0.95	<0.48	**57**	**13**	**23**	**8.4**	<0.16	<0.95	**66**	<1.9	<0.48	<0.95	**42**	**48**
MW-11-5.0	5	07/25/23	<0.99	**9.4**	**300**	<0.99	**3**	**89**	**34**	**49**	**76**	**0.2**	<0.99	**220**	<2.0	<0.50	<0.99	**70**	**2200**
MW-11-10.0	10	07/25/23	<0.97	**5.1**	**320**	<0.97	<0.49	**59**	**9.5**	**34**	**15**	<0.16	<0.97	**55**	<1.9	<0.49	<0.97	**47**	**78**
MW-11-14.0	14	07/25/23	<0.97	**6.7**	**170**	<0.97	<0.49	**39**	**15**	**27**	**13**	<0.16	<0.97	**49**	<1.9	<0.49	<0.97	**50**	**55**
MW-11-15.0	15	07/25/23	<0.96	**3.8**	**190**	<0.96	<0.48	**53**	**12**	**22**	**8.5**	<0.15	<0.96	**72**	<1.9	<0.48	<0.96	**34**	**54**
MW-12-5.0	5	07/25/23	<0.96	**2.8**	**260**	<0.96	**0.75**	**28**	**6.3**	**21**	**81**	<0.16	<0.96	**28**	<1.9	<0.48	<0.96	**24**	**590**
MW-12-10.0	10	07/25/23	<0.95	**6.5**	**300**	<0.95	<0.48	**66**	**18**	**34**	**17**	**0.19**	<0.95	**60**	<1.9	<0.48	<0.95	**59**	**69**
MW-12-15.0	15	07/25/23	<0.98	**6.6**	**130**	<0.98	<0.49	**52**	**12**	**24**	**11**	<0.15	<0.98	**62**	<2.0	<0.49	<0.98	**44**	**53**
MW-12-20.0	20	07/25/23	<0.95	**7.3**	**200**	<0.95	<0.48	**52**	**13**	**23**	**11**	<0.15	<0.95	**56**	<1.9	<0.48	<0.95	**46**	**52**
MW-12-25.0	25	07/25/23	<0.97	**16**	**210**	<0.97	<0.49	**56**	**15**	**39**	**17**	<0.15	<0.97	**61**	<1.9	<0.49	<0.97	**75**	**90**
MW-13-3.0	3	07/31/23	**3.8**	**65**	**4600**	<0.99	**5.7**	**81**	**6.7**	**61**	**200**	**0.49**	<0.99	**25**	**36**	<0.50	<0.99	**18**	**200**
MW-13-5.0	5	07/31/23	<0.97	**15**	**1200**	<0.97	**0.94**	**64**	**9.6**	**30**	**33**	<0.16	<0.97	**52**	**5.6**	<0.49	<0.97	**47**	**81**
MW-13-6.0	6	07/31/23	<0.97	**6.9**	**320**	<0.97	<0.49	**65**	**13**	**32**	**14**	<0.15	<0.97	**58**	<1.9	<0.49	<0.97	**67**	**66**
MW-13-10.0	10	07/31/23	<0.96	**5.1**	**210**	<0.96	<0.48	**59**	**11**	**29**	**7**	<0.14	<0.96	**45**	<1.9	<0.48	<0.96	**52**	**52**
MW-13-15.0	15	07/31/23	<0.97	**3.8**	**200**	<0.97	<0.49	**53**	**14**	**24**	**6.8**	<0.16	<0.97	**59**	<1.9	<0.49	<0.97	**38**	**58**
MW-13-20.0	20	07/31/23	<0.95	**1.9**	**180**	<0.95	**0.48**	**51**	**12**	**25**	**5.3**	<0.14	<0.95	**54**	<1.9	<0.48	<0.95	**33**	**53**
MW-14-5.0	5	07/28/23	<0.99	**2.3**	**260**	<0.99	<0.50	**55**	**7.5**	**28**	**7**	<0.16	<0.99	**44**	<2.0	<0.50	<0.99	**43**	**58**
MW-14-10.0	10	07/28/23	<0.96	**5.7**	**130**	<0.96	<0.48	**46**	**12**	**21**	**5.9**	<0.16	<0.96	**61**	<1.9	<0.48	<0.96	**33**	**46**
MW-14-15.0	15	07/28/23	<0.98	**4.7**	**83**	<0.98	<0.49	**33**	**8.1**	**16**	**4.3**	**0.62**	<0.98	**38**	<2.0	<0.49	<0.98	**28**	**38**
MW-15-5.0	5	07/28/23	<0.97	**3.5**	**110**	<0.97	<0.49	**28**	**6.9**	**13**	**4.1**	<0.16	<0.97	**34**	<1.9	<0.49	<0.97	**24**	**30**
MW-15-10.0	10	07/28/23	<0.96	**4.6**	**120**	<0.96	<0.48	**32**	**9**	**14**	**4.7**	<0.16	<0.96	**38**	<1.9	<0.48	<0.96	**27**	**34**
MW-15-15.0	15	07/28/23	<0.99	**2.6**	**120**	<0.99	<0.50	**42**	**8.7**	**20**	**5.7**	<0.15	<0.99	**48**	<2.0	<0.50	<0.99	**34**	**45**
MW-16-5.0	5	07/27/23	**2.9**	**13**	**200**	<0.99	**2.6**	**80**	**17**	**120**	**630**	**2.9**	**1.5**	**44**	<2.0	<0.50	<0.99	**92**	**600**
MW-16-10.0	10	07/27/23	<0.96	**5.5**	**88**	<0.96	<0.48	**62**	**17**	**40**	**14**	<0.16	<0.96	**35**	<1.9	<0.48	<0.96	**90**	**92**
MW-16-15.0	15	07/27/23	<0.97	**5.3**	**130**	<0.97	<0.49	**35**	**9.3**	**18**	**5.6**	<0.15	<0.97	**47**	<1.9	<0.49	<0.97	**30**	**40**
MW-17-5.0	5	07/26/23	<0.98	**7.5**	**140**	<0.98	<0.49	**58**	**11**	**37**	**13**	<0.16	<0.98	**54**	<2.0	<0.49	<0.98	**54**	**82**
MW-17-10.0	10	07/26/23	<0.96	**6.9**	**400**	<0.96	<0.48	**64**	**11**	**34**	**8.4**	<0.16	<0.96	**52**	<1.9	<0.48	<0.96	**64**	**61**
MW-17-15.0	15	07/26/23	<0.96	**5.8**	**200**	<0.96	<0.48	**63**	**11**	**34**	**6.7**	<0.14	<0.96	**53**	<1.9	<0.48	<0.96	**59**	**60**

Notes:

ESLs = Environmental Screening Levels

-- = not established

mg/kg = milligrams per kilogram

ft bgs = feet below ground surface

<X = Not detected at or above laboratory reporting limit X.

Bold text indicates a concentration detected above the laboratory reporting limit.

Green highlighted concentration indicate an exceedance of the Commercial/Industrial ESLs

Metals analyzed by United States Environmental Protection Agency (USEPA) Methods 6020/7471A.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table S-1) Commercial/Industrial: Shallow Soil Exposure.* January 2019 (Revision 2).

[2] Arsenic concentrations are compared to the accepted background concentration for the San Francisco Bay Region as presented in " *Establishing Background Arsenic in Soil of The Urbanized San Francisco Bay Region* " by Dylan Jacques Duverge, December 2011.

Table A-13
Summary of Soil Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Depth (ft bgs)	Sample Date	TPH			VOCs																
			TPH-Gasoline mg/kg	TPH-Diesel mg/kg	TPH-Motor Oil mg/kg	1,1,1,2-Tetrachloroethane µg/kg	1,1,1-Trichloroethane µg/kg	1,1,2,2-Tetrachloroethane µg/kg	1,1,2-Trichloroethane µg/kg	1,1-Dichloroethane µg/kg	1,1-Dichloroethene µg/kg	1,1-Dichloropropene µg/kg	1,2,3-Trichlorobenzene µg/kg	1,2,3-Trichloropropane µg/kg	1,2,4-Trichlorobenzene µg/kg	1,2,4-Trimethylbenzene µg/kg	1,2-Dibromo-3-Chloropropane µg/kg	1,2-Dibromoethane µg/kg	1,2-Dichlorobenzene µg/kg	1,2-Dichloroethane µg/kg	1,2-Dichloropropane µg/kg	1,3,5-Trimethylbenzene µg/kg
Commercial/Industrial ESLs[1]			*2.0E+03*	*1.2E+03*	*1.8E+05*	*8.9E+03*	*7.3E+06*	*2.7E+03*	*5.1E+03*	*1.6E+04*	*3.5E+05*	--	--	*1.1E+02*	*1.1E+05*	--	*5.9E+01*	*1.6E+02*	*9.4E+06*	*2.1E+03*	*4.4E+03*	--
MW-10-5.0	5	07/26/23	<0.7	<9.9	<20	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
MW-10-10.0	10	07/26/23	<0.6	<9.9	<20	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-10-15.0	15	07/26/23	<0.6	<10	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
MW-11-5.0	5	07/25/23	<0.7	**21**	**63**	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-11-10.0	10	07/25/23	<0.6	<10	<20	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-11-14.0	14	07/25/23	**59**	<9.9	<20	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
MW-11-15.0	15	07/25/23	**79**	<9.9	<20	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
MW-12-5.0	5	07/25/23	<0.6	**50**	**150**	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-10.0	10	07/25/23	<0.6	<10	<20	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-15.0	15	07/25/23	<0.7	<9.9	<20	<3.6	<3.6	<3.6	<3.6	<3.6	**19**	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6
MW-12-20.0	20	07/25/23	<0.6	<10	<20	<3.2	<3.2	<3.2	<3.2	<3.2	**57**	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-25.0	15	07/25/23	<0.6	<10	<20	<3.2	<3.2	<3.2	<3.2	<3.2	**28**	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-13-3.0	3	07/31/23	**4.3**	**3400**	**1300**	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160
MW-13-5.0	5	07/31/23	**2.5**	**1400**	**670**	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	**4.6**	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-13-6.0	6	07/31/23	**150**	**3200**	**1000**	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670
MW-13-10.0	10	07/31/23	**87**	**1900**	**590**	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-13-15.0	15	07/31/23	**68**	**350**	**110**	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1
MW-13-20.0	20	07/31/23	<3.0	**330**	**110**	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-14-5.0	5	07/28/23	<0.7	<10	<20	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-14-10.0	10	07/28/23	<0.6	<9.9	<20	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1
MW-14-15.0	15	07/28/23	<0.6	<10	<20	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-5.0	5	07/28/23	<0.6	<9.9	<20	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-10.0	10	07/28/23	<0.6	<10	<20	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-15.0	15	07/28/23	<0.7	<10	<20	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-16-5.0	5	07/27/23	<35	**640**	**1100**	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180
MW-16-10.0	10	07/27/23	<0.6	<9.9	<20	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-16-15.0	15	07/27/23	<0.7	<9.9	<20	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-17-5.0	5	07/26/23	<0.7	<9.9	<20	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-17-10.0	10	07/26/23	<0.7	<9.9	<20	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
MW-17-15.0	15	07/26/23	<0.6	<10	<20	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Table A-13
Summary of Soil Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Depth (ft bgs)	Sample Date	VOCs																			
			1,3-Dichlorobenzene µg/kg	1,3-Dichloropropane µg/kg	1,4-Dichlorobenzene µg/kg	2,2-Dichloropropane µg/kg	2-Butanone µg/kg	2-Chlorotoluene µg/kg	4-Chlorotoluene µg/kg	4-Methyl-2-Pentanone µg/kg	Acetone µg/kg	Benzene µg/kg	Bromobenzene µg/kg	Bromochloromethane µg/kg	Bromodichloromethane µg/kg	Bromoform µg/kg	Bromomethane µg/kg	Carbon Tetrachloride µg/kg	Chlorobenzene µg/kg	Chloroethane µg/kg	Chloroform µg/kg	Chloromethane µg/kg
Commercial/Industrial ESLs[1]			*--*	*--*	*1.2E+04*	*--*	*2.0E+08*	*--*	*--*	*1.4E+08*	*6.7E+08*	*1.4E+03*	*--*	*--*	*1.3E+03*	*8.0E+04*	*3.0E+04*	*2.7E+03*	*1.3E+06*	*5.9E+07*	*1.4E+03*	*4.7E+05*
MW-10-5.0	5	07/26/23	<3.3	<3.3	<3.3	<3.3	<66	<3.3	<3.3	<3.3	<66	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
MW-10-10.0	10	07/26/23	<3.2	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-10-15.0	15	07/26/23	<3.0	<3.0	<3.0	<3.0	<60	<3.0	<3.0	<3.0	<60	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
MW-11-5.0	5	07/25/23	<3.5	<3.5	<3.5	<3.5	<69	<3.5	<3.5	<3.5	<69	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-11-10.0	10	07/25/23	<3.2	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-11-14.0	14	07/25/23	<250	<250	<250	<250	<5000	<250	<250	<250	<5000	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
MW-11-15.0	15	07/25/23	<250	<250	<250	<250	<5000	<250	<250	<250	<5000	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250	<250
MW-12-5.0	5	07/25/23	<3.2	<3.2	<3.2	<3.2	<65	<3.2	<3.2	<3.2	<65	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-10.0	10	07/25/23	<3.2	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-15.0	15	07/25/23	<3.6	<3.6	<3.6	<3.6	<72	<3.6	<3.6	<3.6	<72	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6
MW-12-20.0	20	07/25/23	<3.2	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-25.0	15	07/25/23	<3.2	<3.2	<3.2	<3.2	<65	<3.2	<3.2	<3.2	<65	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-13-3.0	3	07/31/23	<160	<160	<160	<160	<3200	<160	<160	<160	<3200	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160	<160
MW-13-5.0	5	07/31/23	<3.5	<3.5	<3.5	<3.5	<71	<3.5	<3.5	<5.7	**84**	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-13-6.0	6	07/31/23	<670	<670	<670	<670	<13000	<670	<670	<670	<13000	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670	<670
MW-13-10.0	10	07/31/23	<3.2	<3.2	<3.2	<3.2	<63	<3.2	<3.2	<3.2	<63	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-13-15.0	15	07/31/23	<3.1	<3.1	<3.1	<3.1	<63	<3.1	<3.1	<5.1	<63	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1
MW-13-20.0	20	07/31/23	<3.2	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-14-5.0	5	07/28/23	<3.4	<3.4	<3.4	<3.4	<69	<3.4	<3.4	<5.6	<69	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-14-10.0	10	07/28/23	<3.1	<3.1	<3.1	<3.1	<63	<3.1	<3.1	<5.1	<63	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1
MW-14-15.0	15	07/28/23	<3.2	<3.2	<3.2	<3.2	<63	<3.2	<3.2	<5.1	<63	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-5.0	5	07/28/23	<3.2	<3.2	<3.2	<3.2	<63	<3.2	<3.2	<5.1	<63	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-10.0	10	07/28/23	<3.2	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<5.2	<64	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-15.0	15	07/28/23	<3.5	<3.5	<3.5	<3.5	<70	<3.5	<3.5	<5.7	<70	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-16-5.0	5	07/27/23	<180	<180	<180	<180	<3500	<180	<180	<180	<3500	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180	<180
MW-16-10.0	10	07/27/23	<3.2	<3.2	<3.2	<3.2	<64	<3.2	<3.2	<5.2	**70**	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-16-15.0	15	07/27/23	<3.4	<3.4	<3.4	<3.4	<69	<3.4	<3.4	<3.4	<69	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-17-5.0	5	07/26/23	<3.4	<3.4	<3.4	<3.4	<68	<3.4	<3.4	<3.4	<68	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-17-10.0	10	07/26/23	<3.3	<3.3	<3.3	<3.3	<66	<3.3	<3.3	<3.3	<66	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
MW-17-15.0	15	07/26/23	<3.0	<3.0	<3.0	<3.0	<60	<3.0	<3.0	<3.0	<60	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Table A-13
Summary of Soil Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Sample ID	Depth (ft bgs)	Sample Date	VOCs																			
			cis-1,2-Dichloroethene µg/kg	cis-1,3-Dichloropropene µg/kg	Dibromochloromethane µg/kg	Dibromomethane µg/kg	Dichlorodifluoromethane (Freon-12) µg/kg	Ethylbenzene µg/kg	Freon 113 µg/kg	Hexachlorobutadiene µg/kg	Isopropylbenzene µg/kg	m,p-Xylenes µg/kg	Methylene Chloride µg/kg	Methyl-tert-butyl ether (MTBE) µg/kg	Naphthalene µg/kg	n-Butylbenzene µg/kg	n-Propylbenzene µg/kg	o-Xylene µg/kg	para-Isopropyl Toluene µg/kg	sec-Butylbenzene µg/kg	Styrene µg/kg	tert-Butylbenzene µg/kg
Commercial/Industrial ESLs[1]			*8.5E+04*	--	*3.9E+04*	--	--	*2.6E+04*	--	*5.3E+03*	--	--	*2.5E+04*	*2.1E+05*	*1.7E+04*	--	--	--	--	--	*3.3E+07*	--
MW-10-5.0	5	07/26/23	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<6.6	<6.6	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
MW-10-10.0	10	07/26/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.4	<6.4	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-10-15.0	15	07/26/23	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<6.0	<6.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
MW-11-5.0	5	07/25/23	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<6.9	<6.9	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-11-10.0	10	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.4	<6.4	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-11-14.0	14	07/25/23	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<250	<250	<250	<250	<250	<250	<250	<250	<250
MW-11-15.0	15	07/25/23	<250	<250	<250	<250	<250	<250	<250	<250	<250	<500	<500	<250	<250	<250	**400**	<250	<250	<250	<250	<250
MW-12-5.0	5	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.5	<6.5	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-10.0	10	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.4	<6.4	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-15.0	15	07/25/23	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<7.2	<7.2	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6
MW-12-20.0	20	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.4	<6.4	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-25.0	15	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.5	<6.5	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-13-3.0	3	07/31/23	<160	<160	<160	<160	<160	<160	<160	<160	<160	<320	<320	<160	<160	<160	<160	<160	<160	<160	<160	<160
MW-13-5.0	5	07/31/23	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	**4.3**	<7.1	<7.1	<3.5	**17**	**3.8**	**8.3**	<3.5	<3.5	<3.5	<3.5	<3.5
MW-13-6.0	6	07/31/23	<670	<670	<670	<670	<670	<670	<670	<670	**720**	<1300	<1300	<670	**5400**	**1300**	**1900**	<670	<670	**940**	<670	<670
MW-13-10.0	10	07/31/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	**5.7**	<6.3	<6.3	<3.2	<3.2	**75**	<3.2	**3.4**	**3.4**	**59**	<3.2	<3.2
MW-13-15.0	15	07/31/23	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<6.3	<6.3	<3.1	<3.1	**4.8**	<3.1	<3.1	<3.1	**11**	<3.1	<3.1
MW-13-20.0	20	07/31/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.4	<6.4	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-14-5.0	5	07/28/23	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<6.9	<6.9	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-14-10.0	10	07/28/23	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<6.3	<6.3	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1
MW-14-15.0	15	07/28/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.3	<6.3	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-5.0	5	07/28/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.3	<6.3	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-10.0	10	07/28/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.4	<6.4	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-15.0	15	07/28/23	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<7.0	<7.0	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-16-5.0	5	07/27/23	<180	<180	<180	<180	<180	<180	<180	<180	<180	<350	<350	<180	<180	<180	<180	<180	<180	<180	<180	<180
MW-16-10.0	10	07/27/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<6.4	<6.4	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-16-15.0	15	07/27/23	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<6.9	<6.9	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-17-5.0	5	07/26/23	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<6.8	<6.8	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-17-10.0	10	07/26/23	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<6.6	<6.6	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
MW-17-15.0	15	07/26/23	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<6.0	<6.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Table A-13
Summary of Soil Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

			VOCs						
Sample ID	**Depth (ft bgs)**	**Sample Date**	**Tetrachloroethene** µg/kg	**Toluene** µg/kg	**trans-1,2-Dichloroethene** µg/kg	**trans-1,3-Dichloropropene** µg/kg	**Trichloroethene** µg/kg	**Trichlorofluoromethane** µg/kg	**Vinyl Chloride** µg/kg
Commercial/Industrial ESLs[1]			*2.7E+03*	*5.3E+06*	*6.0E+05*	--	*6.1E+03*	--	*1.5E+02*
MW-10-5.0	5	07/26/23	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
MW-10-10.0	10	07/26/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-10-15.0	15	07/26/23	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
MW-11-5.0	5	07/25/23	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-11-10.0	10	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-11-14.0	14	07/25/23	<250	<250	<250	<250	<250	<250	<250
MW-11-15.0	15	07/25/23	<250	<250	<250	<250	<250	<250	<250
MW-12-5.0	5	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-10.0	10	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	**9.1**
MW-12-15.0	15	07/25/23	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6	<3.6
MW-12-20.0	20	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-12-25.0	15	07/25/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-13-3.0	3	07/31/23	<160	<160	<160	<160	<160	<160	<160
MW-13-5.0	5	07/31/23	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-13-6.0	6	07/31/23	<670	<670	<670	<670	<670	<670	<670
MW-13-10.0	10	07/31/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-13-15.0	15	07/31/23	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1
MW-13-20.0	20	07/31/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-14-5.0	5	07/28/23	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-14-10.0	10	07/28/23	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1	<3.1
MW-14-15.0	15	07/28/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-5.0	5	07/28/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-10.0	10	07/28/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-15-15.0	15	07/28/23	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5	<3.5
MW-16-5.0	5	07/27/23	<180	<180	<180	<180	<180	<180	<180
MW-16-10.0	10	07/27/23	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2	<3.2
MW-16-15.0	15	07/27/23	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-17-5.0	5	07/26/23	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4	<3.4
MW-17-10.0	10	07/26/23	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3	<3.3
MW-17-15.0	15	07/26/23	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0

Table A-13
Summary of Soil Analytical Results - Organics (Roux, 2023)
AB&I Redevelopment
7825 San Leandro Street, Oakland, California

Notes:

ESLs = Environmental Screening Levels
TPH = Total Petroleum Hydrocarbons
VOC = Volatile Organic Compound
-- = not established
ft bgs = feet below ground surface
mg/kg = milligrams per kilogram
µg/kg = micrograms per kilogram
<X = Not detected at or above laboratory reporting limit X.
Bold text indicates a concentration detected above the laboratory reporting limit.
Yellow highlighted concentration indicate an exceedance of the Commercial/Industrial ESLs
TPH analyzed by Environmental Protection Agency (USEPA) Method 8015B/8015m.
VOCs analyzed by EPA Method 8260B.

[1] San Francisco Bay Regional Water Quality Control Board 2019. *Environmental Screening Levels (ESLs): Direct Exposure Human Health Risk Levels (Table S-1) Commercial/Industrial: Shallow Soil Exposure.* January 2019 (Revision 2).

Appendix A
FIGURES

QUADRANGLE
LOCATIONS

N

0 2000'

SOURCE:
USGS; Oakland East, CA (2021)
and San Leandro, CA (2021)
7.5-Minute Topographic Quadrangles

Title:

SITE LOCATION MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: H.R.	Date: 08JUL22	FIGURE
Prepared by: B.H.C.	Scale: AS SHOWN	A-1
Project Mgr: H.R.	Project: 2968.0018L000	
File: 2968.0018LTEMP.01.CDR		

\2968L0018LTEMP\2968.0018LTEMP.01.CDR

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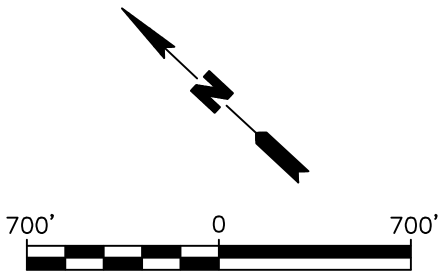
LEGEND

- - - SITE BOUNDARY
🟩 RESIDENTIAL AREA
🟦 COMMERCIAL AREA
🟨 UNHOUSED POPULATION AREA
🟧 SCHOOL AREA

BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023



Title:

REGIONAL SITE USE

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

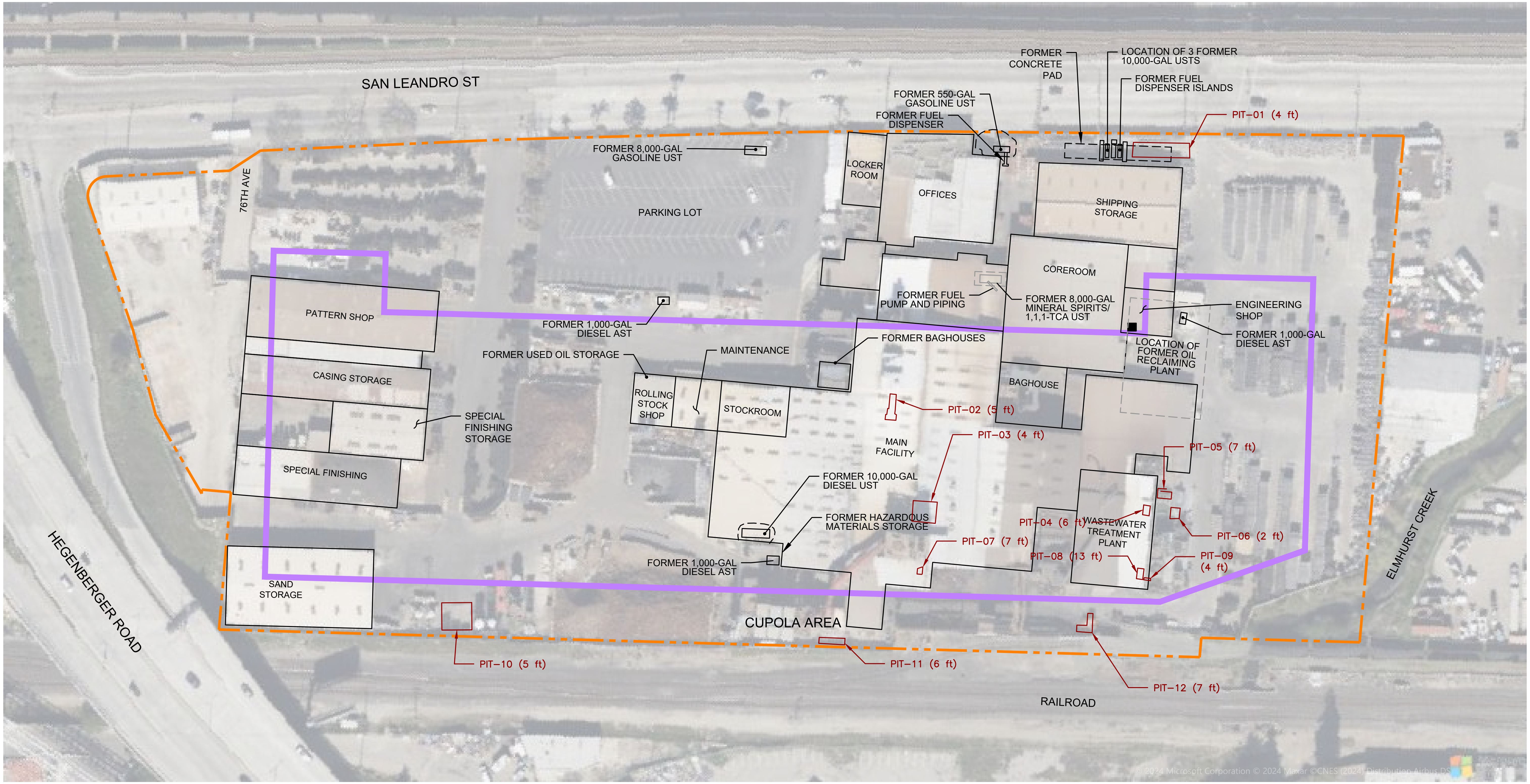
Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: PW	Date: 19JAN2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	A-2
Project Mgr: HR	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST_SF.DWG		

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\OLD\7825 SAN LEANDRO ST_SF.DWG CBELLO



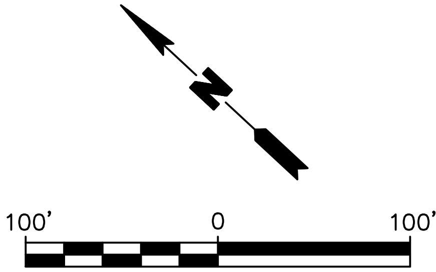
S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\OLD\7825 SAN LEANDRO ST.DWG CBELLO

LEGEND

- SITE BOUNDARY
- PROPOSED BUILDING FOOTPRINT
- ☐ HISTORICAL AREA OF CONCERN
- 🟥 IDENTIFIABLE PIT LOCATION
  PIT–0X (DEPTH OF PIT)

NOTE

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.



BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

Title:

SITE PLAN - HISTORICAL FEATURES

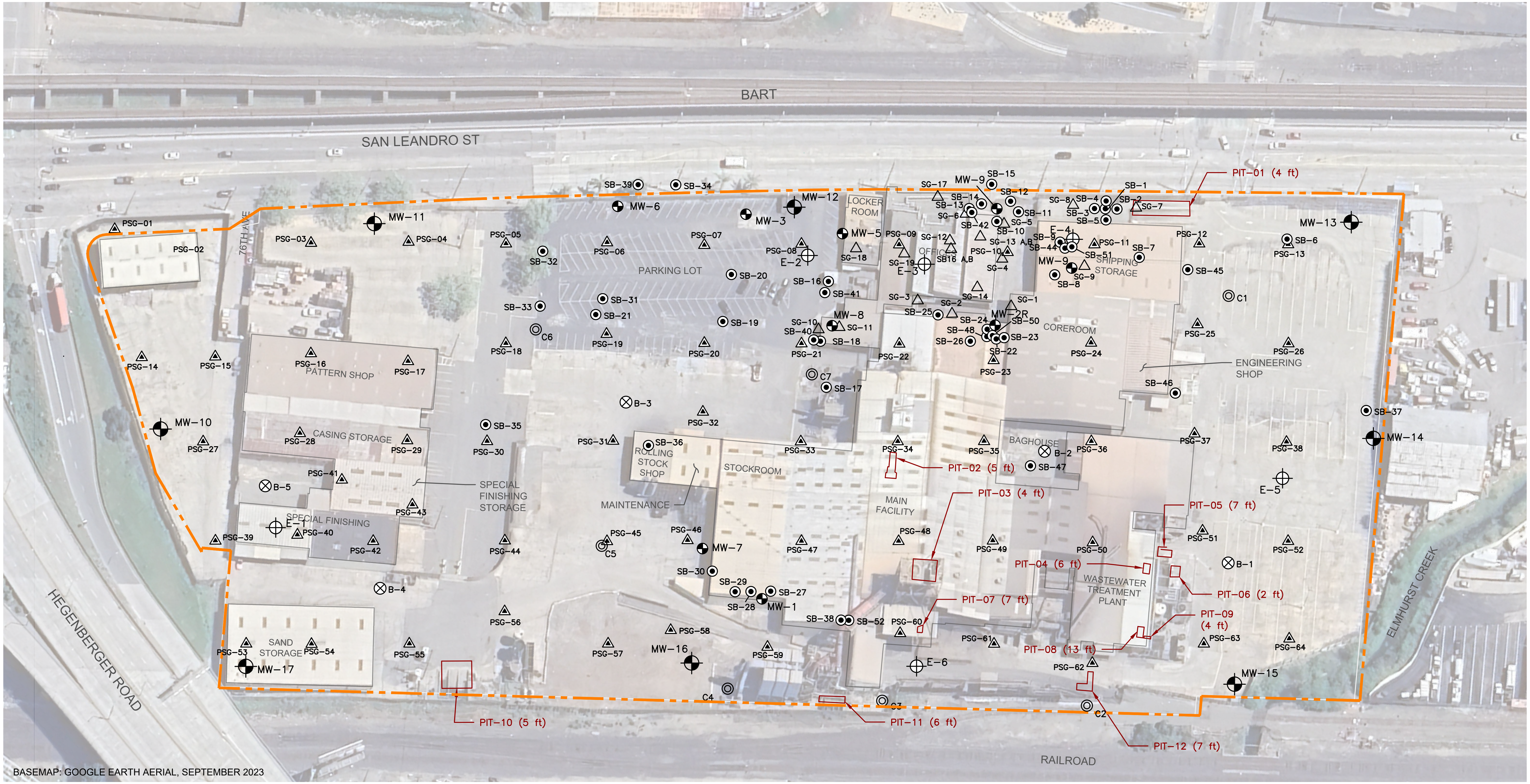
7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: PW
Prepared by: CB
Project Mgr: HR
File: 7825 SAN LEANDRO ST.DWG
Date: 30APR2024
Scale: AS SHOWN
Project: 1793.0030S000
FIGURE
A-3



BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

LEGEND

— - —	SITE BOUNDARY
⊕	ENVIRONMENTAL SOIL BORING SAMPLE LOCATIONS (HALEY & ALDRICH, 2002)
⊗	GEOTECH SOIL BORING (IWASA, 2022)
⊕	EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)
◑	DECOMMISSIONED GROUNDWATER MONITORING WELL (BSK, 1993; BSK, 2006)
◉	SOIL BORING (THE SOURCE GROUP, INC., 2008)
▲	PASSIVE SOIL GAS SAMPLING LOCATIONS (ROUX, 2023)
◎	CPT BORINGS (IWASA, 2022)
△	SOIL GAS SAMPLING LOCATIONS (SGI, 2007; SGI, 2008; SGI, 2009)
▭ PIT–0X (DEPTH OF PIT)	IDENTIFIABLE PIT LOCATION

NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.

N

100' 0 100'

Title:

SITE PLAN WITH HISTORICAL SAMPLING LOCATIONS

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

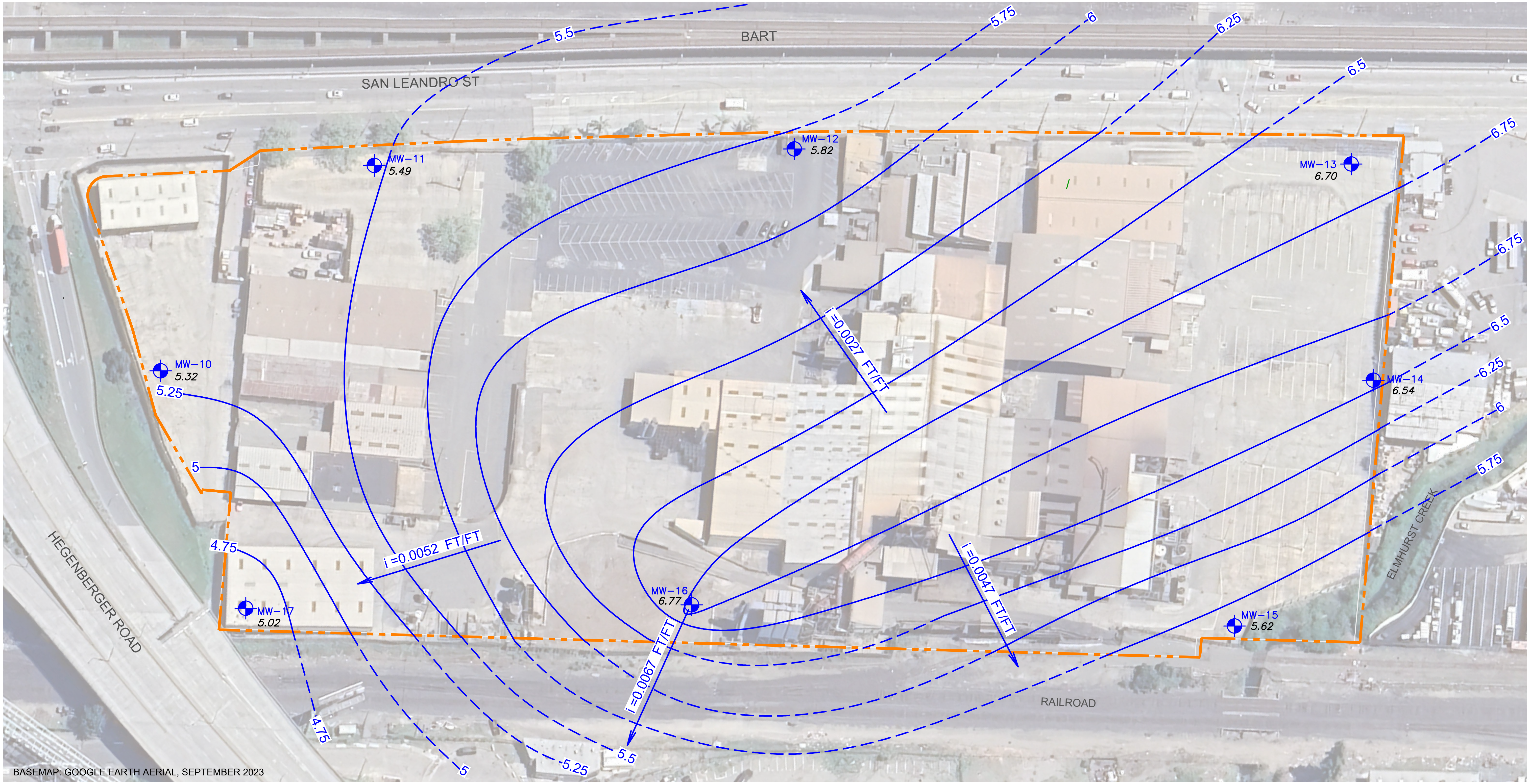
DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 30APR2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	A-4
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG CBELLO

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG CBELLO



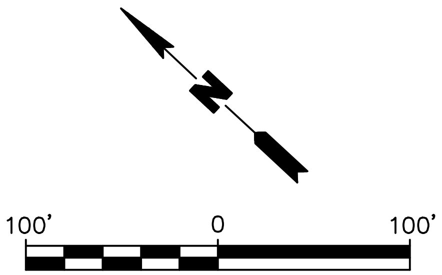
BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

LEGEND

- ▬ ▪ ▬ SITE BOUNDARY
- ⊕ GROUNDWATER MONITORING WELL (ROUX, 2023)
- ─── GROUNDWATER ELEVATION CONTOUR
- ← INFERRED GROUNDWATER FLOW DIRECTION

NOTES

1. GROUNDWATER ELEVATIONS REPORTED IN FEET ABOVE MEAN SEA LEVEL, NORTH AMERICAN VERTICAL DATUM (NAVD88).
2. DASHED INDICATES INFERRED CONTOUR.
3. i = APPROXIMATE HYDRAULIC GRADIENT
4. GROUNDWATER WELL GAUGING DATA WAS COLLECTED AUGUST 9, 2023.
5. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.



Title:

GROUNDWATER CONTOUR MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 30APR2024	FIGURE
Prepared by: ET	Scale: AS SHOWN	A-5
Project Mgr: JO	Project: 1793.0030S000	
File: 7825 SAN LEANDRO ST.DWG		

Appendix A
ATTACHMENTS

A. 1925 Sanborn Map

B. 1960 Sanborn Map

C. Alameda County Department of Environmental Health Subsurface Modeling

D. Historical Soil Analytical Results

E. Historical Soil Vapor Analytical Results

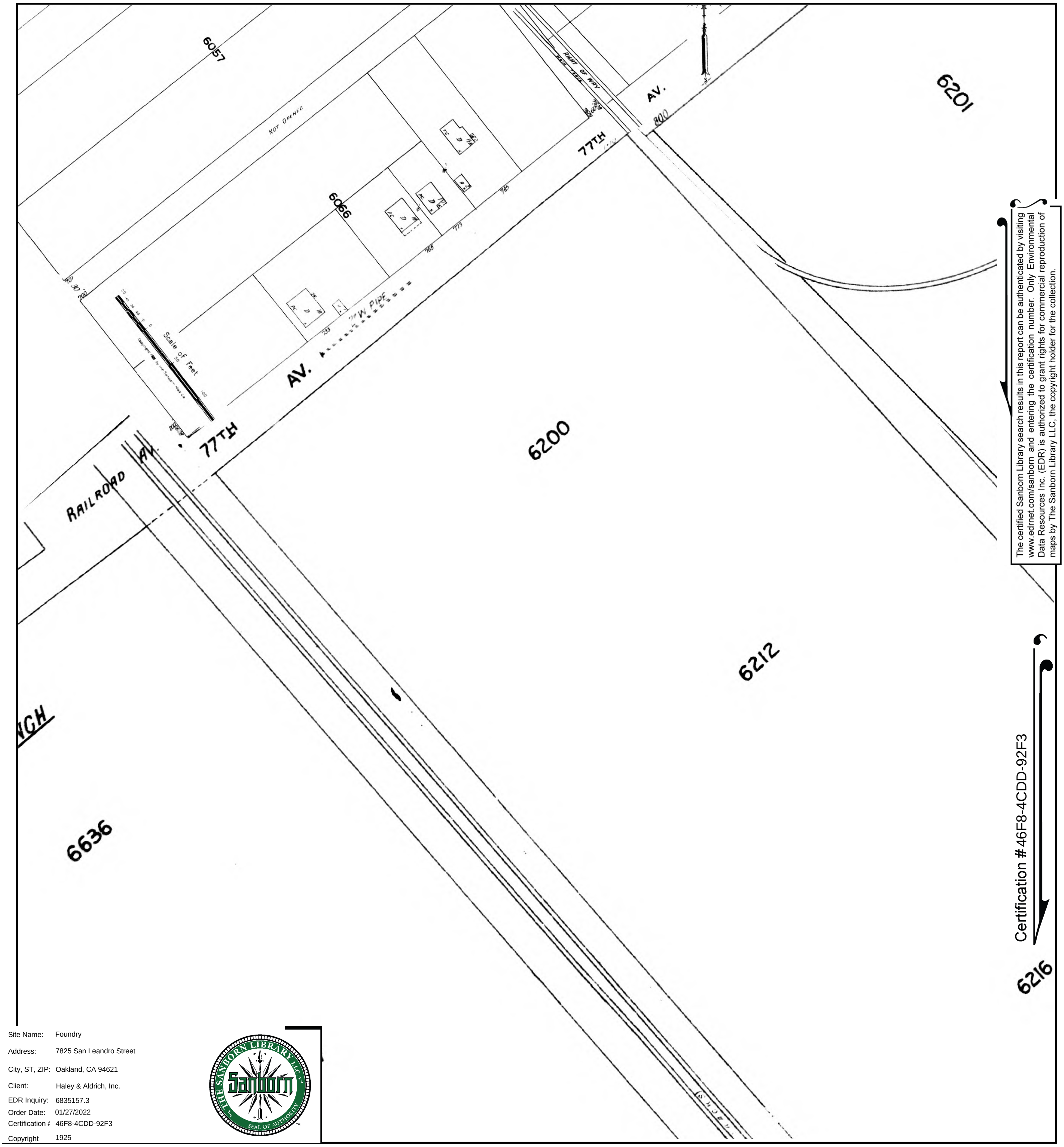
F. Historical Groundwater Analytical Results

Appendix A
ATTACHMENT A

1925 Sanborn Map

Certified Sanborn® Map

1925



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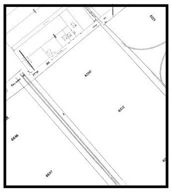
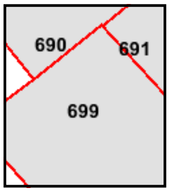
Certification #46F8-4CDD-92F3

Site Name:	Foundry
Address:	7825 San Leandro Street
City, ST, ZIP:	Oakland, CA 94621
Client:	Haley & Aldrich, Inc.
EDR Inquiry:	6835157.3
Order Date:	01/27/2022
Certification #	46F8-4CDD-92F3
Copyright	1925

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600





Volume 6, Sheet 699
Volume 6, Sheet 691
Volume 6, Sheet 690

N

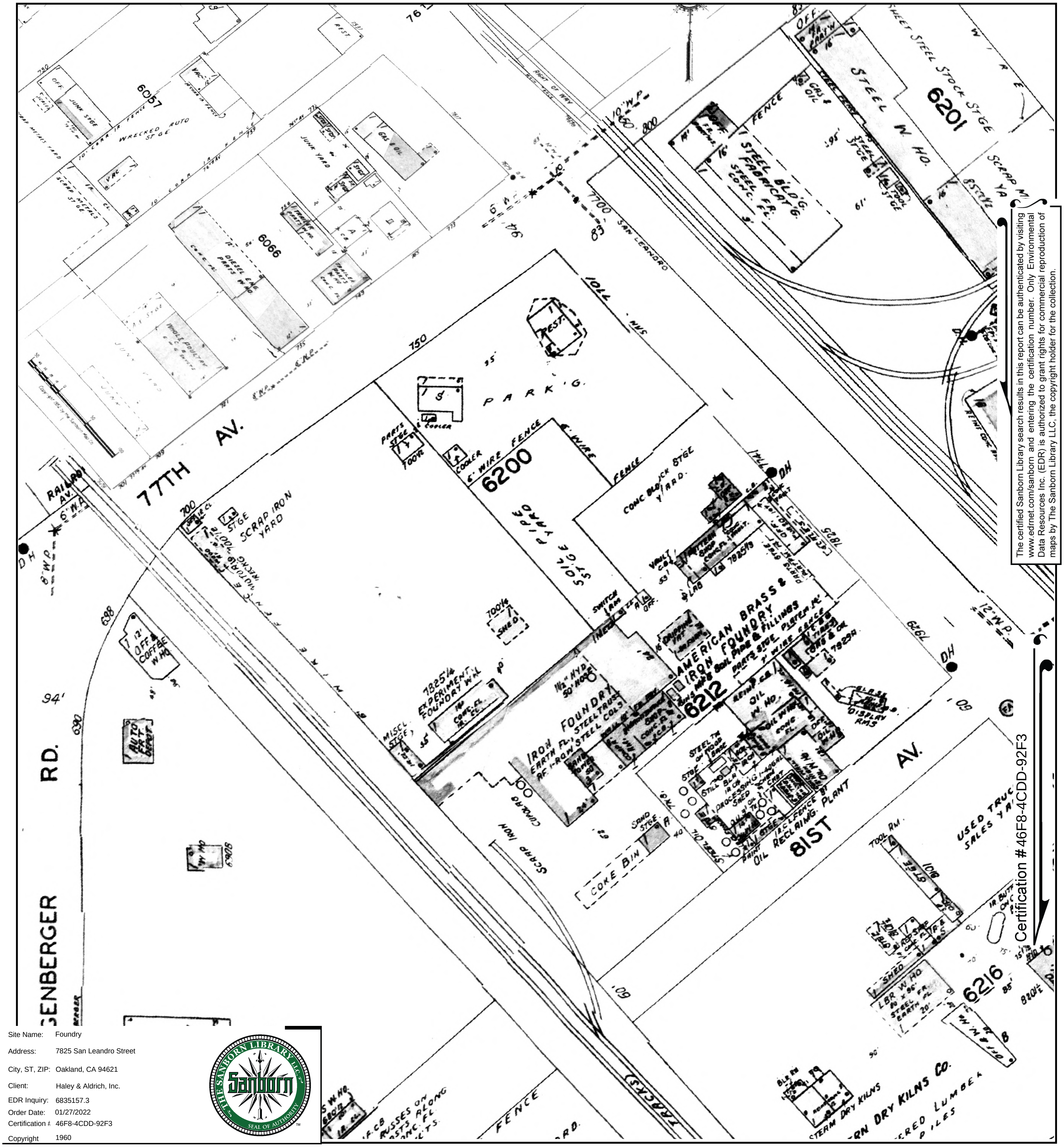
Appendix A
ATTACHMENT B

1960 Sanborn Map

EDR®

Certified Sanborn® Map

1960



Site Name: Foundry
Address: 7825 San Leandro Street
City, ST, ZIP: Oakland, CA 94621
Client: Haley & Aldrich, Inc.
EDR Inquiry: 6835157.3
Order Date: 01/27/2022
Certification # 46F8-4CDD-92F3
Copyright 1960

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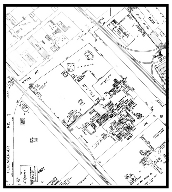
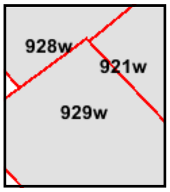
Certification # 46F8-4CDD-92F3

This Certified Sanborn Map combines the following sheets.
Outlined areas indicate map sheets within the collection.

0 Feet 150 300 600



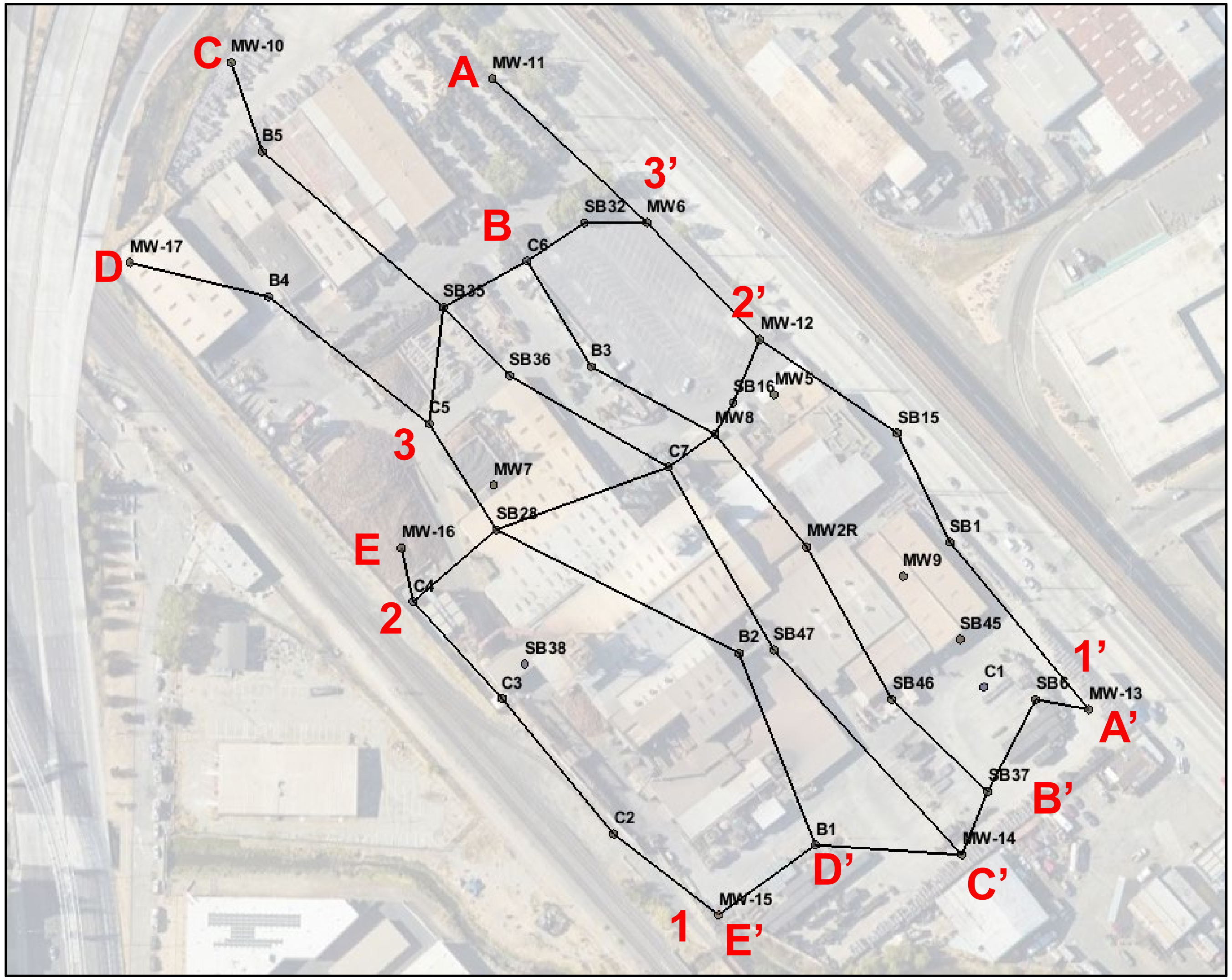


Volume 9, Sheet 929w
Volume 9, Sheet 928w
Volume 9, Sheet 921w

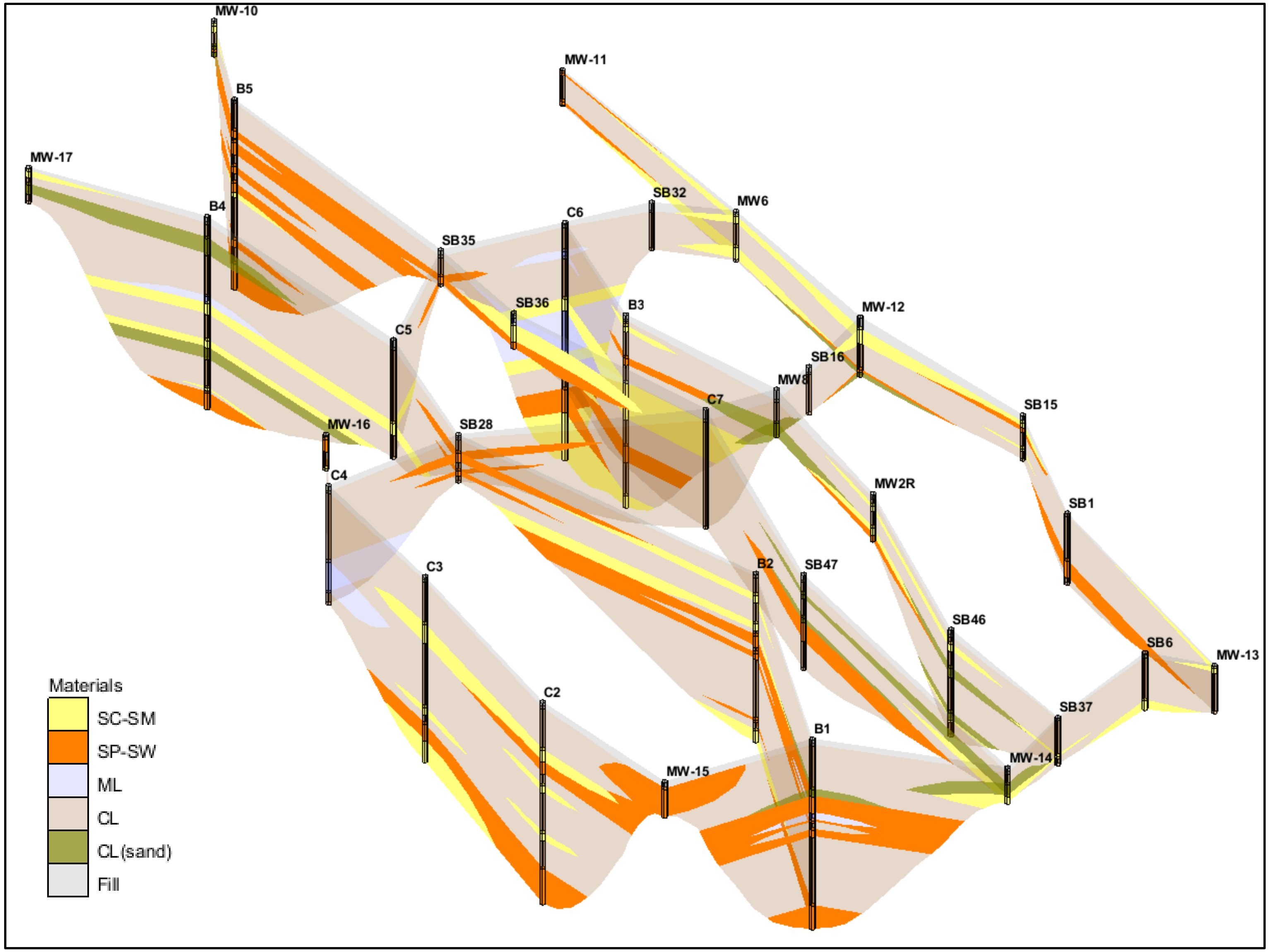
N

Appendix A
ATTACHMENT C

Alameda County Department of Environmental Health Subsurface Modeling

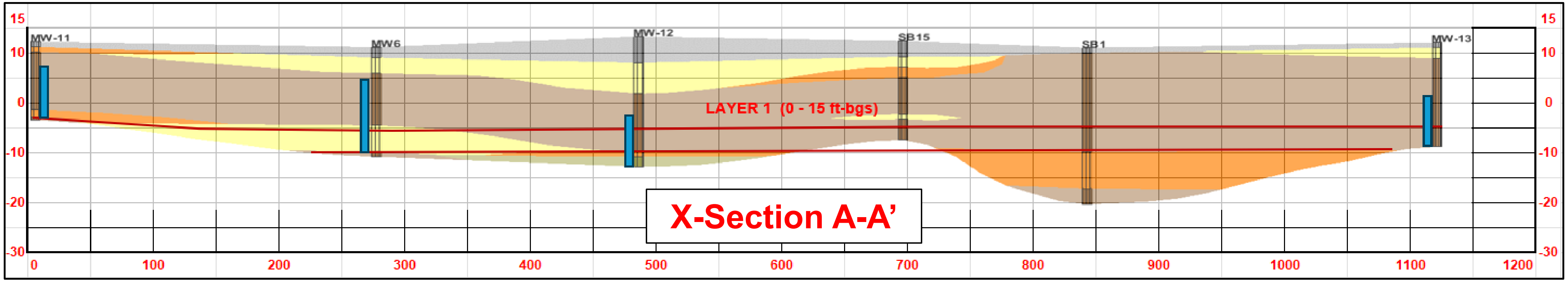

C
MW-10
A
MW-11
B5
3’
SB32
MW6
B
C6
D
MW-17
B4
SB35
2’
MW-12
SB36
B3
SB16
MW5
C5
MW8
SB15
3
C7
MW7
SB28
MW-16
E
MW2R
SB1
MW9
C4
2
SB45
B2
SB47
SB38
C3
1’
C1
SB46
SB6
MW-13
A’
SB37
B’
C2
B1
MW-14
D’
C’
MW-15
1
E’

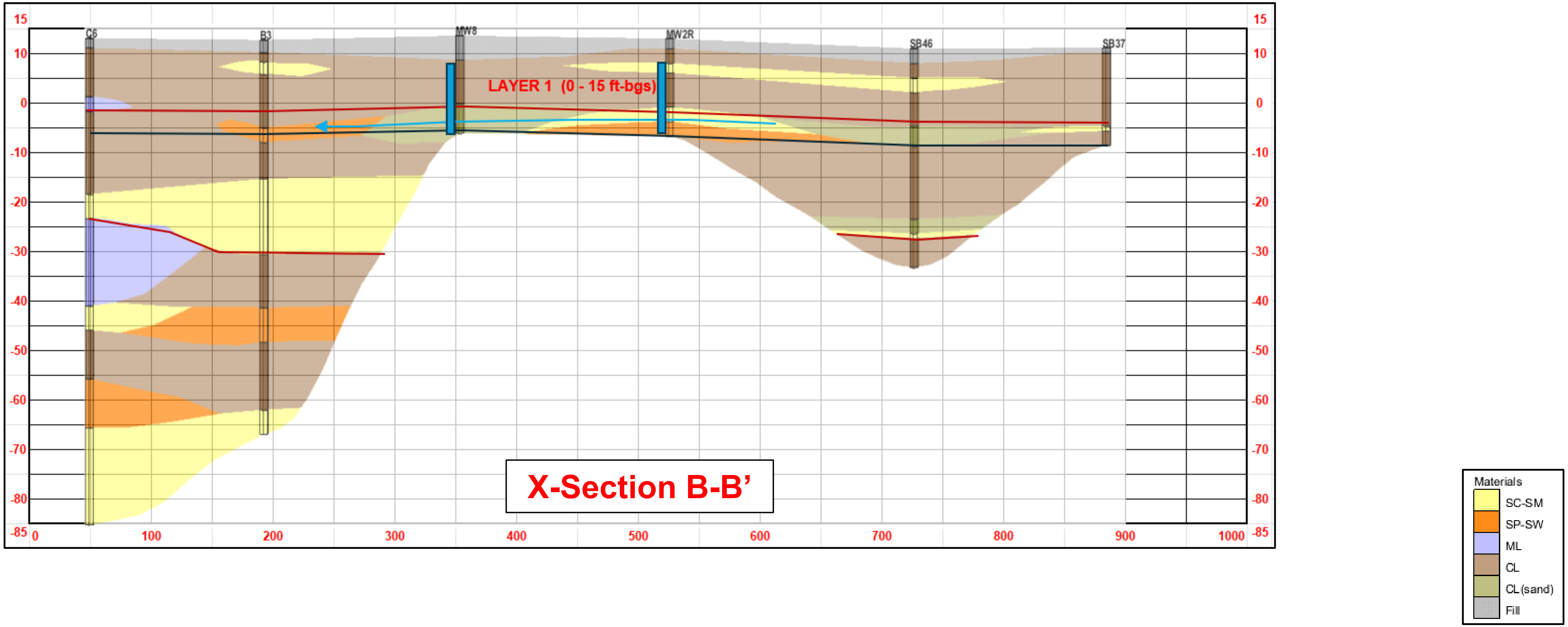
3-D REPRESENTATION OF SAND LAYERS



Layer 1 Sand – 0 to 15 ft-bgs

Layer 2 Sand – 20 to 40 ft-bgs


X-Section A-A'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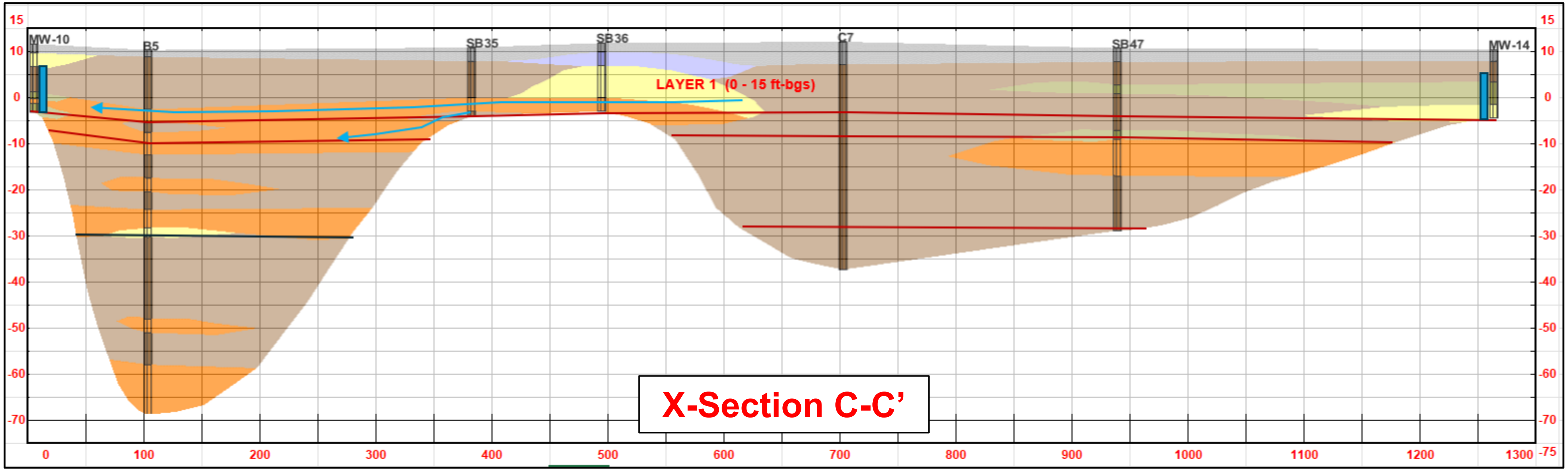
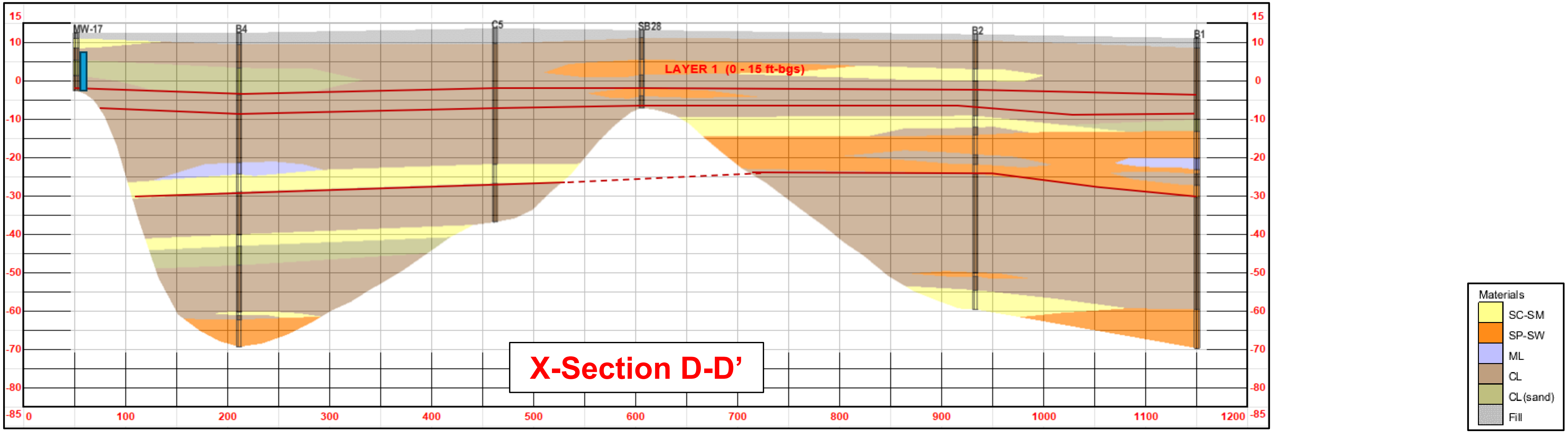
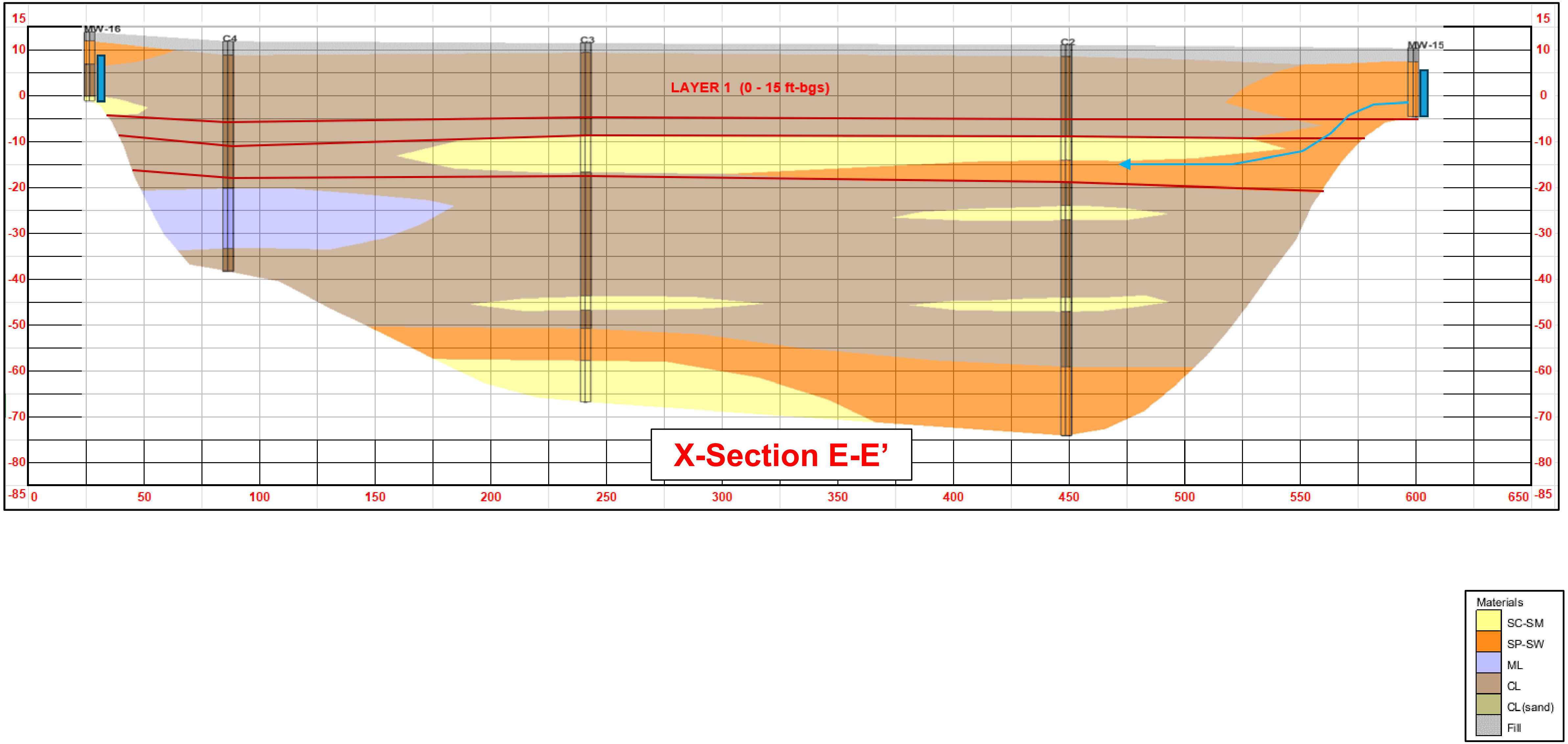


X-Section C-C’

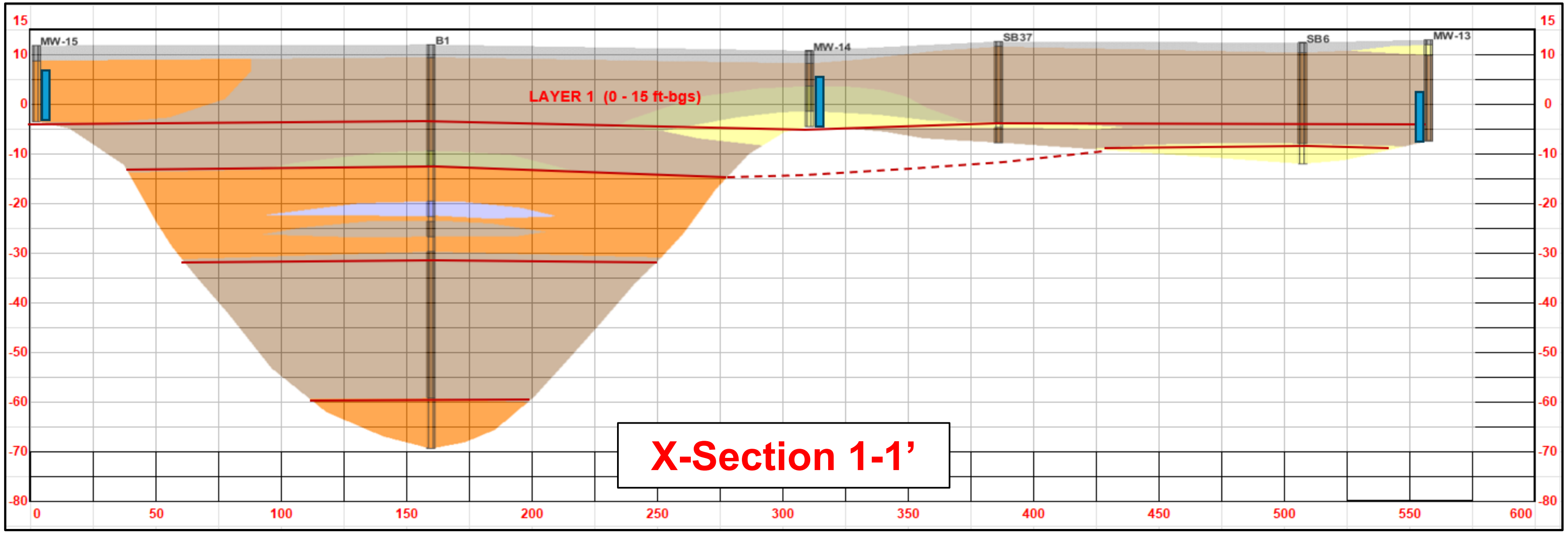


X-Section D-D’

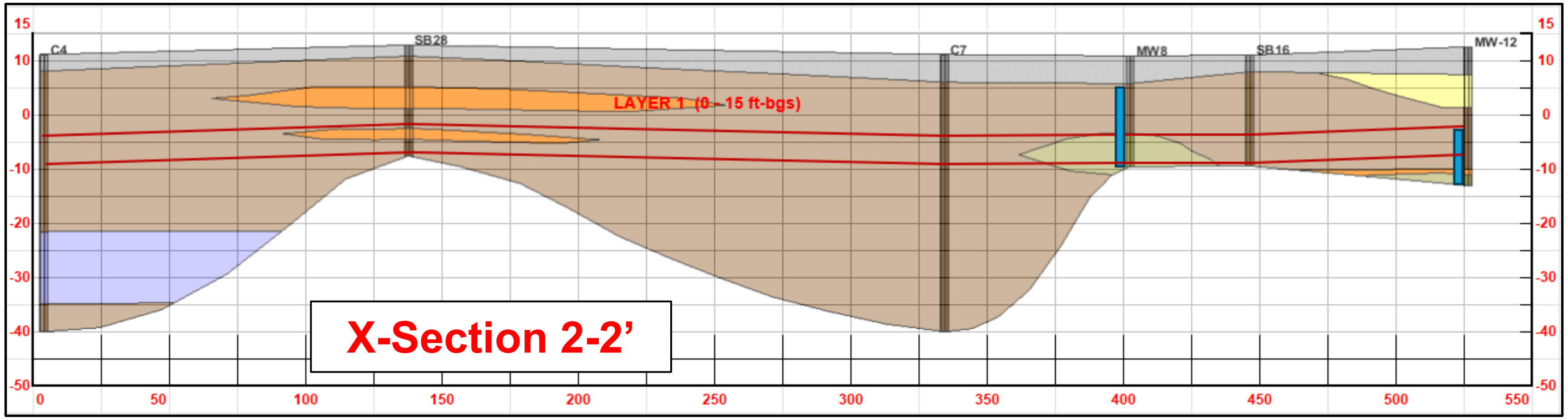


X-Section E-E'

MW-16
C4
C3
C2
MW-15
LAYER 1 (0 - 15 ft-bgs)
15
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-85
0
50
100
150
200
250
300
350
400
450
500
550
600
650
Materials
SC-SM
SP-SW
ML
CL
CL(sand)
Fill



X-Section 1-1’

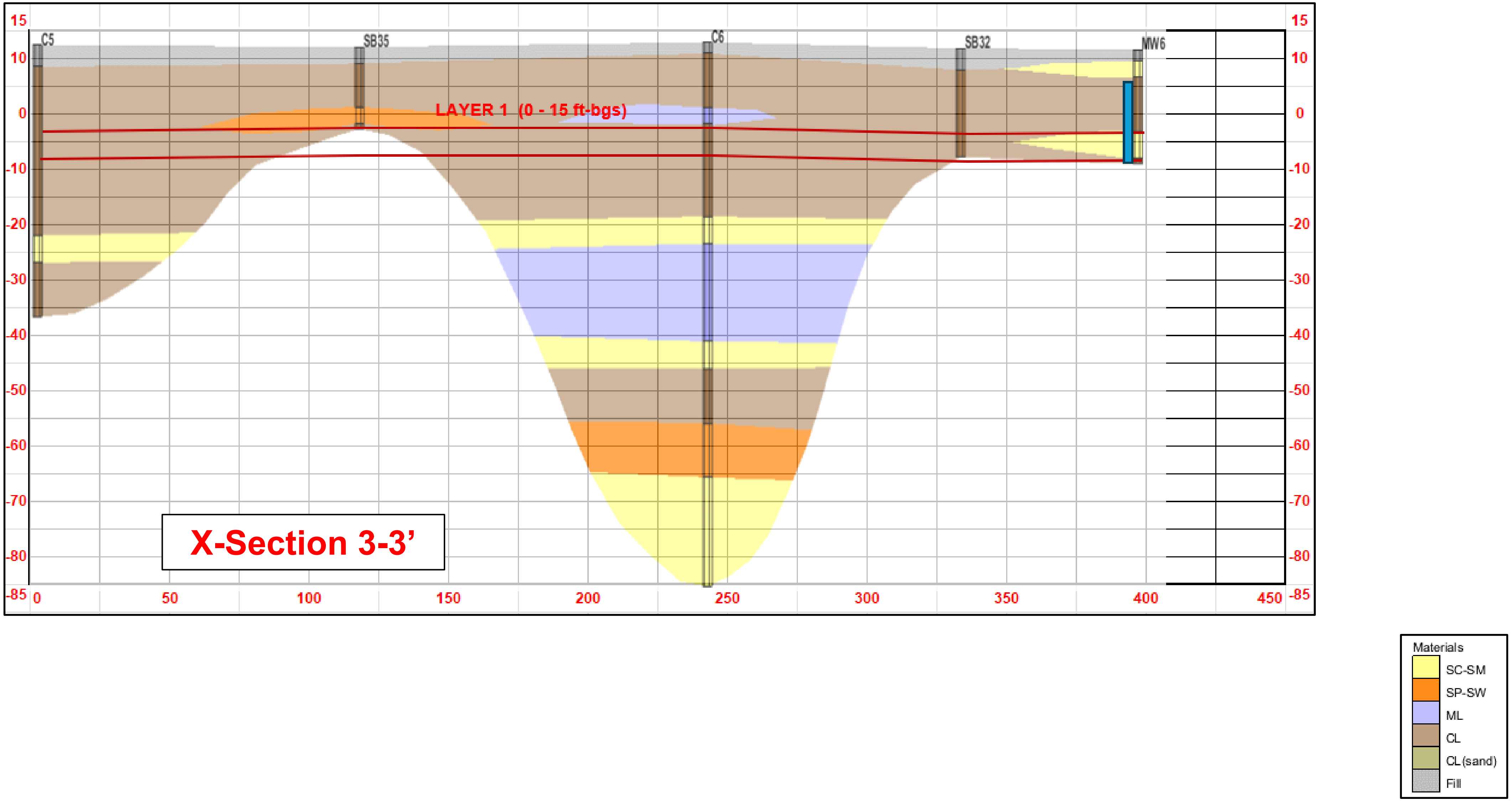


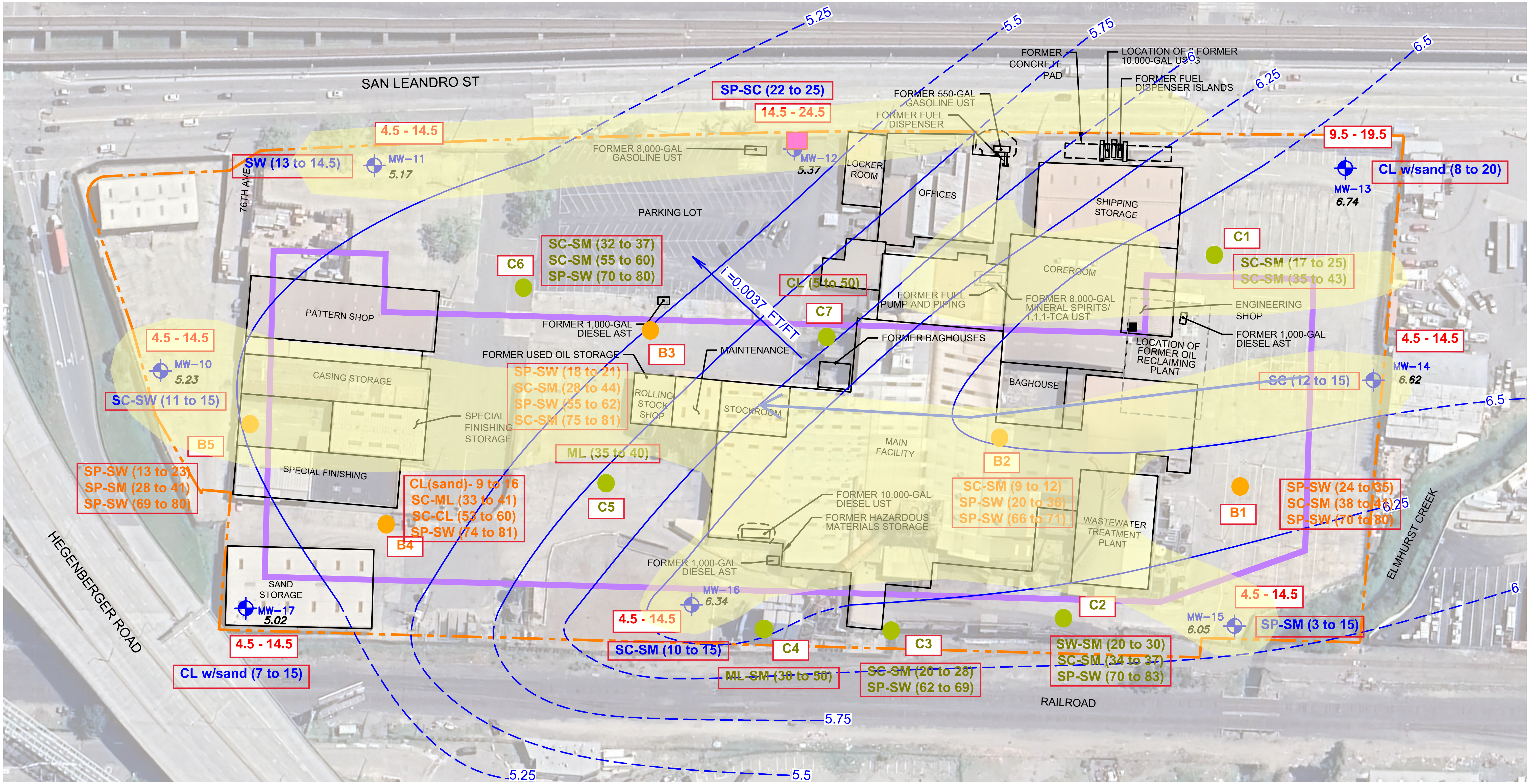
X-Section 2-2’

Materials

🟨 SC-SM
🟧 SP-SW
🟪 ML
🟫 CL
🟩 CL(sand)
▨ Fill

X-Section 3-3’


C5
SB35
C6
SB32
MW6
LAYER 1 (0 - 15 ft-bgs)
15
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-85
0
50
100
150
200
250
300
350
400
450
Materials
SC-SM
SP-SW
ML
CL
CL(sand)
Fill



LEGEND

— - —	SITE BOUNDARY
▬	PROPOSED BUILDING FOOTPRINT
☐	HISTORICAL AREA OF CONCERN
⌖ ID ELEV.	GROUNDWATER SAMPLING LOCATION
—	GROUNDWATER ELEVATION CONTOUR
→	INFERRED GROUNDWATER FLOW DIRECTION

NOTES

1. GROUNDWATER ELEVATIONS REFERENCED TO NORTH AMERICAN VERTICAL DATUM (NAVD88).
2. DASHED INDICATES INFERRED CONTOUR.
3. i = APPROXIMATE HYDRAULIC GRADIENT
4. GROUNDWATER WELL GAUGING DATA WAS COLLECTED NOVEMBER 21-22, 2023.

Layer 1 Sand - 0 to 15 ft-bgs
PREFERENTIAL PATHWAY

100' 0 100'

BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

Title:

GROUNDWATER CONTOUR MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: PW	Date: 12JAN2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	3
Project Mgr: HR	Project: 2968.0018L000	
File: 7825 SAN LEANDRO ST.DWG		

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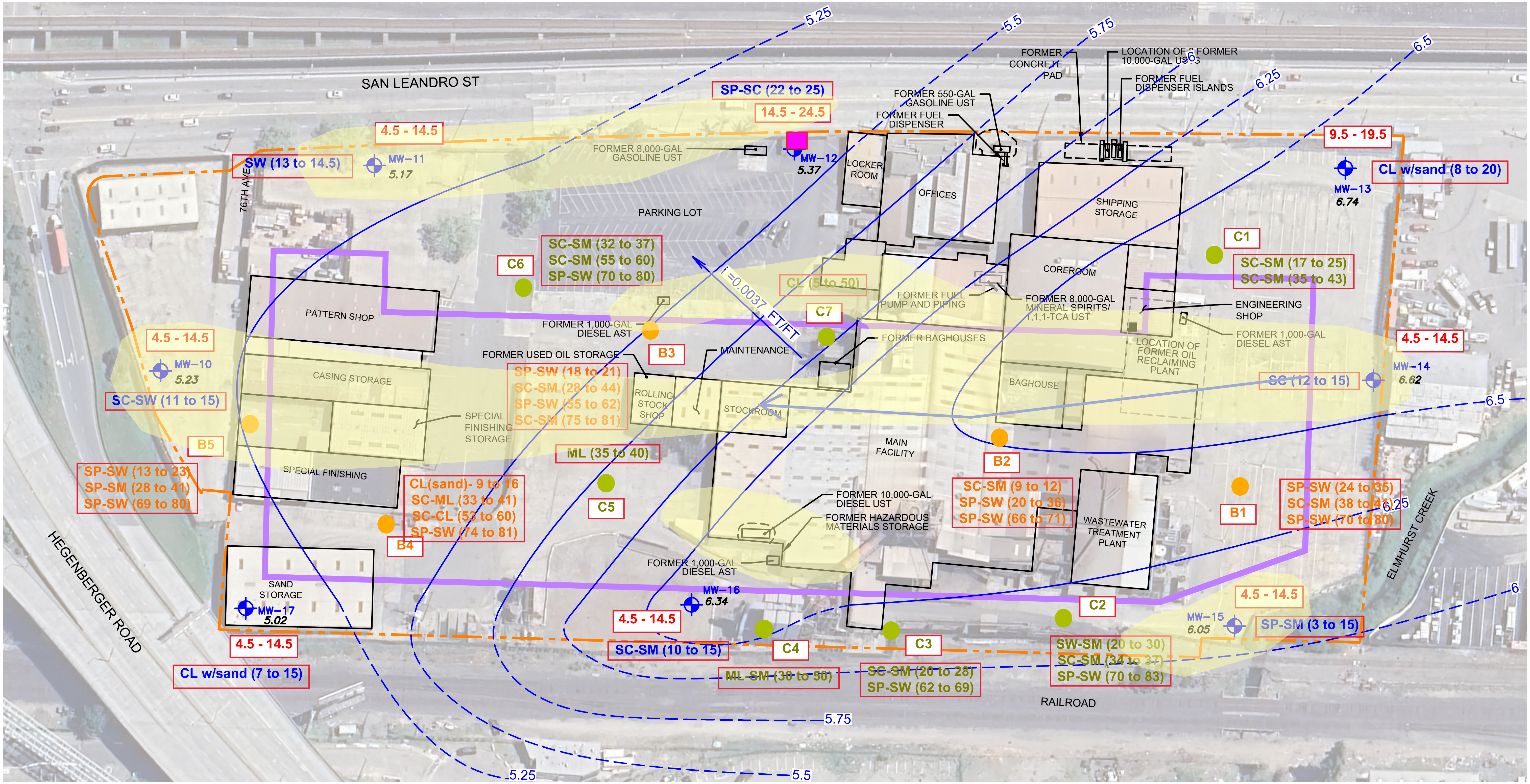


S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG SFERGUSON

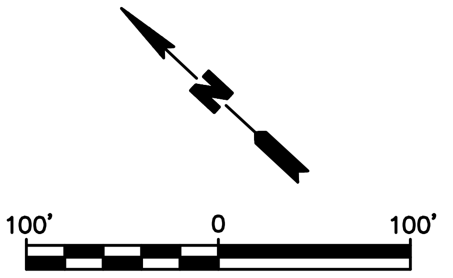
LEGEND

- SITE BOUNDARY
- PROPOSED BUILDING FOOTPRINT
- ☐ HISTORICAL AREA OF CONCERN
- ID ELEV. GROUNDWATER SAMPLING LOCATION
- GROUNDWATER ELEVATION CONTOUR
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES

1. GROUNDWATER ELEVATIONS REFERENCED TO NORTH AMERICAN VERTICAL DATUM (NAVD88).
2. DASHED INDICATES INFERRED CONTOUR.
3. i = APPROXIMATE HYDRAULIC GRADIENT
4. GROUNDWATER WELL GAUGING DATA WAS COLLECTED NOVEMBER 21-22, 2023.

Layer 2 Sand - 15 to 20 ft-bgs
PREFERENTIAL PATHWAY



BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

Title:

GROUNDWATER CONTOUR MAP

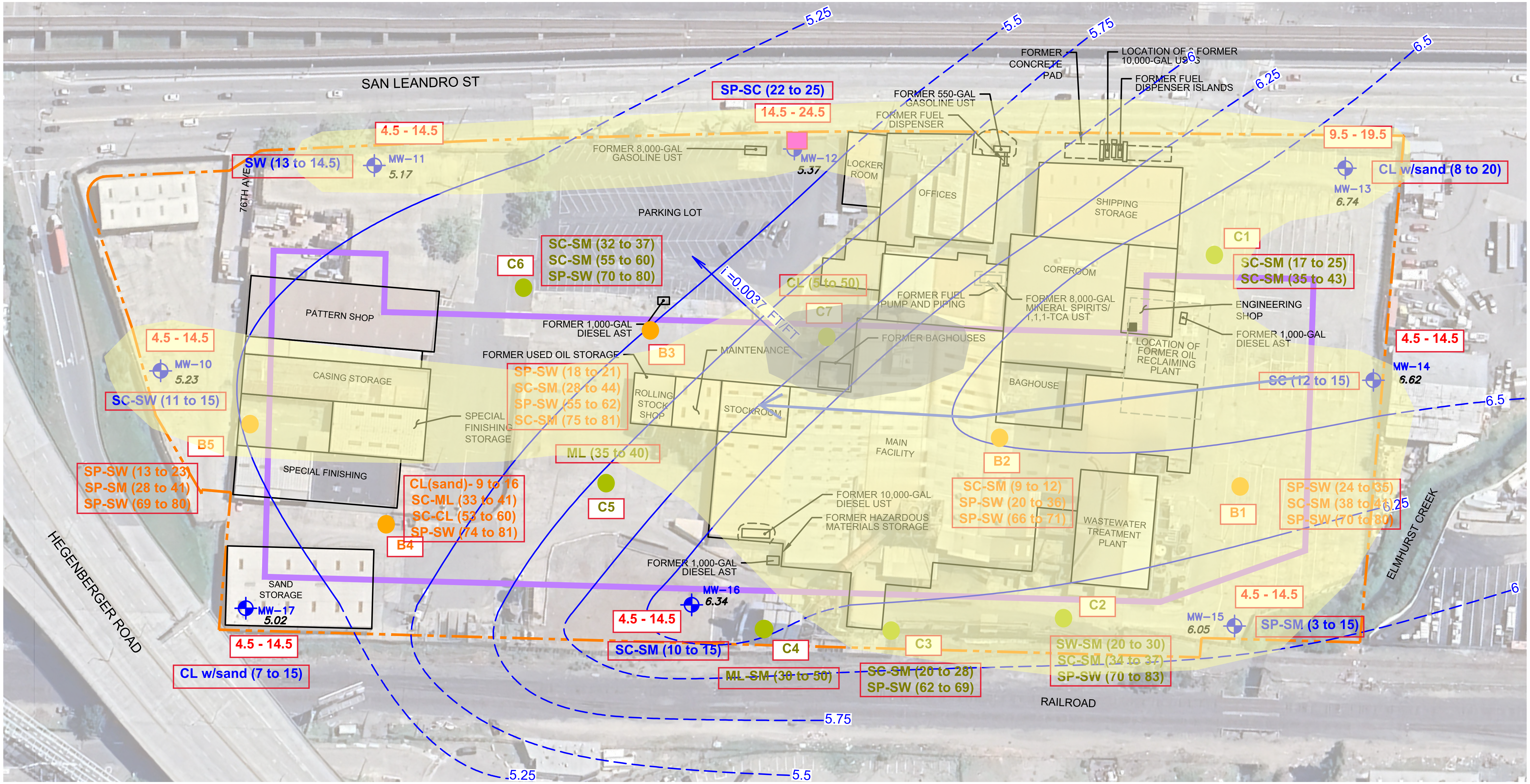
7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: PW	Date: 12JAN2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	3
Project Mgr: HR	Project: 2968.0018L000	
File: 7825 SAN LEANDRO ST.DWG		



LEGEND

- SITE BOUNDARY
- PROPOSED BUILDING FOOTPRINT
- HISTORICAL AREA OF CONCERN
- ID ELEV. GROUNDWATER SAMPLING LOCATION
- GROUNDWATER ELEVATION CONTOUR
- INFERRED GROUNDWATER FLOW DIRECTION

NOTES

1. GROUNDWATER ELEVATIONS REFERENCED TO NORTH AMERICAN VERTICAL DATUM (NAVD88).
2. DASHED INDICATES INFERRED CONTOUR.
3. i = APPROXIMATE HYDRAULIC GRADIENT
4. GROUNDWATER WELL GAUGING DATA WAS COLLECTED NOVEMBER 21-22, 2023.

Layer 3 Sand - 20 to 30 ft-bgs
PREFERENTIAL PATHWAY

BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

Title:

GROUNDWATER CONTOUR MAP

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: PW	Date: 12JAN2024	FIGURE
Prepared by: CB	Scale: AS SHOWN	3
Project Mgr: HR	Project: 2968.0018L000	
File: 7825 SAN LEANDRO ST.DWG		

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG SFERGUSON

Appendix A
ATTACHMENT D

Historical Soil Analytical Results

TABLE 1A - SOIL RESULTS

BENZENE, TOLUENE, ETHYLBENZENE AND XYLENES

Results in Parts Per Million (ppm)

	CONSTITUENTS			
Sample Location	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**
MW-1 at 11'	ND	ND	ND	ND
MW-2 at 10.5'	ND	0.039	ND	0.008
MW-3 at 10'	ND	ND	ND	ND
MW-4 at 14.5'	6.6	4.1	7.0	17
MW-4 at 25.5'	ND	ND	ND	ND

ND - None Detected

TABLE 1B - SOIL RESULTS

TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE AND DIESEL, TOTAL AND HYDROCARBON OIL AND GREASE, TOTAL ORGANIC LEAD, AND VOLATILE HALOCARBONS

Results in Parts Per Million (ppm)

	CONSTITUENTS					
Sample Location	**TPH Gasoline**	**TPH Diesel**	**Total Oil & Grease**	**Hydrocarbon Oil & Grease**	**Total Organic Lead**	**Volatile Halocarbons**
MW-1, 11'	ND	34	--	--	--	--
MW-2, 10.5'	63	140	3500	3500	--	--
MW-3, 10'	ND	--	--	--	--	--
MW-4, 14.5'	2100	--	--	--	0.6	--
MW-4, 25.5'	ND	--	--	--	ND	--

ND - None Detected
-- - Not Tested

Table 3
Summary of Soil Sample Results - Organics
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	**Depth**	**Date**	**TPHg**	**TPHd**	**MTBE**	**Chloroethane**	**Benzene**	**Ethylbenzene**	**Toluene**	**Xylenes, Total**
Units	(feet)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
RWQCB ESLs	**Residential**		**100**	**100**	**8.4**	**10**	**0.12**	**33**	**29**	**31**
	Commercial		**450**	**150**	**8.4**	**11**	**0.26**	**33**	**29**	**100**
Former Three 10,000-Gallon USTs										
SB-01-05	5	10/30/2007	<0.02	65	NA	NA	<0.00028	<0.00028	<0.00019	<0.00057
SB-01-10	10	10/30/2007	91	2.4	NA	NA	<0.42	<0.34	<0.42	<0.76
SB-01-20	20	10/30/2007	450	8.9	NA	NA	<0.41	4.9	<0.41	<0.75
SB-01-28	28	10/30/2007	0.39	<0.18	NA	NA	<0.00029	<0.00029	<0.00019	<0.00057
SB-02-03	3	10/30/2007	68	110	NA	NA	<0.42	<0.34	<0.42	<0.75
SB-02-15	15	10/30/2007	410	47	NA	NA	<0.41	7.4	1.5	30
SB-02-20	20	10/30/2007	**1400**	120	NA	NA	<1	27	<1	62
SB-02-25	25	10/30/2007	0.28	<0.18	NA	NA	<0.00029	<0.00029	<0.00019	<0.00058
SB-03-05	5	10/30/2007	<0.02	<0.18	NA	NA	<0.00028	<0.00028	0.008	<0.00057
SB-03-10	10	10/30/2007	1.3	1.4	NA	NA	0.0049	<0.00028	<0.00019	<0.00056
SB-03-15	15	10/30/2007	**1400**	**660**	NA	NA	<0.98	12	<0.98	<1.8
SB-03-25	25	10/30/2007	<0.021	<0.18	NA	NA	<0.0003	<0.0003	<0.0002	<0.0006
SB-04-10	10	10/30/2007	<0.02	<0.18	NA	NA	<0.00029	<0.00029	<0.00019	<0.00057
SB-04-15	15	10/30/2007	**790**	44	NA	NA	<0.11	2.4	<0.074	<0.22
SB-04-20	20	10/30/2007	**470**	4.3	NA	NA	<0.38	4	<0.38	<0.68
SB-04-24	24	10/30/2007	<0.021	<0.18	NA	NA	<0.0003	<0.0003	<0.0002	<0.0006
SB-05-05	5	10/31/2007	1.9	**2700**	NA	NA	<0.0003	<0.0003	<0.0002	<0.0006
SB-05-10	10	10/31/2007	4.1	<0.18	NA	NA	0.012	<0.0003	<0.0002	<0.00059
SB-05-20	20	10/31/2007	78	22	NA	NA	<0.42	<0.34	<0.42	<0.76
SB-05-25	25	10/31/2007	<0.02	<0.18	NA	NA	<0.00028	<0.00028	<0.00019	<0.00056
SB-08-15	15	10/31/2007	2.2	13	NA	NA	<0.00029	<0.00029	<0.00019	<0.00057
SB-08-20	20	10/31/2007	1.9	<0.18	NA	NA	<0.00027	<0.00027	<0.00018	<0.00054
SB-09-10	10	10/31/2007	4.6	240	NA	NA	<0.0003	<0.0003	<0.0002	<0.0006
SB-09-15	15	10/31/2007	160	**450**	NA	NA	<0.4	<0.33	<0.4	<0.73
Former 550-Gallon Gasoline UST										
SB-10-05	5	10/31/2007	320	50	NA	NA	<0.4	<0.33	<0.4	<0.73
SB-10-10	10	10/31/2007	450	38	NA	NA	<0.4	1.4	<0.4	<0.72
SB-10-15	15	10/31/2007	330	82	NA	NA	<0.4	<0.32	<0.4	<0.72
SB-10-20	20	10/31/2007	5.4	5.1	NA	NA	<0.00029	<0.00029	<0.00019	<0.00057
SB-10-25	25	10/31/2007	<0.02	<0.18	NA	NA	<0.00029	<0.00029	<0.00019	<0.00058
SB-11-05	5	11/1/2007	8.6	NA	NA	NA	<0.0006	<0.0006	<0.0004	<0.0012
SB-11-10	10	11/1/2007	71	NA	NA	NA	<0.38	<0.31	<0.38	<0.69
SB-11-20	20	11/1/2007	<0.021	NA	NA	NA	<0.0003	<0.0003	<0.0002	<0.00059
SB-12-05	5	11/1/2007	<0.02	NA	NA	NA	<0.00028	<0.00028	<0.00019	<0.00057

Table 3
Summary of Soil Sample Results - Organics

AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Depth	Date	TPHg	TPHd	MTBE	Chloroethane	Benzene	Ethylbenzene	Toluene	Xylenes, Total
Units	(feet)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
RWQCB ESLs	**Residential**		**100**	**100**	**8.4**	**10**	**0.12**	**33**	**29**	**31**
	Commercial		**450**	**150**	**8.4**	**11**	**0.26**	**33**	**29**	**100**
SB-12-10	10	11/1/2007	<0.02	NA	NA	NA	<0.00028	<0.00028	<0.00019	<0.00057
SB-12-15	15	11/1/2007	250	NA	NA	NA	<0.39	<0.32	<0.39	<0.71
SB-12-25	25	11/1/2007	<0.02	NA	NA	NA	<0.00029	<0.00029	<0.00019	<0.00058
SB-13-05	5	11/1/2007	<0.019	NA	NA	NA	<0.00027	<0.00027	<0.00018	<0.00055
SB-13-10	10	11/1/2007	0.91	NA	NA	NA	<0.0003	<0.0003	<0.0002	<0.0006
SB-13-15	15	11/1/2007	78	NA	NA	NA	<0.38	<0.31	<0.38	<0.68
SB-13-25	25	11/1/2007	420	NA	NA	NA	<0.42	<0.34	<0.42	<0.75
SB-14-03	3	11/1/2007	<0.02	NA	NA	NA	<0.00028	<0.00028	<0.00019	<0.00056
SB-14-10	10	11/1/2007	<0.02	NA	NA	NA	<0.00029	<0.00029	<0.00019	<0.00058
SB-14-15	15	11/1/2007	30	NA	NA	NA	<0.00093	<0.00093	<0.00062	<0.0019
SB-15-05	5	11/1/2007	<0.019	NA	NA	NA	<0.00027	<0.00027	<0.00018	<0.00055
SB-15-10	10	11/1/2007	<0.02	NA	NA	NA	<0.00028	<0.00028	<0.00019	<0.00056
SB-15-15	15	11/1/2007	**1100**	NA	NA	NA	<0.39	<0.31	<0.39	<0.7
SB-15-19	19	11/1/2007	7.9	NA	NA	NA	<0.0004	0.019	<0.00026	<0.00079
Former 8,000-Gallon Mineral Spirits/ 1,1,1-TCA UST										
SB-22-03	3	11/2/2007	0.29	90	<0.00046	<0.00055	<0.00021	<0.00042	<0.00039	<0.0015
SB-22-05	5	11/2/2007	<0.02	16	<0.00046	<0.00055	<0.00021	<0.00042	<0.00039	<0.0015
SB-22-10	10	11/2/2007	0.99	150	<0.00045	<0.00053	<0.00021	<0.00041	<0.00038	<0.0015
SB-22-15	15	11/2/2007	<0.02	<0.18	<0.00047	<0.00055	<0.00021	<0.00042	<0.0004	<0.0016
SB-23-03	3	11/2/2007	2.1	110	<0.00045	0.055	<0.0002	<0.00041	<0.00038	<0.0015
SB-23-05	5	11/2/2007	0.45	**190**	<0.00044	<0.00053	<0.0002	<0.0004	<0.00038	<0.0015
SB-23-10	10	11/2/2007	0.25	69	<0.00044	<0.00053	<0.0002	<0.0004	<0.00037	<0.0015
SB-23-15	15	11/2/2007	<0.02	<0.18	<0.00045	<0.00053	<0.00021	<0.00041	<0.00038	<0.0015
SB-24-03	3	11/2/2007	1.2	**170**	<0.091	<0.11	<0.042	<0.083	<0.077	<0.31
SB-24-05	5	11/2/2007	1.1	61	<0.00044	0.022	<0.0002	<0.0004	<0.00037	<0.0015
SB-24-10	10	11/2/2007	0.69	<0.18	<0.00046	<0.00054	<0.00021	<0.00042	<0.00039	<0.0015
SB-24-20	20	11/2/2007	<0.02	<0.18	<0.00045	<0.00054	<0.00021	<0.00041	<0.00038	<0.0015
SB-26-04	4	11/2/2007	380	**5800**	<8.9	<11	<4.1	<8.1	<7.6	<30
SB-26-10	10	11/2/2007	72	19	<0.093	<0.11	<0.043	<0.084	<0.079	<0.31
SB-26-15	15	11/2/2007	<0.02	<0.18	<0.00046	<0.00055	<0.00021	<0.00042	<0.00039	<0.0016

Table 3

Summary of Soil Sample Results - Organics

AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Depth	Date	TPHg	TPHd	MTBE	Chloroethane	Benzene	Ethylbenzene	Toluene	Xylenes, Total
Units	(feet)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
RWQCB ESLs	**Residential**		**100**	**100**	**8.4**	**10**	**0.12**	**33**	**29**	**31**
	Commercial		**450**	**150**	**8.4**	**11**	**0.26**	**33**	**29**	**100**
Former 10,000-Gallon Diesel UST										
SB-27-3	3	11/5/2007	NA	100	NA	NA	NA	NA	NA	NA
SB-27-5	5	11/5/2007	NA	6	NA	NA	NA	NA	NA	NA
SB-27-10	10	11/5/2007	NA	<0.18	NA	NA	NA	NA	NA	NA
SB-27-15	15	11/5/2007	NA	<0.18	NA	NA	NA	NA	NA	NA
SB-28-06	6	11/2/2007	<0.02	64	<0.00056	NA	<0.00028	<0.00028	<0.00019	<0.00056
SB-28-10	10	11/2/2007	<0.019	120	<0.00055	NA	<0.00027	<0.00027	<0.00018	<0.00055
SB-28-15	15	11/2/2007	<0.021	<0.18	NA	NA	<0.0003	<0.0003	<0.0002	<0.00059
SB-29-6	6	11/5/2007	NA	13	NA	NA	NA	NA	NA	NA
SB-29-10	10	11/5/2007	NA	<0.18	NA	NA	NA	NA	NA	NA
SB-29-15	15	11/5//2007	NA	<0.18	NA	NA	NA	NA	NA	NA
SB-28-20	20	11/2/2007	<0.02	<0.18	NA	NA	<0.00029	<0.00029	<0.00019	<0.00058

Notes:

MTBE	- Methyl tert butyl ether	<0.005	- Not reported at or above laboratory's reporting limit of 0.005 mg/kg
(mg/kg)	- milligrams per kilogram	UST	- underground storage tank
TPHg	- Total Petroleum Hydrocarbons as Gasoline	1,1,1-TCA	- 1,1,1-Trichloroethane
TPHd	- Total Petroleum Hydrocarbons as Diesel		

-TPHg, BTEX, VOCs and fuel oxygenates analyzed using EPA Method 8260B by Test America Laboratories (TAL), Pleasanton, California

-TPHd analyzed using EPA Method 8015M with silica gel cleanup by TAL, Pleasanton, California

RWQCB ESLs - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, groundwater is not a current or potential source of drinking water.

-Concentrations in bold exceed commercial ESLs for shallow soil (less than 3 meters).

Table 4
Summary of Soil Sample Results - PAHs
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Depth	Date	Naph-thalene	Acenaphtene	Fluorene	Phenanthrene	Anthracene	Fluoranthene	Pyrene	Benzo[a]anthracene	Chrysene	Benzo[b]fluoranthene	Benzo[k]fluoranthene	Benzo[a]pyrene	Indeno[1,2,3-cd]pyrene	Benzo[g,h,i]preylene	2-Methylnaphtalene	Dibenz(1,h)anthracene
Units	(feet)		(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)	(mg/Kg)
RWQCB ESLs	**Residential**		**1.3**	**160**	**410**	**40**	**40**	**40**	**500**	**0.38**	**40**	**0.38**	**0.38**	**0.038**	**0.62**	**35**	**12**	**0.062**
	Commercial		**2.8**	**160**	**1000**	**40**	**40**	**40**	**1000**	**1.3**	**40**	**1.3**	**1.3**	**0.13**	**2.1**	**35**	**12**	**0.21**
Former 8,000-Gallon Mineral Spirits/ 1,1,1-TCA UST																		
SB-26-4	4	11/2/2007	**2100**	**1300**	**1300**	**4500**	**1300**	**3100**	**2400**	**1100**	**1300**	**1000**	**450**	**960**	**460**	**380**	**630**	**140**
SB-26-10	10	11/2/2007	0.76	0.65	0.57	2.0	0.42	1.2	0.92	0.38	0.26	0.29	0.090	**0.23**	0.10	0.084	0.32	<0.067
SB-26-15	15	11/2/2007	<0.067	<0.067	<0.067	0.15	<0.067	0.12	0.085	<0.33	<0.067	<0.067	<0.067	<0.067	<0.067	<0.067	<0.067	<0.067

Notes:

(mg/kg) -milligrams per kilogram

<0.067 - Not reported at or above laboratory's reporting limit of 0.067 mg/kg

-Polycyclic Aromatic Hydrocarbons (PAHs) analyzed using EPA Method 8270BC by Test America Laboratories (TAL), Pleasanton, California

RWQCB ESLs - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, groundwater is not a current or potential source of drinking water.

-Concentrations in bold exceed commercial ESLs for shallow soil (less than 3 meters)

Table 5
Summary of Soil Sample Results - Metals
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	**Depth**	**Date**	**Antimony**	**Arsenic**	**Barium**	**Beryllium**	**Cadmium**	**Chromium**	**Cobalt**	**Copper**	**Lead**	**Mercury**	**Molybdenum**	**Nickel**	**Selenium**	**Silver**	**Thallium**	**Vanadium**	**Zinc**
Units	(feet)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
RWQCB ESLs	**Residential**		**6.1**	**0.38**	**750**	**4**	**1.7**	**750**	**40**	**230**	**200**	**1**	**40**	**150**	**10**	**20**	**1.2**	**15**	**600**
	Commercial		**40**	**15**	**1500**	**8**	**7.4**	**750**	**80**	**230**	**750**	**1**	**40**	**150**	**10**	**40**	**15**	**190**	**600**
Background			**<10**	**42**	**410**	**1.1**	**5.6**	**120**	**25**	**63**	**57**	**0.5**	**<5**	**270**	**5.1**	**3**	**10**	**90**	**140**
Former Three 10,000-Gallon USTs																			
SB-01-05	5	10/30/2007	<0.05	4.2	160	0.67	<0.0033	37	6.8	22	19	0.065	1.1	32	<0.11	<0.013	<0.072	31	44
SB-01-10	10	10/30/2007	<0.051	6.8	130	0.66	<0.0033	36	7.8	20	3.8	0.09	<0.042	34	<0.11	<0.013	<0.073	37	30
Former 550-Gallon Gasoline UST																			
SB-13-05	5	11/1/2007	<0.05	5.5	190	1.7	<0.0033	310	6.1	77	36	<0.00099	7.1	32	7.8	2.7	**16**	**480**	320
SB-13-10	10	11/1/2007	<0.05	4	140	0.5	<0.0032	37	11	21	4.6	0.056	<0.041	27	<0.1	<0.013	<0.071	40	32
Former 8,000-Gallon Mineral Spirits/ 1,1,1-TCA UST																			
SB-22-05	5	11/2/2007	<0.053	4.3	150	<0.0036	<0.0035	40	12	22	5	0.058	<0.044	30	<0.11	<0.014	<0.076	44	36
SB-22-10	10	11/2/2007	<0.05	14	180	0.59	<0.0032	48	18	42	130	0.11	2.6	42	<0.1	<0.013	<0.071	48	110
SB-24-20	20	11/2/2007	<0.047	2.6	300	<0.0032	<0.0031	35	13	23	5	<0.00096	<0.039	41	<0.099	<0.012	<0.068	30	37
SB-26-10	10	11/2/2007	<0.051	5.8	100	0.59	<0.0033	53	17	34	4.9	0.06	<0.042	67	<0.11	<0.013	<0.073	72	100
SB-26-15	15	11/2/2007	<0.05	2.2	120	0.54	<0.0032	35	7.9	18	4	0.053	<0.041	44	<0.1	<0.013	<0.071	31	35
SB-26-04	4	11/2/2007	3.1	13	19	<0.0034	<0.0033	130	10	**240**	28	<0.001	19	87	<0.11	<0.013	<0.073	35	57
Former 10,000-Gallon Diesel UST																			
SB-28-06	6	11/2/2007	2.4	3.9	330	0.68	3.4	31	3	60	**970**	0.11	3.6	15	<0.1	<0.013	<0.071	12	550
SB-28-10	10	11/2/2007	<0.053	10	130	<0.0035	<0.0034	11	5.4	21	110	0.51	<0.044	11	<0.11	<0.014	<0.075	22	120

Notes:

(mg/kg)	-milligrams per kilogram
<0.0033	- Not reported at or above laboratory's reporting limit of 0.0033 mg/kg
UST	- underground storage tank
1,1,1-TCA	- 1,1,1-Trichloroethane
	-CAM 17 Metals analyzed using EPA Method 6010B/7471A by Test American Laboratories (TAL), Pleasanton, California
RWQCB ESLs	- Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, groundwater is not a current or potential source of drinking water.
	-Concentrations in bold exceed commercial ESLs for shallow soil (less than 3 meters).
	-Background data obtained from Lawrence Berkeley National Laboratory Environmental Restoration Program, Soil Management Plan, 2006.

Table 3
Summary of Soil Sample Results - Organics

AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	**Depth**	**Date**	**TPHg**	**TPHd**	**Benzene**	**Isopropylbenzene**	**n-butylbenzene**	**sec-butylbenzene**
Units	(feet)		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)
RWQCB ESLs	**Residential**		**180**	**180**	**2**	**NE**	**NE**	**NE**
	Commercial		**180**	**180**	**2**	**NE**	**NE**	**NE**
Former Three 10,000-Gallon USTs								
SB-44-15	15	7/11/2008	150	**580**	0.11	0.45	0.47	0.27
SB-44-25	25	7/11/2008	0.22	1.1	<1.0	<0.80	<0.78	<0.68
SB-45-5	5	7/10/2008	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0
SB-45-15	15	7/10/2008	66	<1.0	<250	<250	<250	<250
SB-45-20	20	7/10/2008	**360**	<1.0	<250	<250	0.25	<250
Former 550-Gallon Gasoline UST								
SB-42-40	40	7/9/2008	<1.0	<1.0	<5.0	<5.0	<5.0	<5.0

Notes:

(mg/kg)	- all concentrations expressed in milligrams per kilogram (mg/Kg)
TPHg	- Total Petroleum Hydrocarbons as Gasoline
TPHd	- Total Petroleum Hydrocarbons as Diesel
	-VOCs analyzed using EPA Method 8260B by Advanced Technology Laboratories (ATL), Signal Hill, California
	-TPHg and TPHd analyzed using EPA Method 8015M with silica gel cleanup by Advanced Technology Laboratories (ATL), Signall Hill, California
RWQCB ESLs	- Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, updated May 2008, Residential and Commercial/Industrial land use.
	-Concentrations in bold exceed commercial ESLs for deep soil (greater than 3 meters).

Appendix A
ATTACHMENT E

Historical Soil Vapor Analytical Results

Table 2
Summary of Soil Gas Sample Results
AB&I Foundry

7825 San Leandro Street
Oakland, California

Sample ID	Depth	Sample Matrix	PCE	Chloroethane	Benzene	Toluene	Ethylbenzene	m,p-xylene
Units	(feet)		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)
RWQCB ESLs	**Residential**		**0.41**	**21**	**0.084**	**63**	**210**	**21**
	Commercial		**1.4**	**58**	**0.28**	**180**	**580**	**58**
Former 8,000-Gallon Mineral Spirits/ 1,1,1-TCA UST								
SG-1	5	Soil	<0.10	0.2	0.31	<0.20	<0.10	<0.20
SG-2	5	Soil	<0.10	<0.10	<0.080	<0.20	<0.10	<0.20
SG-3	5	Soil	<0.10	<0.10	<0.080	<0.20	<0.10	<0.20
Former 550-Gallon Gasoline UST								
SG-4	5	Soil	0.12	<0.10	0.11	0.22	2	0.63
SG-5	5	Soil	<0.84	<0.84	0.96	<0.84	13	3.4
SG-6	5	Soil	<0.10	<0.10	<0.080	<0.20	0.27	<0.20
Former Three 10,000-Gallon USTs								
SG-7	5	Soil	<0.10	<0.10	<0.080	<0.20	<0.10	<0.20
SG-8	5	Soil	<0.41	<0.41	<0.33	<0.41	1.7	0.48
SG-9	5	Soil	<0.10	<0.10	<0.080	<0.20	0.56	<0.20
Parking Lot Area								
SG-10	5	Soil	<0.10	<0.10	0.21	0.26	0.28	<0.20

Notes:

(µg/l)	- micrograms per liter
PCE	- tetrachloroethylene
<0.20	- Not reported at or above laboratory's reporting limit of 0.20 µg/L
1,1,1-TCA	- 1,1,1-Trichloroethane
	- Samples analyzed using EPA Method 8260B by Airtoxics Laboratories, Folsom, California
RWQCB ESLs	- Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, commercial use ESLs.
UST	- underground storage tank

Table 2
Summary of Soil Gas Sample Results
AB&I Foundry

7825 San Leandro Street
Oakland, California

Sample ID	Purge Volume	Depth (feet bgs)	Date	PCE	TCE	1,1-DCE	1,1,-DCA	Benzene	Toluene	Vinyl Chloride	m,p-xylene
RWQCB ESLs	**Residential**			**0.41**	**1.2**	**42**	**1.5**	**0.084**	**63**	**0.031**	**21**
	Commercial			**1.4**	**4.1**	**120**	**5.1**	**0.28**	**180**	**0.1**	**58**
SG-11	1	5.0	7/7/08	<0.1	<0.1	0.15	0.19	<0.08	0.23	<0.05	<0.2
SG-11	3	5.0	7/7/08	<0.1	<0.1	0.16	0.19	<0.08	<0.1	<0.05	<0.2
SG-11	7	5.0	7/7/08	<0.1	<0.1	0.16	0.19	<0.08	<0.1	<0.05	<0.2
SG-12	1	5.0	7/7/08	<0.1	<0.1	<0.1	<0.1	<0.08	0.27	**2.1**	<0.2
SG-12 (D)	1	5.0	7/7/08	<0.1	<0.1	<0.1	<0.1	<0.08	0.32	**2.9**	<0.2
SG-13A	1	Sub Slab	7/7/08	<0.1	<0.1	<0.1	<0.1	<0.08	<0.1	<0.05	<0.2
SG-13B	1	5.0	7/7/08	<0.1	<0.1	<0.1	<0.1	<0.08	<0.1	<0.05	<0.2
SG-14	1	5.0	7/7/08	<0.1	<0.1	<0.1	<0.1	<0.08	<0.1	<0.05	<0.2
SG-16A	1	Sub Slab	7/7/08	**3.2**	0.14	<0.1	<0.1	<0.08	<0.1	<0.05	0.22
SG-16B	1	5.0	7/7/08	0.58	<0.1	<0.1	<0.1	0.17	<0.1	**3.7**	<0.2

Notes:

- all concentrations expressed in micrograms per liter (µg/l)

(D) - Duplicate sample

feet bgs - feet below ground surface

PCE - Tetrachloroethene

TCE - Trichloroethene

1,1 - DCE - 1,1 - Dichloroethene

1,1 - DCA - 1,1 - Dichloroethane

1,1,1-TCA - 1,1,1-Trichloroethane

<0.10 - Not reported at or above laboratory's reporting limit of 0.10 µg/L

RWQCB ESLs - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, updated May 2008, Residential and Commercial/Industrial Land Use.

- Samples analyzed using EPA Method 8260B by Transglobal Environmental Geochemistry, Rancho Cordova, California
- Concentrations in bold exceed ESLs for indoor air vapor intrusion concerns - Commercial/Industrial Use

Table 1
Summary of Soil Gas Sample Results
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Purge Volume	Depth (feet bgs)	Date	PCE	Benzene
RWQCB ESLs	**Commercial**			**1.4**	**0.28**
SG-17	1	1.5	3/13/09	<0.1	<0.08
SG-18	1	1.5	3/13/09	<0.1	0.15
SG-18 (D)	1	1.5	3/13/09	<0.1	0.15
SG-19	1	1.5	3/13/09	3.1	<0.08
SG-19 (D)	1	1.5	3/13/09	3	<0.08

Notes:

µg/L	- all concentrations expressed in micrograms per liter (µg/l)
(D)	- Duplicate sample
feet bgs	- feet below ground surface
PCE	- Tetrachloroethene
<0.10	- Not reported at or above laboratory's reporting limit of 0.10 µg/L
RWQCB ESLs	- Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, updated May 2008, Residential and Commercial/Industrial Land Use.

- Samples analyzed using EPA Method 8260B by Transglobal Environmental Geochemistry, Rancho Cordova, California

- Concentrations in bold exceed ESLs for indoor air vapor intrusion concerns - Commercial/Industrial Use

Appendix A
ATTACHMENT F

Historical Groundwater Analytical Results

TABLE 2A - WATER RESULTS

BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENES

Results in Parts Per Billion (ppb)

CONSTITUENTS				
Sample Location (Action Level)	**Benzene $(1)_1$**	**Toluene $(100)_2$**	**Ethylbenzene $(680)_1$**	**Xylenes $(1750)_1$**
MW-1	0.6	ND	ND	ND
MW-2	ND	0.8	ND	ND
MW-3	ND	ND	ND	ND
MW-4	1.0	2.0	7.6	19

ND - None Detected

1 - California Department Of Health Services Drinking Water Standard, Revised 10/23/91

2 - California DOHS Action Level, 7/1/92

TABLE 2B - WATER RESULTS

TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE AND DIESEL, TOTAL AND HYDROCARBON OIL AND GREASE, TOTAL LEAD, AND VOLATILE HALOCARBONS

Results in Parts Per Billion (ppb)

CONSTITUENTS						
Sample Location (Action Level)	**TPH Gasoline (NA)**	**TPH Diesel (NA)**	**Total Oil & Grease (NA)**	**Hydrocarbon Oil & Grease (NA)**	**Total Lead (50)**	**Volatile Halocarbons (Determined by Compound)**
MW-1	--	830	--	--	--	--
MW-2	920	--	1.0	ND	--	0.6 - Bromoform$(100)_2$ 5 - Chloroethane(NA) 1.7 - 1,1-Dichloroethane(0.5) 6.7 - 1,1,1-Trichloroethane$(200)_1$
MW-3	ND	--	--	--	--	--
MW-4	1800	--	--	--	0.058	--

5ppb

5B 58 ppb?

? is this ppm yes!

mg/l

ND - None Detected

NA - Not Applicable

-- - Not Tested

1 - California Department of Health Services Drinking Water Standards, Revised 10/23/91.

2 - EPA Drinking Water Standard, Revised 7/1/92

Table 6
Summary of Groundwater Sample Results - Organics
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Depth	Date	TPHg	TPHd	MTBE	TBA	1,1 - DCA	1,1 - DCE	cis 1,2-DCE	Benzene	Chloro-ethane	1,2-Dichloro-benzene	Ethyl-benzene	Naph-thalene	Toluene	1,1,1-TCA	TCE	Vinyl chloride	Xylenes, Total
Units	(feet)		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
RWQCB ESLs^1			**5,000**	**2,500**	**1,800**	**50,000**	**1,000**	**6,300**	**6,200**	**540**	**160**	**100**	**300**	**210**	**400**	**50,000**	**530**	**3.8**	**5,300**
RWQCB ESLs^2			**100**	**100**	**5**	**NE**	**5**	**6**	**6**	**1**	**12**	**10**	**30**	**17**	**40**	**200**	**5**	**0.5**	**20**
Former Three 10,000-Gallon USTs																			
MW-9	5-20	10/25/2007	1300	120	<0.50	15	<0.50	<0.50	<0.5	89	<10	<0.50	6	<1	2	<5	<0.50	<5	<1
SB-01-GW24.5	24.5	10/30/2007	180	51	<0.13	<2.3	<0.059	<0.054	<0.11	0.75	<0.21	<0.05	3.2	1.5	0.67	<0.046	<0.063	<0.04	1.8
SB-06-GW23	23	10/31/2007	<28	110	<0.13	<2.3	<0.059	<0.054	<0.11	<0.035	<0.21	<0.05	<0.039	<0.096	0.52	<0.046	<0.063	<0.04	<0.49
SB-07-GW17	17	10/31/2007	2900	610	<0.13	<2.3	<0.059	<0.054	<0.11	37	<0.21	<0.05	19	17	<0.049	<0.046	<0.063	<0.04	1.4
SB-7-GW17 (D)	17	10/31/2007	4600	450	NA	NA	<0.059	<0.054	<0.11	45	<0.21	<0.05	17	16	<0.049	<0.046	<0.063	<0.04	1.7
SB-08-GW17	17	10/31/2007	**19000**	**6100**	<6.3	<2.3	<0.59	<0.054	<1.1	<0.35	<2.1	<0.5	22	15	<0.49	<0.46	<0.63	<0.4	<4.9
SB-09-GW17	17	10/31/2007	**11000**	**27000**	<6.3	<2.3	<0.059	<0.054	<0.11	25	<0.21	1.5	4.3	2.7	9.8	<0.046	2.1	<0.04	25
SB-37-GW16.5	16.5	11/27/2007	<50	<50	9.1	<5.0	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<1.0	0.89	<0.50	<0.50	<0.50	<1.0
SB-37-GW16.5 (D)	16.5	11/27/2007	NA	NA	11	NA	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<1.0	0.91	<0.50	<0.50	<0.50	<0.50
Former 550-Gallon Gasoline UST																			
MW-4	5-20	10/24/2004	<50	<50	<0.50	<5.0	<0.50	<0.50	<0.5	<5	<10	<0.50	<5	<1	<5	<5	<0.50	<5	<1
SB-12-GW20	20	11/2/2007	2300	860	0.57	<2.3	<0.059	<0.054	<0.11	3.3	<0.21	<0.05	16	1.6	1.8	<0.046	<0.063	<0.04	4.4
SB-14-GW13	13	11/1/2007	1600	80	<0.25	<2.3	<0.059	<0.054	<0.11	1.1	<0.21	<0.05	2.8	<0.096	1.6	<0.046	<0.063	<0.04	7.3
Former 8,000-Gallon Mineral Spirits/ 1,1,1-TCA UST																			
MW-2R	5-20	10/25/2007	150	<50	<0.50	<5.0	<0.50	<0.50	<0.50	<5	<10	<0.50	<5	<1	<5	<5	<0.50	<5	<1
SB-22-GW10	10	11/2/2007	1300	87	<0.13	<2.3	<0.059	<0.054	<0.11	<0.035	<0.21	<0.05	<0.039	<0.096	<0.049	<0.046	<0.063	<0.04	<0.49
SB-25-GW10	10	11/2/2007	1500	1200	<0.13	<2.3	<0.3	<0.27	<0.53	6.4	<1.1	<0.25	50	<0.48	200	<0.23	<0.32	<0.2	410
SB-26-GW10	10	11/2/2007	3100	**37000**	<0.13	<2.3	<1.2	<1.1	<2.1	<0.7	<4.2	<1	17	630	<0.98	<0.92	<1.3	<0.8	<9.8
Parking Lot Area																			
MW-3	5-20	10/24/2007	540	<50	<0.50	<5.0	180	680	5	<5	<10	<0.50	<5	<1	<5	13	<0.50	**7.5**	<1
MW-5	5-20	10/25/2007	<50	<50	<0.50	<5.0	2	1.5	1.5	<5	<10	<0.50	<5	<1	<5	<5	<0.50	<5	<1
MW-6	5-20	10/24/2007	<50	110	<0.50	<5.0	<0.50	<0.50	<0.50	<5	<10	<0.50	<5	<1	<5	<5	<0.50	<5	<1
MW-8	5-20	10/25/2007	1200	<50	<0.50	<5.0	**1600**	1600	<0.50	<5	290	<0.50	<5	<1	<5	1700	<0.50	<5	<1
SB-16-GW15	15	11/1/2007	<28	<30	<0.13	<2.3	29	31	<0.11	<0.035	<0.21	<0.05	<0.039	<0.096	<0.049	16	0.56	<0.04	<0.49
SB-16-GW15 (D)	15	11/1/2007	220	<30	<0.13	<2.3	26	35	<0.11	<0.035	<0.21	<0.05	<0.039	<0.096	<0.049	18	0.63	<0.04	<0.49
SB-17-GW15	15	11/1/2007	540	160	NA	NA	170	740	<2.1	<0.7	<4.2	<1	<0.78	<1.9	<0.98	<0.92	<1.3	**14**	<9.8
SB-18-GW05	5	11/5/2007	330	160	<0.13	<2.3	250	660	<2.1	<0.7	28	<1	<0.78	<1.9	<0.98	310	<1.3	<0.8	<9.8
SB-19-GW15	15	11/5/2007	340	<30	<0.13	<2.3	200	880	5	<0.35	<2.1	<0.5	<0.39	<0.96	<0.49	<0.46	<0.63	**10**	<4.9
SB-20-GW15	15	11/5/2007	330	<30	<0.13	<2.3	200	950	<2.1	<0.7	<4.2	<1	<0.78	<1.9	<0.98	<0.92	<1.3	**11**	<9.8
SB-32-GW15	15	11/27/2007	NA	NA	<5.0	NA	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	0.62	<1.0	1.9	<0.50	<0.50	<0.50	3.3
SB-33-GW15	15	11/27/2007	NA	NA	<5.0	NA	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	0.61	<1.0	3.0	<0.50	<0.50	<0.50	3.4
SB-34-GW15	15	11/27/2007	NA	NA	<10	NA	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<1.0	<2.0	2.2	<1.0	<1.0	<1.0	2.4
SB-35-GW11.5	11.5	11/27/2007	NA	NA	<5.0	NA	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0
SB-36-GW11.5	11.5	11/26/2007	NA	NA	<5.0	NA	0.53	<0.50	<0.50	<0.50	1.6	<0.50	<0.50	<1.0	<0.50	<0.50	<0.50	<0.50	<1.0
Former 10,000-Gallon Diesel UST																			
MW-1	5-20	10/25/2007	<50	450	<0.50	<5.0	<0.50	<0.50	<5	<5	<10	<0.50	<5	<1	<5	<5	<0.50	<5	<1
MW-7	5-20	10/25/2007	<50	370	<0.50	<5.0	<0.50	<0.50	<5	<5	<10	<0.50	<5	<1	<5	<5	<0.50	<5	<1
SB-28-GW15	15	11/2/2007	<28	260	<0.13	<2.3	<0.059	<0.054	<0.11	<0.035	<0.21	<0.05	<0.039	<0.096	0.52	<0.046	<0.063	<0.04	<0.49
SB-29-GW15	15	11/5/2007	<28	150	<0.13	<2.3	<0.059	<0.054	<0.11	<0.035	<0.21	<0.05	<0.039	<0.096	<0.049	<0.046	<0.063	<0.04	<0.49

Table 6
Summary of Groundwater Sample Results - Organics
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Depth	Date	TPHg	TPHd	MTBE	TBA	1,1 - DCA	1,1 - DCE	cis 1,2-DCE	Benzene	Chloro-ethane	1,2-Dichloro-benzene	Ethyl-benzene	Naph-thalene	Toluene	1,1,1-TCA	TCE	Vinyl chloride	Xylenes, Total
Units	(feet)		(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)	(ug/L)
RWQCB ESLs[1]			**5,000**	**2,500**	**1,800**	**50,000**	**1,000**	**6,300**	**6,200**	**540**	**160**	**100**	**300**	**210**	**400**	**50,000**	**530**	**3.8**	**5,300**
RWQCB ESLs[2]			**100**	**100**	**5**	**NE**	**5**	**6**	**6**	**1**	**12**	**10**	**30**	**17**	**40**	**200**	**5**	**0.5**	**20**
SB-30-GW10	10	11/2/2007	<28	74	<0.13	<2.3	<0.059	<0.054	<0.11	<0.035	<0.21	<0.05	<0.039	<0.096	0.64	<0.046	<0.063	<0.04	1.5

Notes:

(µg/L)	- micrograms per Liter
(D)	- duplicate sample
1,1,1-TCA	- 1,1,1-Trichloroethane
UST	- Underground Storage Tank
TPHg	- Total Petroleum Hydrocarbons as Gasoline
TPHd	- Total Petroleum Hydrocarbons as Diesel
MTBE	- Methyl tert butyl ether
TBA	- Tert butyl alcohol
cis-1,2-DCE	- Cis-1,2-dichloroethylene
<0.50	- Not reported at or above laboratory's reporting limit of 0.50 µg/L
NA	- Analyte not sampled for

-TPHg, BTEX, VOCs and fuel oxygenates analyzed using EPA Method 8260B by Test America Laboratories (TAL), Pleasanton, California

-TPHd analyzed using EPA Method 8015M with silica gel cleanup by TAL, Pleasanton, California

-Concentrations in bold exceed ESLs for groundwater as a current or potential source of drinking water

RWQCB ESLs[1] ' - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, groundwater is not a current or potential source of drinking water.

RWQCB ESLs[2] ' - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, groundwater is a current or potential source of drinking water.

Table 4
Summary of Groundwater Monitoring Well Sample Results
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Depth	Date	TPHg	TPHd	PCE	1,1 - DCA	1,1 - DCE	1,2-DCA	trans 1,2-DCE	cis 1,2-DCE	Benzene	Chloroethane	Ethylbenzene	Toluene	1,1,1-TCA	TCE	Vinyl chloride	Naphthalene	Xylenes, Total
Units	(feet bgs)		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
RWQCB ESLs[1]			**NE**	**NE**	**420**	**3,400**	**18,000**	**690**	**19,000**	**17,000**	**1,800**	**2,700**	**170,000**	**530,000**	**360,000**	**11,000**	**13.0**	**11,000**	**160,000**
RWQCB ESLs[2]			**NE**	**NE**	**120**	**1,000**	**6,300**	**200**	**6,700**	**6,200**	**540**	**820**	**170,000**	**350,000**	**130,000**	**530**	**3.8**	**3,200**	**160,000**
MISC																			
MW-1		6/13/2008	<50	160	<0.50	0.40	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1
MW-2R		6/13/2008	98	<50	<0.50	<0.50	0.68	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1
MW-3		6/12/2008	*510	<50	<0.50	170	910	<0.50	0.54	7.9	0.65	<0.50	<0.50	<0.50	<0.50	0.85	**13**	<0.50	<1
MW-4		6/12/2008	<50	<50	<0.50	<0.50	0.73	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1
MW-5		6/12/2008	<50	<50	<0.50	1.1	1.5	<0.50	2	5.1	0.65	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1
MW-6		6/12/2008	<50	54	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1
MW-7		6/13/2008	<50	59	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1
MW-8		6/12/2008	*2100	<50	<8.8	1400	3200	<10	<10	<10	<10	300	<10	<10	2700	0.62	**19**	<10	<20
MW-8 (D)		6/12/2008	2100	<50	<8.8	1300	3000	<10	<10	<10	<10	310	<10	<10	2500	0.62	**19**	<10	<20
MW-9		6/12/2008	2900	180	<0.44	<0.50	1.4	<0.50	<0.50	<0.50	180	<0.50	7.6	3	<0.50	<0.50	<0.50	2.1	2.1

Notes:

NE	-value not established
feet bgs	- feet below ground surface
(D)	- Duplicate sample
*510	Reported due to the presence of discrete peaks
TPHg	- Total Petroleum Hydrocarbons as Gasoline
TPHd	- Total Petroleum Hydrocarbons as Diesel
PCE	- Tetrachloroethene
TCE	- Trichloroethene
1,1 - DCE	- 1,1 - Dichloroethene
1,1 - DCA	- 1,1 - Dichloroethane
1,1,1-TCA	- 1,1,1-Trichloroethane
1,2 - DCA	- 1,2-Dichloroethane
trans-1,2-DCE	- Trans-1,2-dichloroethene
cis-1,2-DCE	- Cis-1,2-dichloroethene
	- all concentrations expressed in micrograms per liter (µg/l)
<0.50	- Not reported at or above laboratory's reporting limit of 0.50 µg/L
	-TPHg, TPHd, and VOCs analyzed using EPA Methods 8015B(M) and 8260B by Advanced Technology Laboratories (ATL), Signal Hill, California
	-Concentrations in bold exceed ESLs for vapor intrusion concearns - residential land use.

RWQCB ESLs[1] ' - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, updated May 2008, commercial land use.

RWQCB ESLs[2] ' - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, updated May 2008, residential land use.

Table 5
Summary of Grab Groundwater Sample Results
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Sampling Method	Depth	Date	TPHg	TPHd	PCE	1,1 - DCA	1,1 - DCE	1,2-DCA	trans 1,2-DCE	cis 1,2-DCE	Benzene	Chloroethane	Ethylbenzene	Toluene	1,1,1-TCA	TCE	Vinyl chloride	Naphthalene	Xylenes, Total
Units	PVC/HP	(feet)		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
RWQCB ESLs[1]				**NE**	**NE**	**420**	**3,400**	**18,000**	**690**	**19,000**	**17,000**	**1,800**	**2,700**	**170,000**	**530,000**	**360,000**	**11,000**	**13.0**	**11,000**	**160,000**
RWQCB ESLs[2]				**NE**	**NE**	**120**	**1,000**	**6,300**	**200**	**6,700**	**6,200**	**540**	**820**	**170,000**	**350,000**	**130,000**	**530**	**3.8**	**3,200**	**160,000**
Former Three 10,000-Gallon USTs																				
SB-51-GW44	PVC	44	7/12/2008	170	<50	0.52	<0.38	<0.43	3.6	<0.41	6.2	0.44J	<0.50	0.97	2.3	<0.48	3.8	0.61	2.5	7
SB-45-GW20	HP	20	7/10/2008	640	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-45-GW45	PVC	45	7/10/2008	900	50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.57	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-46-GW48	HP	48	7/10/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
Former 8,000-Gallon Mineral Spirits/ 1,1,1-TCA UST																				
SB-50-GW58	HP	58	7/12/2008	<50	<50	<0.50	<0.38	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	6.3	<0.38	1.5	<0.45
Parking Lot Area																				
SB-49-GW42	HP	42	7/12/2008	<50	<50	<0.50	0.39J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.45
SB-949-GW42(D)	HP	42	7/12/2008	<50	<56	<0.50	0.38J	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.43 J	<0.38	<0.50	<0.45
Water Supply Well Area																				
SB-52-GW51	HP	51	7/12/2008	<50	<50	<0.50	<0.50	<0.50	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.45
SB-47-GW24	PVC	24	7/11/2008	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.62	<0.50	<0.50	<0.45
SB-38-GW25	PVC	25	7/8/2008	130	<50	0.50	49	70	<0.50	<0.50	4.1	<0.50	<0.50	<0.50	<0.50	<0.50	0.55	1.0	<0.50	<0.50

Notes:

NE	-value not established
(D)	- duplicate sample
UST	- Underground Storage Tank
TPHg	- Total Petroleum Hydrocarbons as Gasoline
TPHd	- Total Petroleum Hydrocarbons as Diesel
1,2 - DCA	- 1,2-dichloroethane
trans-1,2-DCE	- Trans-1,2-dichloroethene
cis-1,2-DCE	- Cis-1,2-dichloroethene
1,1,1-TCA	- 1,1,1-Trichloroethane
TCE	- Trichloroethene
	- all concentrations expressed in micrograms per liter (µg/l)
<0.50	- Not reported at or above laboratory's reporting limit of 0.50 µg/L
	-TPHg, TPHd, and VOCs analyzed using EPA Methods 8015B(M) and 8260B by Advanced Technology Laboratories (ATL), Signal Hill, California
	-Concentrations in bold exceed ESLs for vapor intrusion concerns - Residential Land Use
PVC	- Polyvinyl chloride pipe
HP	- Hydropunch

RWQCB ESLs[1] ' - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, update May 2008, commerical land use.

RWQCB ESLs[2] ' - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, updated May 2008, residential land use.

Table 2
Summary of Semi-Annual Groundwater Monitoring Results - December 2009
AB&I Foundry
7825 San Leandro Street
Oakland, California

Sample ID	Date	TPHg	TPHd	1,1 - DCA	1,1 - DCE	1,2-DCA	trans 1,2-DCE	cis 1,2-DCE	n-Butylbenzene	n-Propylbenzene	sec-Butylbenzene	Benzene	Chloroethane	Ethylbenzene	1,2,3-Trichloropropane	Tert-Butylbenzene	Isopropylbenzene	4-Isopropyltoluene	Toluene	1,1,1-TCA	Vinyl chloride	m,p-Xylene	Naphthalene
Units		*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*	*(µg/L)*
RWQCB ESLs[1]		**NE**	**NE**	**3,400**	**18,000**	**690**	**19,000**	**17,000**	**NE**	**NE**	**NE**	**1,800**	**2,700**	**170,000**	**NE**	**NE**	**NE**	**NE**	**530,000**	**360,000**	**13.0**	**NE**	**11,000**
RWQCB ESLs[2]		**NE**	**NE**	**1,000**	**6,300**	**200**	**6,700**	**6,200**	**NE**	**NE**	**NE**	**540**	**820**	**170,000**	**NE**	**NE**	**NE**	**NE**	**350,000**	**130,000**	**3.8**	**NE**	**3,200**
MISC																							
MW-1	12/10/2009	<50	<50	0.41	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-2R	12/10/2009	99	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-3	12/9/2009	51	<50	16	6.4	<0.50	0.37	0.25	<0.50	<0.50	<0.50	0.51	78	<0.50	<0.50	<0.50	<0.50	<0.50	2.6	<0.50	17	<1.0	<0.50
MW-4	12/9/2009	70	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-5	12/10/2009	53	<50	0.58	0.63	<0.50	0.67	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-6	12/9/2009	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-7	12/10/2009	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<1.0	<0.50
MW-8	12/9/2009	180	<50	94	58	1.8	<2.5	<2.5	<2.5	<2.5	<2.5	3.0	**2,400**	<2.5	<2.5	<2.5	4.1	<2.5	<2.5	14	**85**	<5.0	<2.5
MW-8 (D)	12/9/2009	190	<50	92	60	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	2.8	**2,400**	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	14	**82**	<10	<5.0
MW-9	12/9/2009	2,700	150	<0.50	<0.50	<0.50	<0.50	<0.50	0.74	5.0	1.1	36	<0.50	2.7	<0.50	0.36	5.5	1.6	0.87	<0.50	<0.50	1.1	1.3

Notes:

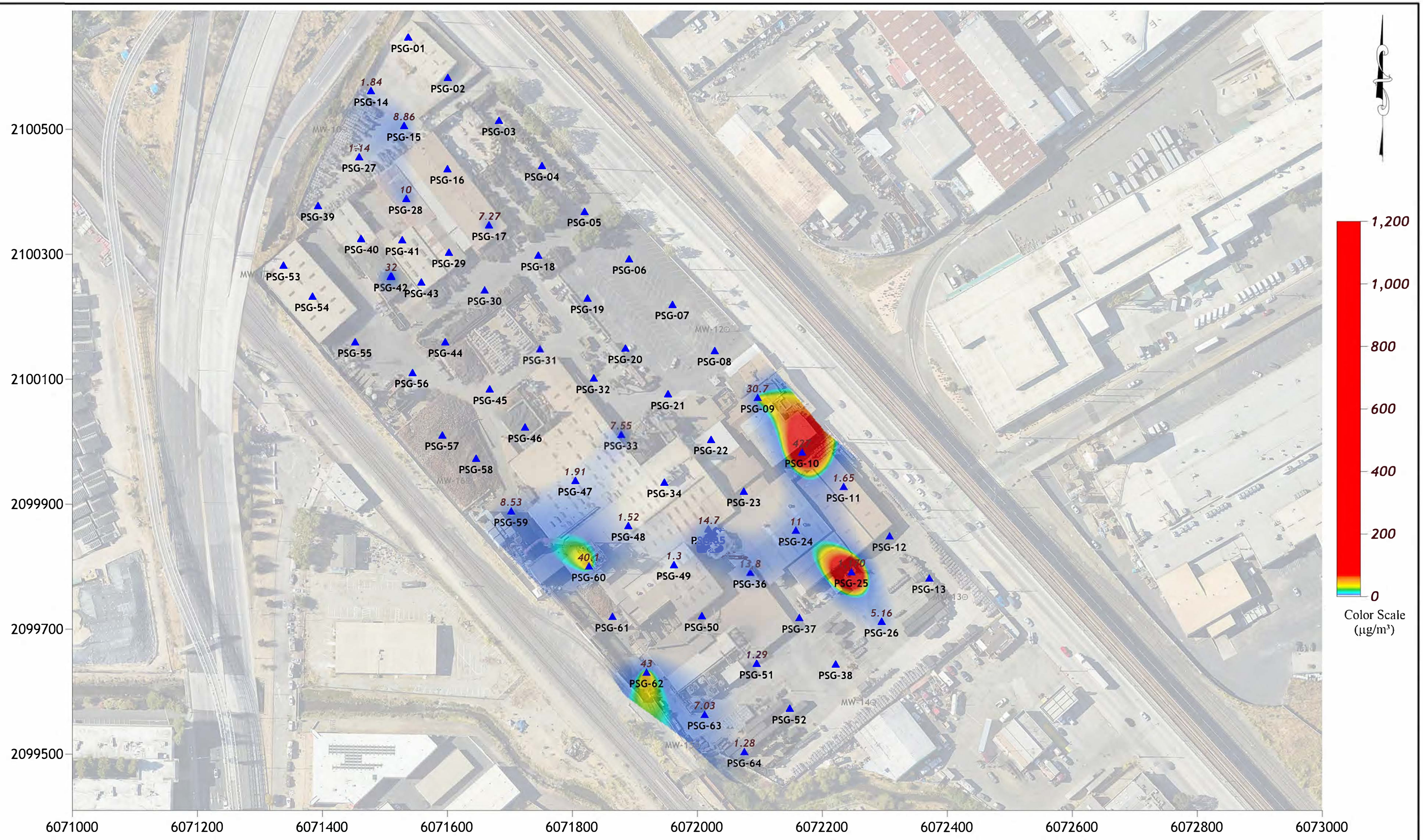
NE	- value not established
feet bgs	- feet below ground surface
(D)	- Duplicate sample
*500	- Reported due to the presence of discrete peaks
1,1,2-TCA	- 1,1,2 -Trichloroethane
TPHg	- Total Petroleum Hydrocarbons as Gasoline
TPHd	- Total Petroleum Hydrocarbons as Diesel
1,1 - DCE	- 1,1 - Dichloroethene
1,1 - DCA	- 1,1 - Dichloroethane
1,1,1-TCA	- 1,1,1-Trichloroethane
1,2 - DCA	- 1,2-Dichloroethane
trans-1,2-DCE	- Trans-1,2-dichloroethene
cis-1,2-DCE	- Cis-1,2-dichloroethene
	- all concentrations expressed in micrograms per liter (µg/l)
<0.50	- Not reported at or above laboratory's reporting limit of 0.50 µg/L
	-TPHg, TPHd, and VOCs analyzed using EPA Methods 8015B(M) and 8260B by Advanced Technology Laboratories (ATL), Signal Hill, California

RWQCB ESLs[1] - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, updated May 2008, Table E-1, commercial land use scenario.

RWQCB ESLs[2] - Environmental Screening Levels taken from the California Regional Water Quality Control Board, San Francisco Bay Region document entitled "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater," Interim Final November 2007, updated May 2008, Table E-1, residential land use scenario.

APPENDIX B

Soil Gas Isoconcentration Maps
(Heat Maps)



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ENVIRONMENTAL
2203A Commerce Road, Suite 1, Forest Hill, MD 21050 USA
www.Beacon-USA.com 1-410-838-8780
Beacon Project No. 7137, August 2023

LEGEND

1,000 MICROGRAMS/CUBIC METER

▲ PASSIVE SOIL-GAS SAMPLE LOCATION

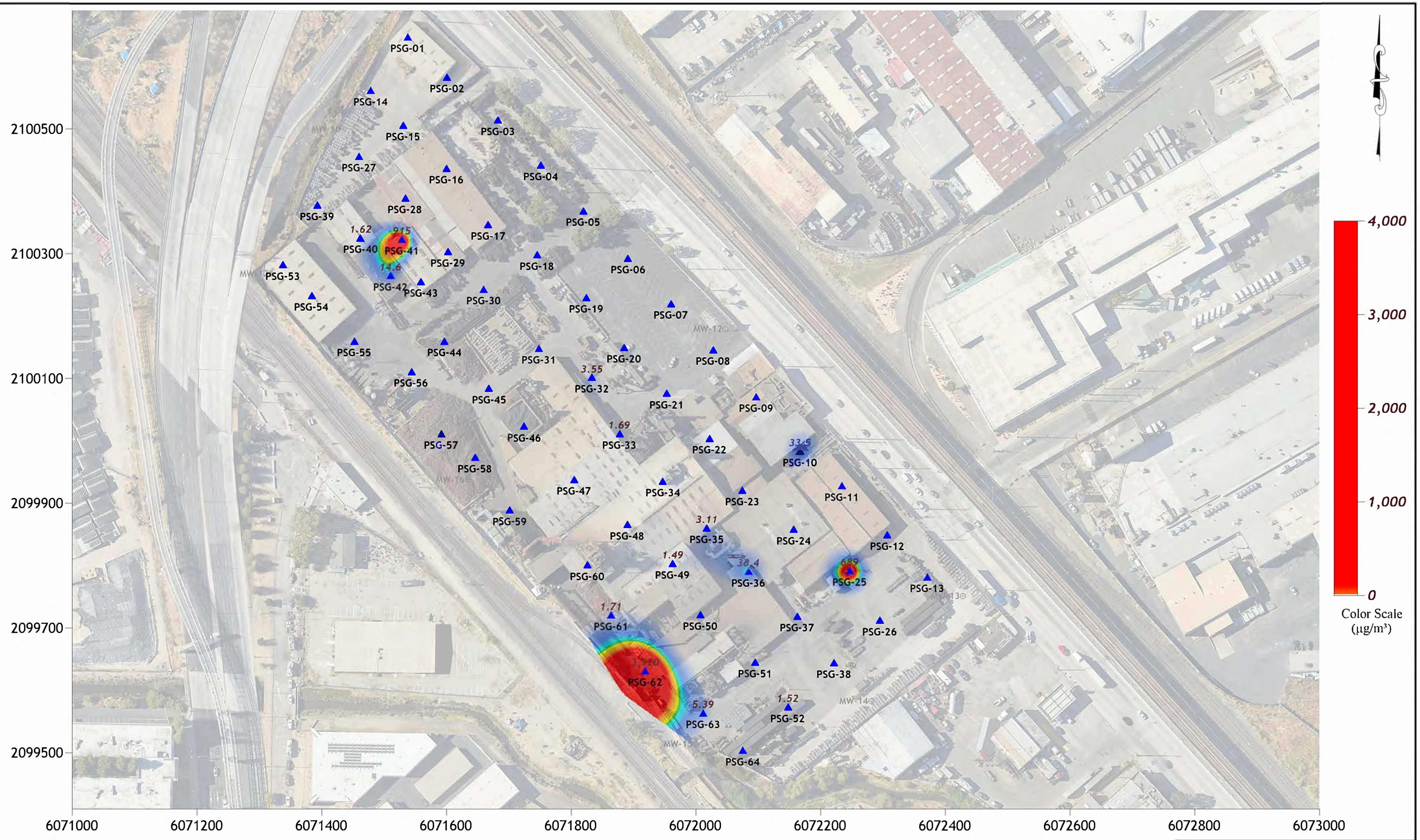
Scale in Feet

0 150 300

System:	State Plane
Zone:	California zone 3
Datum:	NAD83(2011) (EPSG:6420)
Coordinate Units:	ftUS

Figure B-1
Passive Soil-Gas Survey
Tetrachloroethene

AB&I Foundry
Oakland, CA



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Beacon Project No. 7137, August 2023

LEGEND

1,000 MICROGRAMS/CUBIC METER

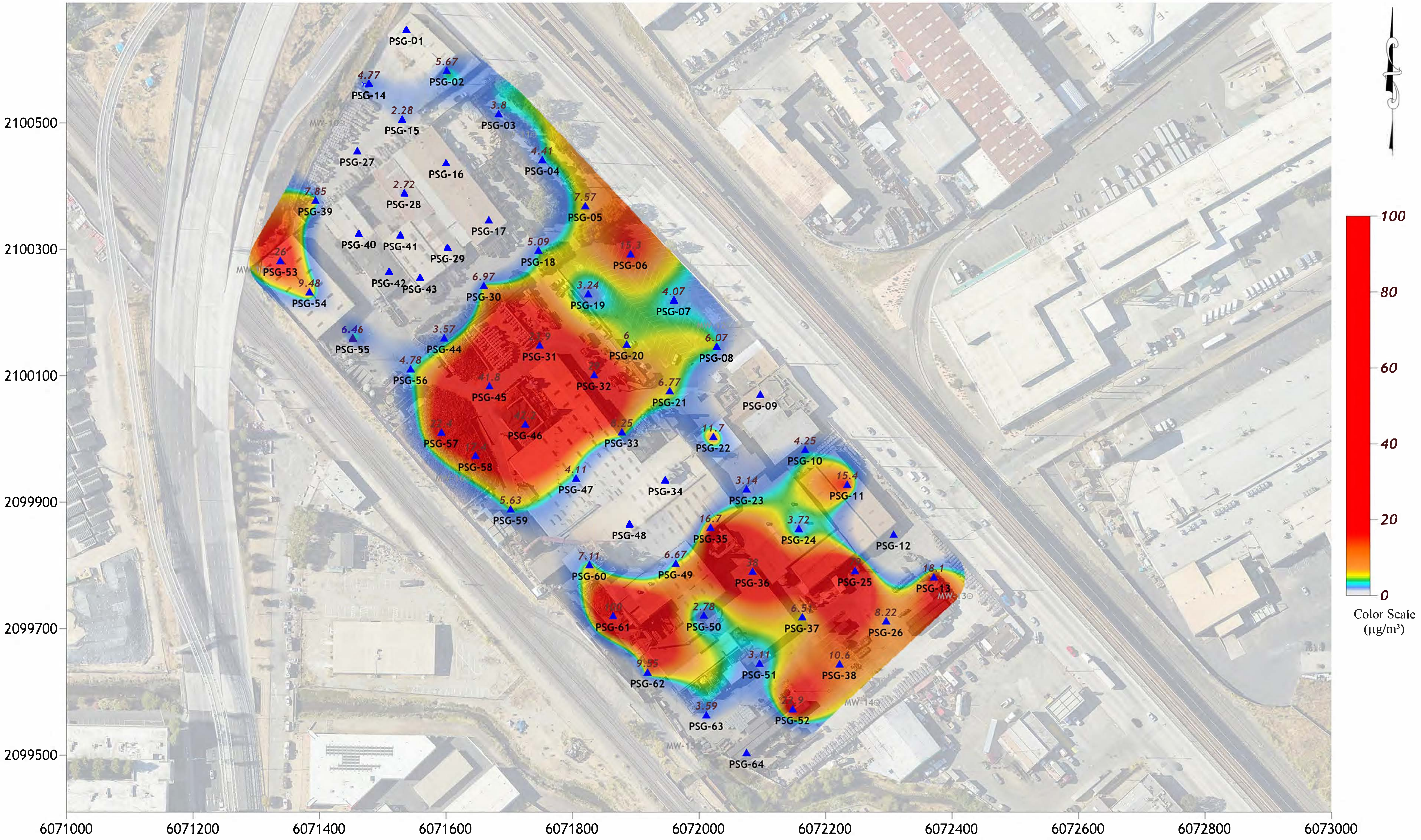
▲ PASSIVE SOIL-GAS SAMPLE LOCATION

Scale in Feet
0 150 300

System:	State Plane
Zone:	California zone 3
Datum:	NAD83(2011) (EPSG:6420)
Coordinate Units:	ftUS

Figure - B-2
Passive Soil-Gas Survey
Trichloroethene

AB&I Foundry
Oakland, CA



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Beacon Project No. 7137, August 2023

LEGEND

1,000 MICROGRAMS/CUBIC METER

▲ PASSIVE SOIL-GAS SAMPLE LOCATION

Scale in Feet
0 150 300

System:	State Plane
Zone:	California zone 3
Datum:	NAD83(2011) (EPSG:6420)
Coordinate Units:	ftUS

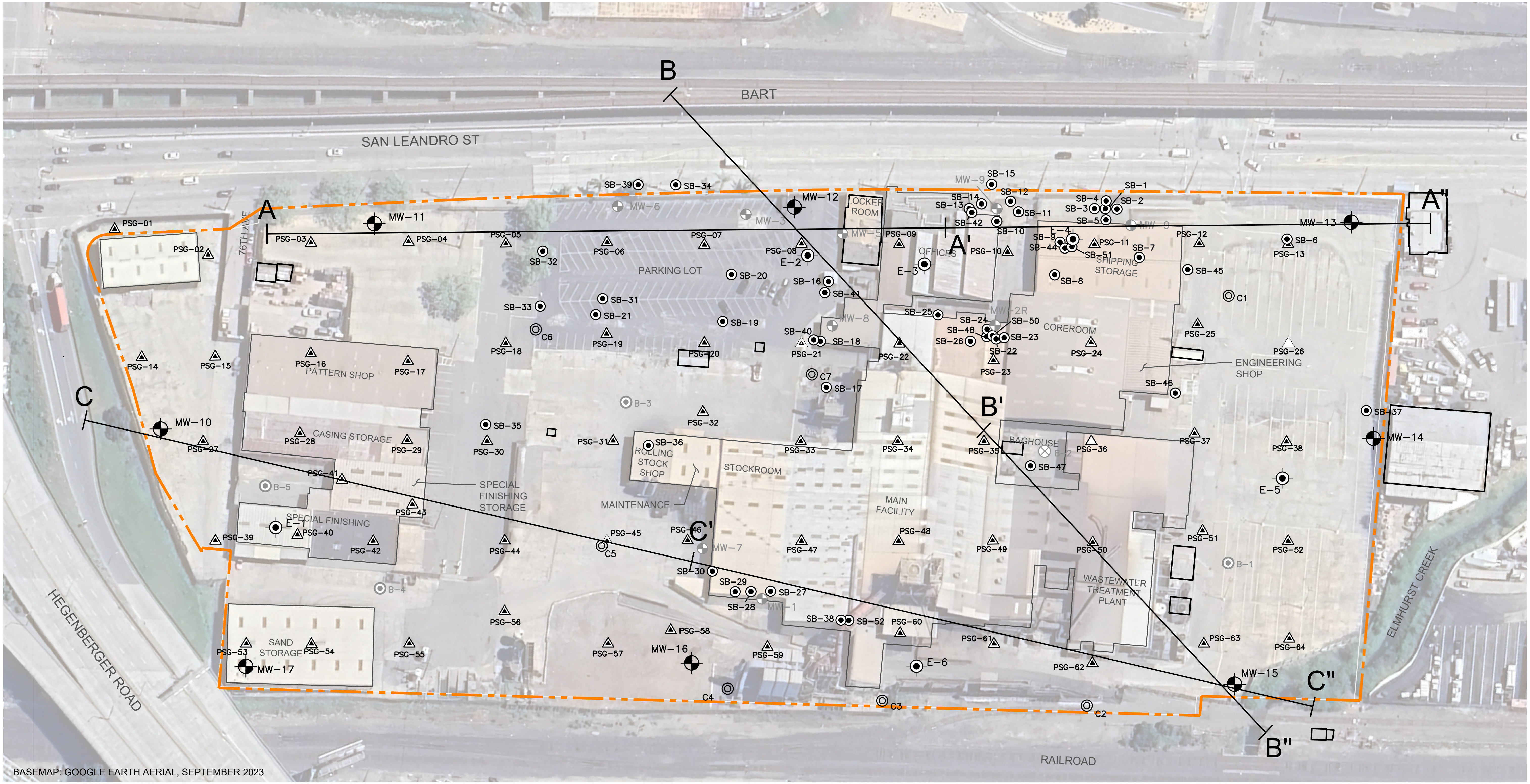
Figure B-3
Passive Soil-Gas Survey
Benzene

AB&I Foundry
Oakland, CA

APPENDIX C

Cross Sections

S:\CLIENTS\PROLOGIS\7825 SAN LEANDRO STREET\02_ROUX WORK PRODUCT\CAD\7825 SAN LEANDRO ST.DWG ETOTSUBO



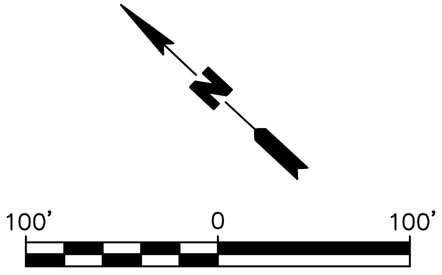
BASEMAP: GOOGLE EARTH AERIAL, SEPTEMBER 2023

LEGEND

— - —	SITE BOUNDARY
⌖	ENVIRONMENTAL SOIL BORING/HALEY & ALDRICH SAMPLE LOCATIONS (2002)
⊗	GEOTECH SOIL BORING
⊕	EXISTING GROUNDWATER MONITORING WELLS (ROUX, 2023)
◕	DECOMMISSIONED GROUNDWATER MONITORING WELL
⊙	SOIL BORING
△	PASSIVE SOIL GAS SAMPLING LOCATIONS (ROUX, 2023)
◎	CPT BORINGS (HALEY & ALDRICH, 2022)

NOTES

1. ALL BUILDINGS ONSITE HAVE BEEN DEMOLISHED AS OF NOVEMBER 2023.



Title:

SITE PLAN WITH HISTORICAL SAMPLING LOCATIONS

7825 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

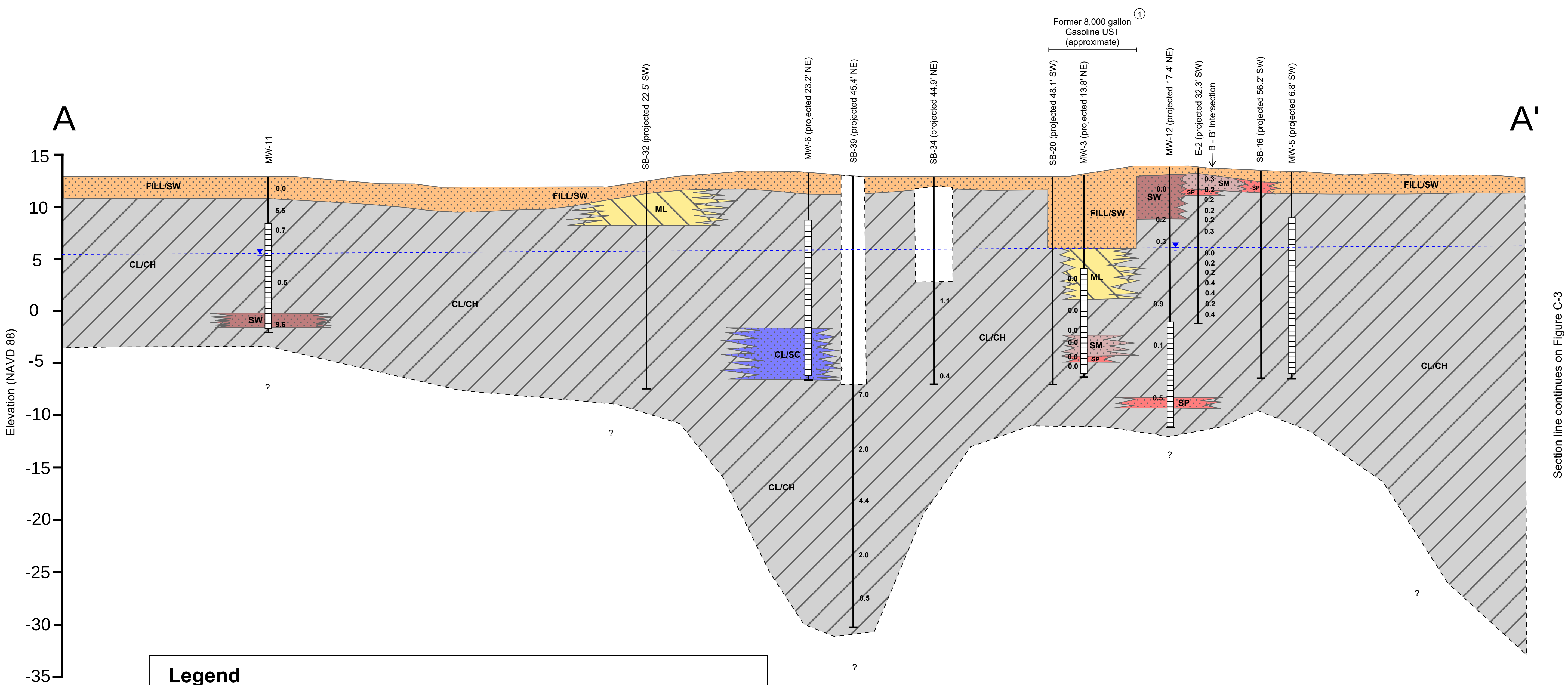
Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: JO	Date: 25APR2024
Prepared by: CB	Scale: AS SHOWN
Project Mgr: JO	Project: 1793.0030S000
File: 7825 SAN LEANDRO ST.DWG	

FIGURE
C-1



Legend

- Fill/Well Graded Sand (FILL/SW)
- Lean Clay/Clayey Sand (CL/SC)
- ▨ Lean/Fat Clay (CL/CH)
- ☐ Not Logged for Various Reasons
- Poorly Graded Sand (SP)
- ▨ Silt (ML)
- Silty Sand (SM)
- Well Graded Sand (SW)

Soil Boring

0.0 Photoionization Detector Reading (ppm)

Groundwater Level (August 2023)

Well Screen Interval

Potentiometric Surface

Lithologic unit contact; dashed where infered

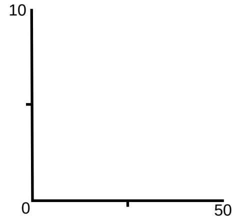
Notes

① Former 8,000 gallon gasoline underground storage tank removal excavation estimated based on information provided in ASTM Phase I Environmental Site Assessment (Haley and Aldrich, 2022).

- Groundwater levels shown on cross section based on August 2023 gaging records conducted by Roux.

Well ID	Groundwater Elevation (NAVD 88)
MW-11	5.49
MW-12	5.82

- Subsurface records interpreted from the following boring log sources:
  - Haley and Aldrich, 2022.
  - Roux, 2023.
  - The Source Group, Inc., 2007.
- Section line A - A' trends N43°W.
- All vertical elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).



Title:

CROSS SECTION A - A'

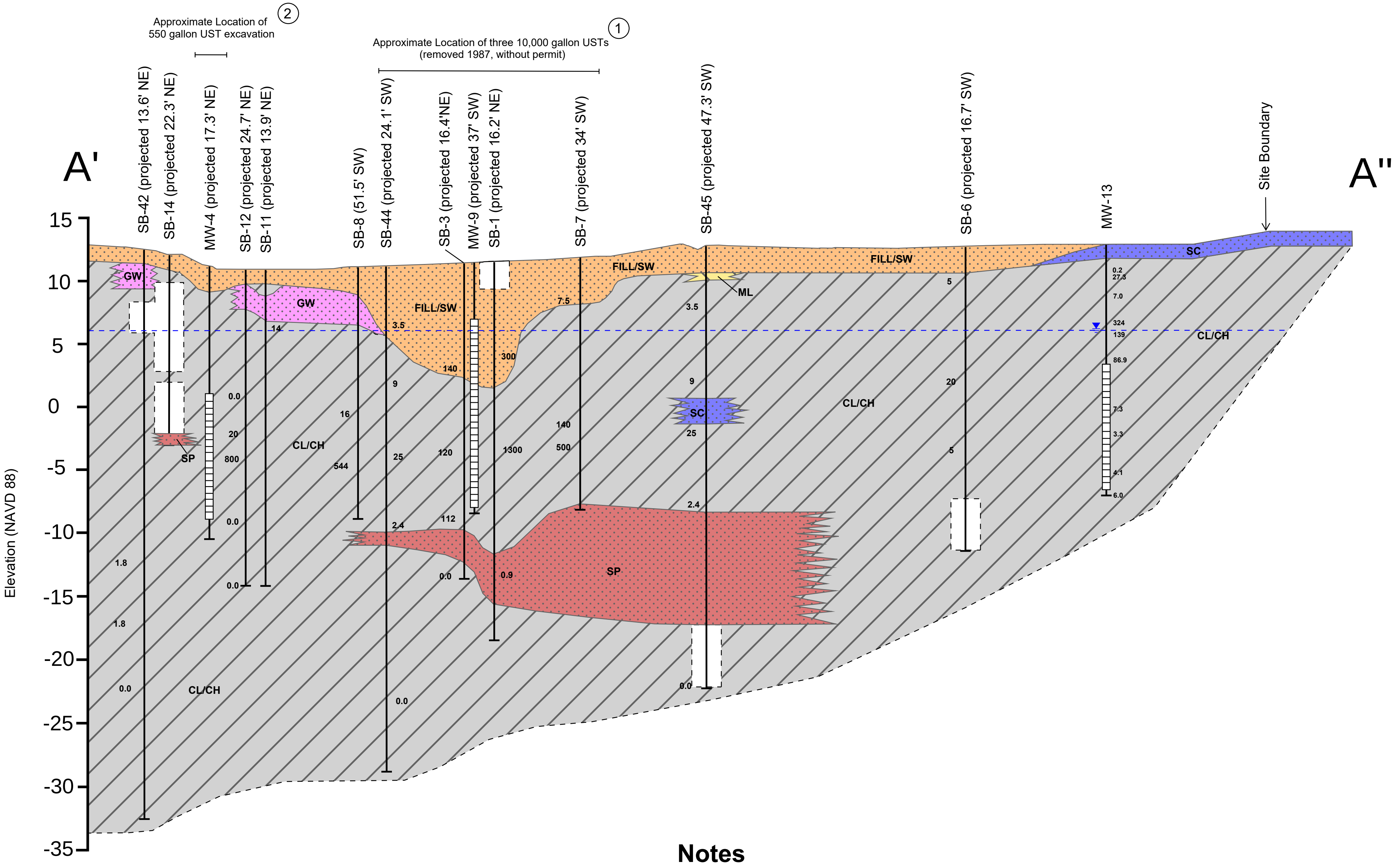
AB&I REDEVELOPMENT
7825 SAN LEANDRO STREET
OAKLAND, CA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: J.O.	Date: 1/19/24	FIGURE
Prepared by: J.O.	Scale: AS SHOWN	C-2
Project Mgr: H.R.	Project: 1793.0030S000	
File: 1793.0030S000.C2.pdf		



Notes

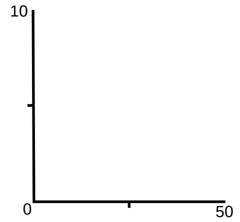
① Former three 10,000 gallon underground storage tank removal excavation estimated based on information provided in ASTM Phase I Environmental Site Assessment (Haley and Aldrich, 2022).

② Former three 550 gallon underground storage tank removal excavation estimated based on information provided in ASTM Phase I Environmental Site Assessment (Haley and Aldrich, 2022).

- Groundwater levels shown on cross section based on August 2023 gaging records conducted by Roux.

Well ID	Groundwater Elevation (NAVD 88)
MW-13	6.70

- Subsurface records interpreted from the following boring log sources:
  - Haley and Aldrich, 2022.
  - Roux, 2023.
  - The Source Group, Inc., 2007.
- Section line A' - A'' trends N43°W.
- All vertical elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).



Legend

🟦	Clayey Sand (SC)
🟧	Fill/Well Graded Sand (FILL/SW)
▨	Lean/Fat Clay (CL/CH)
☐	Not Logged for Various Reasons
🟥	Poorly Graded Sand (SP)
🟨	Silt (ML)
▩	Silty Sand (SM)
🟪	Sandy Gravel (GW)

Soil Boring
0.0 Photoionization Detector Reading (ppm)
Groundwater Level (August 2023)
Well Screen Interval

Potentiometric Surface
Lithologic unit contact; dashed where infered

Title:

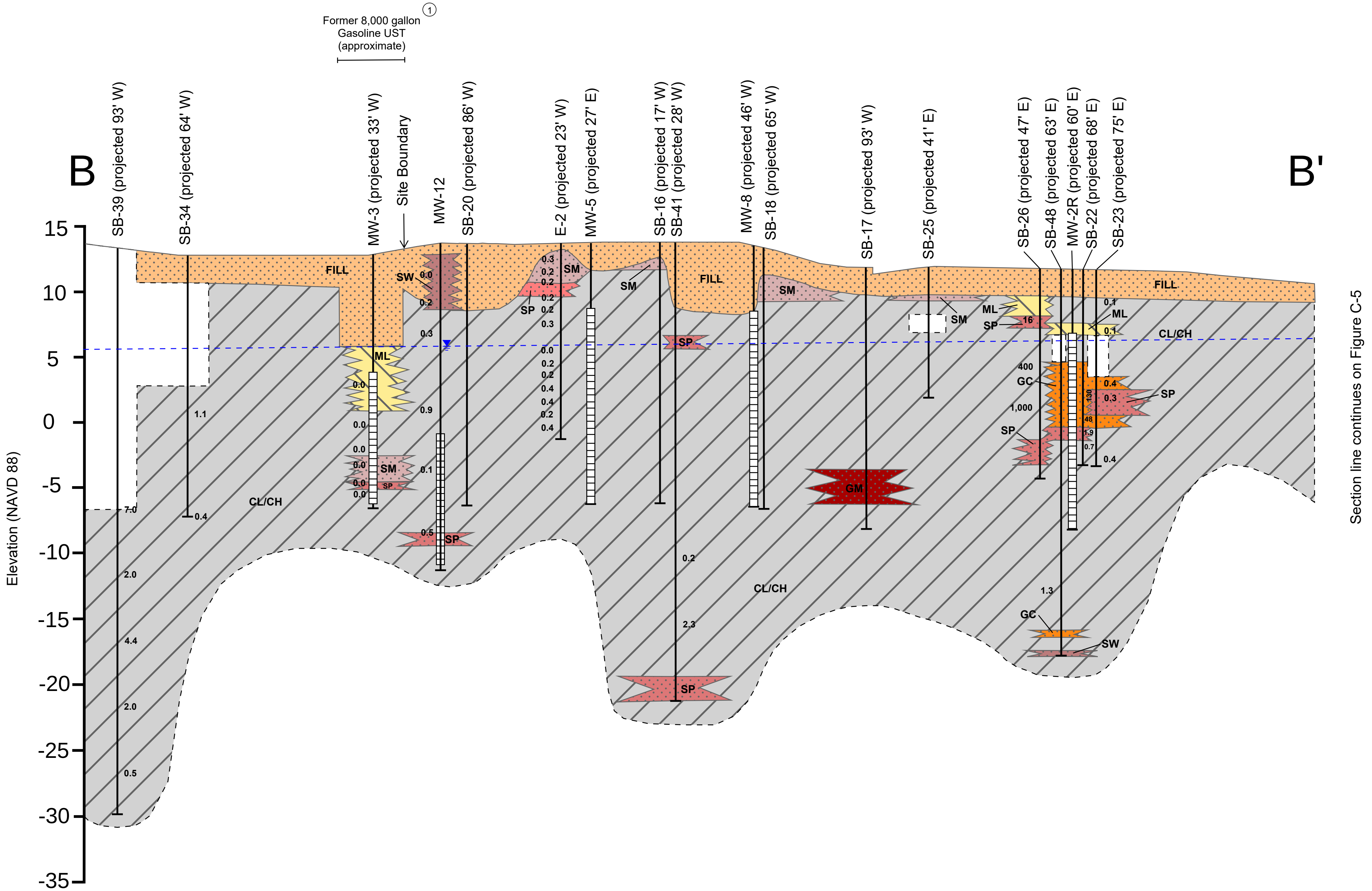
CROSS SECTION A' - A''

AB&I REDEVELOPMENT
7825 SAN LEANDRO STREET
OAKLAND, CA

Prepared for:
DUKE REALTY FOUNDRY LP

ROUX

Compiled by: J.O.
Prepared by: J.O.
Project Mgr: H.R.
File: 2723.0019S00.C3.pdf
Date: 1/19/24
Scale: AS SHOWN
Project: 2723.0019S000
FIGURE
C-3



Legend

▨	Lean/Fat Clay (CL/CH)	🟥	Silty Gravel (GM)
🟧	Fill/Well Graded Sand (FILL/SW)	🟧	Clayey Gravel (GC)
🟨	Silt (ML)	- - -	Potentiometric Surface
🟫	Well Graded Sand (SW)	—— / - - -	Lithologic unit contact; dashed where infered
🟦	Clayey Sand (SC)		
🟫	Silty Sand (SM)		
🟥	Poorly Graded Sand (SP)		
☐	Not Logged for Various Reasons		

- Soil Boring
- 0.0 Photoionization Detector Reading (ppm)
- Groundwater Level (August 2023)
- Well Screen Interval

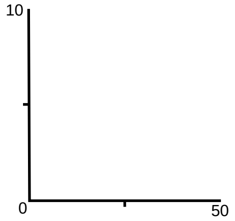
Notes

① Former 8,000 gallon gasoline underground storage tank removal excavation estimated based on information provided in ASTM Phase I Environmental Site Assessment (Haley and Aldrich, 2022).

- Groundwater levels shown on cross section based on August 2023 gaging records conducted by Roux.

Well ID	Groundwater Elevation (NAVD 88)
MW-12	5.82

- Subsurface records interpreted from the following boring log sources:
  - Haley and Aldrich, 2022.
  - Roux, 2023.
  - The Source Group, Inc., 2007.
- All vertical elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).



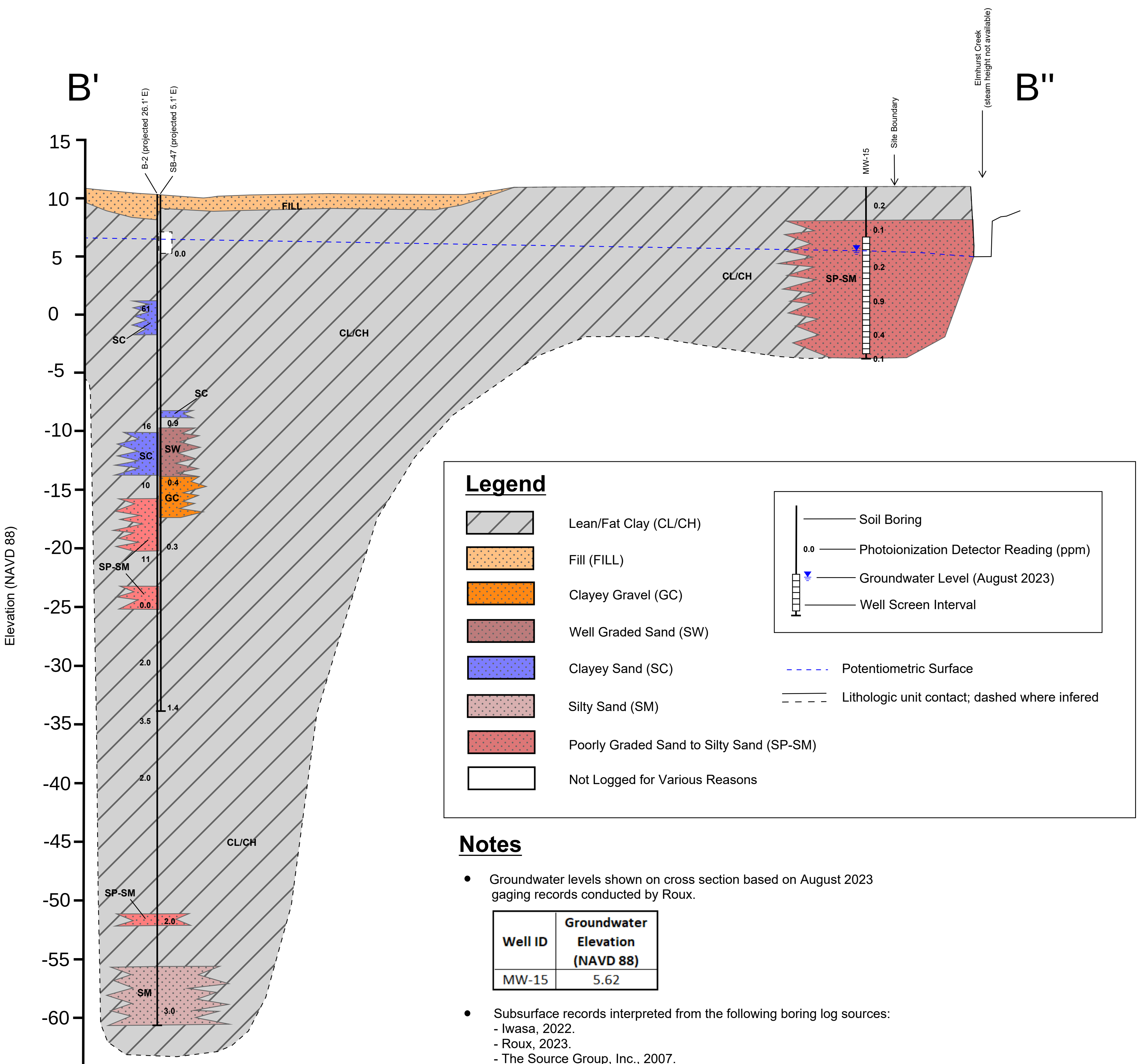
Title:

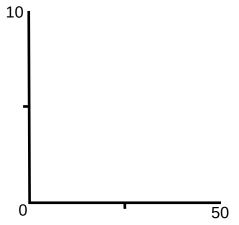
CROSS SECTION B - B'

AB&I REDEVELOPMENT
7825 SAN LEANDRO STREET
OAKLAND, CA

Prepared for:
DUKE REALTY FOUNDRY LP

Compiled by: J.O.	Date: 1/19/24	FIGURE
Prepared by: J.O.	Scale: AS SHOWN	C-4
Project Mgr: H.R.	Project: 1793.0030S000	
File: 1793.0030S000.C4.pdf		





Notes

- Groundwater levels shown on cross section based on August 2023 gaging records conducted by Roux.

Well ID	Groundwater Elevation (NAVD 88)
MW-15	5.62

- Subsurface records interpreted from the following boring log sources:
  - Iwasa, 2022.
  - Roux, 2023.
  - The Source Group, Inc., 2007.
- All vertical elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Title:

CROSS SECTION B' - B''

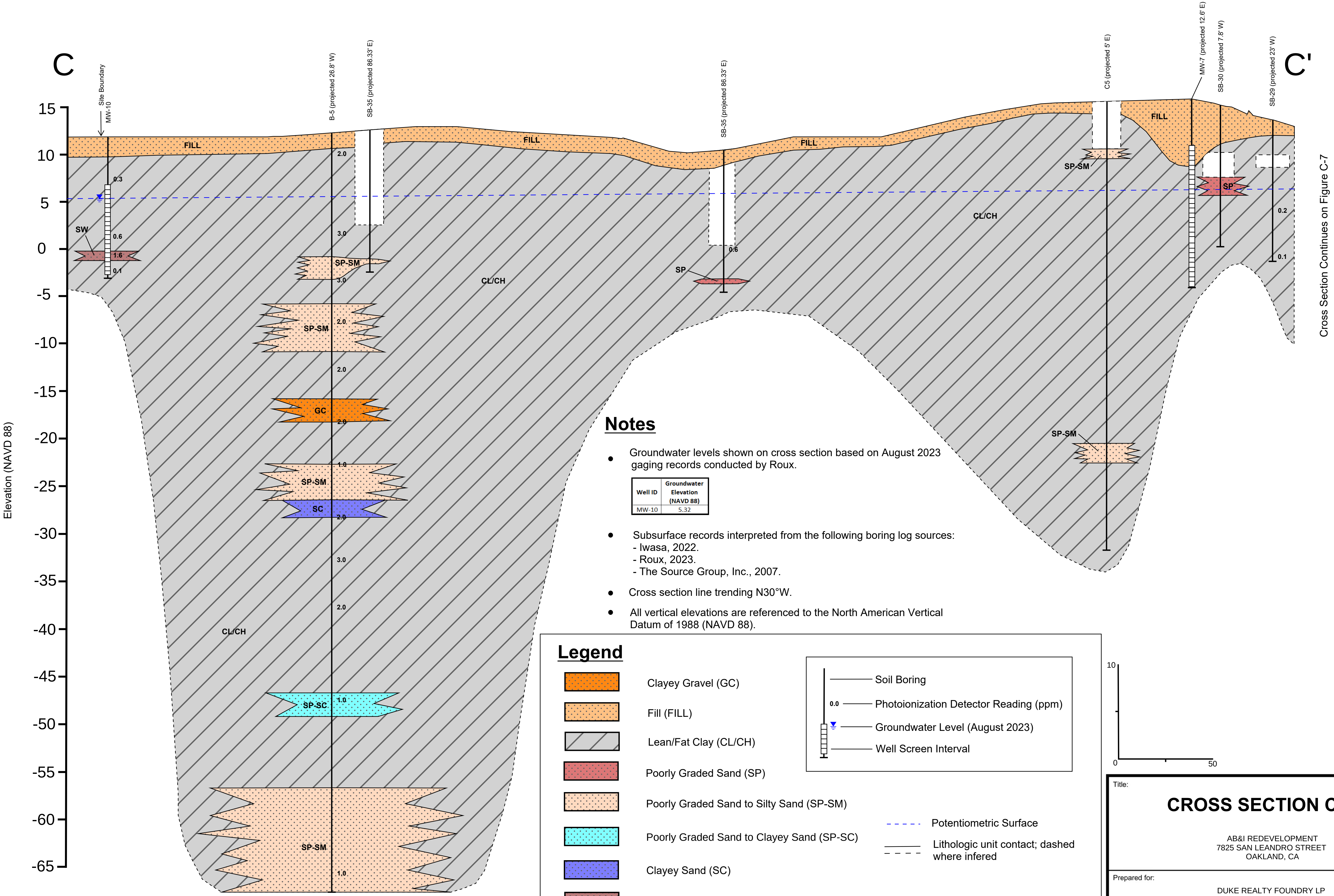
AB&I REDEVELOPMENT
7825 SAN LEANDRO STREET
OAKLAND, CA

Prepared for:

DUKE REALTY FOUNDRY LP

Compiled by: J.O.
Date: 1/19/24
Prepared by: J.O.
Scale: AS SHOWN
Project Mgr: H.R.
Project: 1793.0030S000
File: 1793.0030S000.C5.pdf

FIGURE
C-5



Notes

- Groundwater levels shown on cross section based on August 2023 gaging records conducted by Roux.

Well ID	Groundwater Elevation (NAVD 88)
MW-10	5.32

- Subsurface records interpreted from the following boring log sources:
  - Iwasa, 2022.
  - Roux, 2023.
  - The Source Group, Inc., 2007.
- Cross section line trending N30°W.
- All vertical elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Legend

🟧	Clayey Gravel (GC)
🟧	Fill (FILL)
▨	Lean/Fat Clay (CL/CH)
🟥	Poorly Graded Sand (SP)
▨	Poorly Graded Sand to Silty Sand (SP-SM)
🟦	Poorly Graded Sand to Clayey Sand (SP-SC)
🟪	Clayey Sand (SC)
🟫	Well Graded Sand (SW)
☐	Not Logged for Various Reasons

Soil Boring

0.0 Photoionization Detector Reading (ppm)

Groundwater Level (August 2023)

Well Screen Interval

Potentiometric Surface

Lithologic unit contact; dashed where infered

Title:

CROSS SECTION C - C'

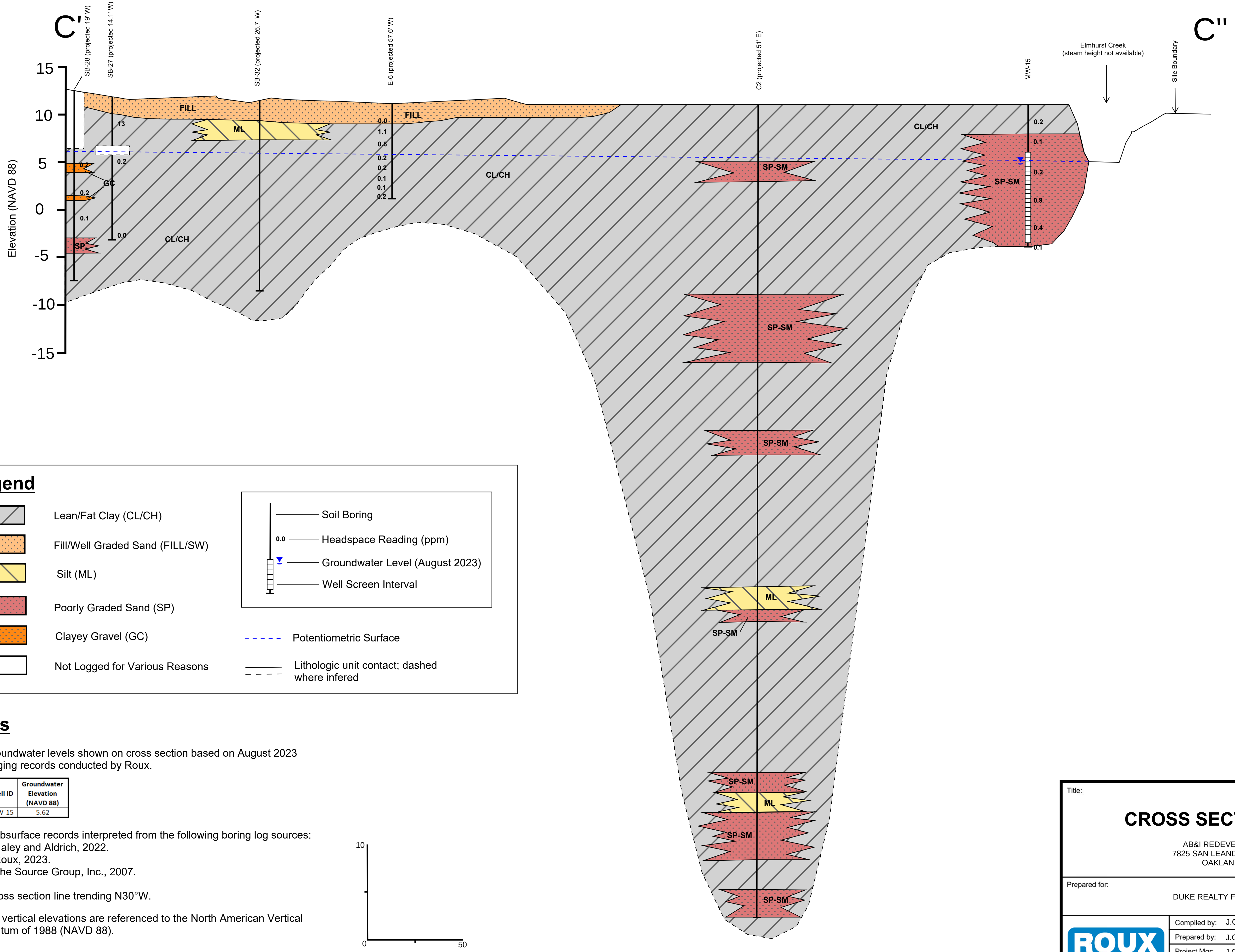
AB&I REDEVELOPMENT
7825 SAN LEANDRO STREET
OAKLAND, CA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: J.O.	Date: 1/19/24	FIGURE
Prepared by: J.O.	Scale: AS SHOWN	C-6
Project Mgr: H.R.	Project: 1793.0030S000	
File: 1793.0030S000.C6.pdf		



Notes

- Groundwater levels shown on cross section based on August 2023 gaging records conducted by Roux.

Well ID	Groundwater Elevation (NAVD 88)
MW-15	5.62

- Subsurface records interpreted from the following boring log sources:
  - Haley and Aldrich, 2022.
  - Roux, 2023.
  - The Source Group, Inc., 2007.
- Cross section line trending N30°W.
- All vertical elevations are referenced to the North American Vertical Datum of 1988 (NAVD 88).

Title:

CROSS SECTION C' - C"

AB&I REDEVELOPMENT
7825 SAN LEANDRO STREET
OAKLAND, CA

Prepared for:

DUKE REALTY FOUNDRY LP

ROUX

Compiled by: J.O.
Date: 3/20/24
Prepared by: J.O.
Scale: AS SHOWN
Project Mgr: J.O.
Project: 1793.0030S000
File: 1793.0030S000.C7.pdf
FIGURE
C-7

APPENDIX D

Boring Logs

BORING LOG: MW-1

DATE: 2/17/93
LOGGED BY: T.W.B.
WATER LEVEL: 12.5 Foot depth
ELEVATION:
EQUIPMENT: Mobile Drill B-53, 8" Hollow Stem Auger

DEPTH IN FEET	PID READING (ppm)	SAMPLE INTERVAL	BLOWS/FOOT	TYPE OF SAMPLER	SYMBOLS	DESCRIPTION
0						4" concrete on raised platform.
	0				FILL	Silty CLAY and SAND: dark to medium gray, soft to firm, moist. (FILL) contains some small gravel
5					▽	GRAVEL, CONCRETE and SLAG (?)
10	0 0 0		13	MC		SAND and GRAVEL: gray, angular, fine, loose, saturated. (FILL)
					CL ▼	Silty CLAY: mottled gray and yellow, firm to stiff, damp to moist.
15					SP	SAND with some fine Gravel: Gray, medium dense.
	0		36	MC	CL	Sandy Silty CLAY: light gray-brown, damp, hard, no to few pores.
20					SP	SAND: gray to reddish brown, pebbly, dense, wet, thin (1") clay -sand lenses.
			29	SPT		no recovery
	0		30	SPT		Boring Terminated.

▽ Denotes stabilized water table

▼ Denotes water table at the time of drilling

NOTES:

1. Boring completed at a depth of 23 feet on 2/17/93.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart, Figure 3.
5. Well constructed of 2" PVC, 0.020" screen from 20' to 10', case from 10' to surface, sand from 23' to 8', bentonite from 8' to 6', cement from 6' to surface.

SHALLOW SOIL AND GROUNDWATER
CHARACTERIZATION
AMERICAN BRASS & IRON
OAKLAND, CLAIFORNIA

Job No. P92270.3
April 1993
FIGURE: 8

BSK
& ASSOCIATES

BORING LOG: MW-2

DATE: 2/17/93
LOGGED BY: T.W.B.
WATER LEVEL: 9.5 Foot depth
ELEVATION:
EQUIPMENT: Mobile Drill B-53, 10" Hollow Stem Auger

DEPTH IN FEET	PID READING (ppm)	SAMPLE INTERVAL	BLOWS/FOOT	TYPE OF SAMPLER	SYMBOLS	DESCRIPTION
0	0				FILL	4" - 6" concrete. SLAG: Medium to dark gray, wire, chunks to 12", saturated, slightly sticky. (FILL)
5	0				▽	
	0				CL ▼	Silty CLAY to Clayey SILT: gray-green, damp to moist, firm to stiff, color lightens with depth, calcareous nodules to 1/4".
10	253 62		66	MC	SP	SAND: greenish-gray, coarse, angular, gravelly with trace fines, dense, sheen noted on rod, odor. PID 253 instant, 62 from cuttings.
			22	SPT	CL	Silty CLAY: red-brown, grades to grey-green with depth, damp to moist, very stiff, few to no pores.
15	0		28	SPT		Grades to light brown, trace coarse sand, trace to no pores, damp, very stiff. Boring Terminated.

▽ Denotes stabilized water table

▼ Denotes water table at the time of drilling

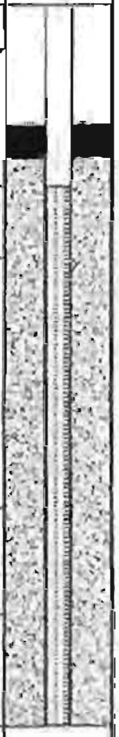
NOTES:
1. Boring completed at a depth of 17 feet on 2/17/93.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart, Figure 3.
5. Well constructed of 4" PVC, 0.020" screen from 17' to 8', case to surface, sand from 17' to 7', bentinite to 6', cement to surface.

SHALLOW SOIL AND GROUNDWATER
CHARACTERIZATION
AMERICAN BRASS & IRON
OAKLAND, CALIFORNIA

Job No. P92270.3
April 1993
FIGURE: 9

BSK
& ASSOCIATES

BORING LOG: MW-2R
DATE(S): 8/13/06
LOGGED BY: E. Studley
WATER LEVEL: 9 feet at time of drilling
EQUIPMENT: BK-81, 8" HSA

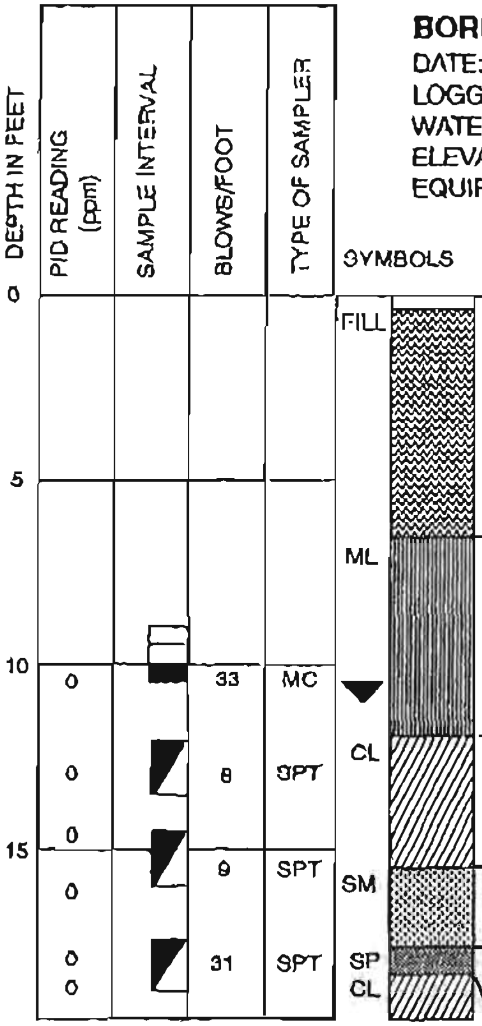
DEPTH (Feet bgs)	FIELD DATA					USCS	DESCRIPTION	WELL CONSTRUCTION
	SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)			
	Drilled with mast down no sampling					CL/CH	4" Concrete Silty Sandy Clay: Olive brown/gray, moist, medium grained sand, very soft 2" PVC 0-5' Cement 0-3' Bentonite 3-4'	
5						SC	Clayey Sand: Dark gray, loose medium grained sand 2/12 Sand 20-4'	
						CL	Sandy Clay: Dark olive gray, wet, very soft Slotted PVC 20-5'	
10								
15						CL/CH	Clayey Sand: Olive brown, wet, loose, medium grained sand	
						CL	Sandy Clay: Olive brown, wet, fine grained sand Total Depth Well 20'	
20								
25								
30								
35								

BSK Engineers, Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

BORING LOG: MW-3

DATE: 2/18/93
LOGGED BY: T.W.B.
WATER LEVEL: 11.0 Foot depth
ELEVATION:
EQUIPMENT: Mobile Drill B-53, 8" Hollow Stem Auger



DEPTH IN FEET	PID READING (ppm)	SAMPLE INTERVAL	BLOWS/FOOT	TYPE OF SAMPLER
10	0		33	MC
	0		8	SPT
15	0			
	0		9	SPT
	0		31	SPT
	0			

SYMBOLS	DESCRIPTION
FILL	2" Asphalt concrete, with 3/4" to 1" Aggregate base. Clayey SILT and SAND: grey-brown, wet, concrete rubble to 12", cobbles to 2". (FILL)
ML	Clayey SILT: greenish-gray, damp, very stiff, calcareous.
CL	Silty CLAY: motiled blue and green with orange streaks, soft to firm, some carbonate, fractures, wet in fractures.
SM	Silty SAND: wet to moist, trace fine gravel.
SP	SAND: brown to red-brown, coarse, porly sorted, loose, with clayey layers, wet to saturated.
CL	Silty CLAY with trace coarse Sand: grey-brown with black mottles, damp to moist, very stiff. Boring terminated.

▽ Denotes stabilized water table

▼ Denotes water table at the time of drilling

NOTES:
1. Boring completed at a depth of 19.5 feet on 2/18/93.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart, Figure 3.
5. Well constructed of 2" PVC, 0.020" screen from 19' to 9', case to surface, sand from 19' to 7', bentinite to 6', cement to surface.

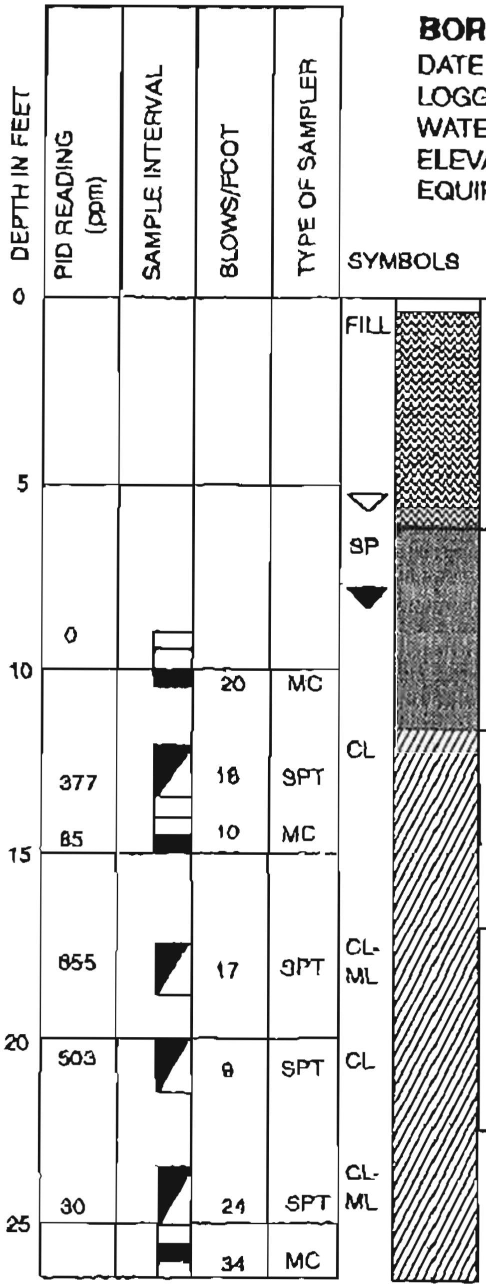
SHALLOW SOIL AND GROUNDWATER
CHARACTIZATION
AMERICAN BRASS & IRON
OAKLAND, CALIFORNIA

Job No. P92270.3
April 1993
FIGURE: 10

BSK
& ASSOCIATES

BORING LOG: MW-4

DATE: 2/18/93
LOGGED BY: T.W.B.
WATER LEVEL: 8.5 Foot depth
ELEVATION:
EQUIPMENT: Mobile Drill B-53, 8" Hollow Stem Auger



DESCRIPTION

4" of concrete at street level.
Clayey SAND: black, moist to wet, stiff. (FILL)

SAND with trace 1/4" Gravel: gray, fine, angular, well sorted, saturated.

Silty CLAY: blue, very stiff, damp to moist.

Grades to Silty CLAY -Clayey SILT: strong odor and few 1 mm vertical pores. Sheen on sample water.

Contains 1.5" yellow-brown layer, vertical pores to 2mm, saturated. Sheen noted.

Grades Silty CLAY- Clayey Silt: yellow and red-brown, blue wet pore spaces, damp, stiff to very stiff. Sheen noted.

Boring terminated.

▽ Denotes stabilized water table

▼ Denotes water table at the time of drilling

NOTES:

1. Boring completed at a depth of 26.5 feet on 2/18/93.
2. Sampling resistance is measured in blows per foot required to drive the sampler 12 inches with a 140 lb. hammer falling 30 inches after sampler has been seated 6 inches.
3. Boring log indicates interpreted subsurface conditions only at the location and the time the boring was drilled.
4. For an explanation of terms used see the Soil Classification Chart, Figure 3.
5. Well constructed of 2" PVC, 0.020" screen from 25' to 10', case to surface, sand from 26.5' to 8', bentinite to 7', cement to surface.

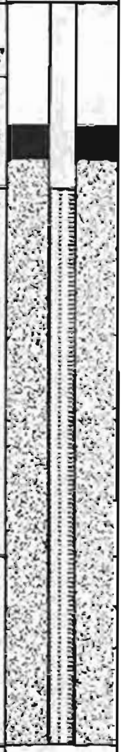
SHALLOW SOIL AND GROUNDWATER CHARACTERIZATION AMERICAN BRASS & IRON OAKLAND, CALIFORNIA	Job No. P92270.3 April 1993 FIGURE: 11	BSK & ASSOCIATES

BORING LOG: MW-5

DATE(S): 8/12/06
LOGGED BY: E. Studley
WATER LEVEL: 13 feet at time of drilling
EQUIPMENT: CME-75, 8" HSA

DEPTH (Feet bgs)	FIELD DATA					USCS	DESCRIPTION
	SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)		
						Fill	3" Asphalt Concrete Silty Sandy Gravel: Yellow brown, damp, (Fill) 2" PVC 0-5'
	CS-1	■	11:05	32		CL/CH	Sandy Silty Clay: Dark gray, damp to moist, fine grained sand Cement 0-3' Bentonite 3-4'
5	CS-2	■	11:08	11		CH	Silty Clay: Dark gray, moist, soft, trace organics 2/12 Sand 20-4'
	CS-3	■	11:12	12			Slotted PVC 20-5'
10	CS-4	■	11:15	11			Silty Clay: Brown mottled oilve gray, moist, soft
15	CS-5	■	11:18	4		CL/CH	Silty Sandy Clay: Olive brown, wet, soft medium grained sand grades mottled olive brown/gray Total Depth Well 20'
20	CS-6	■	11:24	21		SC	Clayey Silty Sand: Gray brown, medium grained sand
25							
30							
35							

WELL CONSTRUCTION



BSK Engineers, Geologists, Environmental Scientists

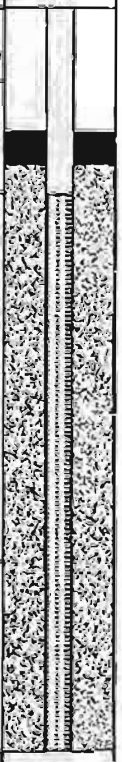
PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

BORING LOG: MW-6

DATE(S): 8/12/06
LOGGED BY: M. Cline
WATER LEVEL: 13 feet at time of drilling
EQUIPMENT: CME-75, 8" HSA

DEPTH (Feet bgs)	FIELD DATA SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)	USCS	DESCRIPTION
						Fill	3" Asphalt Concrete Silty Sandy Gravel: Brown, damp, (Fill)
	CS-1	■	9:10	10		CL/CH Fill	Sandy Silty Clay: Dark gray brown, moist, trace gravel, wood, brick (Fill)
5	CS-2	■	9:15	12		CH	Silty Clay: Dark gray, moist, soft, trace organics
	CS-3	■	9:18	14			grades dark gray to olive gray, very moist
10	CS-4	■	9:21	15			Silty Clay: Brown mottled oilve gray, very moist to wet in pores, some carbonates
15	CS-5	■	9:25	10		CL/SC	Silty Clay/Clayey Sand: Brown to light olive brown, wet
20	CS-6	■	9:38	6		CL/CH	Silty Clay: Brown to light olive brown, wet
25							
30							
35							

WELL CONSTRUCTION



2" PVC 0-5'
Cement 0-3'
Bentonite 3-4'
2/12 Sand 20-4'
Slotted PVC 20-5'
Total Depth Well 20'

BSK Engineers, Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

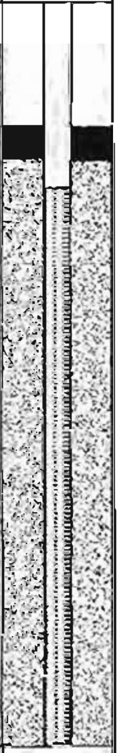
BORING LOG: MW-7

DATE(S): 8/12/06

LOGGED BY: E. Studley

WATER LEVEL: 13 feet at time of drilling

EQUIPMENT: CME-75, 8" HSA

DEPTH (Feet bgs)	FIELD DATA					USCS	DESCRIPTION	WELL CONSTRUCTION
	SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)			
						Fill	4" Concrete Silty Sandy Gravel: Yellow brown, damp, (Fill)	 2" PVC 0-5'
	CS-1	■	15:26	29		CL/CH Fill	Silty Clay: Dark gray, damp, gravels to 1.5" glass, slag, concrete (Fill)	Cement 0-3' Bentonite 3-4'
5	NR	□	15:30	18				2/12 Sand 20-4'
	CS-2	■	15:34	11		CH	Silty Clay: Dark gray, wet, strong hydrocarbon odor	Slotted PVC 20-5'
10	CS-3	■	15:45	4			grades to dark gay mottled light gray wet, slight odor, roots/wood fragments	
15	CS-4	■	15:50	7		CL/CH	Sandy Silty Clay: Olive brown/gray, wet, soft, medium grained sand, faint odor	
							grades to olive gray	Total Depth Well 20'
20	CS-5	■	16:01	9				
25								
30								
35								

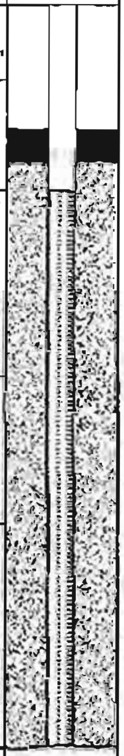
BSK Engineers, Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California

PROJECT NUMBER: E0605504S

BORING LOG: MW-8

DATE(S): 8/12/06
LOGGED BY: E. Studley
WATER LEVEL: 13 feet at time of drilling
EQUIPMENT: CME-75, 8" HSA

	FIELD DATA							
DEPTH (Feet bgs)	SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)	USCS	DESCRIPTION	WELL CONSTRUCTION
						Fill	3" Asphalt Concrete Silty Sandy Gravel: Yellow brown, moist, (Fill) 2" PVC 0-5'	
	CS-1	■	13:00	20		CL/CH Fill	Silty Clay: Dark olive brown, damp, gravels, wire, debris (Fill) Cement 0-3' Bentonite 3-4'	
5	CS-2	■	13:02	6		CL/CH	Silty Clay: Dark olive brown, moist to wet medium grained sand lenses 2/12 Sand 20-4'	
	CS-3	■	13:08	12			Slotted PVC 20-5'	
10	NR	☐		13		CH	grades to olive brown mottled gray	
15	CS-4	■	13:29	5		CL/CH	Silty Sandy Clay: Olive brown, wet, soft, medium grained sand	
							trace carbonates Total Depth Well 20'	
20	CS-5	■	13:36	15				
25								
30								
35								

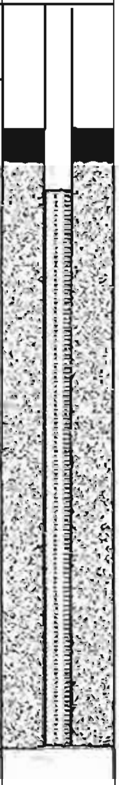
BSK Engineers, Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

FIELD DATA

BORING LOG: MW-9
DATE(S): 8/18/06
LOGGED BY: J. Yeazell
WATER LEVEL: 8 feet at time of drilling
EQUIPMENT: Mari Limited Access, 8" HSA

DEPTH (Feet bgs)	SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)	USCS	DESCRIPTION	WELL CONSTRUCTION
						Fill	6" Concrete Silty Clay: Dark gray, some concrete debris	2" PVC 0-5'
	DP-1	■	10:57			CH	Silty Clay: Dark gray, hydrocarbon odor	Cement 0-3' Bentonite 3-4'
5	DP-2	■	11:03					2/12 Sand 20-4'
	DP-3	■	11:10			CH	Silty Clay: Olive brown/brown, no odor	Slotted PVC 20-5'
10	DP-4	☐	11:29				grades wet, slight odor	
15	DP-5	■	11:36				some fine sand, odor	
								Total Depth Well 20'
20	DP-6	■	11:40					
25								
30								
35								



BSK Engineers,Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

THE SOURCE GROUP, INC.

		BORING/WELL ID:	SB-1
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/30/2007 9:10	FINISH DATE/ TIME	10/30/2007 11:10
FIRST WATER (BGS):	21.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	30'	BORING DIAMETER/DEPTH:	3 1/4" / 30'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		No recovery.	
	☒				2			
					3			
	☒				4			
					5			
					6		Silty gravelly clay, medium brown, moist (fill).	
		300			7			
					8			
	☒				9			
				▨	10		Clay (CL), black (5Y, 2.5/1), moist, stiff, medium plasticity, no odor.	
				▨	11			
				▨	12			
				▨	13			
	☒	1300		▨	14			
				▨	15			
				▨	16			
				▨	17			
				▨	18		Same as above, but more moist, softer, petroleum odor.	
				▨	19			
					20			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID
SB-1

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	10/30/2007 9:10	**FINISH DATE/ TIME**	10/30/2007 11:10
FIRST WATER (BGS):	21.5'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	30'	**BORING DIAMETER/DEPTH:**	3 1/4" / 30'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
				▓	20			
				▓	21	▼		
				▓	22			
		0.9		▓	23		Sandy gravel (SP), coarse grained, wet, poorly sorted, loose, no odor, gravel pieces.	
	☒			▓	24			
				▓	25			
				▓	26			
				▨	27		Silty clay (CL), light yellowish brown (10YR, 6/4), wet, medium plasticity, no odor	
	☒			▨	28			
				▨	29			
					30		**Bottom of Boring 30'**	
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:	SB-2		
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	10/30/2007 11:15	**FINISH DATE/ TIME**	10/30/2007 1245
FIRST WATER (BGS):	16'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	25'	**BORING DIAMETER/DEPTH:**	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
	☒				2			
					3		Silty Gravelly Clay(fill), olive brown, moist, stiff, medium plasticity, strong petroleum odor.	
	☒				4			
					5			
					6			
		300			7			
					8			
	☒				9			
				▨	10			
				▨	11			
				▨	12			
				▨	13		Clay (CL), black, moist, very stiff, medium plasticity, petroleum odor.	
	☒			▨	14			
				▨	15			
				▒	16	▼	Sandy gravel (SP), dark gray, coarse grained subangular gravel 1/4" to 1/2", wet, petroleum odor	
				▒	17			
				▨	18			
				▨	19		Clay (CL), olive brown, moist, stiff, medium plasticity, petroleum odor.	
	☒			▨	20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:

SB-2

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	Logged By:	Nathan Collon
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/30/2007 11:15	FINISH DATE/ TIME	10/30/2007 12:45
FIRST WATER (BGS):	18'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
		1400		▨	20			
				▒	21		Sandy gravel (SP), coarse grained, sub-angular 1/4" to 1/2", poorly sorted, wet, no odor.	
				▒	22			
				▨	23		Clay (CL), medium brown, wet, tight, medium plasticity, no odor.	
	☒	2		▨	24			
					25		Bottom of Boring 25'	
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:	SB-3

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	10/30/2007 1340	**FINISH DATE/ TIME**	10/30/2007 1420
FIRST WATER (BGS):	21'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	25'	**BORING DIAMETER/DEPTH:**	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▒	2		Gravely sand (SP) with chunks of asphalt, reddish brown, moist, sub-angular, (fill).	
	☒			▒	3			
	☒			▒	4		Gravely sand (SP) with chunks of asphalt, reddish brown, moist, sub-angular, (fill).	
					5		No recovery.	
					6			
					7			
		140			8			
	☒				9			
				▨	10		Clay (CL), gray, wet, soft, medium plasticity, petroleum odor.	
				▨	11			
				▨	12			
				▨	13			
	☒	120		▨	14			
				▨	15			
				▨	16			
				▨	17			
				▨	18			
				▨	19			
	☒	112		▨	20		Clay (CL), gray, wet, stiff, medium plasticity, petroleum odor.	

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:

SB-3

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	10/30/2007 13:40:00 AM	**FINISH DATE/ TIME**	10/30/2007 14:20:00 AM
FIRST WATER (BGS):	21'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	25'	**BORING DIAMETER/DEPTH:**	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
				▨	20	▼		
				▒	21		Sand (SP), medium grained, wet, loose, no odor.	
				▒	22		Sandy gravel, coarse grained, sub-angular 1/2" to 3/4", poorly sorted, no odor.	
				▒	23			
	☒	0		▨	24		Silty clay (CL), light to medium brown, wet, stiff, medium plasticity, no odor.	
					25		**Bottom of Boring 25'**	
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID: **SB-4**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/30/2007 14:30	FINISH DATE/ TIME	10/30/2007 15:20
FIRST WATER (BGS):	21.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	24'	BORING DIAMETER/DEPTH:	3 1/4" / 24'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▒	2		Gravely sand (SP) with chunks of asphalt, reddish brown, moist, sub-angular, (fill).	
	☒			▒	3			
	☒			▨	4		Clay (CL), black, moist, stiff, medium plasticity, no odor.	
					5		No recovery.	
					6			
				▨	7			
				▨	8		Clay (CL), black, moist, stiff, medium plasticity, no odor	
	☒			▨	9			
				▨	10			
				▨	11			
				▨	12			
				▨	13			
	☒			▨	14			
		700		▨	15			
				▨	16			
				▨	17			
				▨	18			
				▨	19			
	☒	200		▨	20			

THE SOURCE GROUP, INC.

BORING/WELL ID:	SB-4		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/30/2007 14:30	FINISH DATE/ TIME	10/30/2007 15:20
FIRST WATER (BGS):	21.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	24'	BORING DIAMETER/DEPTH:	3 1/4" / 24'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
				▨	20		Gravely sand (SP) with	
				▒	21	▼	Sandy gravel, coarse grained, sub-angular 1/4" to 3/4", wet, no odor.	
				▒	22			
	☒			▨	23		Clay (CL), black, moist, stiff, medium plasticity, no odor Refusal @ 24'	
					24		Bottom of Boring 24'	
					25			
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

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BORING/WELL ID:	SB-5		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	Logged By:	Nathan Collon
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/31/2007 8:00	FINISH DATE/ TIME	10/31/2007 8:52
FIRST WATER (BGS):	21.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▨	2		Clay (CL), black with pieces at gravel 3/4" subangular, light, medium plasticity, petroleum odor.	
	☒			▨	3			
	☒			▨	4			
					5		No recovery.	
					6			
				▨	7			
				▨	8		Clay (CL), black, moist, stiff, medium plasticity, petroleum odor.	
	☒			▨	9			
				▨	10			
				▨	11		Clay (CL), olive brown, stiff, moist, medium plasticity, petroleum odor	
				▨	12			
				▨	13			
	☒			▨	14		Same as above but more of a light gray to olive brown color.	
		200		▨	15		Clay with trace silt (CL), light to medium gray, wet, soft, petroleum odor.	
				▨	16		Area more wet and more silty but same as above.	
				▨	17			
				▨	18		Clay (CL), light to medium gray, wet, soft, low plasticity, petroleum odor.	
				▨	19			
	☒	700		▨	20			

THE SOURCE GROUP, INC.

		BORING/WELL ID:	**SB-5**
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	3 10,000 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/31/2007 800	FINISH DATE/ TIME	10/31/07 852
FIRST WATER (BGS):	21.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
				▨	20		Silty clay (CL), light to medium gray, wet, soft, low plasticity, petroleum odor.	
				▨	21	▼		
				▒	22		Sandy gravel (SP), coarse grained, 1/4" to 3/4" subangular gravel pieces, poorly sorted, wet, no odor.	
				▒	23		Clay (CL), light brown, moist, stiff, medium plasticity, no odor.	
				▨	24			
					25		Bottom of Boring 25'	
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-6

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	10,000 gal VST	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/5/2007 900	FINISH DATE/ TIME	
FIRST WATER (BGS):	6.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	24'	BORING DIAMETER/DEPTH:	3 1/4" 24'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
		5		▨	2		Clay (CL), black, moist, stiff, medium plasticity, organic odor, chunks of gravel.	
				▨	3			
				▨	4			
	☒			▨	5			
				▨	6			
				▨	7			
				▨	8			
	☒	20		▨	9		Clay (CL), dark gray (2.5Y 4/1), stiff, medium plasticity, faint petroleum odor	
				▨	10			
				▨	11			
				▨	12		Clay (CL), dark greenish gray (GLEY 2 4/1), moist, tight, medium plasticity, no odor.	
				▨	13			
	☒	5		▨	14			
				▨	15		Silty clay (CL), moist, soft, low plasticity, no odor.	
				▨	16			
				▨	17		Same as above but tighter.	
				▨	18			
				▨	19		Clay (CL), light gray, moist, tight, medium plasticity, no odor.	
					20		20' -- 24' – No recovery – GW sample @ 23'	

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BORING/WELL ID: **SB-7**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Warehouse	Logged By:	Nathan Cotton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/31/07 1045	FINISH DATE/ TIME	10/31/07 1200
FIRST WATER (BGS):	17'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Concrete debris stiff.	
		7.6			2			
				▨	3		Clay (CL), black, moist, medium plasticity, slight hydrocarbon odor?	
				▨	4			
	☒			▨	5			
				▨	6		Clay (CL), very dark gray (10YR 3/1), moist, stiff, medium plasticity, no odor.	
				▨	7			
				▨	8			
				▨	9			
				▨	10		Same as above but dark yellowish brown (10YR 4/4)	
				▨	11			
		140		▨	12		Clay (CL), dark greenish gray (GLEY1 5/1), moist, stiff, medium plasticity, petroleum odor (faint).	
				▨	13			
		500		▨	14			
	☒			▨	15		Silty clay (CL), dark greenish gray, wet, soft, low plasticity, no odor.	
				▨	16			
				▨	17			
				▨	18		Clay (CL), dark greenish gray, moist, stiff, medium plasticity, no odor.	
				▨	19		Silty gravel (SP), greenish gray, 1/4" subangular, moist, poorly sorted, no odor.	
				▨	20			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:	SB-8		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Warehouse	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macrocore	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/31/07 1240	FINISH DATE/ TIME	10/31/07 1340
FIRST WATER (BGS):	17'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▓	2		Sandy gravel (asphalt), black, dry, poorly sorted, no odor.	
				▓	3			
				▨	4		Clay (CL), dark brown/black, moist, stiff, medium plasticity, no odor.	
				▨	5			
				▨	6			
				▨	7		Clay (CL), dark olive brown, moist, stiff, medium plasticity, no odor.	
				▨	8			
				▨	9		Same as above but olive brown, more silt component.	
				▨	10			
		16		▨	11		Clay (CL), dark bluish gray (GLEY2 4/1), moist, stiff, medium plasticity, faint petroleum odor.	
				▨	12			
				▨	13			
	☒	544		▨	14		Same as above but stronger petroleum odor.	
				▨	15			
				▨	16	▼		
				▨	17			
				▨	18		Silty clay (CL) with some gravel, wet, soft, low plasticity, no odor	
				▨	19		Clay (CL), medium gray, moist, stiff, medium plasticity, no odor	
					20		Total Depth 20'	

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BORING/WELL ID:

SB-9

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Warehouse	Logged By:	Nathan Collon
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/31/07 1335	FINISH DATE/ TIME	10/31/07 1420
FIRST WATER (BGS):	17'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▒	2		Sandy gravel (asphalt), black, dry, poorly sorted.	
				▒	3			
				▒	4			
				▨	5		Clay (CL), dark gray, moist, stiff, medium plasticity, no odor.	
				▨	6			
				▨	7		Clay (CL), dark bluish gray, moist, medium plasticity, faint petroleum odor.	
				▨	8			
				▨	9		Stronger petroleum odor.	
				▨	10			
		25		▨	11			
				▨	12		Petroleum odor.	
				▨	13			
		30		▨	14			
					15			
					16	▼		
					17		No recovery	
					18			
					19			
					20		Bottom of Boring 20'	

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BORING/WELL ID:	**SB-10**		
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	550 Gal VST	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous DW	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	10/31/07 1430	**FINISH DATE/ TIME**	
FIRST WATER (BGS):	No water	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	30'	**BORING DIAMETER/DEPTH:**	3 1/4" / 30'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Concrete debris.	
				▒	2		Sandy gravel (asphalt), dry, 1/2" subangular, poorly sorted, no odor.	
	☒			▒	3			
	☒			▒	4		Same as above but petroleum odor.	
		700		▨	5		Clay (CL), dark bluish gray (GLEY 2 4/1), moist (wet?), soft, low plasticity, petroleum odor.	
				▨	6			
		300		▨	7			
				▨	8			
	☒	500		▨	9			
				▨	10			
				▨	11			
				▨	12		Petroleum odor.	
				▨	13			
	☒	400		▨	14			
				▨	15			
				▨	16			
		20		▨	17			
				▨	18		Less of an odor	
				▨	19			
	☒	20		▨	20			

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THE SOURCE GROUP, INC.

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	550 Gal VST	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous DW	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	10/31/07 1430	FINISH DATE/ TIME	
FIRST WATER (BGS):	No water	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	30'	BORING DIAMETER/DEPTH:	3 1/4" / 30'

BORING/WELL ID:
SB-10

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Concrete debris.	
				▒	2		Sandy gravel (asphalt), dry, 1/2" subangular, poorly sorted, no odor.	
	☒			▒	3			
	☒			▒	4		Same as above but petroleum odor	
		700		▒ ▨	5		Clay (CL), dark bluish gray (GLEY 2 4/1), moist (wet?), soft, low plasticity, petroleum odor.	
				▨	6			
		300		▨	7			
				▨	8			
	☒	500		▨	9			
				▨	10			
				▨	11			
				▨	12		Petroleum odor.	
				▨	13			
	☒	400		▨	14			
				▨	15			
				▨	16			
		20		▨	17			
				▨	18		Less of an odor.	
				▨	19			
	☒	20		▨	20			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID: **SB-11**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	550 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/1/2007 7:45	FINISH DATE/ TIME	11/1/2007 9:40
FIRST WATER (BGS):	20.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Clay (CL), light and medium brown, wet, stiff, medium plasticity, no odor	
				▒	2		Sandy gravel (asphalt), dry, poorly sorted, no odor.	
	☒			▒	3			
	☒	14		▨	4		Clay (CL), black, stiff, medium, plasticity, faint petroleum odor.	
				▨	5			
				▨	6		Clay (CL), greenish gray (GLEY/ 5/1), moist, stiff, medium plasticity, petroleum odor.	
				▨	7			
				▨	8			
	☒			▨	9			
				▨	10			
				▨	11			
				▨	12			
				▨	13			
	☒			▨	14			
				▨	15			
				▨	16		Clay (CL), greenish gray w/ medium brown, moist, stiff, less of a petroleum odor noticed.	
				▨	17		Clay (CL), same as above, but with a higher grit content, more wet, medium brown.	
				▨	18			
				▨	19			
	☒			▨	20	▲	Silty clay (CL) (higher silt content than above), medium brown, wet, stiff, low plasticity, no odor.	

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-11

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	550 Gallon USTs	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	11/1/2007 7:45	**FINISH DATE/ TIME**	11/1/2007 9:40
FIRST WATER (BGS):	20.5'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	25'	**BORING DIAMETER/DEPTH:**	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
				▨	20		Clay (CL), light and medium brown, wet, stiff, medium plasticity, no odor.	
				▨	21			
				▨	22			
				▨	23			
	☒			▨	24			
					25			
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-12

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	550 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous dw	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/1/2007 9:30	FINISH DATE/ TIME	11/1/2007
FIRST WATER (BGS):	22'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▒	2		Sandy gravel (asphalt), black, dry, poorly sorted.	
	☒			▒	3			
	☒			▨	4		Clay (CL), black, moist, stiff, medium plasticity, no odor	
				▨	5			
				▨	6			
				▨	7			
				▨	8			
	☒	0		▨	9		Clay (CL), greenish gray, moist, stiff, medium plasticity, no odor	
				▨	10			
				▨	11			
		20		▨	12		Same as above but faint petroleum odor noted.	
				▨	13			
	☒	800		▨	14			
				▨	15			
				▨	16		Clay (CL), dark greenish gray (GLEY 1 4/1), moist, stiff, medium pasticity, petroleum odor.	
				▨	17			
				▨	18			
				▨	19			
	☒	0		▨	20		Same as above but lighter petroleum odor noted	

SGI environmental **THE SOURCE GROUP, INC.**

		BORING/WELL ID:	**SB-12**
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	550 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous dw	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/1/2007 9:30	FINISH DATE/ TIME	11/1/2007
FIRST WATER (BGS):	22'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
				▨	20			
				▨	21		Clay (CL), medium brown, moist, stiff, medium plasticity, no odor.	
				▨	22	▲	Clay (CL), medium brown, wet, softer, medium plasticity, no odor.	
				▨	23			
	☒	0		▨	24			
					25		**Bottom of Boring 25'**	
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

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BORING/WELL ID:	SB-13		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	550 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous DW	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/1/2007 11:20	FINISH DATE/ TIME	11/1/2007 12:00
FIRST WATER (BGS):	22.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris	
				▒	2		Sandy gravel (asphalt), dry, poorly sorted, no odor	
	☒			▒	3			
	☒			▨	4		Clay (CL), black, moist, stiff, medium pasticity, no odor	
					5		NR	
				▨	6			
				▨	7			
				▨	8		Clay (CL), black, moist, stiff, medium pasticity, no odor	
	☒	0		▨	9			
		20		▨	10			
				▨	11			
				▨	12		Clay (CL), greenish gray, stiff, medium pasticity, petroleum odor	
				▨	13			
	☒	500		▨	14			
				▨	15			
				▨	16		Same as above but softer, more moist	
				▨	17			
				▨	18			
				▨	19		Clay (CL), greenish gray, stiff, medium pasticity, petroleum odor	
		155		▨	20			

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THE SOURCE GROUP, INC.

BORING/WELL ID: **SB-13**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	550 Gallon USTs	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous DW	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/1/2007 11:20	FINISH DATE/ TIME	11/1/2007 12:00
FIRST WATER (BGS):	22.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	3 1/4" / 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					20			
					21			
					22	▼		
					23		Silty clay (CL), dark greenish gray, wet, soft, low plasticity, faint petroleum odor	
	☒	60			24		Clay (CL), medium brown, moist, stiff, no odor	
					25		**Bottom of Boring 25'**	
					26		Note: PID reading 60 ppm at 25' but soil looks clean. Water from upper levels has drained into the lower soil sample. Possible cross contamination.	
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

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THE SOURCE GROUP, INC.

BORING/WELL ID:	**SB-14**		
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	550-gallon USTs	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous dw	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	11/1/2007 12:50	**FINISH DATE/ TIME**	11/1/2007 13:40
FIRST WATER (BGS):	10.5'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	15'	**BORING DIAMETER/DEPTH:**	3 1/4" /15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Concrete debris.	
	☒			▨	2		Sandy clay (fill), coarse grained, black, moist, poorly sorted, no odor.	
					3		No recovery	
					4			
					5			
					6			
					7			
					8			
	☒			▩	9		Gravelly clay (CL), dark brown, wet, soft, 3/4" subangular, no odor.	
					10	▼	No recovery	
					11			
					12			
					13			
	☒			▒	14		Sandy gravel (SP), very dark gray 1/4" to 3/4", subangular, wet, loose, no odor	
					15		**Bottom of Boring 15'**	
					16			
					17			
					18			
					19			
					20			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID: **SB-15**

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	550 Gallon USTs	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous dw	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	11/1/2007 13:42	**FINISH DATE/ TIME**	11/1/2007 14:30
FIRST WATER (BGS):	5.5'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	19'	**BORING DIAMETER/DEPTH:**	3 1/4" / 19'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
					0			
					1		Concrete debris.	
	☒			▨	2		Silty sand (SM), fine grained, very dark brown, moist, well sorted, some gravel particles 1/2" subangular, no odor.	
				▨	3			
	☒	0		▨	4			
				▨	5	▼	Gravelly sand (SP), fine grained, black, 1/2" subangular, wet, poorly sorted, no odor.	
				▨	6			
				▨	7		Clay (CL), dark gray, moist, medium plasticity, no odor.	
				▨	8			
	☒			▨	9			
		0		▨	10		Clay (CL), greenish gray, moist, stiff, medium plasticity, faint petroleum odor.	
				▨	11			
				▨	12		Silty clay (CL) with some gravel, greenish gray, moist, softer, petroleum odor.	
				▨	13			
	☒	1200		▨	14		Sandy clay (SC), fine sand, moist, well sorter, petroleum odor stronger.	
				▨	15		Clay (CL), greenish gray, stiff, moist, medium plasticity, petroleum odor.	
				▨	16			
				▨	17			
	☒	40		▨	18		Same as above but no odor	
					19		Refusal at 19' bgs, Bottom of Boring at 19'	
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID.	SB-16		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking Lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Marsocere	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/1/2007 14 45	FINISH DATE/ TIME	11/1/2007 15 30
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	10'
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Asphalt	
				▩	2		Gravelly sand (SM), black, 1/2" subangular, dry.	
				▨	3		Clay (CL), some gravel, black, moist, soft, medium plasticity, no odor	
				▨	4			
				▨	5		Clay, black, moist, wood chips, tight, medium plasticity, no odor	
				▨	6			
				▨	7			
				▨	8			
				▨	9			
				▨	10			
				▨	11			
				▨	12			
				▨	13			
				▨	14		Clay (CL), light brownish gray (10YR 6/2), moist, soft, high plasticity, no odor	
				▨	15			
				▨	16			
				▨	17			
				▨	18		Clay (CL), grayish brown (? ?YR 5/2) moist, soft, high plasticity, no odor.	
				▨	19			
					20		Bottom of Boring 20'	

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID

SB-17

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking Lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Marcocere	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/1/2007 1515	FINISH DATE/ TIME	11/1/2007 1600
FIRST WATER (BGS):	15.5'	STABILIZED WATER LEVEL:	9'
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Concrete debris.	
				▨	2		Clay (CL), with some gravel, black, moist, stiff, no odor	
				▨	3			
				▨	4		Same as above with no gravel.	
				▨	5			
				▨	6			
				▨	7			
				▨	8			
				▨	9			
				▨	10			
				▨	11		Clay (CL), light grayish brown, moist, tight, no odor.	
				▨	12			
				▨	13			
				▨	14		Clay (CL), same as above but softer.	
				▨	15	▼	Gravel (GM), very dark gray, wet, subangular, 1/4", no odor.	
				░	16			
				░	17			
				▨	18		Clay (CL), light to medium gray, moist, stiff, medium plasticity, no odor.	
				▨	19			
					20		**Bottom of Boring 20'**	

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:	SB-18		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking Lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/5/2007 12:45	FINISH DATE/ TIME	11/5/2007 13:45
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	2" 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Asphalt debris.	
				░	2		Gravelly clay (SM) with some sand, grayish brown, soft/crumbly, no odor.	
				░	3			
				▨	4		Clay (CL), dark brown, moist, stiff, medium plasticity, no odor.	
				▨	5			
				▨	6			
				▨	7			
				▨	8			
				▨	9			
				▨	10			
				▨	11		Clay (CL), olive brown, moist, soft, medium plasticity, no odor	
				▨	12			
				▨	13			
				▨	14	▼	clay with some sand	
				▨	15		Same as above with gravel 1/4" subangular and sand, medium grained, wet, no odor, olive brown.	
				▨	16			
				▨	17			
				▨	18			
				▨	19			
					20			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID: **SB-19**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking Lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/5/2007 10:30	FINISH DATE/ TIME	11/5/2007 11:15
FIRST WATER (BGS):	17.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	2" 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▒	2		Gravelly clay (asphalt), dry, lose, no odor.	
				▒	3			
				▒	4			
				▒	5			
				▨	6		Clay (CL), very dark gray, moist, stiff, no odor.	
				▨	7			
				▨	8			
				▨	9			
				▨	10			
		0.5		▨	11			
				▨	12			
				▒	13		Gravelly clay (GC), dark gray, almost black, with light gray streaks, moist, poorly sorted, no odor.	
				▨	14		Clay (CL), medium gray, moist, stiff, medium plasticity, no odor.	
					15		No recovery.	
				▨	16		Silty clay (CL), dark gray, wet, some gravel, soft, no odor	
				▨	17	▼		
				▨	18			
				▨	19		Clay (CL), medium brown, moist, stiff, medium plasticity, no odor.	
					20		Bottom of Boring 20'	

SGI environmental **THE SOURCE GROUP, INC.**	BORING/WELL ID. **SB-20**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking Lot	Logged By:	Nathan Collon
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/5/2007 12:00	FINISH DATE/ TIME	11/5/2007 13:00
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	2" 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Asphalt debris.	
				▩	2		Gravelly clay (fill) with some sand, dark brown, moist, stiff, medium plasticity, no odor.	
				▩	3			
				▩	4			
				▨	5		Clay (CL), dark gray (brick pieces red), moist, stiff, medium plasticity, no odor.	
				▨	6			
				▨	7			
				▨	8			
				▨	9		Same as above, no brick pieces.	
				▨	10			
				▨	11			
				▨	12			
				▨	13		Clay (CL), olive brown, moist, soft, medium plasticity, no odor.	
				▨	14			
				▨	15			
				▨	16		More moist, almost wet.	
				▨	17			
				▨	18			
				▩	19		Gravelly clay (GC) , olive brown, moist, stiff, medium plasticity, no odor.	
					20		Bottom of Boring 20'	

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID: **SB-21**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking Lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/5/2007 11:30	FINISH DATE/ TIME	11/5/2007 0:00
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	2" / 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Asphalt debris.	
				▨	2		Silty clay (CL), olive brown, dry.	
				▒	3		Gravelly clay (GC), dark gray, 1/4", subangular, loose, moist, no odor	
				▒	4			
				▒	5		Red rock (brick pieces), dry.	
				▨	6		Clay (CL), olive brown, moist, stiff, medium plasticity, no odor.	
				▨	7			
				▨	8			
				▨	9			
				▨	10			
				▨	11			
				▨	12			
				▨	13			
				▨	14			
				▨	15			
				▨	16			
				▨	17			
				▨	18			
				▨	19			
					20		**Bottom of Boring 20'**	

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THE SOURCE GROUP, INC.

BORING/WELL ID

SB-22

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	8,000 gal TRA VST	Logged By:	Nathan Collon
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/2/07 745	FINISH DATE/ TIME	11/2/07 845
FIRST WATER (BGS):	9'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	15'	BORING DIAMETER/DEPTH:	3 1/4" 15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▨	2		Clay (CL), very dark gray, moist, medium plasticity, no odor	
	☒			▨	3			
	☒			▥	4		Sandy silt (ML), fine grained black, moist, loose, well sorted.	
					5		NR	
					6			
				▨	7		Gravelly clay (GC), dark gray, moist, 1/2" to 3/4" subangular, poorly sorted, no odor.	
				▨	8			
	☒	130		▨	9			
				▨	10		Gravelly clay (GC) with some medium grained sand, dark bluish gray, wet, poorly sorted, slight oily sheen, no odor.	
		48		▨	11			
		1.9		▩	12		Gravelly sand, dark gray, wet, poorly sorted, no odor.	
				▨	13		Clay (CL), light brownish gray, moist very soft, medium plasticity, no odor.	
	☒	0.7		▨	14			
					15		**Bottom of Boring 16'**	
					16			
					17			
					18			
					19			
					20			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:	SB-23		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	8,000 gal TRA VST	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous DW	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/2/2007 905	FINISH DATE/ TIME	11/2/2007 0:00
FIRST WATER (BGS):	8.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	15'	BORING DIAMETER/DEPTH:	3 1/4" 15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
		0.1		▨	2		Clay (CL), very dark gray, moist, medium plasticity, no odor.	
	☒			▨	3			
	☒	0.1		▥	4		Sandy silt (ML), fine grained, black, moist, loose, no odor.	
					5		NR	
					6			
					7			
		0.4		▨	8		Gravelly clay (GC), very dark gray, moist, poorly sorted, no odor.	
	☒	0.3		▨	9		Gravelly sand (SP), very dark gray, medium grained, poorly sorted, no odor, wet.	
				▨	10			
				▨	11		Gravelly clay (GC), dark gray, wet, soft, no odor.	
				▨	12		Clay (CL), olive brownish gray, moist, stiff, medium plasticity, no odor.	
				▨	13			
	☒	0.4		▨	14			
					15		Bottom of Boring 15'	
					16			
					17			
					18			
					19			
					20			

SGI environmental
THE SOURCE GROUP, INC.

BORING/WELL ID.	**SB-24**		
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	8,000 gal TRA VST	**Logged By:**	Nathan Collon
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	11/2/2007 1000	**FINISH DATE/ TIME**	11/2/2007 1100
FIRST WATER (BGS):	7.5'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	20'	**BORING DIAMETER/DEPTH:**	3 1/4" / 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris	
				▨	2		Clay (CL), very dark gray, moist, sorted, medium plasticity, no odor.	
	⊠			▥	3		Sandy silt (ML), fine grained, dark gray, crumbly, most, no odor.	
	⊠			▥	4			
					5		NR	
				▥	6		Sandy silt (ML), some gravel, dark gray, moist, no odor.	
				▒	7		Gravel (GC), brown to dark gray, wet, to 3/4" to 1" subangular, poorly sorted, no odor.	
				▒	8			
	⊠			▨	9		Silty clay (CL), bluish gray, moist, medium stiffness, medium plasticity, no odor.	
		200		▨	10			
				▨	11		Clay (CL), bluish gray, moist, stiff, medium plasticity, no odor.	
		0.6		▨	12			
				▨	13			
	⊠	0.3		▨	14			
				▒	15		Gravel (GC), dark gray, wet, 3/4" to 1" subangular, poorly sorted, no odor.	
				▒	16			
				▒	17			
				▨	18		Clay (CL), dark olive brown, moist, stiff, medium plasticity, no odor.	
				▨	19			
	⊠	0.3			20		Bottom of Boring 20'	

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BORING/WELL ID.

SB-25

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Production Area	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/2/2007 1040	FINISH DATE/ TIME	11/2/2007 1110
FIRST WATER (BGS):	8.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	10'	BORING DIAMETER/DEPTH:	2" 10'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▦	2		Sand (SM), coarse, light brown, moist, no odor.	
				▨	3		Clay (CL), black, moist, stiff, no odor.	
					4		NR	
				▨	5		Clay (CL), some gravel, dark gray, moist, stiff, no odor.	
				▨	6			
				▨	7			
				▨	8			
				▩	9		Gravelly clay (GC), some sand, grained, 1/4" to 1/2" subangular, dark gray, wet, poorly sorted, rotten egg odor.	
					10		**Bottom of Boring 10'**	
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:

SB-26

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Production Area	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/2/2007 11315	FINISH DATE/ TIME	11/2/2007 1200
FIRST WATER (BGS):	13'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	15'	BORING DIAMETER/DEPTH:	2" 15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris	
					2		Silt (ML), dark brown, moist, loose, no odor.	
					3		Gravelly sand (SP) with a very sticky black substance (tar?), moist, faint hydrocarbon odor.	
	☒	16			4		Clay (CL), dark brown, moist, stiff, medium plasticity, no odor.	
					5			
					6			
		400			7		Clay (CL), bluish gray, moist, stiff, medium plasticity, solvent odor?	
					8			
	☒				9			
		1000			10			
					11			
					12			
					13		Sandy gravel (SP), bluish gray, wet, loose, solvent odor.	
		☒			14		Sandy clay (SP), bluish gray, fine grained, wet, solvent odor 13.5' to 14'.	
					15		Clay (CL), bluish gray, moist, stiff, medium plasticity, solvent odor 14' to 15'.	
					16		**Bottom of Boring 15'**	
					17			
					18			
					19			
					20			

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		BORING/WELL ID:	**SB-27**
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	10,000 gal VST	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuos DW	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/5/2007 0710	FINISH DATE/ TIME	11/5/2007 830
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	15'	BORING DIAMETER/DEPTH:	3 1/4" 15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
		13		▨	2		Clay (CL), dark gray, moist, stiff, medium plasticity, faint petroleum odor.	
	☒			▨	3			
	☒			▨	4		White chalking substance, crumbly.	
					5		NR	
		0.2		▨	6			
				▨	7		Silty clay (CL), dark gray, moist, soft, medium plasticity, faint petroleum odor.	
				▨	8			
	☒			▨	9		Clay (CL), dark gray, moist, stiff, medium plasticity, no odor.	
				▨	10			
				▨	11			
				▨	12		Same as above but medium brownish gray.	
				▨	13			
	☒	0		▨	14			
					15		**Bottom of Boring 15'**	
					16			
					17			
					18			
					19			
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:	SB-28		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	10,000 gal VST	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuos	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/2/2007 1500	FINISH DATE/ TIME	11/2/2007 1610
FIRST WATER (BGS):	7.5	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	3 1/4" 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		NR	
					2			
					3			
					4			
					5			
	☒			▨	6		Clay (CL), dark brown, moist, stiff, medium plasticity, no odor.	
		0 2		▨ ▦	7		Gravelly clay (GC) with fine sands, very dark brown, wet, poorly sorted, soft, no odor.	
				▦ ▨	8		Clay (CL), very dark gray, moist, stiff, no odor.	
	☒	0.2		▦	9		Gravelly clay (GC) with fine sands, very dark brown, wet, poorly sorted, soft, no odor	
				▦ ▨	10		White chalking material, very fine particles, crumbles.	
		0.1		▦ ▨	11		Gravel (GC), dark brown, wet, poorly sorted, faint petroleum odor. Clay (CL), dark brown, moist, stiff, medium plasticity, faint petroleum odor.	
				▨	12		Clay, medium gray, moist, stiff, medium plasticity, no odor.	
				▨	13			
	☒			▨	14			
				▨ ▥	15		Sand (SP), medium grained trace gravel, light gray, wet, well sorted, loose, no odor.	
				▥	16			
				▨	17		Clay (CL), medium brownish gray, moist, stiff, medium plasticity, no odor.	
				▨	18			
	☒			▨	19			
					20		Bottom of Boring 20'	

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:	SB-29		
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	10,000 gal VST	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continues	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	11/5/2007 900	**FINISH DATE/ TIME**	
FIRST WATER (BGS):	6.5'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	15'	**BORING DIAMETER/DEPTH:**	3 1/4" 15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
				▨	1		Cement debris. Clay (CL), lots of fine sands (sluffing from top of the sample sleeve?) dry, slight petroleum od	
				▨	2			
				▨	3		No recovery.	
					4			
				▨	5		Clay (CL), dark brown, moist, stiff, medium plasticity, no odor.	
	☒			▨	6	▼		
				▨	7		Silty clay (CL), dark gray, wet, loose, no odor.	
		0.2		▨	8			
	☒			▨	9		Clay (CL), dark gray, moist, stiff, medium plasticity, no odor, some roots.	
				▨	10			
				▨	11			
				▨	12			
				▨	13		Clay (CL), light brown to gray, moist, stiff, medium plasticity, trace rocks (1/4" round), no odor.	
		0.1		▨	14			
					15		Bottom of Boring 15'	
					16			
					17			
					18		No water recovery at 15' Collected sample via hydropunch, screened 15' - 20' bgs.	
					19			
					20			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-30

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	10,000 gal VST	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	11/2/2007 1345	**FINISH DATE/ TIME**	11/2/07 1445
FIRST WATER (BGS):	10'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	15'	**BORING DIAMETER/DEPTH:**	3 1/4" 15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris.	
				▒	2		Gravelly sand (asphalt), dark gray, loose, dry, no odor.	
	☒			▒	3			
	☒			▨	4		Clay (CL), dark gray, moist, stiff, medium plasticity, no odor.	
					5			
					6	▼	NR	
				▒	7		Gravelly sand (SP), dark brown, moist, loose, poorly sorted, no odor.	
				▒	8			
	☒			▒	9		Clay (CL), medium gray,	
				▨	10			
				▨	11			
				▨	12			
				▨	13			
	☒			▨	14		Clay (CL), dark brown, moist and wet, soft, low plasticity, no odor.	
					15		Bottom of Boring 15'	
					16			
					17			
					18			
					19			
					20			

SGI environmental **THE SOURCE GROUP, INC.**

		BORING/WELL ID.	SB-31
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking Lot	Logged By:	Nathan Collon
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/5/07 1430	FINISH DATE/ TIME	
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	25'	BORING DIAMETER/DEPTH:	2" 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1			
	☒				2			
					3		Case jammed. Sample not removed.	
	☒				4			
					5			
					6		NR	
		0.1		▨	7		Clay (CL), black, moist, stiff, medium plasticity, no odor	
				▨	8			
				▨	9			
		0.1		▨	10			
				▨	11			
				▨	12			
				▨	13			
				▨	14			
				▨	15		Clay (CL), olive brown, moist, stiff, medium plasticity, no odor.	
				▨	16			
				▨	17			
				▨	18			
				▨	19			
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID: **SB-31**

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):	Parking Lot	**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	11/5/07 1430	**FINISH DATE/ TIME**	11/5/07 1545
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	25'	**BORING DIAMETER/DEPTH:**	2" 25'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
				▨	20			
				▨	21		Same as above but softer.	
				▨	22			
				▨	23			
				▨	24		Clay (CL), gravelly clay, dark brown, moist, very stiff, medium plasticity, no odor.	
					25		Bottom of Boring 25'	
					26			
					27			
					28			
					29			
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

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BORING/WELL ID:

SB-32

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/26/2007 753	FINISH DATE/ TIME	11/26/2007
FIRST WATER (BGS):	10'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	2" 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Asphalt debris.	
				▥	2		Gravelly silt (ML), medium brown, dry, crumbly, poorly sorted, no odor, fill	
				▥	3			
				▨	4		Clay (CL), dark gray, moist, stiff, medium plasticity, no odor.	
				▨	5			
				▨	6			
				▨	7			
				▨	8		Light gray.	
				▨	9			
				▨	10			
				▨	11			
				▨	12			
				▨	13			
				▨	14		More moist.	
				▨	15			
				▨	16			
				▨	17		Greater silt content, more moist.	
				▨	18		Clay (CL), dark grayish brown, moist, stiff, medium plasticity, no odor.	
				▨	19			
					20		**Bottom of Boring 20'**	

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BORING/WELL ID.

SB-33

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe 6600		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/26/2007 1030	FINISH DATE/ TIME	11/26/2007
FIRST WATER (BGS):	17.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	2" 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
				▨	1		Gravelly clay (fill).	
					2		NR	
					3			
					4			
					5			
					6			
					7			
					8			
					9			
		0.3		▨	10		Clay (CL), light grayish brown, moist, stiff, medium plasticity, no odor, trace red (brick?) fragments.	
				▨	11		Olive brown with no brick fragments.	
				▨	12			
				▨	13			
				▨	14			
				▨	15		Olive to light brown (tan), moist, stiff, medium plasticity, no odor	
				▨	16			
				▨	17	▼	Light grayish brown, wet, soft, medium plasticity, no odor.	
				▨	18			
				▨	19		Medium brown, moist, stiff, medium plasticity, no odor.	
					20		Bottom of Boring 20'	

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-34

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe 6600		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/26/2007 1030	FINISH DATE/ TIME	11/26/2007
FIRST WATER (BGS):	17.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	2" 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
				▨	1		Gravelly clay (fill).	
					2		NR	
					3			
					4			
					5			
					6			
					7			
					8			
					9			
				▨	10		Clay (CL), olive brown, moist, medium tightness, medium plasticity, no odor.	
				▨	11			
		1.1		▨	12		Clay (CL), trace gravel, medium grayish brown, moist	
				▨	13			
				▨	14		Clay (CL), medium brown, moist, stiff, medium plasticity, no odor.	
				▨	15		Gravelly clay (CL), medium brown, moist, poorly sorted, no odor.	
				▨	16			
				▨	17		Clay (CL), olive brown, moist, stiff, medium plasticity, no odor	
				▨	18			
		0.4		▨	19			
					20		Bottom of Boring 20'	

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:	SB-35		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continues	MONITORING DEVICE:	MiniRae 2000
START DATE/ TIME):	11/26/2007 1140	FINISH DATE/ TIME	11/26/2007 1230
FIRST WATER (BGS):	11.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	15'	BORING DIAMETER/DEPTH:	2" 15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Hand auger to 5' bgs.	
					2			
					3			
					4			
					5		NR	
					6			
					7			
					8			
		0.6			9			
				▨	10		Gravelly clay (CL), black, moist, soft, medium plasticity, no odor.	
				▨	11	▼	Not much recovery, very wet, water moving soil sample gravel. Appears to be gravelly clay, black, very wet, loose, no odor.	
				▨	12			
				▨	13		Gravelly sand (SP), dark gray, wet, loose, poorly sorted, no odor.	
				▨	14		Clay (CL), dark gray, moist, stiff, medium plasticity, no odor.	
					15		Bottom of Boring 15'	
					16			
					17			
					18			
					19			
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:
SB-36

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe		
SAMPLING METHOD:	Continues	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/26/2007 1300	FINISH DATE/ TIME	11/26/2007 1400
FIRST WATER (BGS):	11.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	15'	BORING DIAMETER/DEPTH:	2" 15'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
				▥	1		Silt (ML), light gray/white, dry, crumbly, no odor, fill.	
				▥	2			
				▥	3			
				▥	4			
					5		NR	
					6			
					7			
					8			
					9			
					10			
					11	▼	Very wet, water in empty sleeve.	
					12			
					13			
				▨	14		Gravel (GP), dark grey, wet, loose, poorly sorted, 1/4" - 1/2" subangular, no odor.	
					15		**Bottom of Boring 15'**	
					16			
					17			
					18			
					19			
					20			

THE SOURCE GROUP, INC.

BORING/WELL ID:
SB-37

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):	Parking lot	Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	Vironex Geoprobe 6600		
SAMPLING METHOD:	Macro	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	11/26/2007 1110	FINISH DATE/ TIME	11/26/2007
FIRST WATER (BGS):	17.5'	STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	20'	BORING DIAMETER/DEPTH:	2" 20'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		Cement debris, fill.	
				▨	2		Clay (CL), dark brown, moist, stiff, medium plasticity, no odor	
				▨	3			
				▨	4			
				▨	5			
				▨	6			
				▨	7			
				▨	8		Some gravel, subangular 1/4" diameter	
		0.4		▨	9			
				▨	10		Clay (CL), grayish brown, moist, stiff, medium plasticity, no odor.	
				▨	11			
				▨	12		Olive brown, moist, medium stiffness, medium plasticity, no odor	
				▨	13			
				▨	14			
				▨	15			
				▦	16	▼	Silty sand (SM), fine grained, olive brown, wet, loose, well sorted, no odor.	
				▨	17		Clay (CL), grayish brown, moist, stiff, medium plasticity, no odor.	
				▨	18			
				▨	19			
					20		Bottom of Boring 20'	

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THE SOURCE GROUP, INC.

		BORING/WELL ID:	**SB-38**
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/8/08 900	**FINISH DATE/ TIME**	7/8/08 1300
FIRST WATER (BGS):	19.5'	**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	44'	**BORING DIAMETER/DEPTH:**	4" 44'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
				▨	1		Cement debris, fill.	
				▨	2		Silty Clay, trace gravel (concrete?), dark gray, soft, moderate plasticity, faint odor (petroleum?)	
				▨	3			
				▨	4			
		0.3		▨	5		Clay, dark gray, moist, soft, moderate plasticity, no odor	
				▨	6			
				▨	7			
				▨	8		Clay, olive brown, moist, soft, moderate plasticity, no odor	
		1.4		▨	9			
				▨	10			
				▨	11			
				▨	12		same as above, moist to wet	
				▨	13			
				▨	14			
		0.3		▩	15		Sandy Clay, olive brown, some gravel, 1/4" subangular, well graded, med-grained, no odor	
		3.6		▨	16		Clay, olive brown, moist, stiff, low plasticity, no odor	
				▨	17			
				▨	18			
				▨	19	▼		
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:	SB-38		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Collon
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/8/08 900	FINISH DATE/ TIME	7/8/08 1300
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	44'	BORING DIAMETER/DEPTH:	4" 44'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
		1.9			20			
					21			
					22		Silty Clay, olive brown, moist, soft, low plasticity, no odor	
					23		Silty Sand, olive brown, medium-grained, some gravel, 1/2" subangular, well graded, no odor	
					24			
					25			
					26			
					27		Clay, olive brown, some gravel, 1/4" subangular, moist, stiff, low plasticity, no odor	
					28			
					29		Gravelly Sand, medium grained, 1/2" subangular, moist, well graded, no odor	
					30		Clay, medium brown, wet, stiff, moderate plasticity, no odor	
					31			
					32		Silt, medium brown, wet, soft, no odor	
					33		Clay, light gray, moist, stiff, moderate plasticity, no odor	
					34			
					35			
					36		same as above, soft, moist to wet	
					37			
					38			
					39			
					40			

THE SOURCE GROUP, INC.

SGI environmental

BORING/WELL ID:	SB-38		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/8/08 900	FINISH DATE/ TIME	7/8/08 1300
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	44'	BORING DIAMETER/DEPTH:	4" 44'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHER	Well construction details
		1.9		▨	40			
				▨	41			
				▨	42			
				▨	43			
					44		Refusal at 44'	
					45			
					46			
					47			
					48			
					49			
					50			
					51			
					52			
					53			
					54			
					55			
					56			
					57			
					58			
					59			
					60			

THE SOURCE GROUP, INC.

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/8/08 1355	**FINISH DATE/ TIME**	7/8/08 1645
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	43'	**BORING DIAMETER/DEPTH:**	4" 43'

BORING/WELL ID:

SB-39

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1			
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19	▼		
					20			

SGI environmental **THE SOURCE GROUP, INC.**			BORING/WELL ID: **SB-39**
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/8/08 1355	**FINISH DATE/ TIME**	7/8/08 1645
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	43'	**BORING DIAMETER/DEPTH:**	4" 43'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
		7		▨	20		Clay, olive brown to med. Brown, moist, stiff, low plasticity, no odor	
				▨	21			
				▨	22			
				▨	23			
				▨	24			
		2		▨	25		Clay, black, moist, soft, moderate plasticity, no odor	
				▨	26		same as above, bluish gray, very stiff	
				▨	27			
				▨	28			
				▨	29			
				▨	30			
		4.4		▨	31		Sandy Clay, medium brown, fine-grained, wet, no odor	
				▨	32		Clay, medium brown, moist, stiff, moderate plasticity, no odor	
				▨	33			
				▨	34			
		2		▨	35			
				▨	36			
				▨	37			
					38		Silty Clay, olive brown, moist, stiff, moderate platicity, no odor	
					39			
					40			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:			**SB-39**
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/8/08 1355	**FINISH DATE/ TIME**	7/8/08 1645
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	43'	**BORING DIAMETER/DEPTH:**	4" 43'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHER	Well construction details
		0.5		▨	40		Clay, dark brown, very stiff (tough drilling), moist, moderate plasticity, no odor	
				▨	41			
				▨	42			
					43		Refusal at 43'	
					44			
					45			
					46			
					47			
					48			
					49			
					50			
					51			
					52			
					53			
					54			
					55			
					56			
					57			
					58			
					59			
					60			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-40

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/9/08 640	**FINISH DATE/ TIME**	7/9/08 900
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	35'	**BORING DIAMETER/DEPTH:**	4" 35'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0		asphalt	
			80	▨	1		Clay, orangish brown, some gravel, 1/2" - 3/4" subangular, stiff, low plasticity, no odor. FILL	
				▨	2			
				▨	3			
				▨	4		Sandy Clay, bluish gray, fine-grained sands, loose, no odor.	
				▨	5			
				▨	6		Clay, dark gray, moist, stiff, moderate plasticity, no odor	
				▨	7			
				▨	8			
				▨	9			
		0.5	100	▨	10			
				▨	11			
				▨	12			
				▨	13		Silty Clay, olive brown, moist to wet, soft, moderate plasticity, no odor	
				▨	14			
		1.2		▨	15			
				▨	16			
				▨	17		Gravelly Clay, olive brown, 1/4" subangular, moist to wet, moderate plasticity, no odor.	
				▨	18			
				▨	19	▼		
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:

SB-40

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Collon
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/9/08 640	**FINISH DATE/ TIME**	7/9/08 900
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	35'	**BORING DIAMETER/DEPTH:**	4" 35'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
			100	▨	20			
				▨	21			
				▨	22			
				▨	23		same as above, trace gravel, 1/2" subangular	
		4		▨	24		Clay, olive brown, moist, stiff, moderate plasticity, no odor, trace silt	
				▨	25		Clay, olive brown, moist, stiff, moderate plasticity, no odor	
				▨	26			
				▨	27			
				▨	28			
		2.3		▨	29			
				▨	30			
				▨	31			
				▨	32			
				▨ ░	33		Sand, medium brown, medium-grained, wet, loose, poorly graded, no odor	
		2.3		░	34			
					35		Heaving sands encountered at 35' bgs	
					36			
					37			
					38			
					39			
					40			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID: **SB-41**

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/9/08 900	**FINISH DATE/ TIME**	7/9/08 1100
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	35'	**BORING DIAMETER/DEPTH:**	4" 35'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0		asphalt	
				▨	1		Gravelly Clay (fill)	
				▨	2			
				▨	3		Clay, dark gray, some gravel (fill)	
				▨	4			
					5		No Recovery	
					6			
				░	7		Sand, light gray, coarse-grained, wet, poorly graded, no odor.	
				▨	8		Clay, black, moist, stiff, moderate plasticity, no odor	
				▨	9			
				▨	10		Clay, bluish gray, moist, soft, moderate plasticity, no odor	
				▨	11			
				▨	12			
				▨	13			
				▨	14			
				▨	15			
				▨	16			
				▨	17			
				▨	18			
				▨	19	▼		
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID: **SB-41**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/9/08 900	FINISH DATE/ TIME	7/9/08 1100
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	35'	BORING DIAMETER/DEPTH:	4" 35'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
			100	▨	20			
				▨	21			
				▨	22		Silty Clay, olive brown, moist, stiff, moderate plasticity, no odor, some 1/4" red gravel	
				▨	23			
		0.2		▨	24			
				▨	25		Clay, olive brown, moist, stiff, moderate plasticity, no odor	
				▨	26			
				▨	27			
				▨	28			
		2.3		▨	29			
				▨	30			
				▨	31			
				▨	32			
				▨	33		Sand, olive brown, medium-grained, wet, loose, poorly graded, no odor	
				▨	34			
				▨	35		**Heaving sands encountered at 35' bgs**	
				▨	36			
				▨	37			
					38			
					39			
					40			

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BORING/WELL ID:

SB-42

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/9/08 1442	**FINISH DATE/ TIME**	7/9/08 1645
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	45'	**BORING DIAMETER/DEPTH:**	4" 45'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		0' bgs to 20' bgs see boring SB-13	
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID: **SB-42**

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/9/08 1442	FINISH DATE/ TIME	7/9/08 1645
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	45'	BORING DIAMETER/DEPTH:	4" 45'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
			100	▨	20		Clay, bluish gray, moist, stiff, moderate plasticity, no odor	
				▨	21			
				▨	22			
				▨	23			
		1.8		▨	24			
			100	▨	25			
				▨	26			
				▨	27			
				▨	28			
		1.8		▨	29			
			100	▨	30			
				▨	31		Clay, medium brown, moist, stiff, moderate plasticity, no odor	
				▨	32			
				▨	33			
		0		▨	34			
				▨	35			
				▨	36			
				▨	37			
				▨	38			
1618	☒			▨	39			
					40			

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-42

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/9/08 1442	**FINISH DATE/ TIME**	7/9/08 1645
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	45'	**BORING DIAMETER/DEPTH:**	4" 45'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHER	Well construction details
				▨	40			
				▨	41			
				▨	42			
				▨	43			
				▨	44			
					45		**Refusal at 45'**	
					46			
					47			
					48			
					49			
					50			
					51			
					52			
					53			
					54			
					55			
					56			
					57			
					58			
					59			
					60			

THE SOURCE GROUP, INC.		BORING/WELL ID: **SB-44**	
PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/10/08 630	**FINISH DATE/ TIME**	7/10/2008
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	35'	**BORING DIAMETER/DEPTH:**	4" 35'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0		Concrete	
					1		No Recovery	
					2			
					3		Silt, black, dry, loose, trace gravel, (concrete?) FILL	
1305	☒	3.5			4		Clay, black, wet, stiff, moderate plasticity, strong petroleum odor FILL	
					5		No Recovery	
					6		Clay, black, moist, stiff, moderate plasticity, petroleum odor	
					7			
					8			
1315	☒	9			9		same as above, bluish gray	
					10			
					11			
					12			
					13			
1320	☒	25			14			
					15			
					16			
					17		Clay, light bluish brown, moist, very stiff, moderate plasticity, faint petroleum odor	
					18			
1330	☒	2.4			19		same as above, brown, no odor	
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:

SB-44

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/10/08 630	FINISH DATE/ TIME	7/10/2008
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	35'	BORING DIAMETER/DEPTH:	4" 35'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
				▨	20		Gravelly Clay, medium brown, 1/4" subangular, moist, no odor	
				▨	21		Gravelly Sand, dark brown, wet, loose, medium-grained, 1/2" subangular, well graded, no odor	
				▨	22		Gravelly Clay, dark brown, moist, stiff, low plasticity, no odor	
				▨	23		Clay, medium brown, moist, stiff, moderate plasticity, no odor	
1340	☒			▨	24			
				▨	25			
				▨	26			
				▨	27			
				▨	28			
				▨	29		Sand, medium to dark brown, wet, medium-grained, loose, poorly graded, no odor, trace gravel, 1/2" subangular	
				▨	30		**Heaving sands encountered at 30' (10 feet of dual wall core filled with sand)**	
				▨	31			
				▨	32			
				▨	33			
		0		▨	34			
				▨	35			
				▨	36			
				▨	37			
				▨	38			
1618	☒			▨	39			
					40			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:

SB-45

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/10/08 630	**FINISH DATE/ TIME**	7/10/2008
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	35'	**BORING DIAMETER/DEPTH:**	4" 35'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0		Concrete	
					1		Gravelly Clay, very dark gray, moist, soft, low plasticity, no odor (fill)	
				▨	2		Silt, dark gray, moist, loose, petroleum odor Clay, dark grayish black, moist, stiff, low plasticity, petroleum odor, trace concrete pieces	
				▨	3			
1305	☒	3.5		▨	4			
				▨	5			
				▨	6			
				▨	7		Clay, dark bluish gray, moist, stiff, moderate plasticity, no odor	
				▨	8			
1315	☒	9		▨	9		same as above, some silt (Silty Clay?)	
				▨	10			
				▨	11		Silty Clay, bluish gray, trace gravel, moist, stiff, low plasticity, petroleum odor	
				▨	12		Clayey Sand, bluish gray, medium-grained, 1/2" subangular gravel, wet, petroleum odor	
				▨	13			
1320	☒	25		▨	14		Clay, medium brown, moist, stiff, moderate plasticity, no odor	
				▨	15			
				▨	16			
				▨	17			
				▨	18			
1330	☒	2.4		▨	19		Sandy Clay, bluish gray, fine-grained, loose, poorly graded, petroleum odor	
					20			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:	SB-45		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/10/08 630	FINISH DATE/ TIME	7/10/2008
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	35'	BORING DIAMETER/DEPTH:	4" 35'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
				▨	20			
				▨	21		Gravelly Sand, medium brown, medium-grained, wet, well graded, no odor, 3/4" subangular gravel	
				▨	22			
				▨	23			
1340	☒			▨	24			
				▨	25			
				▨	26			
				▨	27			
				▨	28			
				▨	29			
					30		**Heaving sands encountered at 30' (10 feet of dual wall core filled with sand)**	
					31			
					32			
					33			
		0			34			
					35			
					36			
					37			
					38			
1618	☒				39			
					40			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-46

PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/10/08 1200	FINISH DATE/ TIME	7/10/08 1430
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	45'	BORING DIAMETER/DEPTH:	4" 45'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
				▨	1		Clay, very dark brown, moist, medium stiffness, moderate plasticity, no odor, trace gravel (concrete?) FILL	
				▨	2			
				▨	3			
				▨	4			
				▨	5		No Recovery	
				▨	6			
				▨	7		Silty Sand, olive brown, fine-grained, wet, loose, well graded, no odor	
				▦	8			
				▨	9		Clay, very dark grayish black, stiff, moderate plasticity, specks of brown silt, no odor	
				▨	10			
				▨	11			
				▨	12		same as above, grayish brown, soft, sticky clay	
				▨	13			
				▨	14			
					15		No Recovery	
					16		Gravelly Clay, medium grayish brown, wet, soft, 1/4" subangular, no odor	
					17			
					18		same as above, stiff, moist, low plasticity, no odor, some sand, fine-grained	
					19			
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID: **SB-46**

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/10/08 1200	**FINISH DATE/ TIME**	7/10/08 1430
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	45'	**BORING DIAMETER/DEPTH:**	4" 45'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
		7		▨	20		Clay, medium brown, stiff, moist, moderate plasticity, no odor	
				▨	21			
				▨	22			
				▨	23		same as above, organic matter (roots)	
				▨	24			
		2		▨	25			
				▨	26			
				▨	27			
				▨	28			
				▨	29			
				▨	30			
		4.4		▨	31			
				▨	32			
				▨	33			
				▨	34			
		2		▨	35		same as above, wet, soft, moderate plasticity, no odor	
				▨	36		Gravelly Clay, 1/4"-1/2" subangular	
				▨	37			
					38		Sand, fine-grained, wet,no odor, trace gravel, 1/4"-1/2" subangular,	
				▨	39		Clay, dark gray, moist, stiff, moderate plasticity, no odor	
					40			

SGI environmental **THE SOURCE GROUP, INC.**

		BORING/WELL ID:	SB-46
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/10/08 1200	FINISH DATE/ TIME	7/10/08 1430
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	45'	BORING DIAMETER/DEPTH:	4" 45'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHER	Well construction details
		0.5		▨	40		Clay, dark brown, very stiff (tough drilling), moist, moderate plasticity, no odor	
				▨	41			
				▨	42			
				▨	43			
					44			
					45		**Refusal at 45'**	
					46			
					47			
					48			
					49			
					50			
					51			
					52			
					53			
					54			
					55			
					56			
					57			
					58			
					59			
					60			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:			**SB-47**
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/11/08 635	FINISH DATE/ TIME	7/11/08 930
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	44'	BORING DIAMETER/DEPTH:	4" 44'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
			40		1		Gravelly Clay, dark gray, dry, stiff, low plasticity, no odor, some silt	
					2			
					3		No Recovery	
		0			4			
			100		5		Clay, medium gray, stiff, moist, moderate plasticity, no odor, trace gravel, 1/4" subangular	
					6			
					7			
					8		same as above, medium brown, silt	
		2.6			9		Gravelly Clay, medium gray, stiff, moist, low plasticity, no odor, 1/4" subangular	
			100		10		Clay, medium gray, moist, stiff, moderate plasticity	
					11		same as above, faint petroleum odor, trace gravel	
					12			
					13		same as above, no gravel	
		36			14			
713	☒		100		15			
					16			
					17			
					18		Sandy Clay, medium brown, fine-grained, wet, loose, no odor, trace gravel, 1'4" round	
715	☒	0.9			19		Clay, medium brown, stiff, moderate plasticity, no odor	
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID: **SB-47**

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/11/08 635	**FINISH DATE/ TIME**	7/11/08 930
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	44'	**BORING DIAMETER/DEPTH:**	4" 44'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
			100	▨	20		Sandy Gravel, medium brown, wet, medium-grained, 1/4" - 1/2" subangular, well graded, no odor	
				▨	21			
				▨	22			
				▨	23			
		0.4		▩	24		Clayey Gravel, medium brown, moist to wet, stiff, 1/2" - 3/4" subangular, no odor	
			100	▩	25			
				▩	26			
				▩	27		Clay, medium brown, moist, stiff, moderate plasticity, no odor	
				▧	28			
				▧	29			
		0.3		▧	30			
			100	▧	31			
				▧	32			
				▧	33			
				▧	34			
			100	▧	35			
				▧	36			
				▧	37			
				▧	38			
				▧	39			
					40			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:	SB-47		
PROJECT NAME AND ADDRESS:	AB&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/11/08 635	FINISH DATE/ TIME	7/11/08 930
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	44'	BORING DIAMETER/DEPTH:	4" 44'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHER	Well construction details
			80	▨	40		same as above	
				▨	41			
				▨	42			
		1.4		▨	43			
					44		**Refusal at 44'**	
					45			
					46			
					47			
					48			
					49			
					50			
					51			
					52			
					53			
					54			
					55			
					56			
					57			
					58			
					59			
					60			

SGI environmental

THE SOURCE GROUP, INC.

BORING/WELL ID:

SB-48

PROJECT NAME AND ADDRESS:	AB&I Foundry	**Project No.**	01-ABI-001
BORING LOCATION (AT SITE):		**Logged By:**	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	**MONITORING DEVICE:**	MiniRae 2000
START DATE/ (TIME):	7/11/08 945	**FINISH DATE/ TIME**	7/11/08 1200
FIRST WATER (BGS):		**STABILIZED WATER LEVEL:**	
SURFACE ELEVATION:		**CASING TOP ELEVATION:**	
TOTAL BORING DEPTH(S):	29.5'	**BORING DIAMETER/DEPTH:**	4" 29.5'

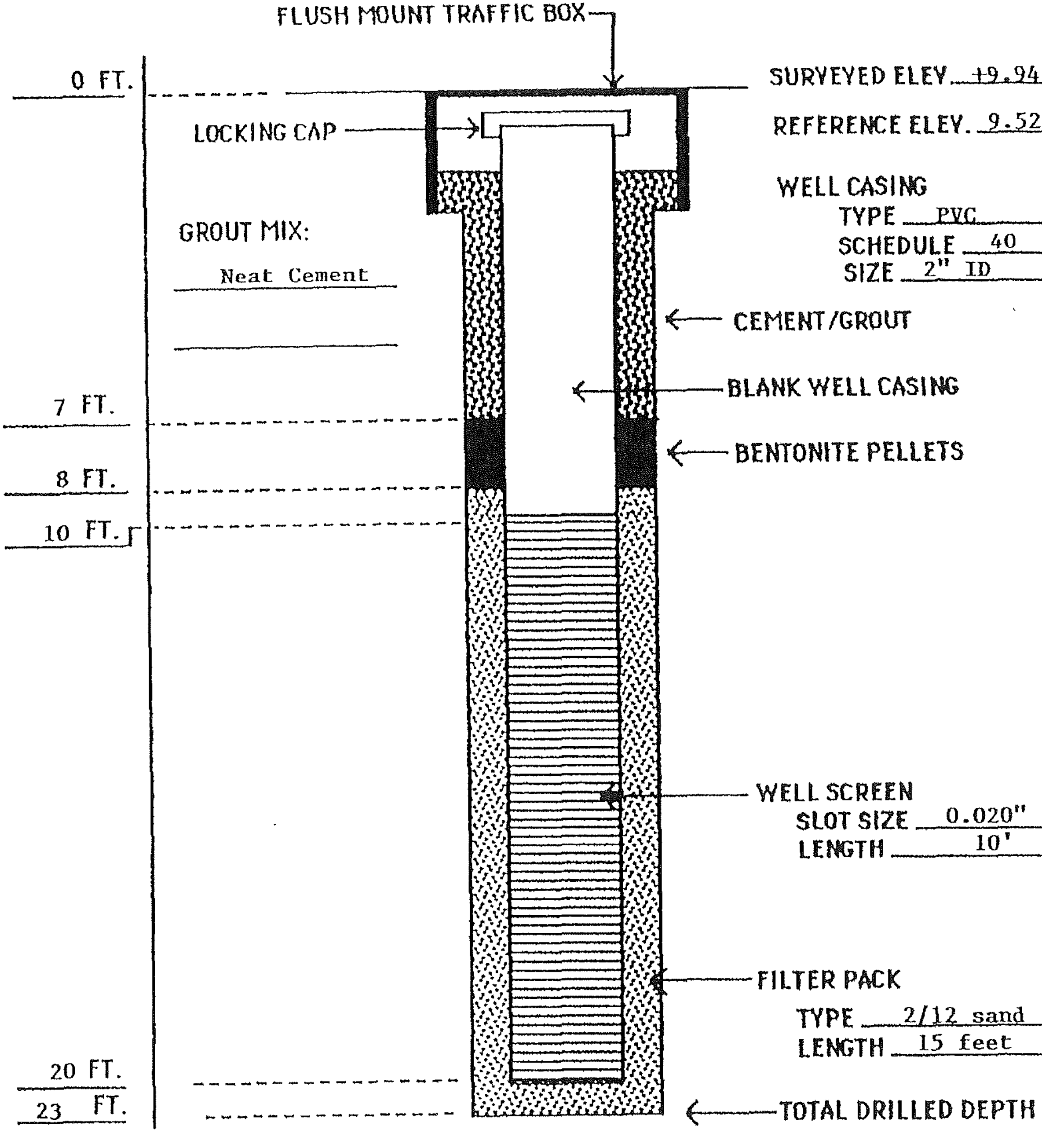
Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHERWISE STATED	Well construction details
					0			
					1		no soil samples collected 0-20 ft bgs. See boring SB-22 for lithology.	
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
					11			
					12			
					13			
					14			
					15			
					16			
					17			
					18			
					19			
					20			

SGI environmental **THE SOURCE GROUP, INC.**

BORING/WELL ID:	SB-48		
PROJECT NAME AND ADDRESS:	A8&I Foundry	Project No.	01-ABI-001
BORING LOCATION (AT SITE):		Logged By:	Nathan Colton
CONTRACTOR AND EQUIPMENT:	WDC Geoprobe 7730DT		
SAMPLING METHOD:	325 continuous	MONITORING DEVICE:	MiniRae 2000
START DATE/ (TIME):	7/11/08 945	FINISH DATE/ TIME	7/11/08 1200
FIRST WATER (BGS):		STABILIZED WATER LEVEL:	
SURFACE ELEVATION:		CASING TOP ELEVATION:	
TOTAL BORING DEPTH(S):	29.5'	BORING DIAMETER/DEPTH:	4" 29.5'

Date/Time	Sample Interval	PID (ppm)	Recovery	Stratigraphy	Depth (feet)	Water-level	LITHOLOGIC DESCRIPTION (classification, color, moisture, density, grain size/plasticity, other) ALL PERCENTAGES ARE APPROXIMATE UNLESS OTHE	Well construction details
			100	▨	20		Clay, olive brown, moist, soft, moderate plasticity, no odor	
				▨	21		Sandy Clay, dark gray, moist, soft, moderate plasticity, medium-grained, no odor, trace gravel, 1/4" subangular	
				▨	22		Clay, medium brown, moist, stiff, moderate plasticity, no odor	
				▨	23			
		1.3		▨	24			
				▨	25			
				▨	26		Gravelly Clay, grayish brown, wet, 1/4" subangular, no odor	
				▨	27		Clayey Gravel, dark gray, wet, some sand, coarse-grained	
					28		Clay, trace sand, medium brown, stiff, fine-grained, no odor	
					29		Sand, olive brown, coarse-grained, 1/2" subangular, well graded, no odor **Refusal at 29.5'**	
					30			
					31			
					32			
					33			
					34			
					35			
					36			
					37			
					38			
					39			
					40			

WELL NO. MW-1
PROJECT NO. P92270.3
DATE INSTALLED 3/10/93



SURVEYED ELEV. +9.94 ft.
REFERENCE ELEV. 9.52 TOC

WELL CASING
TYPE PVC
SCHEDULE 40
SIZE 2" ID

GROUT MIX:
Neat Cement

WELL SCREEN
SLOT SIZE 0.020"
LENGTH 10'

FILTER PACK
TYPE 2/12 sand
LENGTH 15 feet

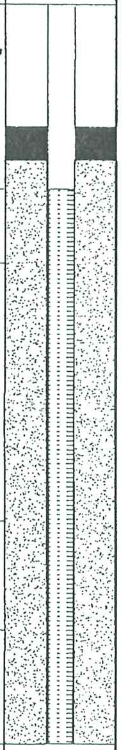
REMARKS :

PROJECT NO. P92270.3	MONITORING WELL INSTALLATION DIAGRAM	BSK &ASSOCIATES
FIGURE: 3		

BORING LOG: MW-2R

DATE(S): 8/13/06
LOGGED BY: E. Studley
WATER LEVEL: 9 feet at time of drilling
EQUIPMENT: BK-81, 8" HSA

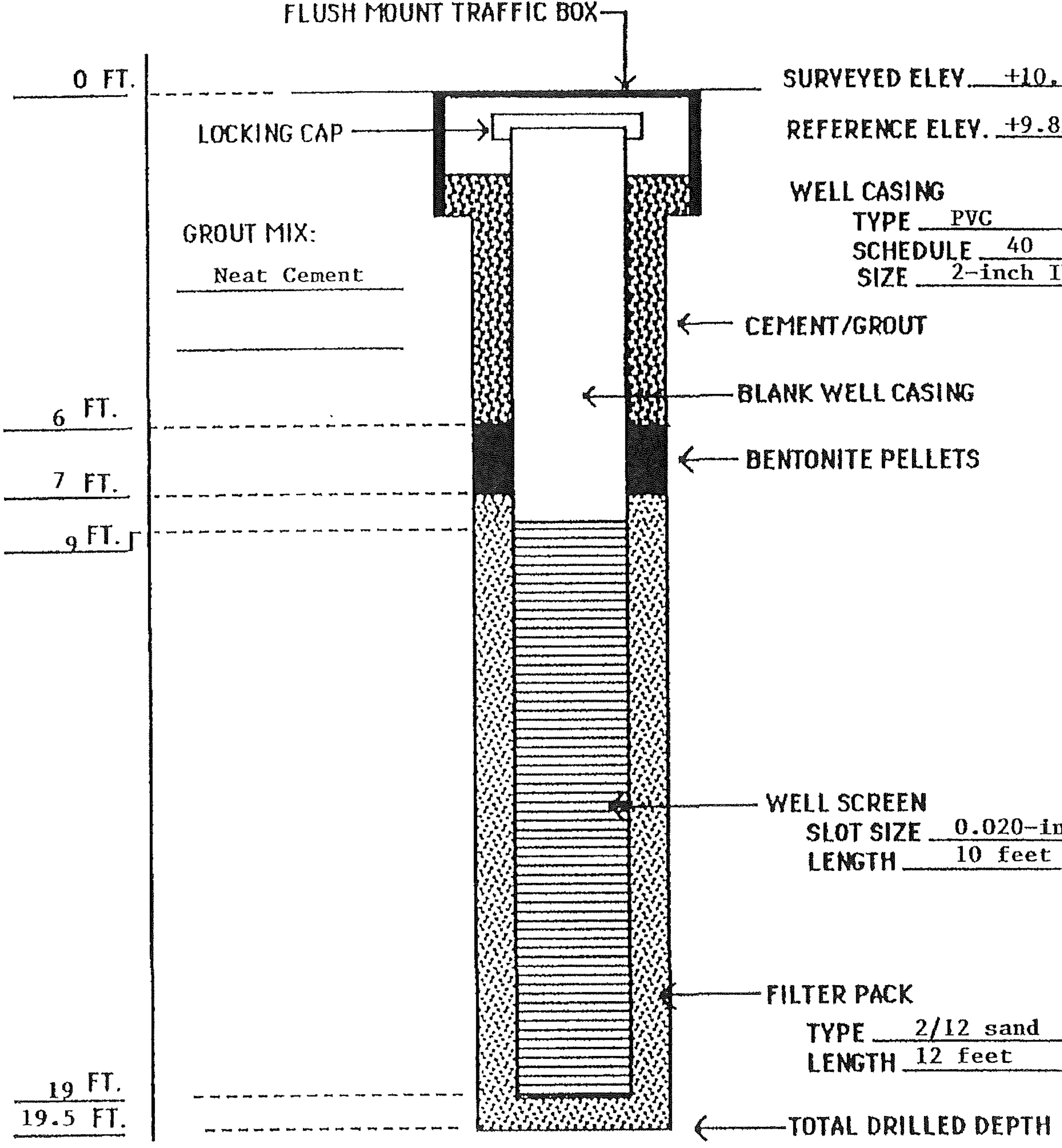
DEPTH (Feet bgs)	FIELD DATA SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)	USCS	DESCRIPTION	WELL CONSTRUCTION
	Drilled with mast down no sampling					CL/CH	4" Concrete Silty Sandy Clay: Olive brown/gray, moist, medium grained sand, very soft	2" PVC 0-5' Cement 0-3' Bentonite 3-4'
5						SC	Clayey Sand: Dark gray, loose medium grained sand	2/12 Sand 20-4'
						CL	Sandy Clay: Dark olive gray, wet, very soft	Slotted PVC 20-5'
10								
						CL/CH	Clayey Sand: Olive brown, wet, loose, medium grained sand	
15								
						CL	Sandy Clay: Olive brown, wet, fine grained sand	Total Depth Well 20'
20								
25								
30								
35								



BSK Engineers, Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

WELL NO. MW-3
PROJECT NO. P92270.3
DATE INSTALLED 3/10/93



SURVEYED ELEV. +10.14 feet
REFERENCE ELEV. +9.83 feet TOC

GROUT MIX:
Neat Cement

WELL CASING
TYPE PVC
SCHEDULE 40
SIZE 2-inch ID

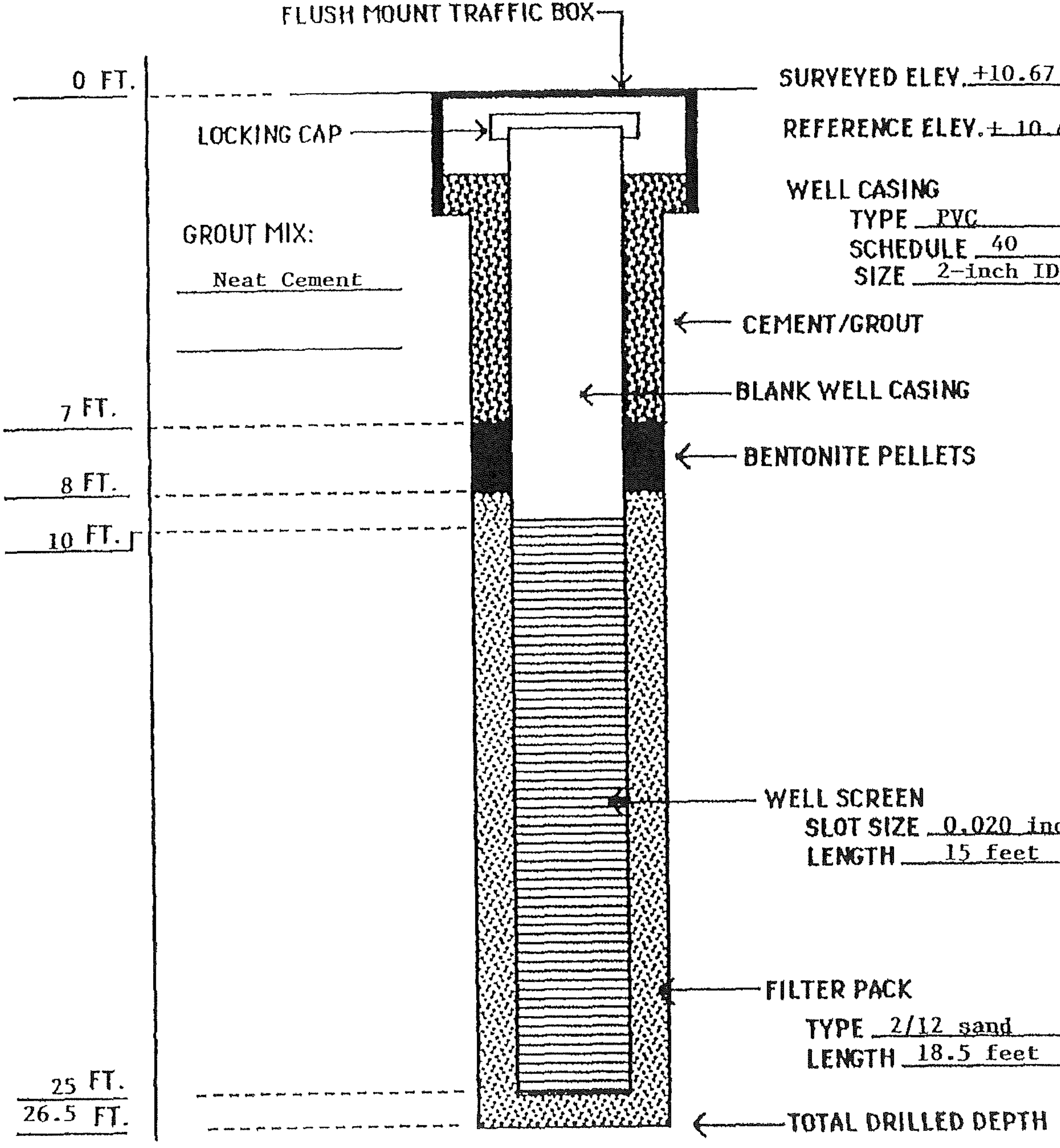
WELL SCREEN
SLOT SIZE 0.020-inch
LENGTH 10 feet

FILTER PACK
TYPE 2/12 sand
LENGTH 12 feet

REMARKS :

PROJECT NO. P92270.3	MONITORING WELL INSTALLATION DIAGRAM	BSK &ASSOCIATES
FIGURE: 5		

WELL NO. MW-4
PROJECT NO. P92270.3
DATE INSTALLED 3/10/93



SURVEYED ELEV. +10.67 feet
REFERENCE ELEV. ± 10.40 feet TOC

WELL CASING
TYPE PVC
SCHEDULE 40
SIZE 2-inch ID

GROUT MIX:
Neat Cement

WELL SCREEN
SLOT SIZE 0.020 inch
LENGTH 15 feet

FILTER PACK
TYPE 2/12 sand
LENGTH 18.5 feet

REMARKS :

PROJECT NO. P92270.3	MONITORING WELL INSTALLATION DIAGRAM	BSK &ASSOCIATES
FIGURE: 6		

BORING LOG: MW-5

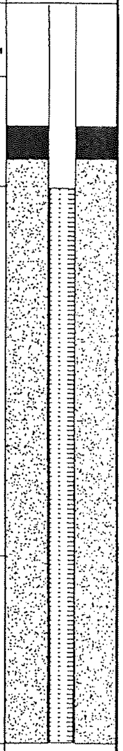
DATE(S): 8/12/06

LOGGED BY: E. Studley

WATER LEVEL: 13 feet at time of drilling

EQUIPMENT: CME-75, 8" HSA

DEPTH (Feet bgs)	FIELD DATA					USCS	DESCRIPTION	WELL CONSTRUCTION
	SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)			
						Fill	3" Asphalt Concrete Silty Sandy Gravel: Yellow brown, damp, (Fill)	2" PVC 0-5'
	CS-1	■	11:05	32		CL/CH	Sandy Silty Clay: Dark gray, damp to moist, fine grained sand	Cement 0-3' Bentonite 3-4'
5	CS-2	■	11:08	11		CH	Silty Clay: Dark gray, moist, soft, trace organics	2/12 Sand 20-4'
	CS-3	■	11:12	12				Slotted PVC 20-5'
10	CS-4	■	11:15	11			Silty Clay: Brown mottled oilve gray, moist, soft	
15	CS-5	■	11:18	4		CL/CH	Silty Sandy Clay: Olive brown, wet, soft medium grained sand	
							grades mottled olive brown/gray	Total Depth Well 20'
20	CS-6	■	11:24	21		SC	Clayey Silty Sand: Gray brown, medium grained sand	
25								
30								
35								



BSK Engineers,Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California

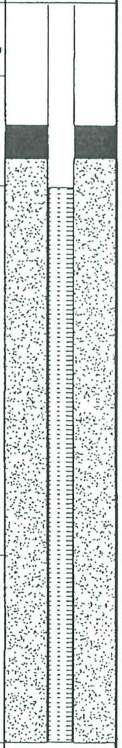
PROJECT NUMBER: E0605504S

BORING LOG: MW-6

DATE(S): 8/12/06
LOGGED BY: M. Cline
WATER LEVEL: 13 feet at time of drilling
EQUIPMENT: CME-75, 8" HSA

DEPTH (Feet bgs)	FIELD DATA SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)	USCS	DESCRIPTION
						Fill	3" Asphalt Concrete Silty Sandy Gravel: Brown, damp, (Fill)
	CS-1	■	9:10	10		CL/CH Fill	Sandy Silty Clay: Dark gray brown, moist, trace gravel, wood, brick (Fill)
5	CS-2	■	9:15	12		CH	Silty Clay: Dark gray, moist, soft, trace organics
	CS-3	■	9:18	14			grades dark gray to olive gray, very moist
10	CS-4	■	9:21	15			Silty Clay: Brown mottled oilve gray, very moist to wet in pores, some carbonates
15	CS-5	■	9:25	10		CL/SC	Silty Clay/Clayey Sand: Brown to light olive brown, wet
20	CS-6	■	9:38	6		CL/CH	Silty Clay: Brown to light olive brown, wet
25							
30							
35							

WELL CONSTRUCTION



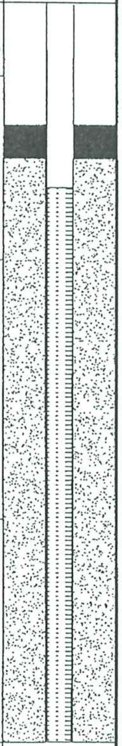
BSK Engineers, Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

BORING LOG: MW-7

DATE(S): 8/12/06
LOGGED BY: E. Studley
WATER LEVEL: 13 feet at time of drilling
EQUIPMENT: CME-75, 8" HSA

DEPTH (Feet bgs)	FIELD DATA					USCS	DESCRIPTION	WELL CONSTRUCTION
	SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)			
						Fill	4" Concrete Silty Sandy Gravel: Yellow brown, damp, (Fill)	2" PVC 0-5'
	CS-1	▬	15:26	29		CL/CH Fill	Silty Clay: Dark gray, damp, gravels to 1.5" glass, slag, concrete (Fill)	Cement 0-3' Bentonite 3-4'
5	NR	☐	15:30	18				2/12 Sand 20-4'
	CS-2	▬	15:34	11		CH	Silty Clay: Dark gray, wet, strong hydrocarbon odor	Slotted PVC 20-5'
10	CS-3	▬	15:45	4			grades to dark gay mottled light gray wet, slight odor, roots/wood fragments	
15	CS-4	▬	15:50	7		CL/CH	Sandy Silty Clay: Olive brown/gray, wet, soft, medium grained sand, faint odor	
							grades to olive gray	Total Depth Well 20'
20	CS-5	▬	16:01	9				
25								
30								
35								



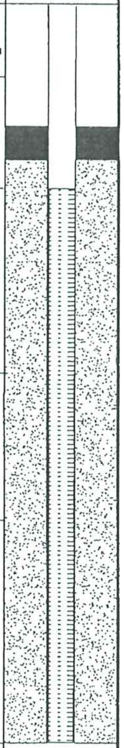
BSK Engineers,Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

BORING LOG: MW-8

DATE(S): 8/12/06
LOGGED BY: E. Studley
WATER LEVEL: 13 feet at time of drilling
EQUIPMENT: CME-75, 8" HSA

DEPTH (Feet bgs)	FIELD DATA							
	SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)	USCS	DESCRIPTION	WELL CONSTRUCTION
						Fill	3" Asphalt Concrete Silty Sandy Gravel: Yellow brown, moist, (Fill)	2" PVC 0-5'
	CS-1	■	13:00	20		CL/CH Fill	Silty Clay: Dark olive brown, damp, gravels, wire, debris (Fill)	Cement 0-3' Bentonite 3-4'
5	CS-2	■	13:02	6		CL/CH	Silty Clay: Dark olive brown, moist to wet medium grained sand lenses	2/12 Sand 20-4'
	CS-3	■	13:08	12				Slotted PVC 20-5'
10	NR	□		13		CH	grades to olive brown mottled gray	
						CL/CH	Silty Sandy Clay: Olive brown, wet, soft, medium grained sand	
15	CS-4	■	13:29	5				
							trace carbonates	Total Depth Well 20'
20	CS-5	■	13:36	15				
25								
30								
35								



BSK Engineers, Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California
PROJECT NUMBER: E0605504S

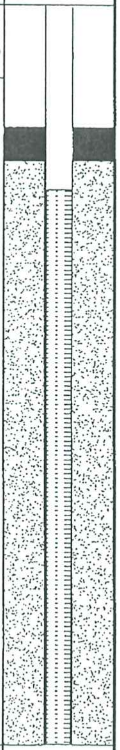
BORING LOG: MW-9

DATE(S): 8/18/06

LOGGED BY: J. Yeazell

WATER LEVEL: 8 feet at time of drilling

EQUIPMENT: Marl Limited Access, 8" HSA



DEPTH (Feet bgs)	FIELD DATA: SAMPLER TYPE/ SAMPLE NO.	SAMPLE INTERVAL	TIME OF COLLECTION	BLOWS/FOOT	PID (ppm)	USCS	DESCRIPTION	WELL CONSTRUCTION
						Fill	6" Concrete Silty Clay: Dark gray, some concrete debris	2" PVC 0-5'
	DP-1	■	10:57			CH	Silty Clay: Dark gray, hydrocarbon odor	Cement 0-3' Bentonite 3-4'
5	DP-2	■	11:03					2/12 Sand 20-4'
	DP-3	■	11:10			CH	Silty Clay: Olive brown/brown, no odor	Slotted PVC 20-5'
10	DP-4	☐	11:29				grades wet, slight odor	
15	DP-5	■	11:36					
							some fine sand, odor	
20								Total Depth Well 20'
20	DP-6	■	11:40					
25								
30								
35								

BSK Engineers, Geologists, Environmental Scientists

PROJECT NAME: A B & I, Oakland, California

PROJECT NUMBER: E0605504S

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. E-2

Page 1 **of**

PROJECT The Foundry Oakland
LOCATION 7825 San Leandro Street
CLIENT Duke Realty
CONTRACTOR GPRS
DRILLER Gregg Drilling

H&A FILE NO. 0204627-100
PROJECT MGR. C.Ellis
FIELD REP. A.Cayeney
DATE STARTED 3/25/22
DATE FINISHED 3/25/22

Elevation ft **Datum** **Boring Location**

Item	Casing	Sampler	Core Barrel
Type			
Inside Diameter			
Hammer Weight			
Hammer Fall (in.)			

Rig Make & Model
☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☐ Geoprobe ☐ Winch
☐ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ ☐ Cutting Head

Hammer Type
☐ Safety
☐ Doughnut
☐ Automatic

Drilling Mud
☐ Bentonite
☐ Polymer
☐ None

Casing Advance
Type Method Depth
DPT

Drilling Notes: 2.5" Hand Auger, 2.25" DPT

Depth (ft.)	Sample Recovery	Sample No.	PID (ppb)	SV Probe Diagram	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Toughness	Plasticity	Strength
0								Asphalt/Concrete										
								Fill										
1			287			0.5	SM	Yellowish brown (5/6, 10YR), Silty sand	15	15		40	30	30				
								with gravel, Moist, No odor, Fill										
2	Hand Auger		232					Color change to dark brown (3/3, 10YR)										
							SP	gray (6/1, 10YR) Poorly graded	10	5			80	5				
3			233			2.5	CL	sand w/gravel, moist, No odor, Trace brick fragments	10	5		5	10	70	S	L	M	L
						3	CL		10	10		5	5	70	S	M	M	M
4			230			4	CL	Dark brown (3/3, 10YR), Gravelly lean clay w/sand, moist,					10	90	S	M	M	M
								No odor, trace wood/brick fragments										
5			227					@3', Very dark gray (3/1, Gley 1) lean clay w/gravel, moist										
								Slight odor, trace brick/wood fragments										
6		E-2-S-6	275					@4' Black (2.5/N, Gley 1), lean clay, moist,										
								No odor										
7																		
8			237															
9			160															
10		E-2-S-11	240															
11			411															
∇12			402															
13			233															
14		E-2-W	406															
15								Total Depth 15', SV probe @ 5'										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole		Water
	1332					11.75

Sample ID
O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Well Diagram
▭ Riser Pipe
▣ Screen
☐ Filter Sand
▨ Cuttings
▒ Grout
▲ Concrete
▧ Bentonite Seal

Summary
Overburden (Linear ft.)
Rock Cored (Linear ft.)
Number of Samples
BORING NO.

Field Tests Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. E-4

Page 1 **of** 1

PROJECT	The Foundry Oakland	**H&A FILE NO.**	0204627-100
LOCATION	7825 San Leandro Street	**PROJECT MGR.**	C.Ellis
CLIENT	Duke Realty	**FIELD REP.**	A.Caveney
CONTRACTOR	GPRS	**DATE STARTED**	3/25/22
DRILLER	Gregg Drilling	**DATE FINISHED**	3/25/22

Elevation ft **Datum** **Boring Location**

Item	**Casing**	**Sampler**	**Core Barrel**
Type			
Inside Diameter			
Hammer Weight			
Hammer Fall (in.			

Rig Make & Model

☐ Truck	☐ Tripod	☐ Cat-Head	
☐ ATV	☑ Geoprobe	☐ Winch	
☐ Track	☐ Air Track	☐ Roller Bit	
☐ Skid	☐ ______	☐ Cutting Head	

Hammer Type	**Drilling Mud**	**Casing Advance** **Type Method Depth**
☐ Safety	☐ Bentonite	Hand Auger,
☐ Doughnut	☐ Polymer	OPT
☐ Automatic	☐ None	

Drilling Notes: 3.5" → HA , 3.25" OPT

Depth (ft.)	Sample Recovery	Sample No.	PID (ppb)	~~SV Probe Diagram~~	~~Well Diagram~~ SV probe	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
								Concrete core ~4.5"										
0	Hand Auger						SM	Yellowish Brown (5/6, 10YR) Silty Sand w/gravel, Fill	10	5		40	30	15				
1			281					Moist, slight odor, trace brick fragments/glass @1' color change to dark brown (3/3, 10YR)										
2			1401															
3		E-4 S-3	12 ppm					@3' strong petroleum odor										
4			14.2 ppm															
5			18.1 ppm			5	CL	Black (2.5/N, Gley 1) lean Clay with sand, Moist, petroleum odor				5	10	85	S	M	M	M
6			950															
7			651															
8			404															
9			2831															
10			34.1 ppm															
11			13.1 ppm					@11' Color change to light olive brown (5/4, 2.5Y)										
12			24.6 ppm					@12' 6" lense of Black (2.5/N, Gley 1)										
13		E-4 S-13	105.49 ppm					@13' very strong petroleum odor										
14			49.29 ppm															
15								TD 15', SV probe @4'										

@ 1745

@1830

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole		Water

Sample ID

O	Open End Rod
T	Thin Wall Tube
U	Undisturbed Sample
S	Split Spoon Sample
G	Geoprobe

Well Diagram

◫	Riser Pipe
▤	Screen
☐	Filter Sand
▣	Cuttings
▨	Grout
▣	Concrete
▧	Bentonite Seal

Summary

Overburden (Linear ft.) ______

Rock Cored (Linear ft.) ______

Number of Samples ______

BORING NO.

Field Tests Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High

Toughness: L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. E-5

Page 1 of 1

PROJECT The Foundry Oakland
LOCATION 7825 San Leandro Street
CLIENT Duke Realty
CONTRACTOR GPRS
DRILLER Gregg Drilling

H&A FILE NO. 0204627-100
PROJECT MGR. C.Ellis
FIELD REP. A.Caveney
DATE STARTED 3/25/22
DATE FINISHED 3/25/22

Elevation ft
Datum
Boring Location

Item	Casing	Sampler	Core Barrel
Type			
Inside Diameter			
Hammer Weight			
Hammer Fall (in.			

Rig Make & Model
☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☑ Geoprobe ☐ Winch
☐ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ ☐ Cutting Head

Hammer Type: ☐ Safety ☐ Doughnut ☐ Automatic

Drilling Mud: ☐ Bentonite ☐ Polymer ☐ None

Casing Advance — Type Method Depth: Hand Auger

Drilling Notes: .25" Diameter

Depth (ft.)	Sample Recovery	Sample No.	PID (ppb)	SV Probe Diagram	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Field Test Dilatancy	Field Test Toughness	Field Test Plasticity	Field Test Strength
0								Approx 5 in Concrete										
1030	Hand Auger	E-5-S-0	112			0.5		Fill/Aggregate base										
1			52				SM	Very dark gray (3/1, 7.5 YR), Silty sand with gravel, moist, no odor, Fill	15	5		25	25	30	S	L	L	L
2			61															
1035		E-5-S-3																
3								Total depth 3', boring grouted @ 1040										
4																		
5																		

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Depth in feet to: Bottom of Hole	Depth in feet to: Water

Sample ID
O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Well Diagram
▭ Riser Pipe
▬ Screen
☐ Filter Sand
⊡ Cuttings
▨ Grout
▣ Concrete
▧ Bentonite Seal

Summary
Overburden (Linear ft.)
Rock Cored (Linear ft.)
Number of Samples 2

BORING NO.

Field Tests Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
Toughness L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

*NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

HALEY & ALDRICH

TEST BORING REPORT

BORING NO. E-6
Page 1 **of** 1

PROJECT	The Foundry Oakland	**H&A FILE NO.**	0204627-100
LOCATION	7825 San Leandro Street	**PROJECT MGR.**	C.Ellis
CLIENT	Duke Realty	**FIELD REP.**	A.Caveney
CONTRACTOR	GPRS	**DATE STARTED**	3/25/22
DRILLER	Gregg Drilling	**DATE FINISHED**	3/25/22

Elevation ft **Datum** **Boring Location**

Item	**Casing**	**Sampler**	**Core Barrel**
Type			
Inside Diameter			
Hammer Weight			
Hammer Fall (in.			

Rig Make & Model
☐ Truck ☐ Tripod ☐ Cat-Head
☐ ATV ☐ Geoprobe ☐ Winch
☐ Track ☐ Air Track ☐ Roller Bit
☐ Skid ☐ ☐ Cutting Head

Hammer Type
☐ Safety
☐ Doughnut
☐ Automatic

Drilling Mud
☐ Bentonite
☐ Polymer
☐ None

Casing Advance
Type Method Depth
HandAuger/DPT

Drilling Notes: 2.5" HA, 2.25" DPT

	Depth (ft.)	Sample Recovery	Sample No.	PID (ppb)	SV Probe Diagram	Well Diagram	Stratum Change (ft.)	USCS Symbol	Visual-Manual Identification & Description (density/consistency, color, GROUP NAME & SYMBOL, maximum particle size*, structure, odor, moisture, optional descriptions, geologic interpretation)	Gravel % Coarse	Gravel % Fine	Sand % Coarse	Sand % Medium	Sand % Fine	% Fines	Dilatancy	Toughness	Plasticity	Strength
	0								Rocks/fill										
	1			42ppb															
1620	2		E-6 -S-2	1100ppb			2	CL	Black (2.5/N, Gley1), lean Clay, moist, NO odor				10	5	85	S	M	M	M
	3			800ppb															
	4	Hand Auger					4	CL	Gray (6/1, Gley1), Sandy Clay, Moist, trace gravel, slight odor		T		10	5	85	S	M	M	M
1625	5		E-6 -S-5	165															
	6			153			6	CL	Black (2.5/N, Gley1), Lean Clay, moist, slight odor				10	5	85	6	M	M	M
	▽ 7			142															
	8			133															
@1630	9		E-6 -W	157															
	10								Total depth 10'										

Water Level Data

Date	Time	Elapsed Time (hr.)	Depth in feet to: Bottom of Casing	Bottom of Hole		Water
3/25/22	1615					7.75

Sample ID
O Open End Rod
T Thin Wall Tube
U Undisturbed Sample
S Split Spoon Sample
G Geoprobe

Well Diagram
▥ Riser Pipe
▤ Screen
☐ Filter Sand
⁘ Cuttings
▨ Grout
▦ Concrete
▧ Bentonite Seal

Summary
Overburden (Linear ft.)
Rock Cored (Linear ft.)
Number of Samples
BORING NO.

Field Tests Dilatancy: R - Rapid S - Slow N - None Plasticity: N - Nonplastic L - Low M - Medium H - High
Toughnes L - Low M - Medium H - High Dry Strength: N - None L - Low M - Medium H - High V - Very High

***NOTE: Maximum Particle Size is determined by direct observation within the limitations of sampler size.**

NOTE: Soil identifications based on visual-manual methods of the USCS system as practiced by Haley & Aldrich, Inc.

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-1

Boring location: See Site Plan, Figure 2
Date started: 8/10/22
Date finished: 8/10/22
Drilling method: Hollow stem auger and rotary wash
Hammer weight/drop: 140 lbs. / 30 inches
Hammer type: Safety
Sampler: Modified California (MC) , Standard Penetration Test (SPT)
Logged by: D. Iwasa

LABORATORY TEST DATA

DEPTH (feet)	SAMPLES Sampler Type	Sample	Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION Approx. Ground Surface Elevation: 11.5 feet, NAVD88	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
0					5.5" thick concrete with wire mesh						
1				SM/ GM	SILTY SAND and GRAVEL (SM/GM) Red brown, dense, moist [FILL]						
3	MC	▨	2 4 6	CH	CLAY (CH) Black, medium stiff, moist, PID = 2 ppm Corrosion test (see Appendix B) Unconsolidated undrained triaxial compression test (see Appendix B)	TxUU	240	1420		34.1	87
6					CLAY (CL) Green-gray brown, medium stiff, moist Resistance value test R-value = 7 (see Appendix B)						
10	MC	▨	2 3 5		PID = 2 ppm Atterberg limits test, PI=28, LL=45 (See Appendix B)					26.4	96
12				CL							
13					▼ 8/10/22, 9:00am (unstabilized)						
15	MC	▨	2 4 8		Medium stiff to stiff, wet, PID = 2 ppm					24.6	101
20	MC	▨	3 8 16		PID = 2ppm					21.3	107
21				CL	CLAY with SAND (CL) Gray-brown, very stiff, wet, fine grained sand						
24				SP- SM	SAND with SILT and GRAVEL (SP-SM) Gray-brown, dense, wet, coarse grained PID = 2 ppm						
25	MC	▨	6 17 30						10.1		
30					Some flowing sands						

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-1

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
		▨	7	SP-SM	SAND with SILT and GRAVEL (SP-SM) continued						
31	MC	▨	9 13		PID = 2 ppm						
32				ML	SILT (ML) Brown, stiff to very stiff, wet, converted to rotary wash at depth of 30'						
33											
34				SP-SM	SAND with SILT (SP-SM) Brown, medium dense, wet						
35		▨	5								
36	MC	▨	6 10	CL	CLAY (CL) Gray-brown, stiff, wet, PID = 2 ppm						
37											
38					SAND with SILT (SP-SM)						
39				SP-SM	Brown, medium dense, wet						
40		▨	5		PID = 2 ppm						
41	MC	▨	14 18		CLAY (CL) Gray-brown, very stiff, wet						
42											
43											
44											
45		▨	4		PID = 2 ppm						
46	MC	▨	9 13		Stiff to very stiff					22.5	105
47											
48											
49											
50		▨	8	CL	PID = 2 ppm						
51	MC	▨	12 20		Increasing sand content Very stiff					19.5	110
52											
53					Hard drilling between 53' and 55'						
54											
55											
56											
57											
58											
59											
60											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-1

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ foot			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	MC	▨	8 12 16		CLAY (CL) Brown, very stiff, wet Some gravel at 61’ PID = 1 ppm Unconsolidated undrained triaxial compression test Su at 5% strain, (see Appendix B)	TxUU	3080	2090		16.5	117
62											
63											
64											
65				CL							
66											
67											
68											
69											
70	MC	▨	50/5”		SAND with SILT (SP-SM) Brown, very dense, wet, some gravel at 72’ PID = 1 ppm						
71											
72											
73											
74											
75				SP-SM							
76											
77	MC	▨	12 24 30		PID = 1 ppm Slough in sampler, blow counts are not reliable Some gravels at 77’, drilled to 80’, slough encountered while sampling						
78											
79											
80					Boring terminated at a depth of 80 feet. Boring backfilled with cement grout using tremie method. Groundwater encountered at the approximate depth of 13.0 feet						
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-2

Boring location: See Site Plan, Figure 2
Date started: 8/5/22
Date finished: 8/5/22
Drilling method: Hollow stem auger and rotary wash
Hammer weight/drop: 140 lbs. / 30 inches
Hammer type: Safety
Sampler: Modified California (MC) , Standard Penetration Test (SPT), Shelby tube
Logged by: D. Iwasa

Approx. Ground Surface Elevation: 11.4 feet, NAVD88

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
0				SM/GM	5” thick concrete						
1					SILTY SAND and GRAVEL (SM/GM) Yellow brown, some cobbles, PID = 45 ppm [FILL]						
2–5	Shelby	▨		CH	CLAY (CH) Black to dark gray, stiff, moist Unconsolidated undrained triaxial compression test, (see Appendix B) Atterberg limits test: PI = 48, LL = 73 (see Appendix B) Permeability test: K = 2.25 X10^{-6} cm/sec (see Appendix B)	TxUU	320	1180		31.3 32.6	91 89
6–9					Gray brown, 500 psi, push pressure						
9–12	MC	▨	3 10 14	SC	CLAYEY SAND (SC) Green-gray, very stiff, moist, sand lenses, petroleum odor, PID = 61 ppm					12.1	126
12–15				CL	▼ 8/15/22, 10:30am CLAY (CL) Green-gray, medium stiff, wet						
15–17.5	Shelby	▨			Unconsolidated undrained triaxial compression test, (see Appendix B) Consolidation test: Po = 9.0 ksf, Cec = 0.12, Cer = 0.04 Medium stiff, wet	TxUU	1120	940		22.9 23.2	104 101
20	MC	▨	2 7 14		PID = 16 ppm						
20.5–24				SC	CLAYEY SAND (SC) Gray medium dense, wet						
24–26				CH	CLAY (CH) Gray, very stiff, wet, PID = 10 ppm						
25	MC	▨	2 16 19								
26–30				SP-SM	SAND with SILT (SP-SM) Brown, medium dense, wet, coarse grained						

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-2

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	LABORATORY TEST DATA: Confining Pressure Lbs/Sq Ft	LABORATORY TEST DATA: Shear Strength Lbs/Sq Ft	LABORATORY TEST DATA: Fines %	LABORATORY TEST DATA: Natural Moisture Content, %	LABORATORY TEST DATA: Dry Density Lbs/Cu Ft
		▨	4 10 12	SP-SM	SAND with SILT (SP-SM) continued, converted to rotary wash at 30'						
31	MC									21.7	107
32				CL	CLAY with SAND (CL) Gray-brown, stiff to very stiff, wet, PID = 11 ppm						
33											
34				SP-SM	SAND with SILT (SP-SM) Gray-brown, medium dense, wet, coarse grained PID = 0 ppm						
35		▨	2 7 12						10.6		
36	MC				CLAY (CL) Brown, stiff, wet						
37											
38											
39											
40		▨	8 14 27		Very stiff, wet PID = 2 ppm						
41	MC										
42											
43											
44											
45		▨	9 16 22		PID = 3 ppm						
46	MC										
47				CL							
48											
49											
50		▨	7 18 24		PID = 2 ppm						
51	MC									19.2	113
52											
53											
54											
55											
56											
57											
58											
59											
60											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-2

Page 3 of 3

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	MC	●	6 6 13	CL	CLAY (CL) continued No recovery						
62	MC	▨	10 50 5″	SP-SM	SAND with SILT (SP-SM) Brown, dense, wet, fine grained, PID = 2 ppm						
63				CL	SANDY CLAY (CL) Brown, hard, wet						
64											
65											
66				SM	SILTY SAND with GRAVEL (SM) Brown, dense, wet						
67											
68											
69											
70	MC	▨	18 50 5″		PID = 3 ppm				13.6		
71					Boring terminated at a depth of 71 feet. Boring backfilled with cement grout using tremie method. Groundwater encountered at the approximate depth of 12.5 feet						
72											
73											
74											
75											
76											
77											
78											
79											
80											
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-3

Boring location: See Site Plan, Figure 2

Date started: 8/11/22

Date finished: 8/11/22

Drilling method: Hollow stem auger and rotary wash

Hammer weight/drop: 140 lbs. / 30 inches

Hammer type: Safety

Sampler: Modified California (MC)

Logged by: D. Iwasa

DEPTH (feet)	SAMPLES Sampler Type	Sample	Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION Approx. Ground Surface Elevation: 13.9 feet, NAVD88	LABORATORY TEST DATA Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
					8" concrete						
1 2				SC	CLAYEY SAND (SC) Gray, loose moist [FILL] Resistance value test, R value = 8 (see Appendix B)						
3 4	MC	▨	4 3 4	CH	CLAY with SAND (CH) Dark brown, medium stiff, moist, PID = 2 ppm [FILL]					25.6	90
5 6 7	MC	▨	3 6 5	SC	CLAYEY SAND (SC) Gray, loose, moist, PID = 2 ppm [FILL]						
8 9				CH	CLAY (CH) Dark gray, medium stiff, moist, PID = 2 ppm						
10 11 12 13	MC	▨	4 3 2	CH	▼ 8/11/22, 9:25am, PID = 2 ppm Corrosion test (see Appendix B) Consolidation test, Cec=0.41, Cer=0.04 (See Appendix B) Soft, wet, some organics					95.7	44
14				CL	CLAY (CL) Green-gray, very stiff, wet						
15 16 17 18	MC	▨	9 12 17	CL	PID = 2 ppm Atterberg limits test, PI=20, LL=32 (see Appendix B)						
19 20				SW	SAND (SW) Brown, loose, wet						
21 22 23 24	MC	▨	3 4 8	CL	CLAY (CL) Brown, medium stiff to stiff, wet, PID = 3 ppm						
25 26 27 28 29 30	MC	▨	2 8 12	CL	Stiff, wet, PID = 2 ppm Unconsolidated undrained triaxial compression test: Su at 5% strain (see Appendix B)	TxUU	1490	2310		22.2	107

Some flowing sands

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-3

DEPTH (feet)	SAMPLES Sampler Type	Sample	Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	MC	▨	2 6 13	CL	CLAY (CL) continued, converted to rotary wash at 30’ PID = 2 ppm						
31											
32											
33											
34											
35	MC	▨	3 6 12		PID = 0 ppm						
36											
37				SC	CLAYEY SAND (SC) Gray-brown, medium dense, wet						
38											
39											
40	MC	▨	7 15 22		PID = 2 ppm				46.0		
41											
42											
43											
44				CL	CLAY (CL) Brown, very stiff, wet, PID = 2 ppm						
45	MC	▨	4 11 16								
46											
47											
48											
49											
50	MC	▨	11 16 20		PID = 2 ppm Unconsolidated undrained triaxial compression test: Su at 5% strain (see Appendix B)	TxUU	2540	2640		19.0	113
51											
52											
53											
54											
55				SP-SM	SAND with SILT (SP-SM) Brown, very dense, wet, some gravels at 57.0’						
56											
57											
58											
59											
60											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-3

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ foot			Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	MC	▨	38 50 4”	SP-SM	SAND with SILT (SP-SM) continued Brown, very dense, wet, PID = 2 ppm						
61											
62					CLAY (CL) Gray brown, very stiff, wet						
63											
64											
65											
66											
67											
68											
69				CL							
70	MC	▨	8 13 18		PID = 1 ppm					21.3	110
71											
72											
73											
74											
75											
76					CLAYEY SAND and GRAVEL (SC/GC) Olive brown, very dense, wet						
77											
78				SC/ GC							
79											
80	MC	▨	31 50 5”		PID = 1 ppm						
81					Boring terminated at a depth of 81.0 feet. Boring backfilled with cement grout using tremie method. Groundwater encountered at the approximate depth of 10.0 feet						
82											
83											
84											
85											
86											
87											
88											
89											
90											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-4

Page 1 of 3

Boring location: See Site Plan, Figure 2
Date started: 8/3/22
Date finished: 8/8/22
Drilling method: Hollow stem auger and rotary wash
Hammer weight/drop: 140 lbs. / 30 inches
Hammer type: Safety
Sampler: Modified California (MC)
Logged by: D. Iwasa

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ foot		Approx. Ground Surface Elevation: 11.8 feet, NAVD88	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
					4.5" thick concrete						
1					SILTY SAND and GRAVEL (SM/GM)						
2				SM/ GM	Red brown and yellow brown, very dense, moist, occasional metal debris [FILL]						
3	MC	▨	6 6 11		PID = 9 ppm				46.4		
					CLAY (CH)						
4					Black, stiff, moist PID = 9 ppm						
5					Rig breaks down, resume drilling on 8/8/22						
6	MC	▨	3 3 10	CH	Permeability test; k=8.5x10-8 cm/sec (see Appendix B)					29.6	93
7											
8											
9					SANDY CLAY (CL) Brown, stiff, moist						
10					PID = 2 ppm						
11	MC	▨	2 6 7		Corrosion test (see Appendix B) Consolidaton test; Cec=0.11, Cer=0.03 (see Appendix B)					23.2	101
12				CL							
13											
14					▼ 8/8/22, 10:05am (unstabilized)						
15					PID = 2 ppm						
16	MC	▨	0 3 7		CLAY (CL) Gray brown, medium stiff, wet					24.9	100
17											
18											
19											
20					Stiff, wet						
21	MC	▨	4 8 10		PID = 3 ppm						
22											
23				CL							
24											
25					Hard, wet, PID = 3 ppm						
26	MC	▨	11 12 14							20.0	111
27											
28											
29											
30											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-4

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	MC	▨	3 8 12	CL	CLAY (CL) continued Stiff, wet, PID = 3 ppm Converted to rotary wash drilling at 30.0' Unconsolidated undrained triaxial compression test, Su at 5% strain (see Appendix B)	TxUU	1870	1230		23.4	104
32											
33											
34				ML	SILT with SAND (ML) Brown, very stiff, wet PID = 2 ppm						
35											
36	MC	▨	5 11 20							21.0	108
37				SM	SILTY SAND (SM) Brown, medium dense, wet, fine grained						
38											
39											
40					PID = 2 ppm						
41	MC	▨	5 13 17	CL	CLAY (CL) Brown, very stiff, wet						
42											
43											
44											
45					PID = 2 ppm						
46	MC	▨	8 14 24								
47											
48											
49											
50					PID = 3 ppm						
51	MC	▨	7 18 24							21.8	112
52											
53				SC	CLAYEY SAND (SC) Brown, wet						
54											
55											
56				CL	SANDY CLAY (CL) Brown, hard, wet						
57											
58											
59											
60											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-4

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DEPTH (feet)	SAMPLES Sampler Type	Sample	Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
	MC	▨	15 22 24		CLAY (CL) continued PID = 2 ppm					24.9	103
61											
62											
63											
64											
65											
66				CL							
67											
68											
69											
70	MC	▨	7 9 15		Very stiff, wet, PID = 3 ppm						
71											
72				SM	SILTY SAND (SM) Brown, wet						
73				CL	SANDY CLAY (CL Brown, wet, difficult drilling						
74											
75					SAND with SILT (SP-SM) Gray brown, very dense, wet, coarse grained						
76											
77											
78				SP-SM							
79											
80	MC	▨	9 22 50 3”								
81					Some gravels						
82					Boring terminated at a depth of 81.3 feet. Boring backfilled with cement grout using tremie method. Groundwater encountered at the approximate depth of 14.0 feet						
83											
84											
85											
86											
87											
88											
89											
90											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-5

Page 1 of 3

Boring location: See Site Plan, Figure 2
Date started: 8/9/22
Date finished: 8/9/22
Drilling method: Hollow stem auger and rotary wash
Hammer weight/drop: 140 lbs. / 30 inches
Hammer type: Safety
Sampler: Modified California (MC)
Logged by: D. Iwasa

DEPTH (feet)	SAMPLES			LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA					
	Sampler Type	Sample	Blows/ foot		Approx. Ground Surface Elevation: 11.5 feet, NAVD88	Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
				SM/ GM	4" thick concrete						
1					SILTY SAND and GRAVEL (SM/GM) Brown, dense, moist, 4" to 6" pieces of concrete debris [FILL]						
2											
3					CLAY CH) Black, medium stiff, moist PID = 2 ppm						
4											
5		▨	2		Atterberg limits test, PI=42, LL=63 (see Appendix B) Permeability test, K=2.15 x 10^{-4} cm/sec (see Appendix B)						
6	MC	▨	3 8	CH	Resistance value test, R value = 8 (see Appendix B)					32.4	83
7											
8											
9											
10		▨	3								
11	MC	▨	6 9		CLAY CL) Gray-brown, stiff, moist, PID = 3 ppm					21.6	105
12				CL							
13					SAND with SILT (SP-SM) Brown, medium dense, moist, coarse grained						
14				SP-SM							
15		▨	4		▼ 8/9/22, 10:15am						
16	MC	▨	7 10		CLAY CL) Brown, stiff, wet, PID = 3 ppm						
17				CL							
18					SAND with SILT and GRAVEL (SP-SM) Brown, medium dense, wet, coarse grained						
19											
20		▨	3	SP- SM	PID = 2 ppm						
21	MC	▨	20 24						8.6		
22											
23					CLAY CL) Brown, stiff, wet						
24											
25		▨	3		PID = 2 ppm						
26	MC	▨	8 13	CL							
27											
28					CLAYEY GRAVEL (GC) Brown, medium dense, wet						
29				GC							
30											

Some flowing sands

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-5

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DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
31	MC	▨	3 7 15		CLAYEY GRAVEL (GC) continued, converted to rotary wash at 30.0'					24.3	104
32				CL	CLAY (CL) Brown, stiff to very stiff, wet, PID = 2 ppm						
33											
34											
35	MC	▨	9 30 50/2"	SP-SM	SAND with SILT (SP-SM) Brown, very dense, wet, PID = 1 ppm						
36											
37											
38											
39				SC	CLAYEY SAND (SC) Brown, medium dense, wet						
40	MC	▨	5 13 18								
41				CL	CLAY (CL) Brown, very stiff, wet, PID = 2 ppm					20.9	109
42											
43											
44											
45	MC	▨	5 15 18		PID = 3 ppm						
46											
47											
48											
49											
50	MC	▨	7 8 12		Stiff, wet, PID = 2 ppm Increased sand content					18.8	118
51											
52											
53											
54											
55											
56											
57											
58											
59				SP-SC	SAND with CLAY (SP-SC) Brown, dense to very dense, wet						
60											

PROJECT: **7825 San Leandro Street**
Oakland, California

Log of Boring B-5

DEPTH (feet)	SAMPLES: Sampler Type	SAMPLES: Sample	SAMPLES: Blows/ foot	LITHOLOGY	MATERIAL DESCRIPTION	LABORATORY TEST DATA: Type of Strength Test	Confining Pressure Lbs/Sq Ft	Shear Strength Lbs/Sq Ft	Fines %	Natural Moisture Content, %	Dry Density Lbs/Cu Ft
61	MC	▨	10 34 40	SP-SC	SAND with CLAY (SP-SC) continued PID = 1 ppm						
62					CLAY (CL) Brown, hard, wet						
63											
64											
65				CL							
66											
67											
68											
69											
70	MC	●	21 50/6"		SAND with SILT (SP-SM) Brown, very dense, wet, coarse grained No recovery						
71											
72											
73											
74											
75				SP-SM							
76											
77											
78	MC	▨			Driller indicates bottom of hole collapsed, retrieved sample of soil for classification purposes PID = 1 ppm						
79											
80					Boring terminated at a depth of 80.0 feet. Boring backfilled with cement grout using tremie method. Groundwater encountered at the approximate depth of 15.0 feet						
81											
82											
83											
84											
85											
86											
87											
88											
89											
90											

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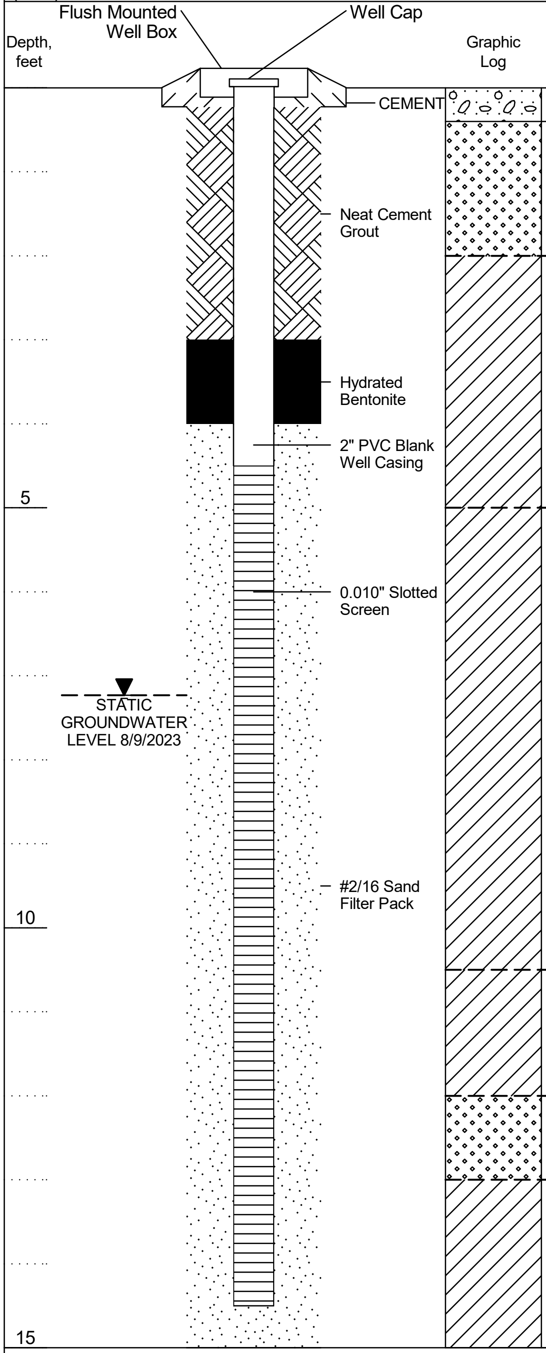
Page **1** of **1**

WELL CONSTRUCTION LOG

WELL NO. **MW-10**
NORTHING **2100498.77**
EASTING **6071436.31**
PROJECT NO./NAME **1793.0030S000 / AB&I Redevelopment**
LOCATION **7825 San Leandro Street Oakland, CA**
APPROVED BY **H. Rush**
LOGGED BY **J. Aguayo**
DRILLING CONTRACTOR/DRILLER **C-57 1058336 / Cascade Drilling**
GEOGRAPHIC AREA **San Francisco Bay Area**
DRILL BIT DIAMETER/TYPE **6-in. / Auger**
BOREHOLE DIAMETER **6-inches**
DRILLING EQUIPMENT/METHOD **Geoprobe / HA, DPT, & HSA**
SAMPLING METHOD **2" Macro-Core**
START-FINISH DATE **7/26/23-7/26/23**
CASING MAT./DIA. **PVC / 2-inch**
SCREEN: TYPE **Slotted** MAT. **PVC** TOTAL LENGTH **10.0**ft DIA. **2-inch** SLOT SIZE **10-Slot**
ELEVATION OF: (Feet) GROUND SURFACE **12.55** TOP OF WELL CASING **12.32** TOP & BOTTOM SCREEN **8.1 / -2.0**
GRAVEL PACK SIZES **#2/16**



Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
Concrete			(X, X, X) corresponds to (% Gravel, % Sand, % Fines).
Gravelly SAND, some clay and silt (SW): Orange brown; medium dense; dry; little to no plasticity; well graded; fine to coarse grained, subangular sand and gravel; (30, 50, 20).		0.3	bgs = below ground surface.
Sandy CLAY with gravel and silt (CL): Brown; medium stiff; dry; low plasticity; well graded; fine to coarse grained, subangular sand and gravel; (20, 30, 50).	MW-10-5.0	0.3	HA - Hand Auger DPT = Direct Push Technology HSA = Hollow Stem Auger
CLAY with sand (CL): Black; medium stiff; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand; (0, 20, 80).	MW-10-10.0		PVC = Polyvinyl Chloride
Sandy CLAY, some gravel (CL): Orange brown; soft; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand; (10, 30, 60).		0.6	
Gravelly SAND, some clay and silt (SW): Orange brown; loose; wet; non-plastic; moderately graded; medium to coarse grained, subangular sand and gravel; (30, 60, 10).		1.6	
Sandy CLAY (CL): Orange brown; soft; moist; low plasticity; moderately graded; medium to coarse grained, subangular sand and gravel; (5, 30, 65).	MW-10-15.0	0.1	Bottom of boring at 15 feet bgs.

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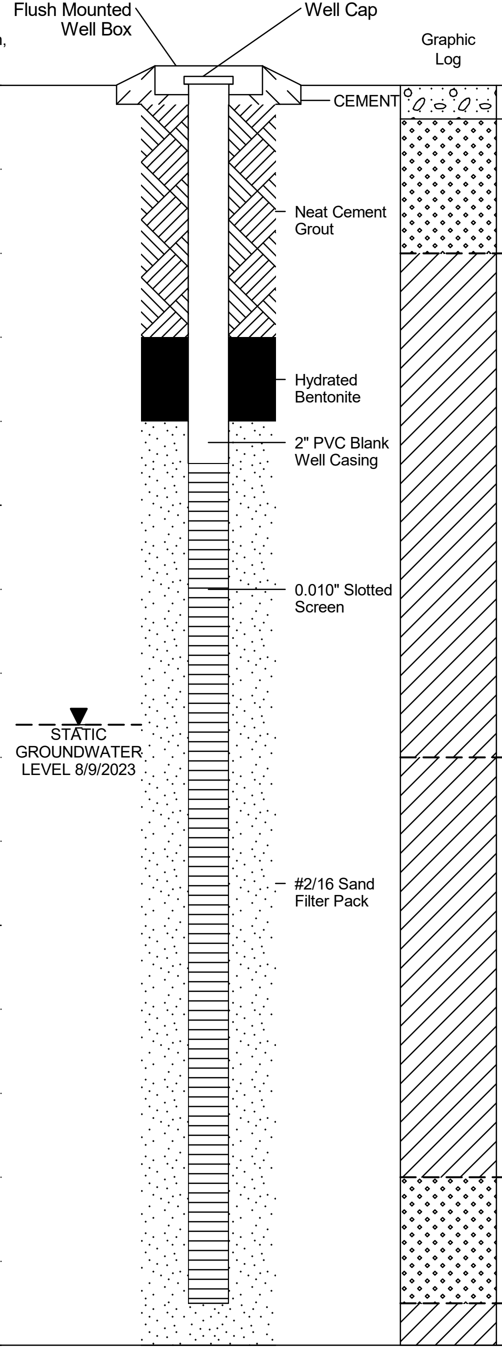
WELL CONSTRUCTION LOG

WELL NO. **MW-11**	NORTHING **2100480.16**	EASTING **6071738.36**		
PROJECT NO./NAME **1793.0030S000 / AB&I Redevelopment**		LOCATION **7825 San Leandro Street** **Oakland, CA**		
APPROVED BY **H. Rush**	LOGGED BY **J. Aguayo**			
DRILLING CONTRACTOR/DRILLER **C-57 1058336 / Cascade Drilling**		GEOGRAPHIC AREA **San Francisco Bay Area**		
DRILL BIT DIAMETER/TYPE **6-in. / Auger**	BOREHOLE DIAMETER **6-inches**	DRILLING EQUIPMENT/METHOD **Geoprobe / HA, DPT, & HSA**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/25/23-7/25/23**
CASING MAT./DIA. **PVC / 2-inch**	SCREEN: TYPE **Slotted**	MAT. **PVC**	TOTAL LENGTH **10.0**ft DIA. **2-inch**	SLOT SIZE **10-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE **13.10**	TOP OF WELL CASING **12.79**	TOP & BOTTOM SCREEN **8.6 / -1.4**	GRAVEL PACK SIZES **#2/16**



Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			(X, X, X) corresponds to (% Gravel, % Sand, % Fines).
	Gravelly SAND with silt (SW): Light brown; medium stiff; dry; non-plastic; moderately graded; fine grained, subangular sand and gravel; (30, 40, 30).		0.0	bgs = below ground surface.
	CLAY with sand, some silt, minor gravel (CL): Black; medium stiff; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand and gravel; (5, 25, 70).		5.5	HA - Hand Auger DPT = Direct Push Technology HSA = Hollow Stem Auger
5		MW-11-5.0	0.7	PVC = Polyvinyl Chloride
	CLAY with sand (CL): Light brown; medium stiff; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand; (0, 20, 80). At 9 feet bgs, color change to light brown, increase in sand.			
10		MW-11-10.0	0.5	
	At 12 feet bgs, color change to grey, soft.			
	Gravelly SAND, some clay and silt (SW): Dark grey green; medium dense; moist; non-plastic; well graded; fine to coarse grained, subangular sand; (30, 60, 10).	MW-11-14.0	9.6	Bottom of boring at 15 feet bgs.
15	**CLAY with sand (CL)**: Dark grey green; medium stiff; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand; (0, 20, 80).	MW-11-15.0		

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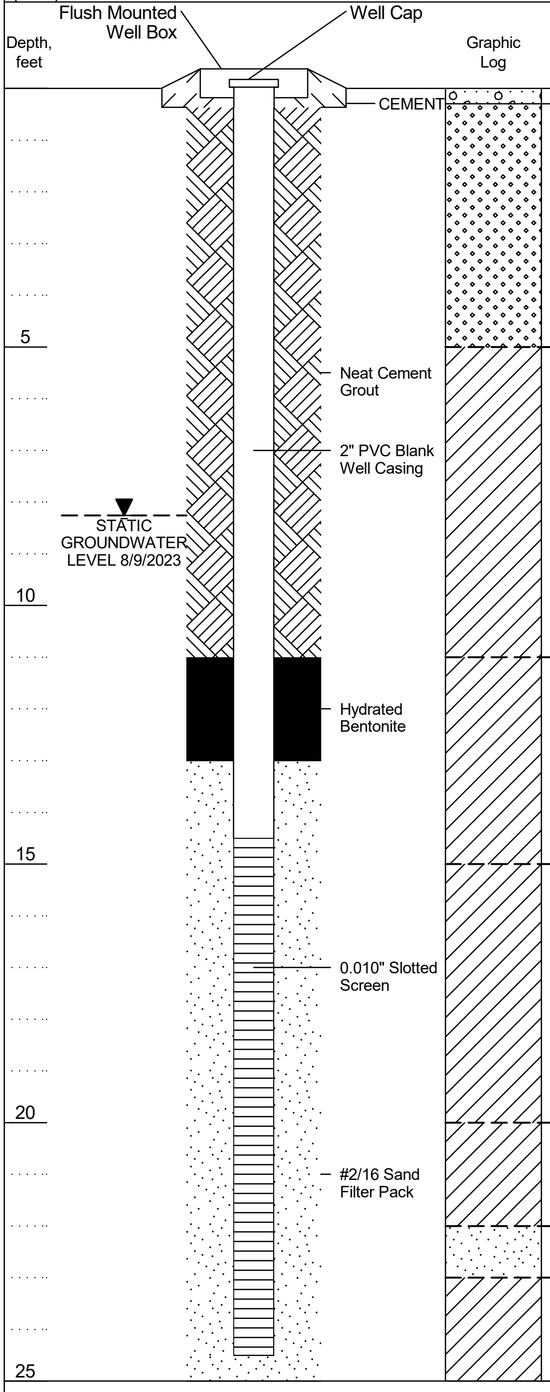
Page **1** of **1**

WELL CONSTRUCTION LOG

WELL NO. **MW-12**	NORTHING **2100178.68**	EASTING **6072047.54**		
PROJECT NO./NAME **1793.0030S000 / AB&I Redevelopment**		LOCATION **7825 San Leandro Street** **Oakland, CA**		
APPROVED BY **H. Rush**	LOGGED BY **J. Aguayo**			
DRILLING CONTRACTOR/DRILLER **C-57 1058336 / Cascade Drilling**		GEOGRAPHIC AREA **San Francisco Bay Area**		
DRILL BIT DIAMETER/TYPE **6-in. / Auger**	BOREHOLE DIAMETER **6-inches**	DRILLING EQUIPMENT/METHOD **Geoprobe / HA, DPT, & HSA**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/25/23-7/25/23**
CASING MAT./DIA. **PVC / 2-inch**	SCREEN: TYPE **Slotted**	MAT. **PVC** TOTAL LENGTH **10.0**ft	DIA. **2-inch**	SLOT SIZE **10-Slot**
ELEVATION OF: (Feet)	GROUND SURFACE **14.08**	TOP OF WELL CASING **13.73**	TOP & BOTTOM SCREEN **-0.4 / -10.4**	GRAVEL PACK SIZES **#2/16**



Depth, feet	Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
	Concrete			(X, X, X) corresponds to (% Gravel, % Sand, % Fines).
	Gravelly SAND with silt (SW): Dark brown; medium dense; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand and gravel; (30, 50, 20).			bgs = below ground surface.
			0.0	HA - Hand Auger
				DPT = Direct Push Technology
				HSA = Hollow Stem Auger
5		MW-12-5.0	0.2	
	CLAY, trace sand (CL): Black; stiff; dry; medium plasticity; moderately graded; fine grained, subangular sand; (0, 95, 5).			PVC = Polyvinyl Chloride
			0.3	
10		MW-12-10.0		
	CLAY with sand, trace gravel (CL): Light brown with green mottling; medium stiff; dry; low plasticity; well graded; fine to medium grained, subangular sand and gravel; (5, 20, 75). At 13 feet bgs, moist.			
			0.9	
15		MW-12-15.0		
	Sandy CLAY (CL): Light brown; soft; moist; low plasticity; poorly graded; fine grained, subangular sand; (0, 30, 70).			
			0.1	
20		MW-12-20.0		
	CLAY with sand (CL): Grey; stiff; dry; high plasticity; poorly graded; fine grained sand, subangular sand; (0, 15, 85).			
	Gravelly SAND (SP): Orange brown; medium dense; moist; non-plastic; poorly graded; medium to coarse grained, subangular sand and gravel; (60, 40, 0).		0.5	
	CLAY with sand and gravel (CL): Orange brown; very stiff; moist; low plasticity; well graded; medium to coarse grained, subangular sand; (15, 25, 60).			Bottom of boring at 25 feet bgs.
25		MW-12-25.0		

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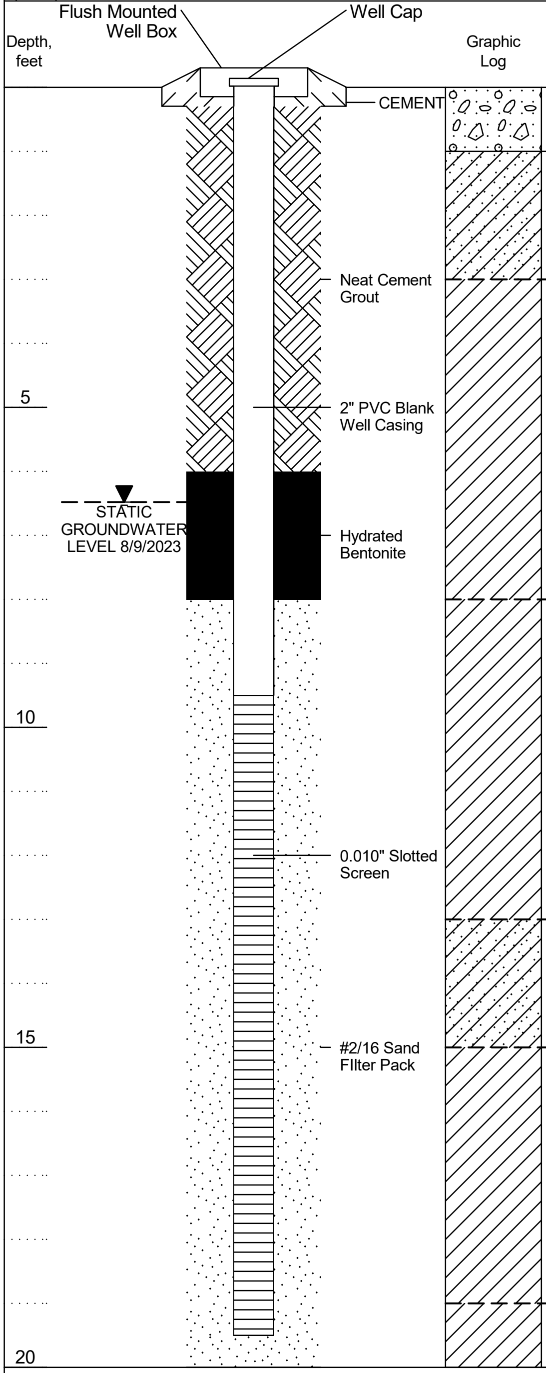
WELL CONSTRUCTION LOG

WELL NO. **MW-13**	NORTHING **2099750.87**	EASTING **6072428.24**
PROJECT NO./NAME **1793.0030S000 / AB&I Redevelopment**		LOCATION **7825 San Leandro Street** **Oakland, CA**
APPROVED BY **H. Rush**	LOGGED BY **J. Aguayo**	
DRILLING CONTRACTOR/DRILLER **C-57 1058336 / Cascade Drilling**		GEOGRAPHIC AREA **San Francisco Bay Area**

DRILL BIT DIAMETER/TYPE **6-in. / Auger**	BOREHOLE DIAMETER **6-inches**	DRILLING EQUIPMENT/METHOD **Geoprobe / HA, DPT, & HSA**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/31/23-7/31/23**

CASING MAT./DIA. **PVC / 2-inch**
SCREEN: TYPE **Slotted** MAT. **PVC** TOTAL LENGTH **10.0**ft DIA. **2-inch** SLOT SIZE **10-Slot**

ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
	13.18	**12.68**	**3.7 / -6.3**	**#2/16**



Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
Concrete			(X, X, X) corresponds to (% Gravel, % Sand, % Fines).
SAND with clay, silt, and gravel (SC): Dark brown; loose; moist; non-plastic; well graded; fine to coarse grained, subangular sand and gravel; (20, 60, 20).	MW-13-3.0	0.2 27.3	bgs = below ground surface. HA - Hand Auger
CLAY, some sand, trace gravel (CL): Black; stiff; moist; high plasticity; poorly graded; fine to medium, subangular sand and gravel; (5, 15, 80). At 4.5 feet bgs, grey blue plastic wrap. At 6 feet bgs, sheen substance observed in soil.	MW-13-5.0 MW-13-6.0	7.0 324.0 139.0	DPT = Direct Push Technology HSA = Hollow Stem Auger PVC = Polyvinyl Chloride
CLAY with sand, some gravel (CL): Dark brown with orange mottling; stiff; moist; high plasticity; poorly graded; fine to medium, subangular sand and gravel; (10, 20, 70). Black sheen spots and residue observed. At 9 feet bgs, some grey cementation present.	MW-13-10.0	86.9 7.3	
CLAY with sand (CL): Light brown-grey with orange mottling; very stiff; moist; high plasticity; poorly graded; fine grained, subrounded sand; (0, 20, 80).	MW-13-15.0	3.3	
CLAY with gravel, some sand (CL): Grey; stiff; moist; medium plasticity; poorly graded; fine grained, subangular sand; (5, 15, 80).		4.1	
CLAY with gravel, some sand (CL): Grey; stiff; moist; low plasticity; moderately graded; fine grained, subangular sand and gravel; (20, 10, 70).	MW-13-20.0	6.0	Bottom of boring at 20 feet bgs.

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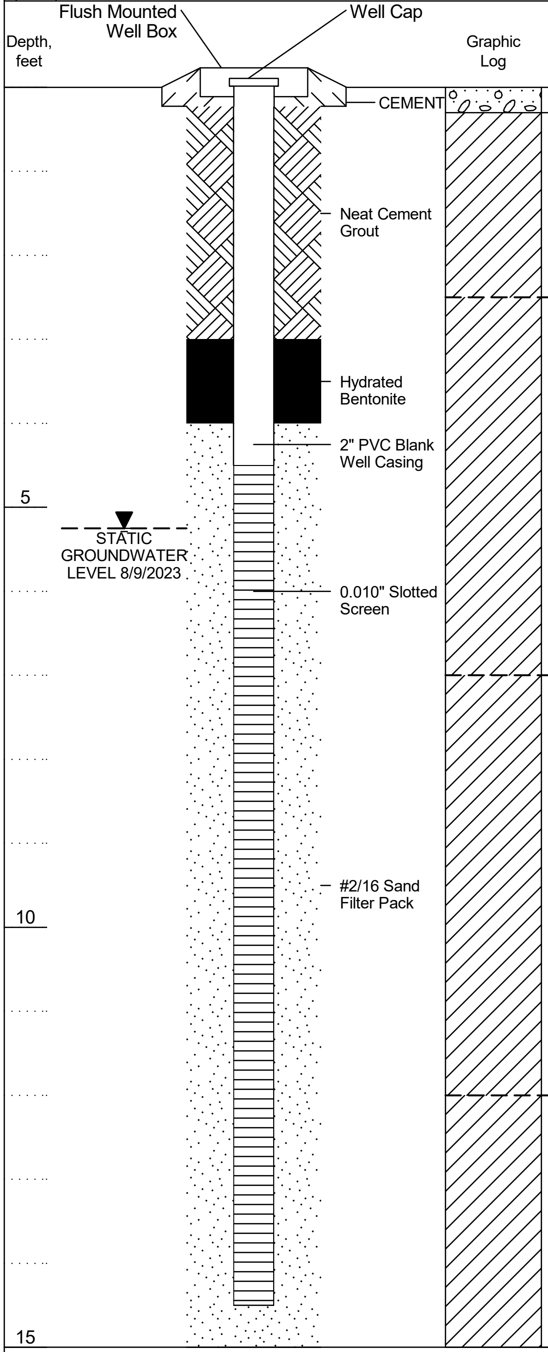
WELL CONSTRUCTION LOG

WELL NO. **MW-14**	NORTHING **2099582.75**	EASTING **6072281.12**
PROJECT NO./NAME **1793.0030S000 / AB&I Redevelopment**		LOCATION **7825 San Leandro Street** **Oakland, CA**
APPROVED BY **H. Rush**	LOGGED BY **J. Aguayo**	
DRILLING CONTRACTOR/DRILLER **C-57 1058336 / Cascade Drilling**		GEOGRAPHIC AREA **San Francisco Bay Area**

DRILL BIT DIAMETER/TYPE **6-in. / Auger**	BOREHOLE DIAMETER **6-inches**	DRILLING EQUIPMENT/METHOD **Geoprobe / HA, DPT, & HSA**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/28/23-7/28/23**

CASING MAT./DIA. **PVC / 2-inch**
SCREEN: TYPE **Slotted** MAT. **PVC** TOTAL LENGTH **10.0**ft DIA. **2-inch** SLOT SIZE **10-Slot**

ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
	11.79	**11.38**	**7.3 / -2.7**	**#2/16**



Visual Description

Concrete

Sandy CLAY with gravel and silt (CL): Brown; medium dense; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand and gravel; (20, 30, 50).

CLAY with sand and silt (CL): Black; medium stiff; dry; low plasticity; moderately graded; fine to medium grained, subangular sand; (0, 20, 80).

From 6 feet bgs to 7 feet bgs, moist.

Sandy CLAY, some gravel (CL): Dark grey green with orange-brown mottling; medium stiff; dry; low plasticity; moderately graded; fine to medium grained, subangular sand and gravel; (10, 30, 60).

Some lenses of white bentonite-like material.

Clayey SAND (SC): Orange brown; soft; moist; non-plastic; poorly graded; fine to medium grained, subangular sand; (0, 60, 40).

Blow Counts per 6"	PID Values (ppm)
	1.1
	1.5
MW-14-5.0	
	1.8
MW-14-10.0	2.6
	1.7
MW-14-15.0	1.9

REMARKS

(X, X, X) corresponds to (% Gravel, % Sand, % Fines).

bgs = below ground surface.

HA - Hand Auger

DPT = Direct Push Technology

HSA = Hollow Stem Auger

PVC = Polyvinyl Chloride

Bottom of boring at 15 feet bgs.

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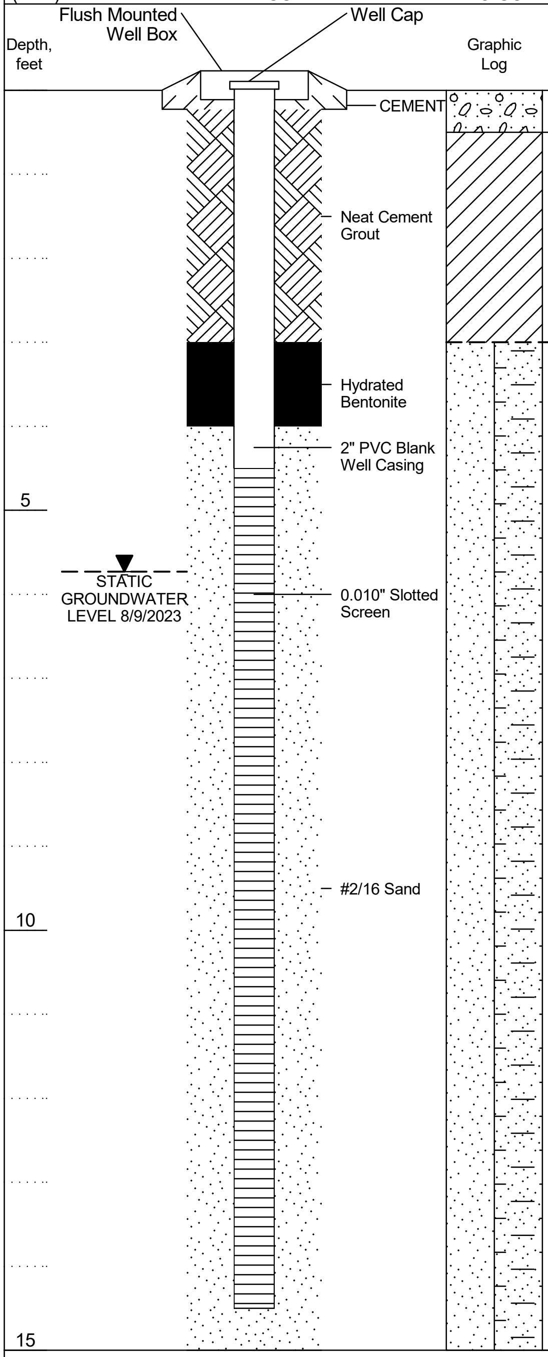
WELL CONSTRUCTION LOG

WELL NO. **MW-15**	NORTHING **2099513.38**	EASTING **6071999.82**		
PROJECT NO./NAME **1793.0030S000 / AB&I Redevelopment**		LOCATION **7825 San Leandro Street** **Oakland, CA**		
APPROVED BY **H. Rush**	LOGGED BY **J. Aguayo**			
DRILLING CONTRACTOR/DRILLER **C-57 1058336 / Cascade Drilling**		GEOGRAPHIC AREA **San Francisco Bay Area**		
DRILL BIT DIAMETER/TYPE **6-in. / Auger**	BOREHOLE DIAMETER **6-inches**	DRILLING EQUIPMENT/METHOD **Geoprobe / HA, DPT, & HSA**	SAMPLING METHOD **2" Macro-Core**	START-FINISH DATE **7/28/23-7/28/23**

CASING MAT./DIA. **PVC / 2-inch**
SCREEN: TYPE **Slotted** MAT. **PVC** TOTAL LENGTH **10.0**ft DIA. **2-inch** SLOT SIZE **10-Slot**

ELEVATION OF: (Feet)	GROUND SURFACE	TOP OF WELL CASING	TOP & BOTTOM SCREEN	GRAVEL PACK SIZES
	11.35	**10.85**	**6.9 / -3.2**	**#2/16**



Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
Concrete			(X, X, X) corresponds to (% Gravel, % Sand, % Fines).
Sandy CLAY with gravel and silt (CL): Brown; medium dense; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand and gravel; (20, 30, 50).		0.2	bgs = below ground surface. HA - Hand Auger
SAND with silt and clay, trace gravel (SP-SM): Brown; medium dense; moist; low plasticity; poorly graded; fine to coarse grained, subangular sand and gravel; (5, 60, 35). At 4 feet bgs, loose.		0.1	DPT = Direct Push Technology HSA = Hollow Stem Auger
From 5 feet bgs to 7 feet bgs, color change to orange brown, saturated.	MW-15-5.0		PVC = Polyvinyl Chloride
		0.2	
At 10 feet bgs, slight increase in plasticity.	MW-15-10.0	0.9	
		0.4	
At 13 feet bgs, color change to brown with orange brown mottling.			
	MW-15-15.0	0.1	Bottom of boring at 15 feet bgs.

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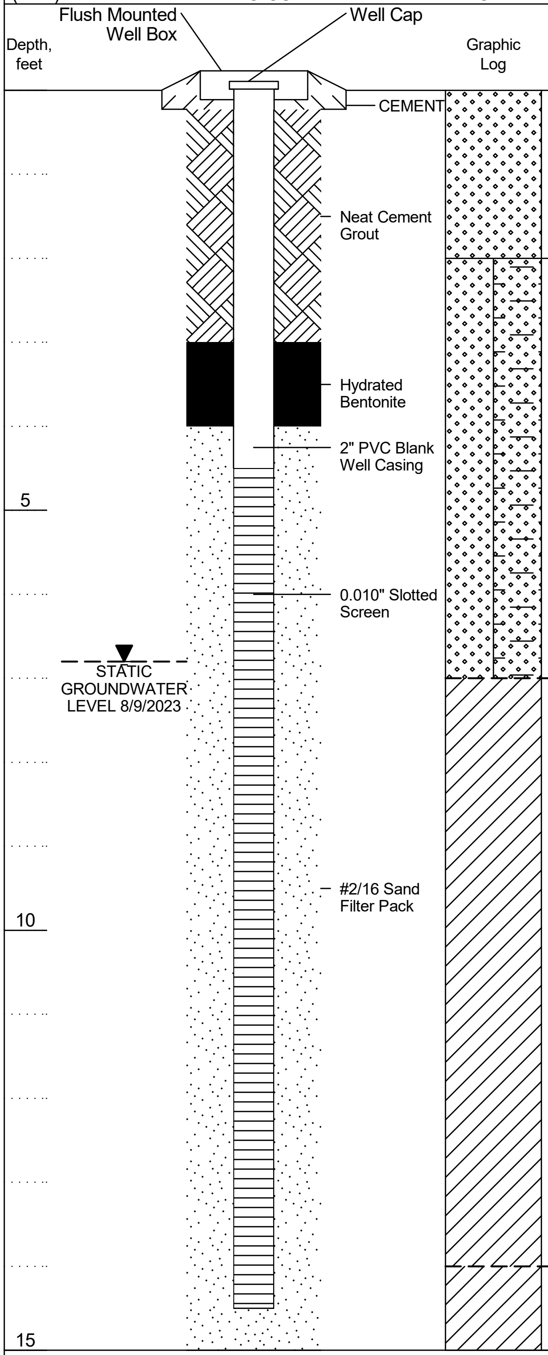
WELL CONSTRUCTION LOG

WELL NO. **MW-16**
NORTHING **2099937.48**
EASTING **6071633.24**
PROJECT NO./NAME **1793.0030S000 / AB&I Redevelopment**
LOCATION **7825 San Leandro Street Oakland, CA**
APPROVED BY **H. Rush**
LOGGED BY **J. Aguayo**
DRILLING CONTRACTOR/DRILLER **C-57 1058336 / Cascade Drilling**
GEOGRAPHIC AREA **San Francisco Bay Area**
DRILL BIT DIAMETER/TYPE **6-in. / Auger**
BOREHOLE DIAMETER **6-inches**
DRILLING EQUIPMENT/METHOD **Geoprobe / HA, DPT, & HSA**
SAMPLING METHOD **2" Macro-Core**
START-FINISH DATE **7/27/23-7/27/23**
CASING MAT./DIA. **PVC / 2-inch**
SCREEN: TYPE **Slotted** MAT. **PVC** TOTAL LENGTH **10.0**ft DIA. **2-inch** SLOT SIZE **10-Slot**
ELEVATION OF: (Feet) GROUND SURFACE **13.58** TOP OF WELL CASING **13.17** TOP & BOTTOM SCREEN **9.1 / -0.9**
GRAVEL PACK SIZES **#2/16**



Visual Description

Gravelly SAND, some sand and silt (SW): Dark red brown; loose; dry; non-plastic; well graded; fine to coarse grained, subangular sand and gravel; (30, 60, 10).

SAND with clay, silt, and gravel (SW-SM): Brown; medium dense; dry; low plasticity; moderately graded; fine to coarse grained, subangular sand and gravel; (20, 50, 30).

At 4 feet bgs, metal debris.

At 5 feet bgs, some odor.

At 6 feet bgs, color change to orange brown, increase in sand, white benotite-like material present.

CLAY with gravel, sand, and silt (CL): Dark green grey; medium stiff; moist; low plasticity; well graded; fine to coarse grained, subangular sand and gravel; (20, 20, 60).
From 7 feet bgs to 7.5 feet bgs, lense of gravel.
At 7.5 feet bgs, moist.

From 10 feet bgs to 13 feet bgs, saturated.

SAND with clay and silt, trace gravel (CL): Dark green grey; loose; moist; low plasticity; moderately graded; fine to medium grained, subangular sand and gravel; (5, 60, 35).

Blow Counts per 6"	PID Values (ppm)
	0.4
MW-16-5.0	3.5
	0.5
	0.2
MW-16-10.0	
	0.0
MW-16-15.0	0.1

REMARKS

(X, X, X) corresponds to (% Gravel, % Sand, % Fines).

bgs = below ground surface.

HA - Hand Auger

DPT = Direct Push Technology

HSA = Hollow Stem Auger

PVC = Polyvinyl Chloride

Bottom of boring at 15 feet bgs.

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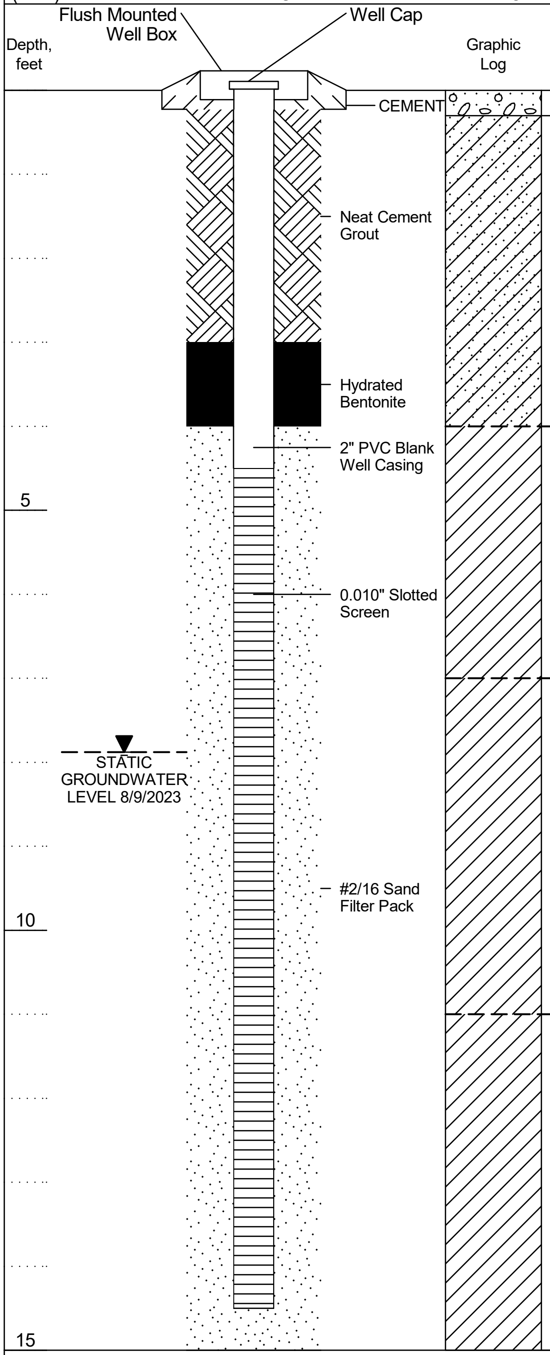
WELL CONSTRUCTION LOG

WELL NO. **MW-17**
NORTHING **2100267.44**
EASTING **6071319.16**
PROJECT NO./NAME **1793.0030S000 / AB&I Redevelopment**
LOCATION **7825 San Leandro Street Oakland, CA**
APPROVED BY **H. Rush**
LOGGED BY **J. Aguayo**
DRILLING CONTRACTOR/DRILLER **C-57 1058336 / Cascade Drilling**
GEOGRAPHIC AREA **San Francisco Bay Area**
DRILL BIT DIAMETER/TYPE **6-in. / Auger**
BOREHOLE DIAMETER **6-inches**
DRILLING EQUIPMENT/METHOD **Geoprobe / HA, DPT, & HSA**
SAMPLING METHOD **2" Macro-Core**
START-FINISH DATE **7/26/23-7/26/23**
CASING MAT./DIA. **PVC / 2-inch**
SCREEN: TYPE **Slotted** MAT. **PVC** TOTAL LENGTH **10.0**ft DIA. **2-inch** SLOT SIZE **10-Slot**
ELEVATION OF: (Feet) GROUND SURFACE **12.43** TOP OF WELL CASING **12.20** TOP & BOTTOM SCREEN **7.9 / -2.1**
GRAVEL PACK SIZES **#2/16**



Visual Description	Blow Counts per 6"	PID Values (ppm)	REMARKS
Concrete			(X, X, X) corresponds to (% Gravel, % Sand, % Fines).
Clayey SAND with gravel (SC): Black; medium dense; dry; non-plastic; well graded; fine to coarse grained, subangular sand and gravel; (20, 50, 30).		0.2	bgs = below ground surface. HA - Hand Auger DPT = Direct Push Technology
CLAY with sand (CL): Black; medium stiff; dry; low plasticity; well graded; fine to medium grained, subangular sand; (0, 20, 80).	MW-17-5.0	0.2	HSA = Hollow Stem Auger PVC = Polyvinyl Chloride
Sandy CLAY with silt (CL): Orange brown; stiff; dry; low plasticity; poorly graded; fine to medium grained, subangular sand and gravel; (10, 30, 60).	MW-17-10.0	0.0 0.0	
CLAY with sand, trace gravel (CL): Orange brown; stiff; dry; low plasticity; poorly graded; fine to medium grained, subangular sand and gravel; (5, 25, 70).	MW-17-15.0	0.2 0.0	Bottom of boring at 15 feet bgs.

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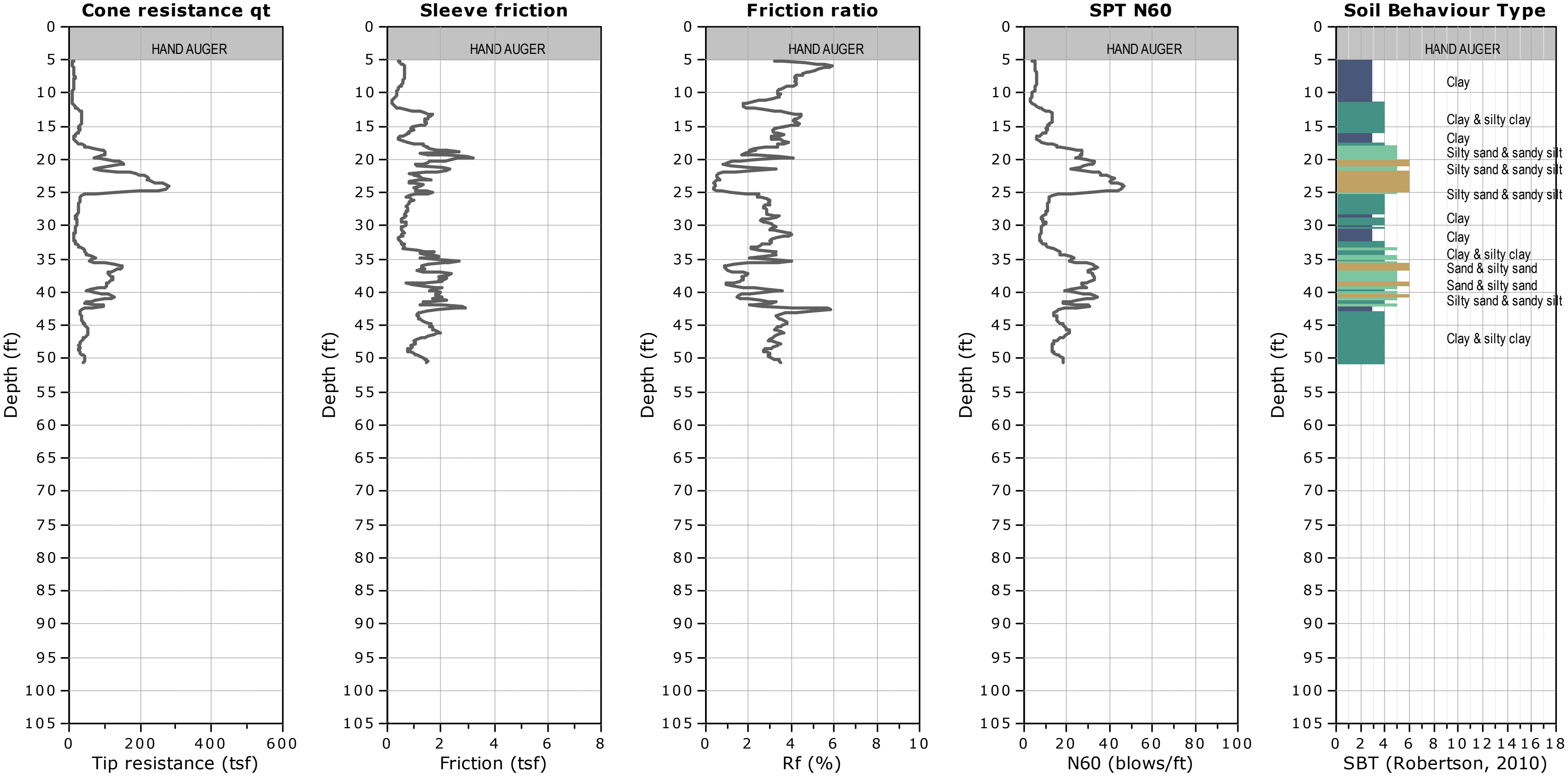
CPT: CPT-C1

FIELD REP: NICK VAIA
Cone ID: GDC-94

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

Total depth: 50.52 ft, Date: 2/11/2022



SBTn legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬜ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

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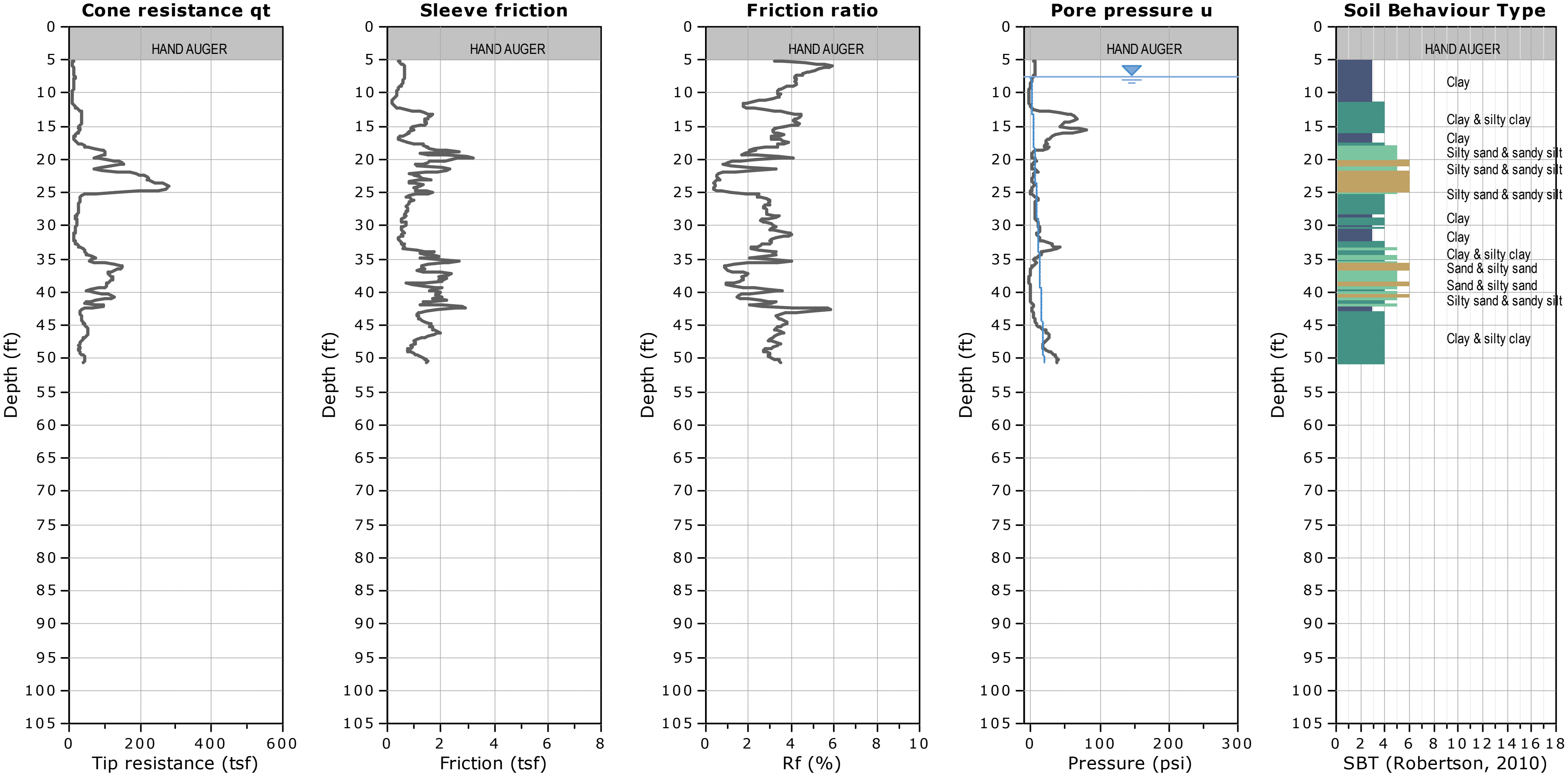
CPT: CPT-C1

CLIENT: HALEY & ALDRICH

SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP: NICK VAIA
Cone ID: GDC-94
Total depth: 50.52 ft, Date: 2/11/2022



SBTn legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

WATER TABLE FOR ESTIMATING PURPOSES ONLY

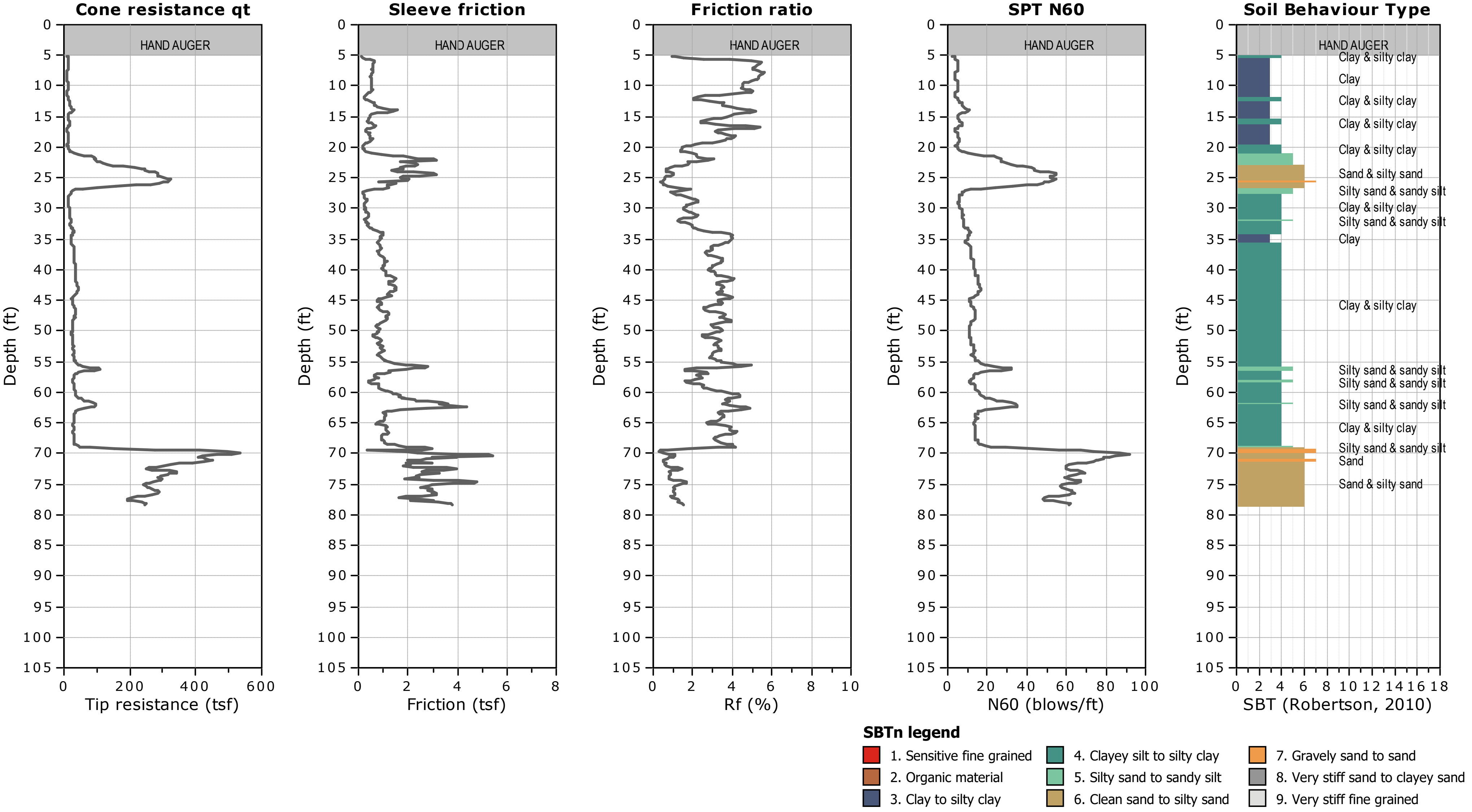
GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C3

FIELD REP: NICK VAIA
Cone ID: GDC-94

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

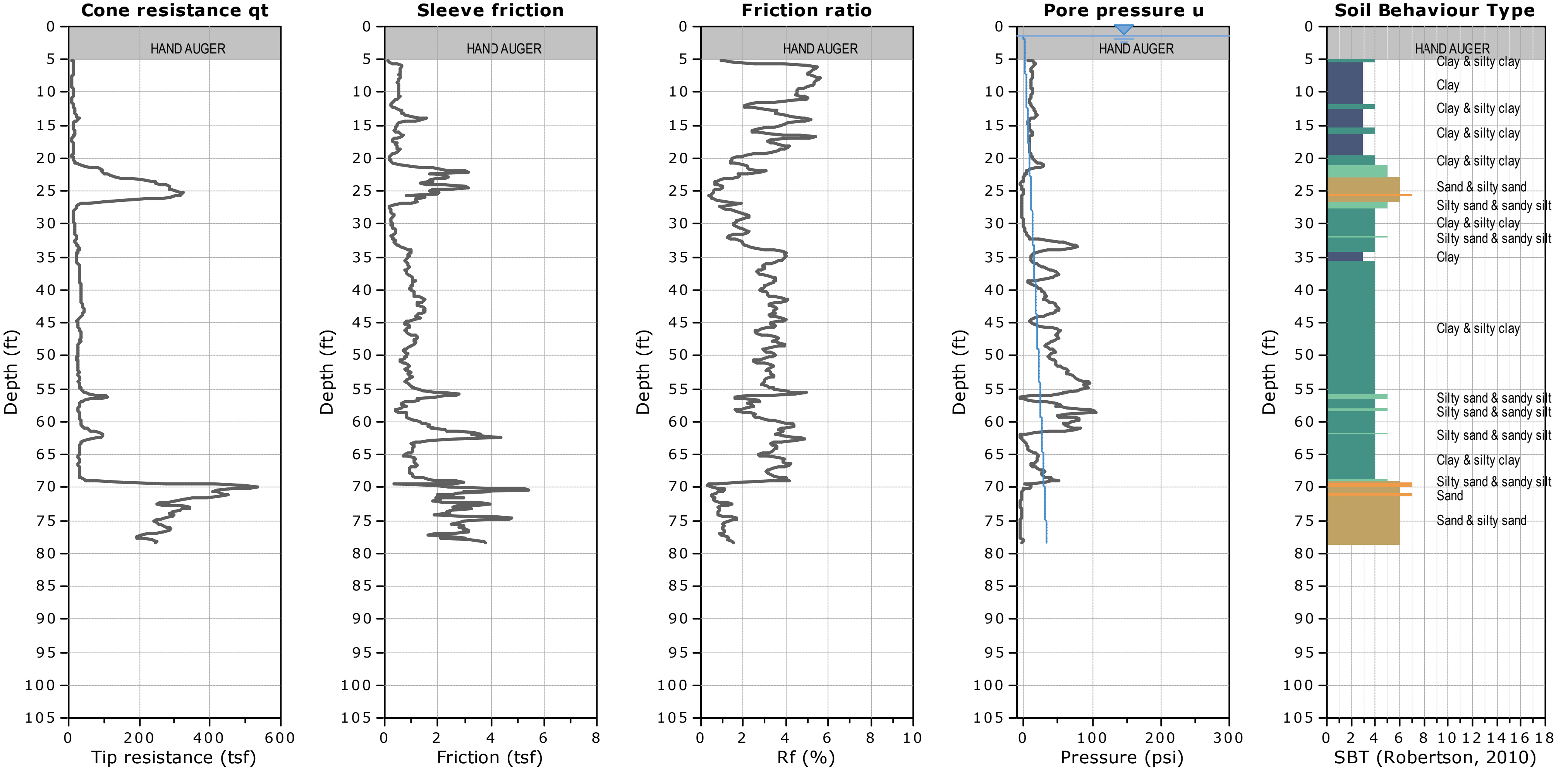
Total depth: 78.41 ft, Date: 2/11/2022



CPT: CPT-C3

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP: NICK VAIA
Cone ID: GDC-94
Total depth: 78.41 ft, Date: 2/11/2022



SBTn legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬛ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟨 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

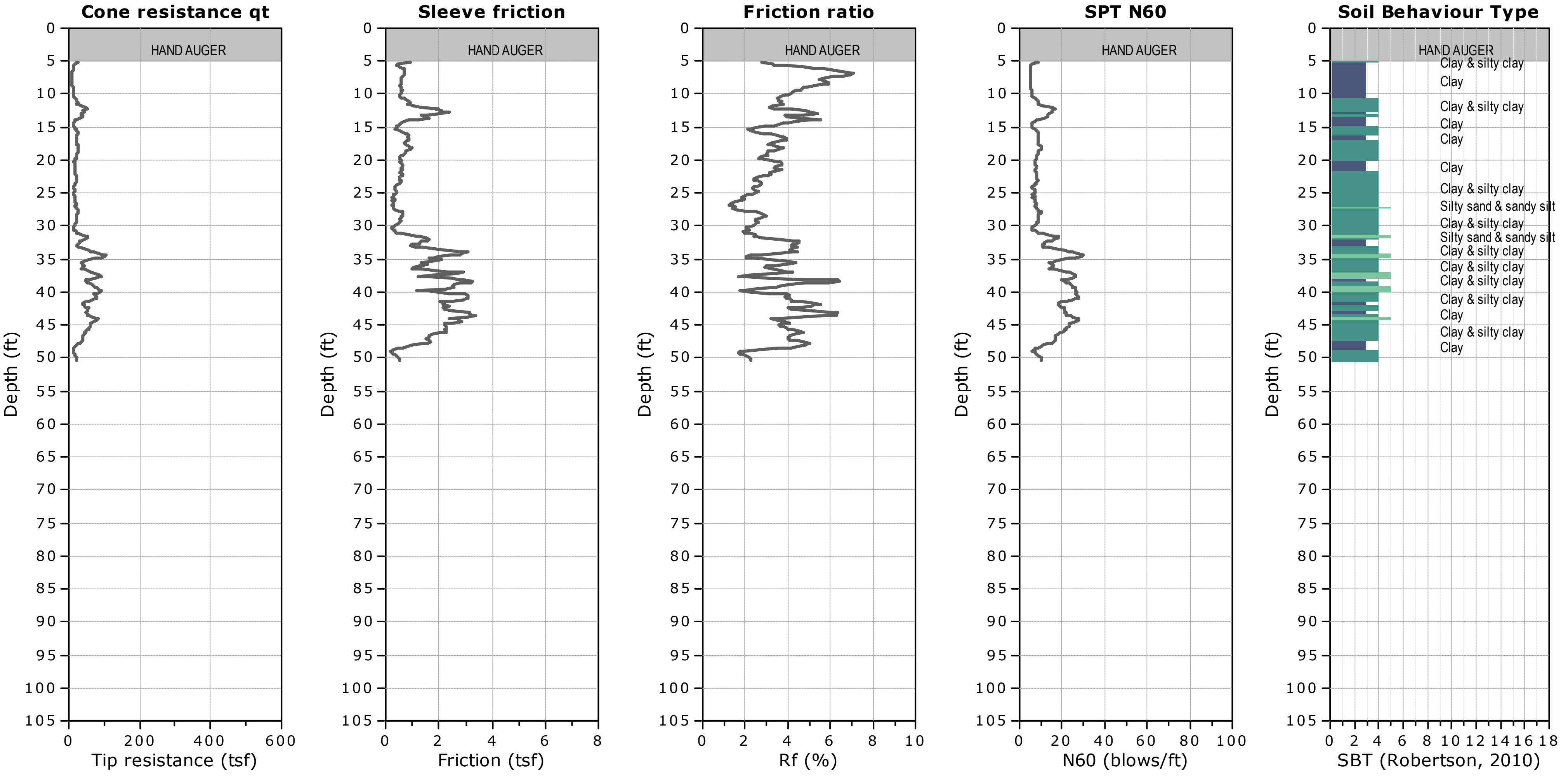
WATER TABLE FOR ESTIMATING PURPOSES ONLY

GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C4

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP: NICK VAIANA
Cone ID: GDC-89
Total depth: 50.36 ft, Date: 2/11/2022



SBTn legend

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🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

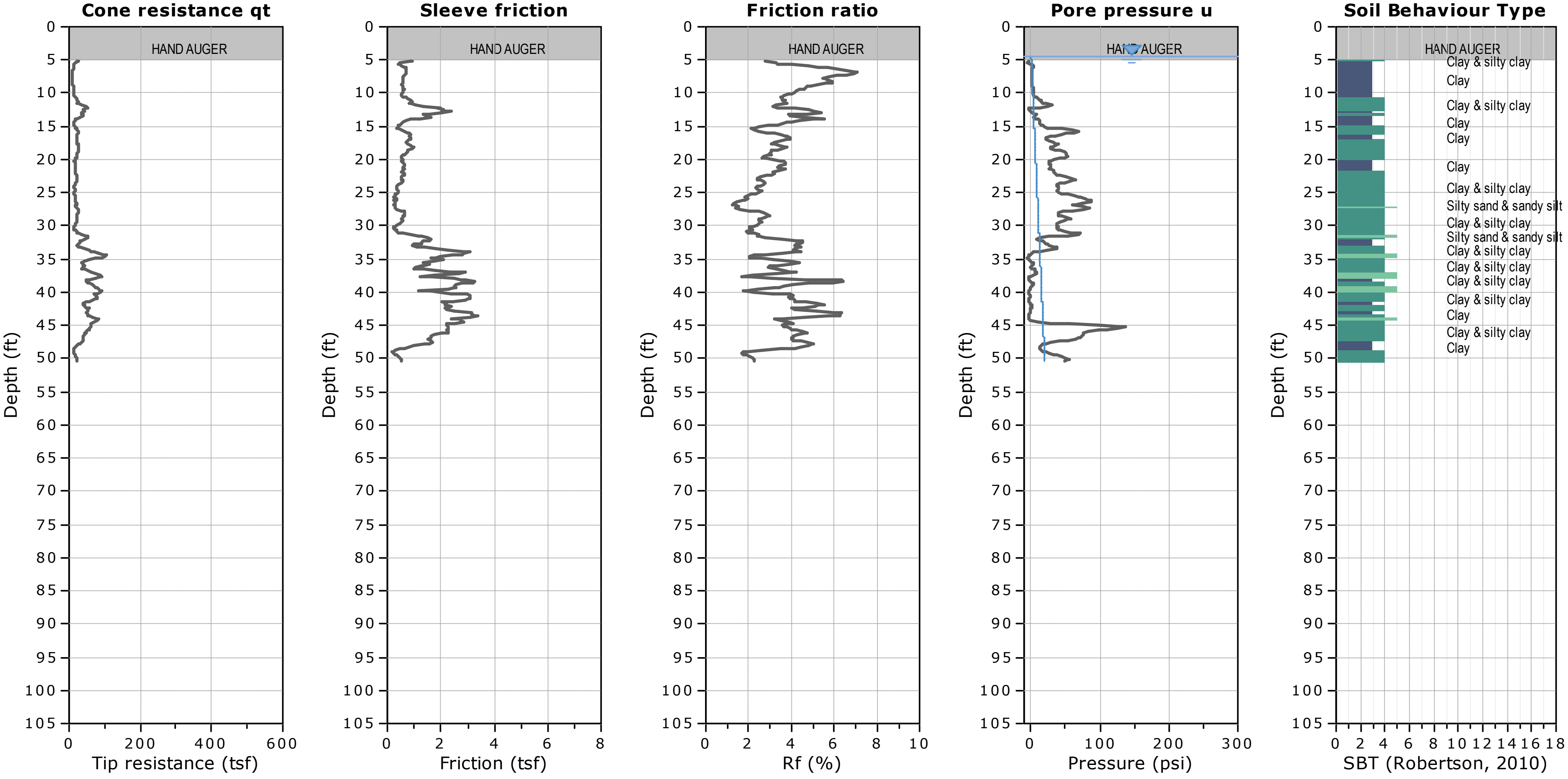
GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C4

CLIENT: HALEY & ALDRICH

SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP: NICK VAIANA
Cone ID: GDC-89
Total depth: 50.36 ft, Date: 2/11/2022



SBTn legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

WATER TABLE FOR ESTIMATING PURPOSES ONLY

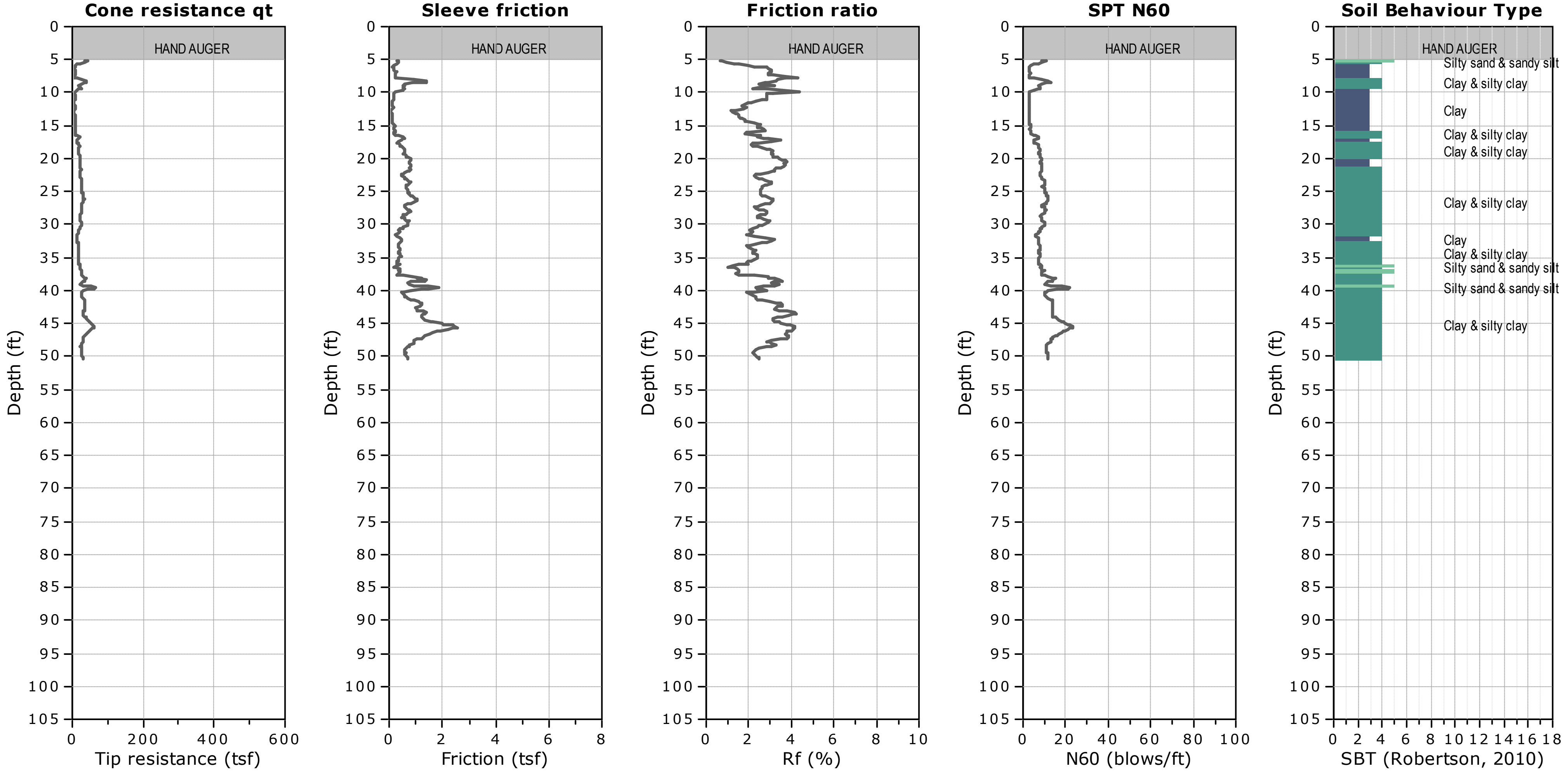
GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C5

CLIENT: HALEY & ALDRICH

SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP: NICK VAIANA
Cone ID: GDC-89
Total depth: 50.36 ft, Date: 2/11/2022



SBTn legend

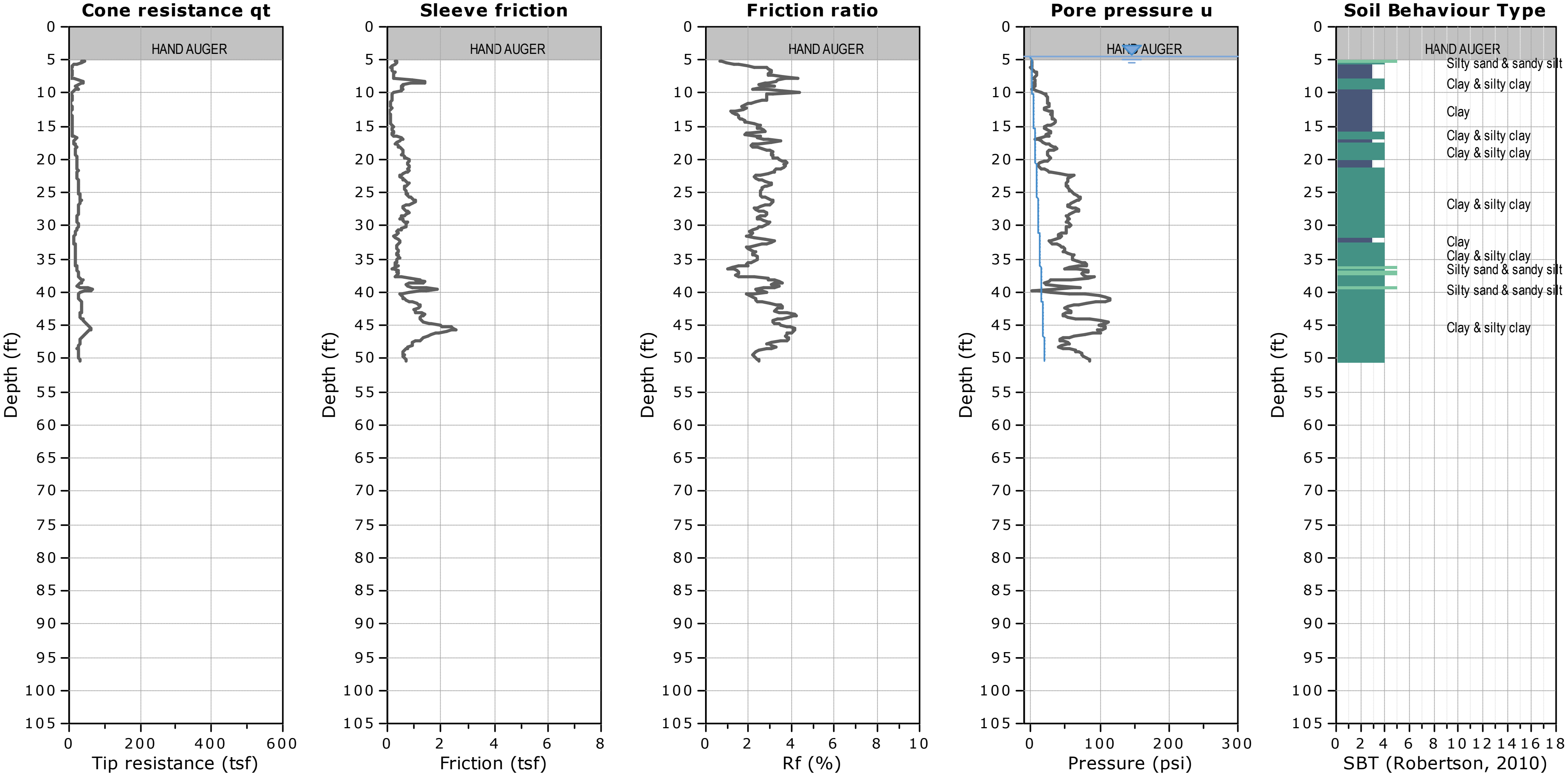
🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C5

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP: NICK VAIANA
Cone ID: GDC-89
Total depth: 50.36 ft, Date: 2/11/2022



SBTn legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬜ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

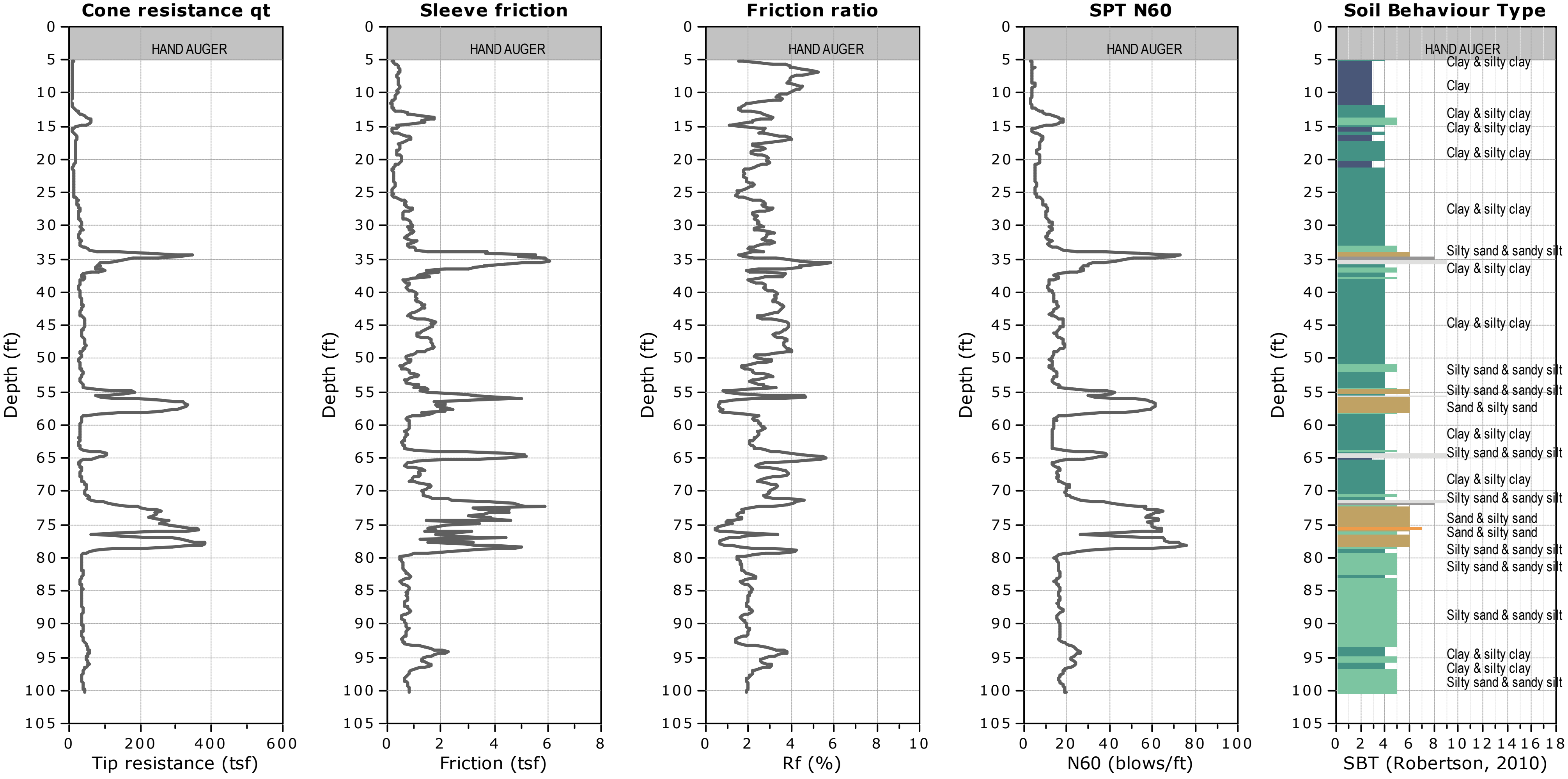
WATER TABLE FOR ESTIMATING PURPOSES ONLY

GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C6

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP: NICK VAIANA
Cone ID: GDC-89
Total depth: 100.39 ft, Date: 2/11/2022



SBTn legend

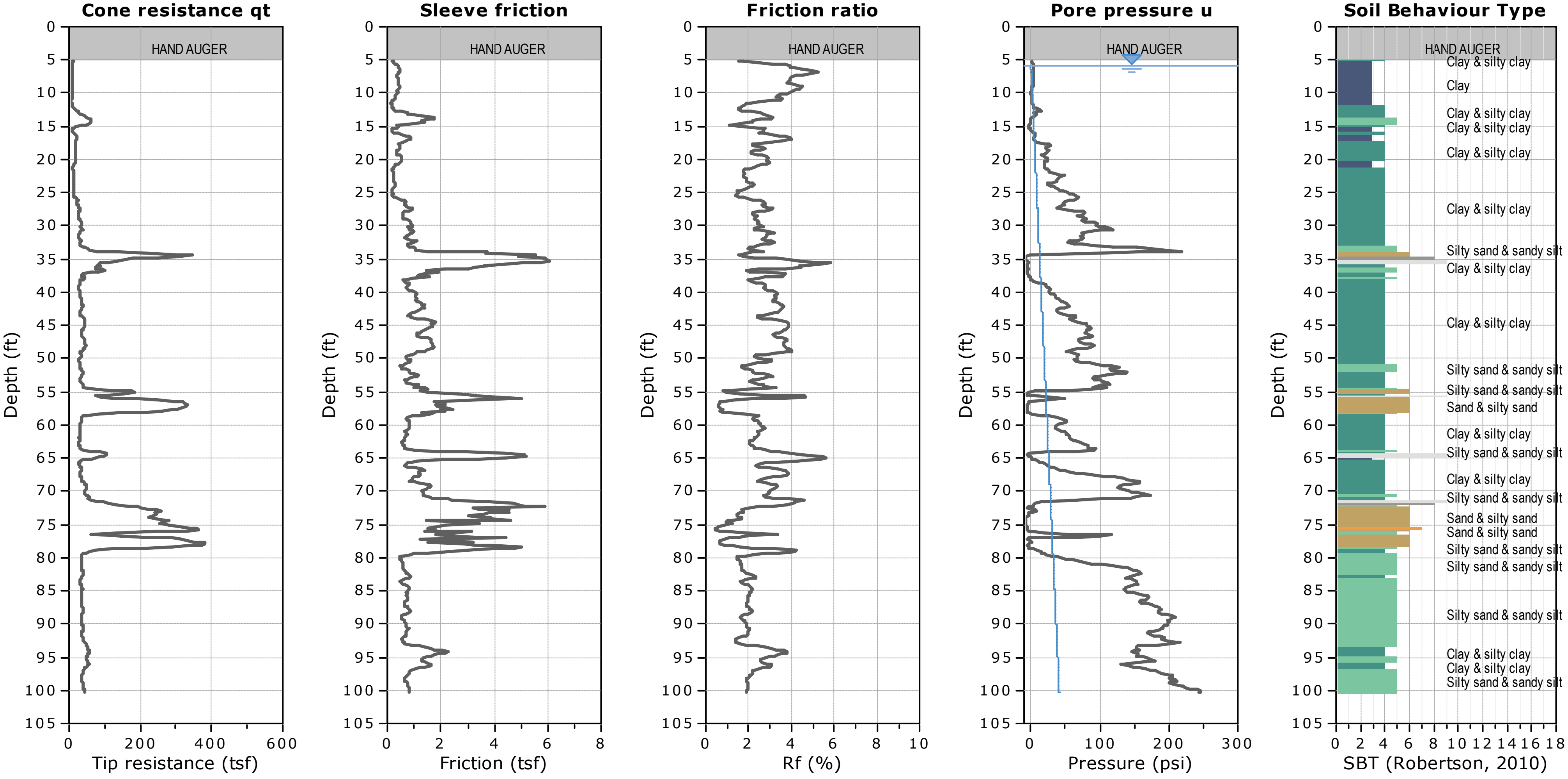
- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C6

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP: NICK VAIANA
Cone ID: GDC-89
Total depth: 100.39 ft, Date: 2/11/2022



SBTn legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟨 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

WATER TABLE FOR ESTIMATING PURPOSES ONLY

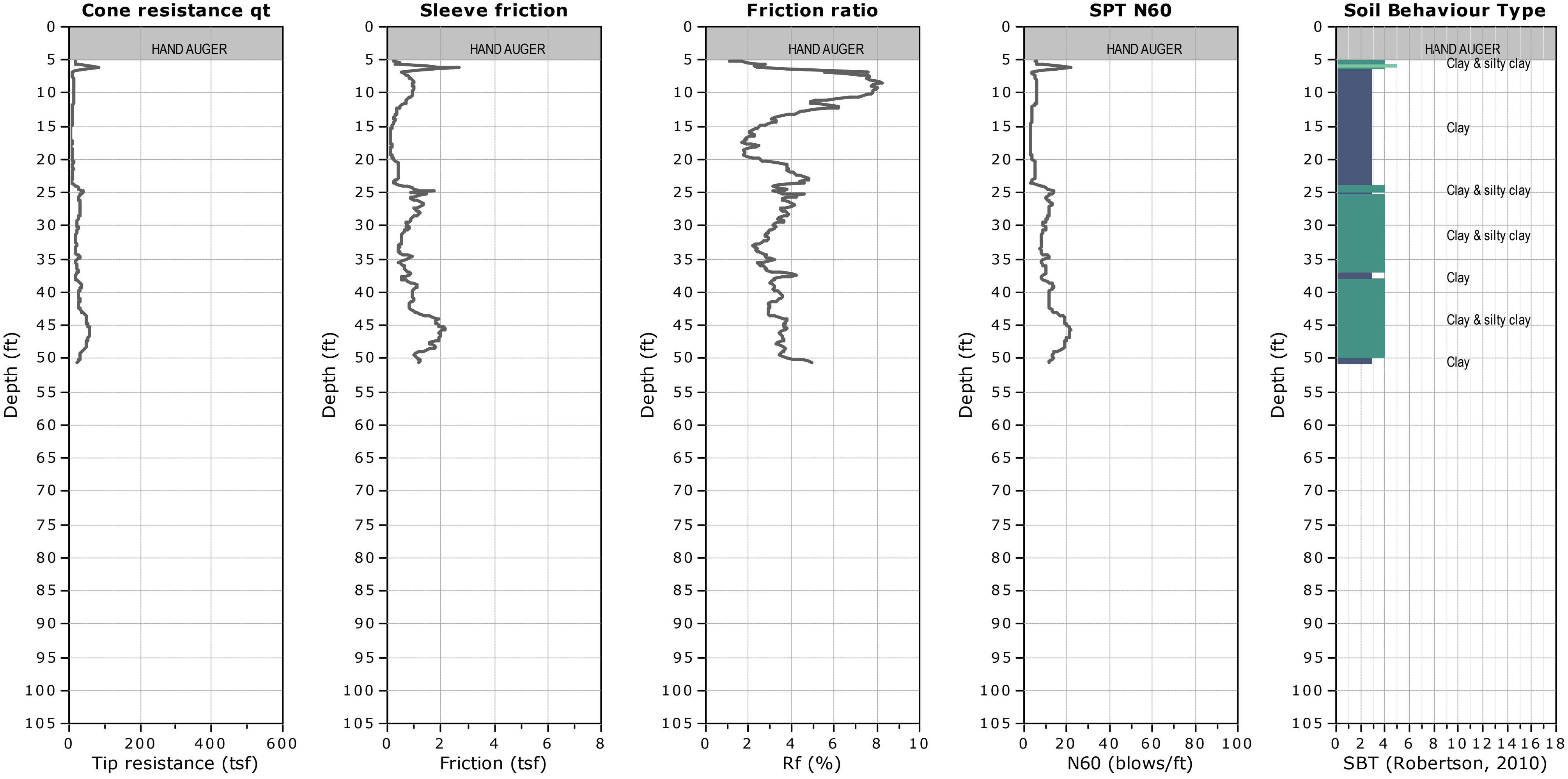
GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C7

FIELD REP: NICK VAIANA
Cone ID: GDC-89

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

Total depth: 50.52 ft, Date: 2/11/2022



SBTn legend

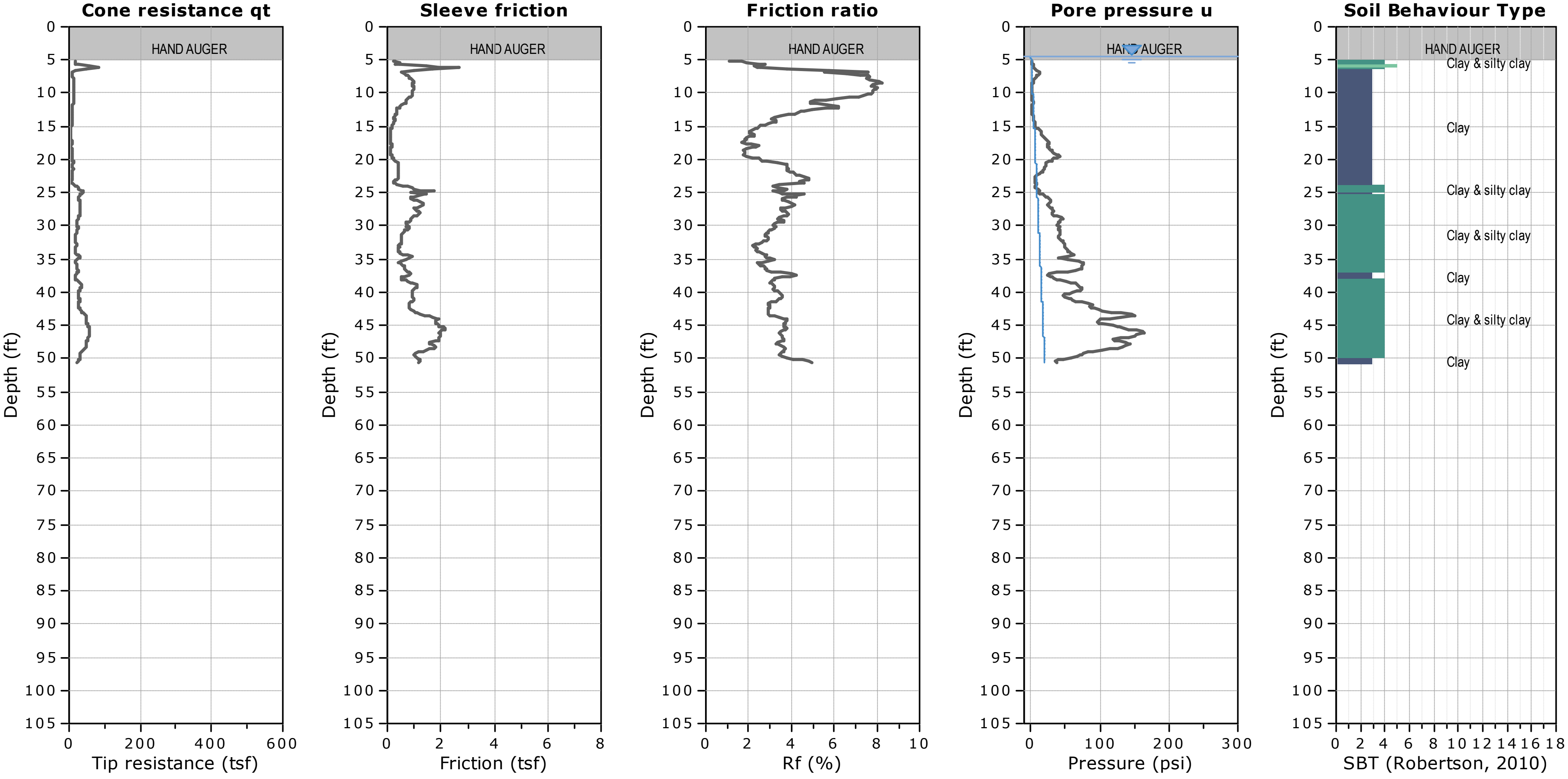
🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟨 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: CPT-C7

FIELD REP: NICK VAIANA
Cone ID: GDC-89
Total depth: 50.52 ft, Date: 2/11/2022

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA



SBTn legend

- 🟥 1. Sensitive fine grained
- 🟫 2. Organic material
- 🟦 3. Clay to silty clay
- 🟩 4. Clayey silt to silty clay
- 🟩 5. Silty sand to sandy silt
- 🟫 6. Clean sand to silty sand
- 🟧 7. Gravely sand to sand
- ⬛ 8. Very stiff sand to clayey sand
- ⬜ 9. Very stiff fine grained

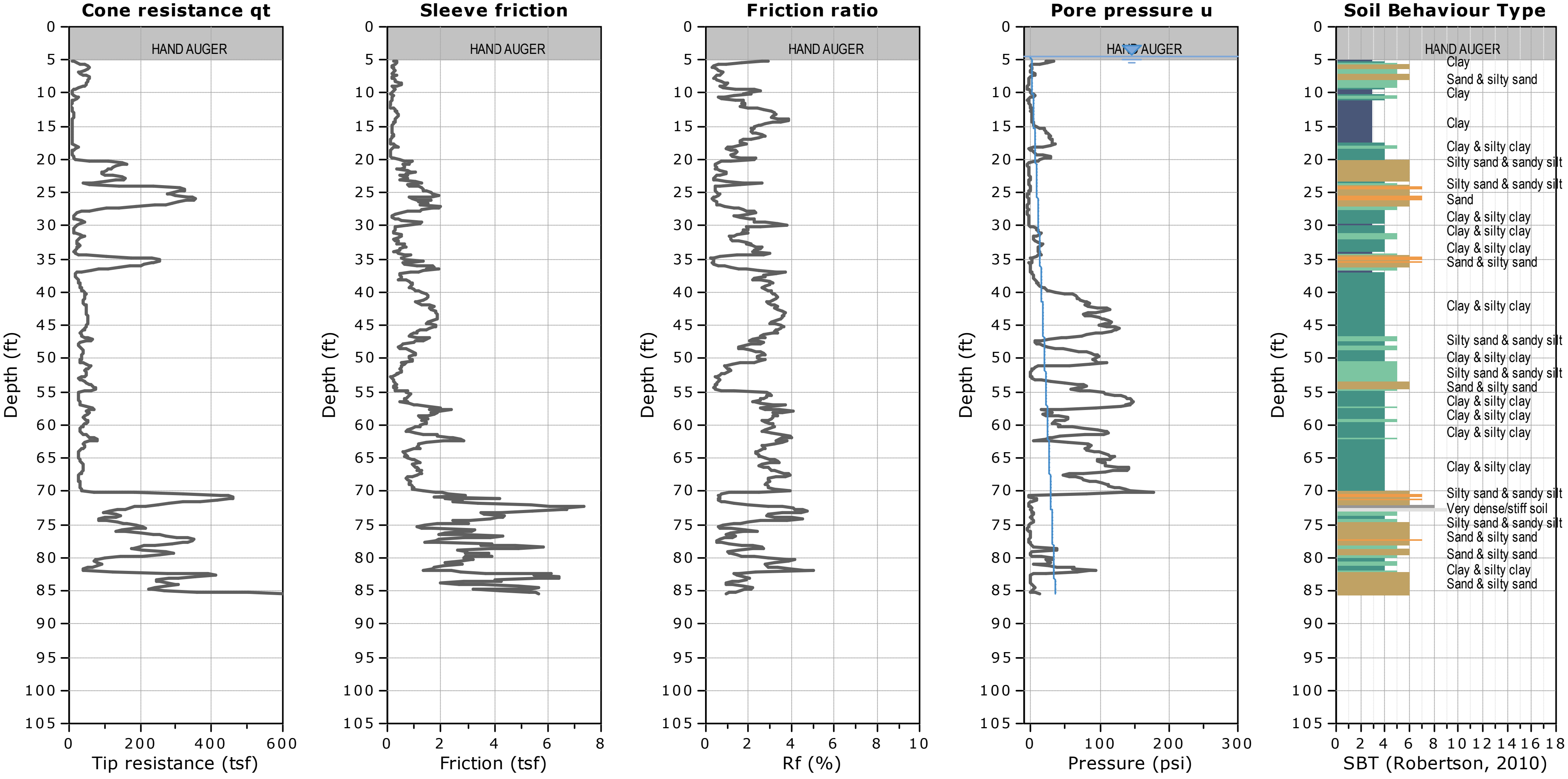
WATER TABLE FOR ESTIMATING PURPOSES ONLY

GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: SCPT-C2

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP:
Cone ID:
Total depth: 85.47 ft, Date: 3/2/2022



SBTn legend

🟥 1. Sensitive fine grained	🟩 4. Clayey silt to silty clay	🟧 7. Gravely sand to sand
🟫 2. Organic material	🟩 5. Silty sand to sandy silt	⬛ 8. Very stiff sand to clayey sand
🟦 3. Clay to silty clay	🟫 6. Clean sand to silty sand	⬜ 9. Very stiff fine grained

WATER TABLE FOR ESTIMATING PURPOSES ONLY

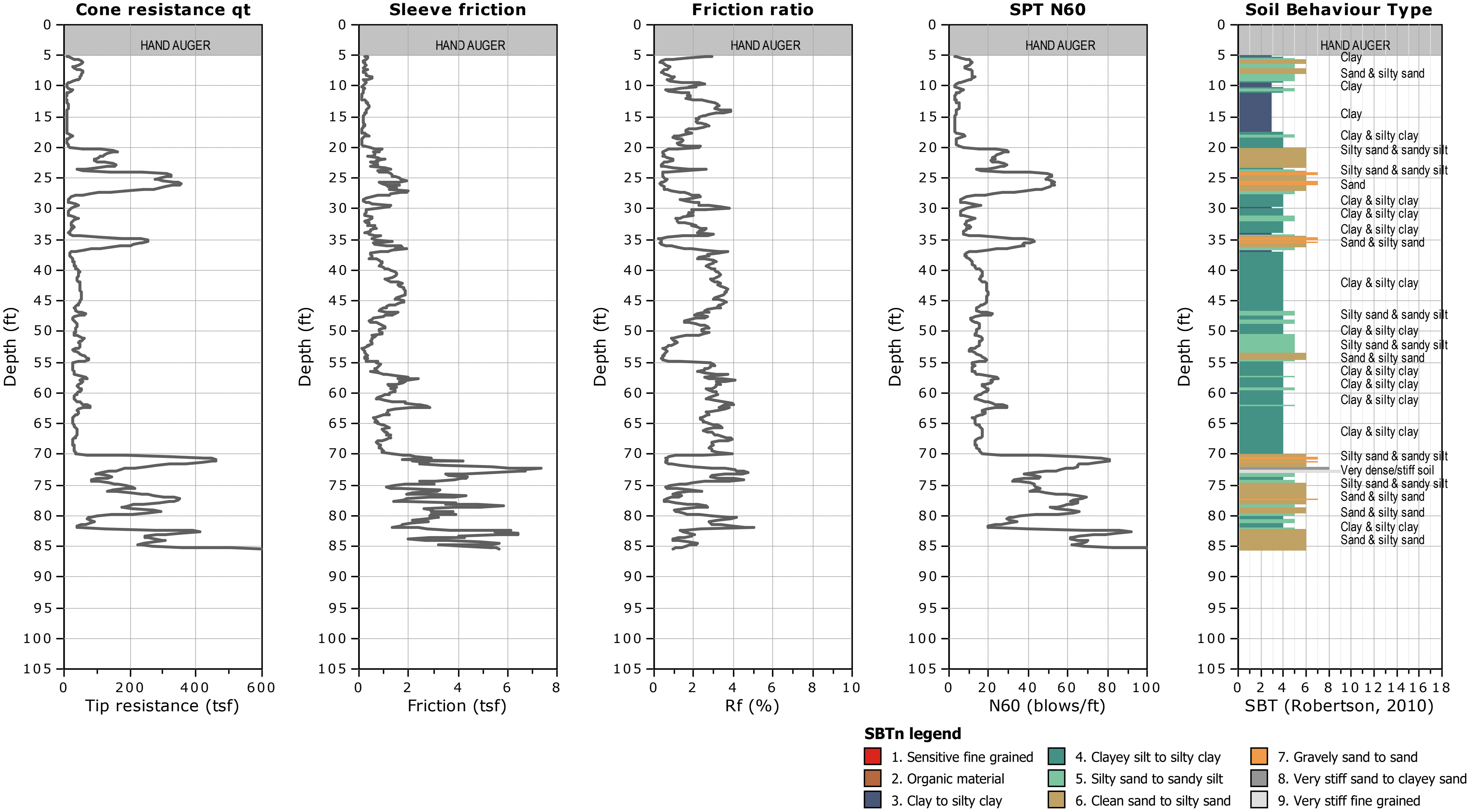
GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: SCPT-C2

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

FIELD REP:
Cone ID:

Total depth: 85.47 ft, Date: 3/2/2022



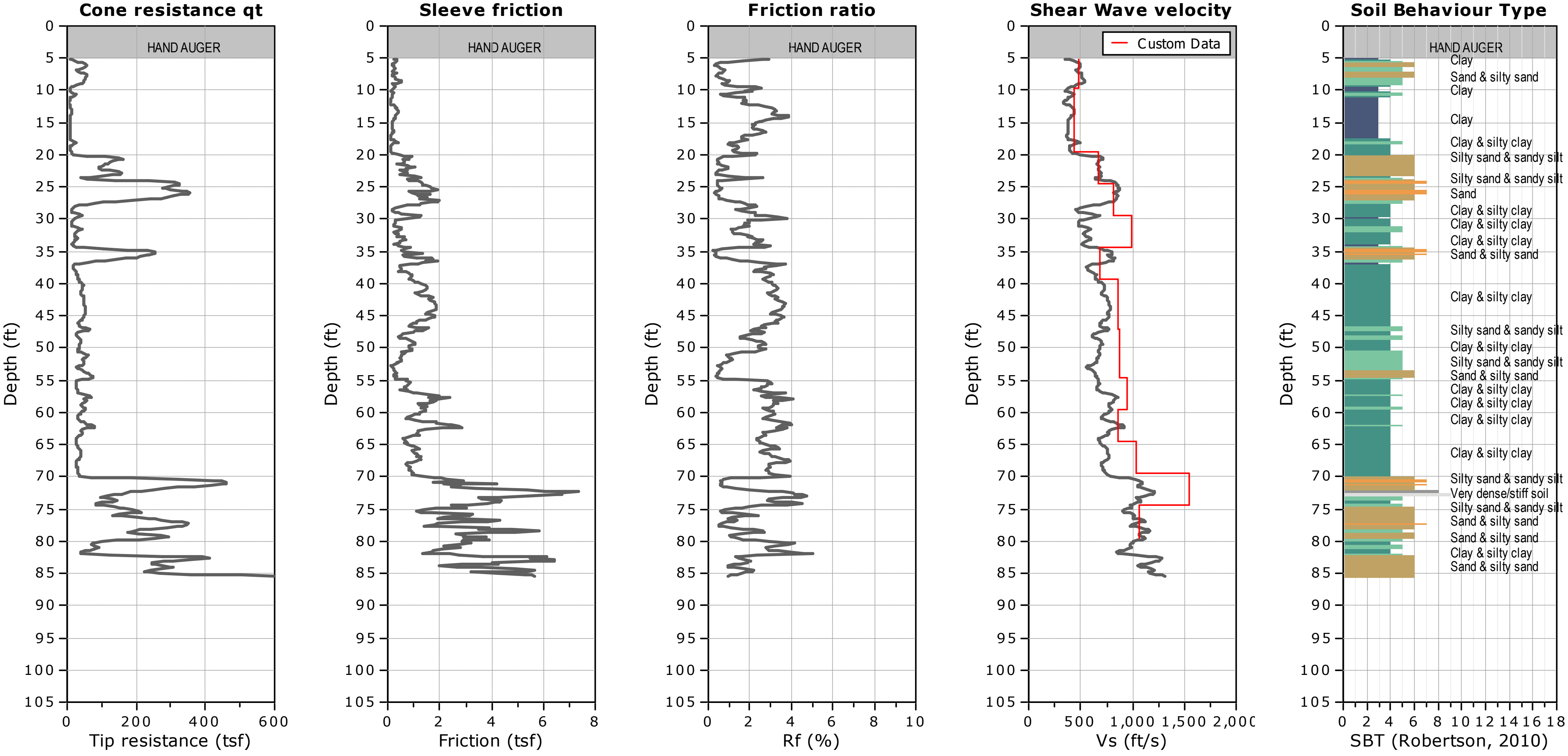
GREGG DRILLING, LLC
WWW.GREGGDRILLING.COM

CPT: SCPT-C2

FIELD REP:
Cone ID:

CLIENT: HALEY & ALDRICH
SITE: AB&I FOUNDRY, OAKLAND, CA

Total depth: 85.47 ft, Date: 3/2/2022



SBTn legend

🟥 1. Sensitive fine grained
🟫 2. Organic material
🟦 3. Clay to silty clay
🟩 4. Clayey silt to silty clay
🟩 5. Silty sand to sandy silt
🟫 6. Clean sand to silty sand
🟧 7. Gravely sand to sand
⬛ 8. Very stiff sand to clayey sand
⬜ 9. Very stiff fine grained

APPENDIX E

Standard Operating Procedures

Date: Prepared February 22, 2023

Subject: **Standard Operating Procedure for Installation and Collection of Passive Soil Gas Samplers for Laboratory Analysis**

Purpose

The purpose of this Standard Operating Procedure (SOP) is to establish guidelines for the installation and collection of passive soil gas (PSG) samplers using BESURE^{TM} sample collection kits. This SOP is applicable to PSG samplers installed into the shallow subsurface within the upper 3 feet below ground surface (bgs). Sampling procedures were developed in accordance with ASTM Standards D5314 and D7758 and in general accordance with the manufacturer's specifications.

Considerations

- The BESURE^{TM} sample collection kits provided by Beacon Environmental (Beacon) contain hydrophobic adsorbent cartridges which allow the samplers to be effective even in water-saturated conditions.
- Samples should not be collected if there has been a spill of a potentially hazardous chemical near, at or on the sample collection location.
- BESURE^{TM} sample collection kits should be inspected for damage prior to sampling and should be replaced as necessary.
- Sampling duration should be chosen to meet project specific objectives.

Equipment and Materials

1. Site-specific Health and Safety Plan (HASP) with Job Safety Analysis (JSAs);
2. Field notebook, field note form(s) and logs, Site maps, chain-of-custody (COC) forms, and custody seals;
3. Roto-hammer drill with 0.5-inch-diameter drill bit (48-inches long), and 1.5-inch diameter drill bit (12-inches long)
4. Aluminum foil
5. Disposable Nitrile sampling gloves;
6. Concrete for surface patching;
7. Screwdriver or chisel and hammer to remove temporary seal (where needed);
8. Ball-point pen (do not use Sharpie); and
9. BESURE^{TM} sample collection kits, including:
    a. Beacon PSG Sampler (a rugged, borosilicate glass vial containing two sets of hydrophobic adsorbent cartridges);
    b. Retrieval wire wrapped around sampler;
    c. Solid Cap on the Sampler Vial;
    d. Sampling Cap (a one-hole cap with a screen meshing insert);
    e. Cap Storage Container;
    f. 12-inch long pre-cleaned, aluminum protection sleeve pipe;
    g. Wire cutters;
    h. Pipe cutter;

i. Screwdriver;
j. Towel;
k. Hammer;
l. Tapping dowel;
m. Chisel;
n. Gauze cloth; and
o. At least one trip blank per return shipment bag

Decontamination

To prevent cross-contamination, sampling equipment that comes in contact with potentially contaminated soil or soil gas during the installation or sampling procedures described below should not be reused before proper decontamination. Equipment that should not be reused during sampling generally includes anything that soil gas would pass through on its way to the samplers. This includes all components of the BESURE^{TM} sample collection kits. Disposable items such as sampling gloves will be changed after each use and discarded in an appropriate manner.

Procedures

1. Shipment Received/Retrieved from Manufacturer

- Inventory field sampling kit, field equipment, and planned sampling locations before mobilization. Verify BESURE^{TM} sample collection kits custody seal is intact.

2. PSG Sampler Installation

- Prior to subsurface work, perform private geophysical utility clearance, USA mark out, and submit DigAlert ticket in accordance with Roux's subsurface utility clearance protocols to clear the boring locations of potentially buried utilities.

- Mark and label sample locations as well as underground utilities or other features that may present a safety hazard or obstacle to gas movement.

- Clear vegetation or asphalt/concrete at each pre-determined survey point as needed and advance a boring to a depth of 1 foot bgs using a roto-hammer drill with a 1.5-inch diameter drill bit. The boring should extend beyond any surface aggregate material beneath asphalt/concrete. Advance borings to terminal depths of approximately 3 feet bgs using a 0.5-inch diameter drill bit.

- For locations covered in asphalt/concrete, insert the aluminum protection sleeve pipe into the upper 12 inches of the boring, while wearing nitrile gloves. Using the tapping dowel and hammer, push or tap the pipe into the hole so it rests approximately 1-inch bgs. As needed, use the pipe cutter to cut the pipe so it is flush with the ground surface.

    - *Note: The sleeve pipe may also be used in soil covered locations to isolate the depth at which the sampler is detecting compounds in the soil gas.*

- While wearing nitrile gloves, take the sampler vial and unwind the wrapped retrieval wire.

- Replace the white solid cap with the black, permeable sampling cap. Store the solid cap in the cap storage container.

- Prepare a 12-inch length of aluminum foil.

- Lower the Sampler with the screened-capped-end pointing down into the boring or metal pipe.

- For soil covered locations, form the aluminum foil into a ball and wrap the end of the retrieval wire around the foil ball, so it extends at least 1 inch out of the boring. Compress the foil ball into the top of the boring using the tapping dowel and hammer so it forms a seal and rests approximately 0.5-inches bgs.
    - Coil the wire and lay it flat on the ground surface. Collapse the soil above the plug, and place a whisker or flag for later sample recovery.

- For asphalt/concrete covered locations, hang the coil of wire over the top and outside of the pipe.
    - Plug the top of the hole with the aluminum foil. Using the tapping dowel and hammer, push the aluminum foil into the hole so it forms a seal and rests approximately 0.25-inches bgs.
    - Plug the top of the hole with a thin concrete patch (approximately 0.25-inches thick) to temporarily seal the Sampler in the ground.

- Record the field sample ID, sample number, date and time of placement, sampling hole depth, type of surfacing, and other relevant information on the COC.

- Repeat at next location.

3. PSG Sampler Retrieval

- At the end of the sampling period (typically between 3 to 14 days depending on project specific objectives), return to the sample location.

- Use a screwdriver or hammer and chisel to remove the concrete patch, as needed. Using a screwdriver, remove the aluminum foil plug and retrieve the sampler.

- Holding the sampler upright, clean the sides of the sampler vial with the clean towel. Remove the sampling cap and cut the wire from the sampler vial with wire cutters. Clean the vial threads with the gauze cloth.

- Screw the solid cap on the sampler vial. With a ballpoint pen, record the sample number, corresponding to the sample location, on the cap's label. Do not use a Sharpie marker to record.

- Return the sampling cap to the sampling cap container.

- Place the sealed and labeled sampler vial in a sampler bag. Using a ballpoint pen, record the sample number on the sampler bag.

- Place the individually bagged and labeled sampler into the return shipment bag. Up to 30 samplers and 1 trip blank can be placed into 1 return shipment bag.

- Record the sampler location, date and time of retrieval, and other relevant information on the COC.

- Fill the borehole with granular bentonite, hydrated in place, and complete the surface to match surrounding conditions.

- Ship the BESURE^{TM} sampling collection kits and associated passive sampler vials with the chain-of-custody form to the contracted laboratory for analysis via express delivery. Include any field blanks within the sample kit during shipment. Affix a new custody seal on the kit and note the ID on the COC. *Note: No ice or preservatives are required for shipment.*

1. Sample Identification Verification and COCs

It is important to verify all samples are properly labeled and all information provided on the COC(s) is accurate before relinquishing samples to the laboratory. Specify desired analysis on the COC.

2. Transportation and Shipment to Laboratory

Ensure all samples are securely packaged as initially received from the manufacturer. Samples should be protected from extreme temperatures during shipment. Obtain a copy of the signed COC once the samples have been relinquished to the laboratory.

STANDARD OPERATING PROCEDURE 5.1
FOR COLLECTION OF SOIL SAMPLES
FOR LABORATORY ANALYSIS

Date: May 5, 2000

1.0 PURPOSE

The purpose of this Standard Operating Procedure (SOP) is to establish guidelines for the collection of soil samples for laboratory analysis. This SOP is applicable to soil samples collected from split-spoon samplers during drilling, hand auger samples, grab samples from stockpiled soils, surface samples, test pit samples, etc.

2.0 CONSIDERATIONS

Soil samples may be collected in either a random or biased manner. Random samples can be based on a grid system or statistical methodology. Biased samples can be collected in areas of visible impact or suspected source areas. Soil samples can be collected at the surface, shallow subsurface, or at depth. When samples are collected at depth the water content should be noted, since generally “soil sampling” is restricted to the unsaturated zone. Equipment selection will be determined by the depth of the sample to be collected. A thorough description of the sampling locations and proposed methods of sample collection should be included in the work plan.

Commonly, surface sampling refers to the collection of samples at a 0 to 6 inch depth interval. Certain regulatory agencies may define the depth interval of a surface sample differently, and this must be defined in the work plan. Collection of surface soil samples is most efficiently accomplished with the use of a stainless steel trowel or scoop. For samples at greater depths a decontaminated bucket auger or power auger may be needed to advance the hole to the point of sample collection. Another clean bucket auger should then be used to collect the sample. To collect samples at depths of greater than approximately six feet the use of a drill rig and split spoon samples will usually be necessary. In some situations, sample locations are accessed with the use of a backhoe.

3.0 MATERIALS/EQUIPMENT

a. A work plan which outlines soil sampling requirements.

b. Field notebook, field form(s), maps, chain-of-custody forms, and custody seals.

c. Decontamination supplies (including: non-phosphate, laboratory grade detergent, buckets, brushes, potable water, distilled water, regulatory-required reagents, aluminum foil, plastic sheeting, etc.).

d. Sampling device (split-spoon sampler, stainless steel hand auger, stainless steel trowel, etc.).

e. Stainless steel spoons or spatulas.

f. Disposable sampling gloves.

g. Laboratory-supplied sample containers with labels.

h. Cooler with blue or wet ice.

i. Plastic sheeting.

j. Black pen and indelible marker.

k. Zip-lock bags and packing material.

l. Tape measure.

m. Paper towels or clean rags.

n. Masking and packing tape.

o. Overnight (express) mail forms.

4.0 DECONTAMINATION

All reusable sampling equipment will be thoroughly cleaned according to the decontamination SOP. Where possible, thoroughly pre-cleaned and wrapped sampling equipment should be used and dedicated to individual sampling locations. Disposable items such as sampling gloves, aluminum foil, and plastic sheeting will be changed after each use and discarded in an appropriate manner.

5.0 PROCEDURE

5.1 Prior to collecting soil samples, ensure that all sampling equipment has been thoroughly cleaned according to the decontamination SOP. If samples are to be collected at depth, then the boring must be advanced with thoroughly cleaned equipment to the desired sampling horizon and a different thoroughly cleaned sampler must be used to collect the sample.

5.2 Using disposable gloves and a pre-cleaned, stainless steel spatula or spoon, extract the soil sample from the sampler, measure the recovery, and separate the wash from the true sample. Where allowed by regulatory agency(ies), disposable plastic spoons may be used.

5.3 Place the sample in a laboratory-supplied, pre-cleaned sample container. This should be done as quickly as possible and this is especially important when sampling for volatile organic compounds (VOCs). Samples to be analyzed for VOCs must be collected prior to other constituents.

5.4 The sample container will be labeled with appropriate information such as, client name, site location, sample identification (location, depth, etc.), date and time of collection, and sampler's initials.

5.5 Using the remaining portion of soil from the sampler, log the sample in detail and record sediment characteristics (color, odor, moisture, texture, density, consistency, organic content, layering, grain size, etc.).

5.6 If soil samples are to be composited in the field, then equal portions from selected locations will be placed on a clean plastic sheet and homogenized. Alternately, several samples may be submitted to the laboratory for compositing by weight. The method used is dependent upon regulatory requirements. Specific compositing procedures shall be approved by the appropriate regulatory agency and described in the work plan. Samples to be analyzed for VOCs will not be composited unless required by a regulatory agency.

5.7 After the sample has been collected, labeled, and logged in detail, it is placed in a zip-lock bag and stored in a cooler at 4°C.

5.8 A chain-of-custody form is completed for all samples collected. One copy is retained and two are sent with the samples in a zip-lock bag to the laboratory. A custody seal is placed on the cooler prior to shipment.

5.9 Samples collected from Monday to Friday are to be delivered to the laboratory within 24 hours of collection. If Saturday delivery is unavailable, samples collected on Friday must be delivered by Monday morning. Check the work plan to determine if any analytes require a shorter delivery time.

5.10 The field notebook and appropriate forms should include, but not be limited to the following: client name, site location, sample location, sample depth, sample identification, date and time collected, sampler’s name, method of sample collection, number and type of containers, geologic description of material, description of decontamination procedures, etc. A site map should be prepared with exact measurements to each sample location in case follow-up sampling is necessary.

5.11 All reusable sampling equipment must be thoroughly cleaned in accordance with the decontamination SOP. Following the final decontamination (after all samples are collected) the sampling equipment is wrapped in aluminum foil. Discard any gloves, foil, plastic, etc. in an appropriate manner that is consistent with site conditions.

END OF PROCEDURE

Date: Version 3: Prepared October 2022

Subject: **Standard Operating Procedure for Collection of Soil Vapor Samples for Laboratory Analysis Using a Helium Shroud**

Purpose

The purpose of this Standard Operating Procedure (SOP) is to establish guidelines for the collection of soil vapor samples into SUMMA® canisters using a helium shroud. This SOP is applicable to soil vapor sampling from vapor probes installed into the subsurface. Sampling procedures were developed in accordance with the Department of Toxic Substances Control (DTSC) 2015 Soil Gas Advisory.

Considerations

- Soil vapor samples should not be collected during or within the 5 days following a significant rain event (defined as 0.25-inches of rainfall or greater during a 24-hour period).
- Soil vapor sampling may occur within 5 days of a significant rain event in areas beneath high-integrity pavement where water infiltration has not occurred.
- Soil vapor samples should not be collected in areas where standing water is observed or if water is visible in the probe tubing.
- Samples should not be collected if there has been a spill of a potentially hazardous chemical near, at or on the sample port.
- Probe tubing, termination valves, well boxes, and well box covers should be inspected for cracks or damage prior to sampling and should be replaced as necessary.

Equipment and Materials

1. Site-specific Health and Safety Plan (HASP) with Job Safety Analysis (JSAs);
2. Field notebook, field note form(s) and logs, Site maps, boring logs, purge-volume calculation sheets, chain-of-custody (COC) forms, and custody seals;
3. 1-liter batch-certified SUMMA® canisters with 200 milliliters per minute (mL/min) flow controllers (check project specific requirements for sample container sizes);
4. SUMMA® fittings and attachments provided by laboratory: threaded Swagelok nuts, ferrules, manifolds/flow controllers, three way vales, and “T” splitter(s) if collecting duplicate samples;
5. Sample train components: 3-way and 1-way stopcock valves, rigid ¼-inch Nylaflow® and flexible Tygon® or silicone tubing, and Teflon® tape;
6. Tubing snips/scissors;
7. Two 9/16-inch crescent wrenches to tighten and loosen SUMMA® connections;
8. 9/16-inch and 1/2-inch socket wrenches to open/close well boxes (if applicable);
9. Disposable Nitrile sampling gloves;
10. Resealable Ziplock bag and clean rag;
11. Helium bottle & shroud for use as a leak check compound;
12. Helium detectors;
13. Purge SUMMA® canister(s) with 200 mL/min flow controller or 60 mL syringe with 3-way valve;

14. Connection lines for helium detectors, helium bottle, and purge cannister;
15. Ball point pen (do not use Sharpies);
16. Stop watch or timer; and
17. QT Vacuum gage.

Decontamination

To prevent cross-contamination, sampling equipment that comes in contact with soil vapor during the sample collection step (see Step 6 below) should not be reused to collect soil vapor samples from different probes. Equipment that should not be reused during sampling generally includes anything that soil vapor would pass through on its way to the sample canisters. This includes manifolds/flow controllers, threaded Swagelok nuts, ferrules, tubing, 1-way and 3-way valves.

Portions of the sample train that are "downstream" of the sample canister, may be reused between samples as these portions of the sample train are not used during sample collection. This includes the purge pump, syringe, pressure gauge and the valves and tubing that attach these components.

Disposable items such as sampling gloves, used tubing, and valves will be changed after each use and discarded in an appropriate manner.

Procedures

1. Shipment Received/Retrieved from Laboratory

Ensure all requested SUMMA® canisters and associated helium shroud equipment are included in shipment. Verify each canister has a minimum vacuum of 25-inches of mercury (in Hg) and the open/close valves are turned to the "closed" position. Make sure the fittings on the canisters and the manifolds/flow controllers are compatible.

2. Equilibration Period and Purge Volume Calculations

- Prior to purging, ensure the appropriate equilibration period has been observed after probe installation (for newly installed probes).
- A default of three purge volumes (PVs) should be extracted from the probe to remove stagnant air.
- Calculate the PV based on the probe construction specifications using the PV calculation worksheet.

<u>Note</u>*:*

For vapor probes installed vertically, one PV includes the following:

- the volume of the sand pack surrounding the probe tip,
- the void space of the dry bentonite in the annular space above and/or below the sand pack, and
- the internal volume of the probe and sample train tubing and the probe tip.

For vapor probes installed horizontally underneath a building as part of the VIMS, one PV includes:

- the internal volume of the probe and sample train tubing, and
- the probe tip.
- .

3. Conduct Shut-in Test

Insert well line to the larger diameter tubing on the well side of the manifold with the 3-way line in the purge position:

- Connect SUMMA® cannister tubing to 3-way valve (e.g., closed end) and conduct shut-in test for one minute or longer per DTSC guidance 4.2.1
- After a successful shut-in test, the gauge level should not be altered. The vacuum gauge should be calibrated and sensitive enough to indicate a water pressure change of 0.5 inches.
- Connect the ¼" tube from the well to the threaded end of the flow controller with the swage nut compression fitting using a 9/16" wrench.

Use the QT Vacuum gauge to check the initial vacuum of the sample canister. An acceptable sample canister should start at -30"Hg / - 30psi.

4. Set Up Enthalpy Helium Shroud Kit

Use the 3 provided lines to make the following 4 connections:

- The end marked "Helium Supply" to the helium bottle using a 9/16" wrench.
- The end marked "Helium detector inlet" to the upper line on the flow-through helium detector by twisting the end of the line on firmly to the lure lock.
- The end marked "Helium detector outlet" to the lower line on the flow-through helium detector by twisting the end of the line on firmly. Do not cut these lines, do not disassemble lures.
- The end marked "To flow controller while purging" to the flow controller using the quick-connectors.

5. Preparing the Shroud and Ring

- Place the end of the line currently attached to the helium bottle (marked "Open End Under Shroud") resting close to the flow controller.
- Place the ambient helium detector close to the flow controller.
- Checking that the 3 way is set to purge, connect the sampling canister to your flow controller.
- Use a chain to form a ring large enough to enclose the flow controller, well head, ambient helium detector, open end of the helium line, and sample canister.
- Adjust the chain so that it conforms to your terrain for best performance. Make sure that there are no gaps in the circumference of the shroud edges. Lines going into and out of the ring should pass under the chain.
- Position the helium bottle, flow-through helium detector, and 6L purge canister outside of the shroud. Make sure that the end of the line marked "Purge Can" will easily reach the quick connect fitting on the top of the can. Do not attach the line to the can.
- Per section 4.2.3 of DTSC guidance a default of 3 purge volumes should be used in order to make sure stagnant air is removed from the well, ensuring that the sample is representative. The lab can provide a calculation spreadsheet to account for well conditions if you do not have one.
- Note the approximate layout of your system and remove the chain.

- Place the included plastic clear tarp flat over the components that will be inside of the ring.

- Replace the chain, creating the shroud pocket. Pull tight to conserve helium and minimize area of shroud atmosphere.

6. Purging and Leak Check

- Turn each helium detector on by moving the silver toggle switches to the up position. The LCD display will turn on immediately. Allow the readings on the meters to settle to an accurate reading for about 10 seconds after turning them on. A small amount of fluctuation at rest is normal.

- Open and close the valve on top of the helium bottle momentarily to introduce a small blast of helium into the shroud. It should take no more than 3 blasts to achieve 20%.

- Observe the reading on the helium detector inside of the shroud. It will start responding immediately to the helium. Wait a few seconds until the reading levels out to get a stable reading.

- Helium will slowly escape from the shroud over time, especially in windy or uneven topography of the terrain (i.e. tall grass). This is normal. While using the system, add small amounts of helium as needed to maintain the ideal 20-40% helium concentration.

- With the shroud charged with the 20-40% charged with helium, connect the hooked end of the line (labeled “Purge Can”) to the purge can with the quick-connect fittings. This will begin purging immediately.

- Extract 3 PVs from the sampling system (as determined in Step 2). Note the vacuum readings during purging.

- $Purge\ time\ (seconds) = \left[\frac{3\text{ PV (mL)}}{200\left(\frac{\text{mL}}{\text{min}}\right)}\right] x\ 60\ seconds/min$

- Watch your flow through helium detector closely, if there is readings immediately then there is a poor connection within the shroud.

- If there are readings after 1-2 well volumes this is indicative of poor seal at the well head resulting in helium being sucked down to sample point and back up through the system. In this instance re-evaluate seal of well head.

- Monitor both helium detectors for the duration of the purging process. Introduce more helium if the inner detector falls below 20%.

- After the determined purge time has elapsed, detach the line from the purge cannister to stop purging. You are able to do a quantitative check of the volume purged by viewing the gauge. For every 5” Hg of vacuum decrease, 1 L vapor has been collected within the Summa canister. A single purge can perform 30-40 minutes of continuous purging, and can be moved from well to well without risk of cross contamination.

7. Sample Collection

- Turn the valve to sample without removing the shroud. Sampling has begun. Be sure to monitor helium as well as down hole gauge. If down hole gauge exceeds <7” Hg you are dealing with a tight soil formation and may not be able to collect a full liter. One should also expect longer sampling times in these field conditions.

- Monitor the right-hand gauge of the flow controller, which is now displaying the vacuum in the sample canister.

- Detach the canister from the flow controller when the right-hand gauge reading has fallen to about 5” Hg.

- The sample is complete. The whole helium system may be moved to the next well to complete. A clean flow controller must be used at each well. Reminder to turn off detectors when not monitoring.

8. Sample Identification Verification and COCs

It is important to verify all samples are properly labeled and all information provided on the COC(s) is accurate before relinquishing samples to the laboratory. Specify desired analysis on the COC, including the helium leak check compound (or other designated compound) as a separate analysis.

9. Transportation and Shipment to Laboratory

Ensure all samples are securely packaged as initially received from the laboratory. All manifolds/flow controllers should be removed from the SUMMA® canisters and dust caps should be replaced prior to shipment.   Samples should be protected from extreme temperatures during shipment. Obtain a copy of the signed COC once the samples have been relinquished to the laboratory.

STANDARD OPERATING PROCEDURE 4.2
FOR MEASURING WATER LEVELS USING AN ELECTRONIC SOUNDING DEVICE (M-SCOPE)

Date: May 5, 2000

1.0 PURPOSE

The purpose for this standard operating procedure (SOP) is to establish the guidelines for using m-scopes. A m-scope is an electronic sounding device used to measure the depth to ground water below an established (surveyed) measuring point (MP). Measuring the depth to water (DTW) below the surveyed MP provides information for calculating ground-water elevations needed to construct ground-water elevation maps and determine the direction of ground-water flow.

M-scopes can be less accurate than a steel tape because the wire can kink, measurement increment marks can shift, and the tip may have been cut off and replaced without proper documentation. Thus, it is mandatory that a m-scope be calibrated before use.

2.0 DECONTAMINATION

The m-scope must be pre-cleaned (decontaminated) using a non-phosphate, laboratory-grade solution and rinsed with copious amounts of distilled or deionized water. This process is repeated before each measurement and following the final measurement.

3.0 CALIBRATION

The m-scope must be calibrated before being used to measure water levels. Calibration is accomplished by measuring the water level with the m-scope followed by a measurement using a steel tape. This dual measurement procedure is continued until the individual is confident that measurements taken using both devices are similar and the m-scope is reliable. The calibration procedure is documented in the field notebook or on an appropriate field form, and initialed and dated.

4.0 PROCEDURE

4.1 If the well is not vented, then remove the cap and wait several minutes for the water level to equilibrate. Take several measurements to ensure that the water level measured is in equilibrium with the aquifer (i.e., not changing substantially).

4.2 The manufacturer's model must be noted because some have switches, lights, beepers, or a combination of the above.

4.3 The 1-foot or 5-foot marked intervals on the electrical line must be checked to ensure that they have not shifted, and the bottom of the probe has not been cut. Check on a periodic basis that the cord has not kinked.

4.4 The water-level measurement is taken by lowering the probe into the well until the instrument-specific detection method (e.g., light, beeper, or both) is activated by contacting the water.

4.5 The electrical line is held at the MP and, using a ruler (e.g., carpenter's folding ruler) or an engineer's scale, the distance from the "held" point to the nearest marked interval is measured. The distance measured is added to, or subtracted from, the marked interval reading. The result is the DTW.

4.6 Measurements will be taken accurately and to the nearest 0.01 foot.

4.7 After measuring all wells in an area, always re-measure at least one well, preferably the first well measured, to see if the static water level has changed (e.g., due to pumping in the area, tidal effects, etc.). If a significant change has occurred, it may be necessary to re-measure other wells.

4.8 If there are previous water-level measurements available for the wells, then have these data available to compare the measurements with those just taken. Use these data to see if water levels are similar or if they have changed. If water levels have changed, then check if the changes are consistent (i.e., all up or all down) and make sense.

4.9 Water-level elevations are calculated by subtracting the DTW from the MP and a water-elevation map is constructed (contoured) on a well location map. This also provides a check to evaluate if the water levels make sense (or anomalies are evidenced). Re-measure the well(s) where anomalies are found as a check on the initial measurement(s).

4.10 If anomalies persist or water-level trends are different from the historical database, then check to see if hydrogeologic conditions and/or stresses have changed (e.g., discharge areas, pumping and/or injection wells, etc.).

4.11 All pertinent data will be documented in the field notebook, and initialed and dated.

END OF PROCEDURE

Date: May 5, 2000

1.0 PURPOSE

The purpose for this standard operating procedure (SOP) is to establish the guidelines for purging a well prior to the collection of a ground-water sample. Purging (evacuating) a well involves the removal of the standing column of water in the well to allow “fresh” (representative) formation water to enter the well. Two conventionally used methods for well purging include: 1) discharge of a specified number of casing volumes of water (which is more commonly used); and 2) pumping until specific indicator parameters (e.g., specific conductance, pH, temperature) stabilize. Wells must be purged prior to sampling to ensure the collection of representative formation ground water for water-quality analysis.

For accepted, existing sampling and analysis programs, the same purging method will be used each time to maintain consistency. For new sampling and analysis programs, the basis for the purging technique(s) will be site-specific field conditions, client input, the experience of Roux Associates, Inc. and regulatory agency(ies) guidelines (e.g., some states permit purging a low-yield well to dryness while others insist that some water remains in the well).

2.0 EQUIPMENT AND MATERIALS

2.1 The following equipment may be needed to purge a monitoring well before sampling:

a. Bailers.

b. Centrifugal pumps.

c. Electrical submersible pumps.

d. Peristaltic pumps.

e. Positive gas-displacement devices.

f. Bladder pumps.

g. Hand-operated diaphragm or bilge pump(s).

h. Teflon™ tape, electrical tape.

i. Tape measure (stainless steel, steel, fiberglass) with 0.01-foot measurement increments and chalk (e.g., blue carpenter’s) or m-scope.

j. Appropriate discharge hose and valves.

k. Appropriate discharge tubing (e.g., polypropylene) if using a peristaltic pump.

l. Appropriate compressed gas if using bladder-type or gas-displacement device.

m. Extension cord(s) or portable generator (and fuel) if using an electric submersible pump.

n. Non-absorbent cord (e.g., polypropylene, etc.), cotton (absorbent) cord.

o. Tripod(s).

p. Water Well Handbook.

q. Explosimeter.

r. Flow meter.

2.2 Bailers or centrifugal pumps are recommended for shallow, small diameter monitoring wells. For deep wells, or large diameter wells, a submersible pump is recommended.

3.0 DECONTAMINATION

Each piece of equipment that is used to evacuate wells (e.g., bailers, pumps, hoses) will be decontaminated thoroughly prior to the introduction of the equipment into the well and prior to leaving the site. Additionally, disposable items (e.g., cord, tubing) will be changed between each well purged and discarded in an appropriate manner.

4.0 PROCEDURE

4.1 The depth to water (DTW) is measured and subtracted from the sounded (total) depth of the well to calculate the length of the column of standing water in the well (in feet).

4.2 The volume of the standing water in the well is calculated by multiplying the length of standing water by a coefficient which equates the diameter of the well to gallons per linear foot. (Refer to the attached table from the Water Well Handbook for the coefficient or use the following equation [V=(7.48 gal/ft3)(r2h), where V is volume of water in gallons, r is the radius of the well casing in feet, and h is the height of the water column in the well in feet].)

4.3 If purging is performed by evacuating a specified number of casing volumes, then three to five volumes are purged (typical regulatory agency requirement).

4.4 If wells are screened in low permeability formations, then the well may go dry prior to removing the specified volume of water. If the recovery rate is fairly rapid and time allows, then remove more than one casing volume; otherwise, the evacuation of one casing volume may suffice. (Refer to the site sampling and analysis plan [SAP] for details of purging a low-yield well.)

4.5 Evacuation will occur from the top of the water column in the well to ensure that "fresh" formation water enters the bottom of the well through the screen, moves up as standing water is removed from the top, and all standing water is removed (i.e., only representative formation water is in the well).

4.6 The volume of water purged from the well must be measured and can be calculated directly by discharging into containers of known volume or can be calculated by multiplying rate of flow by time.

4.7 If a submersible or centrifugal pump is used, then the intake is set just below the dynamic (pumping) water level in the well. The rate of flow in gallons per minute (gpm) can be measured using a calibrated bucket (e.g., 5-gallon) if the rate is relatively low, or a 55-gallon drum if the rate is relatively high, and a watch capable of measuring time in second intervals. A precalibrated flow meter may also be used if available.

4.8 After the specified number of casing volumes have been evacuated from the well, the pump intake is lifted slowly until it breaks suction to confirm that any standing water above the intake has been purged.

4.9 If a bailer is used, then the bailer is lowered only deep enough to remove water from the top of the water column and a 5-gallon bucket is used to measure the volume of water evacuated.

4.10 If purging is not executed by evacuating a specified number of well volumes, then purging is performed by pumping or bailing the well until specific indicator parameters (e.g., specific conductance, pH, temperature) stabilize. The volume of water removed is documented on an appropriate field form or in the field notebook.

4.11 Water purged from the well will be disposed of in accordance with the appropriate method outlined in the site SAP.

4.12 If historic site data indicate that explosive gases could be present and accumulate in the well, then an explosimeter will be used to check vapor concentrations in wells at the site prior to beginning the purging procedure. Vapor concentrations in a well that exceed the 25 percent lower explosive limit (LEL) will require specific precautionary measures to allow purging the well without danger of explosion or fire (e.g., use of cotton cord for bailers or lowering pumping devices, non-electric powered pumps). These conditions will be addressed in the site health and safety plan (HASP) and/or SAP.

END OF PROCEDURE

Date: May 5, 2000

1.0 PURPOSE

The purpose of this standard operating procedure (SOP) is to establish guidelines for the sampling of ground-water monitoring wells for dissolved constituents. As part of the SOP for the sampling of ground-water monitoring wells, sample collection equipment and devices must be considered, and equipment decontamination and pre-sampling procedures (e.g., measuring water levels, sounding wells, and purging wells) must be implemented. Sampling objectives must be firmly established in the work plan before considering the above.

Valid water-chemistry data are integral to a hydrogeologic investigation that characterizes ground-water quality conditions. Water-quality data are used to evaluate both current and historic aquifer chemistry conditions, as well as to estimate future conditions (e.g., trends, migration pathways). Water-quality data can be used to construct ground-water quality maps to illustrate chemical conditions within the flow system, to generate water-quality plots to depict conditions with time and trends, and to perform statistical analyses to quantify data variability, trends, and cleanup levels.

2.0 EQUIPMENT AND MATERIALS

2.1 In order to sample ground water from monitoring wells, specific equipment and materials are required. The equipment and materials list may include, but not necessarily be limited to, the following:

a. Bailers (Teflon™ or stainless steel).

b. Pumps (centrifugal, peristaltic, bladder, electric submersible, bilge, hand-operated diaphragm, etc.).

c. Gas-displacement device(s).

d. Air-lift device(s).

e. Teflon™ tape, electrical tape.

f. Appropriate discharge hose.

g. Appropriate discharge tubing (e.g., polypropylene, teflon, etc.) if using a peristaltic pump.

h. Appropriate compressed gas if using bladder-type or gas-displacement device.

i. Portable generator and gasoline or alternate power supply if using an electric submersible pump.

j. Non-absorbent cord (e.g., polypropylene, etc.).

k. Plastic sheeting.

l. Tape measure (stainless steel, steel, fiberglass) with 0.01-foot measurement increments and chalk (blue carpenter's).

m. Electronic water-level indicators (e.g., m-scope, etc.) or electric water-level/product level indicators.

n. Non-phosphate, laboratory-grade detergent.

o. Distilled/Deionized water.

p. Potable water.

q. Paper towels, clean rags.

r. Roux Associates' field forms (e.g., daily log, well inspection checklist, sampling, etc.) and field notebook.

s. Well location and site map.

t. Well keys.

u. Stop watch, digital watch with second increments, or watch with a second hand.

v. Water Well Handbook.

w. Calculator.

x. Black pen and water-proof marker.

y. Tools (e.g., pipe wrenches, screwdrivers, hammer, pliers, flashlight, pen knife, etc.).

z. Appropriate health and safety equipment, as specified in the site health and safety plan (HASP).

aa. pH meter(s) and buffers.

bb. Conductivity meter(s) and standards.

cc. Thermometer(s).

dd. Extra batteries (meters, thermometers, flashlight).

ee. Filtration apparatus, filters, pre-filters.

ff. Plasticware (e.g., premeasured buckets, beakers, flasks, funnels).

gg. Disposable gloves.

hh. Water jugs.

ii. Laboratory-supplied sample containers with labels.

jj. Cooler(s).

kk. Ice (wet, blue packs).

ll. Masking, duct, and packing tape.

mm. Chain-of-custody form(s) and custody seal(s).

nn. Site sampling and analysis plan (SAP).

oo. Site health and safety plan (HASP).

pp. Packing material (e.g., bubble wrap)

qq. "Zip-lock" plastic bags.

rr. Overnight (express) mail forms.

3.0 DECONTAMINATION

3.1 Make sure all equipment is decontaminated and cleaned before use (refer to the SOP for Decontamination of Field Equipment for detailed decontamination methods, summaries for bailers and pumps are provided below). Use new, clean materials when decontamination is not appropriate (e.g., non-absorbent cord, disposable gloves). Document, and initial and date the decontamination procedures on the appropriate field form and in the field notebook.

a. Decontaminate a bailer by: 1) wearing disposable gloves, 2) disassembling (if appropriate) and scrubbing in a non-phosphate, laboratory-grade detergent and distilled/deionized water solution, and 3) rinsing first with potable water and then distilled/deionized water.

b. Decontaminate a pump by: 1) wearing disposable gloves, 2) flushing the pump and discharge hose (if not disposable) first with a non-phosphate, laboratory-grade detergent and potable water solution in an appropriate container (clean bucket, garbage can, or 55-gallon drum) and then with distilled/deionized water or potable water, and 3) wiping pump-related equipment (e.g., electrical lines, cables, discharge hose) first with a clean cloth and detergent solution and then rinsing or wiping with a clean cloth and distilled/deionized water or potable water.

3.2 Note that the decontamination procedures for bailers and pumps are the minimum that must be performed. Check the work plan to determine if chemicals specified by individual state regulatory agencies must also be used for decontamination procedures (e.g., hexane, nitric acid, acetone, isopropanol, etc.).

4.0 CALIBRATION OF FIELD ANALYSIS EQUIPMENT

Calibrate field analysis equipment before use (e.g., thermometers, pH and conductivity meters, etc.). Refer to the specific SOP for field analysis for each respective piece of equipment. Document, and initial and date the calibration procedures on the appropriate field form, in the field notebook, and in the calibration log book.

5.0 PROCEDURE

5.1 Document, and initial and date well identification, pre-sampling information, and problems encountered on the appropriate field form and in the field notebook as needed.

5.2 Inspect the protective casing of the well and the well casing, and note any items of concern such as a missing lock, or bent or damaged casing(s).

5.3 Place plastic sheeting around the well to protect sampling equipment from potential cross contamination.

5.4 Remove the well cap or plug and, if necessary, clean the top of the well off with a clean rag. Place the cap or plug on the plastic sheeting. If the well is not vented, allow several minutes for the water level in the well to equilibrate. If fumes or gases are present, then diagnose these with the proper safety equipment. Never inhale the vapors.

5.5 Measure the depth to water (DTW) from the measuring point (MP) on the well using a steel tape and chalk or an electronic sounding device (m-scope). Refer to the specific SOPs for details regarding the use of a steel tape or a m-scope for measuring water levels. Calculate the water-level elevation. Document, and initial and date the information on the appropriate field form and in the field notebook.

5.6 Measuring the total depth of the well from the MP with a weighted steel tape. Calculate and record the volume of standing water in the well casing on the appropriate field form and in the field notebook.

5.7 Decontaminate the equipment used to measure the water level and sound the well with a non-phosphate, laboratory-grade detergent solution followed by a distilled/deionized water rinse.

5.8 Purge the well prior to sampling (refer to the SOP for Purging a Well). The well should be pumped or bailed to remove the volume of water specified in the work plan. Usually three to five casing volumes are removed if the recharge rate is adequate to accomplish this within a reasonable amount of time.

If the formation cannot produce enough water to sustain purging, then one of two options must be followed. These include: 1) pumping or bailing the well dry, or 2) pumping or bailing the well to "near-dry" conditions (i.e., leaving some water in the well). The option employed must be specified in the work plan and be in accordance with regulatory requirements.

If the well is purged dry, then all the standing water has been removed and upon recovery the well is ready for sampling. However, depending on the rate of recovery and the time needed to complete the sampling round, one of the following procedures may have to be implemented: 1) the well may have to be sampled over a period of more than one day; 2) the well may not yield enough water to collect a complete suite of samples and only select (most important) samples will be collected; or 3) the well may not recover which will preclude sampling. Regardless of the option that must be followed, the sampling procedure must be fully documented. When preparing to conduct a sampling round, review drilling, development and previous sampling information (if available) to identify low-yielding wells in order to purge them first, and potentially allow time for the well to recover for sampling.

5.9 Record the physical appearance of the water (i.e., color, turbidity, odor, etc.) on the appropriate field form and in the field notebook, as it is purged. Note any changes that occur during purging.

5.10 If a bailer is used to collect the sample, then:

a. Flush the decontaminated bailer three times with distilled/deionized water.

b. Tie the non-absorbent cord (polypropylene) to the bailer with a secure knot and then tie the free end of the bailer cord to the protective casing or, if possible, some nearby structure to prevent losing the bailer and cord down the well.

c. Lower the bailer slowly down the well and into the water column to minimize disturbance of the water surface. If a bottom-filling bailer is used, then do not submerge the top of the bailer; however, if a top-filling bailer is used, then submerge the bailer several feet below the water surface.

d. Remove and properly discard one bailer volume from the well to rinse the bailer with well water before sampling. Again, lower the bailer slowly down the well to the appropriate depth depending on the bailer type (as discussed above in 5.11 c). When removing the bailer from the well, do not allow the bailer cord to rest on the ground but coil it on the protective plastic sheeting placed around the well. Certain regulatory agencies require that the first bailer volume collected be utilized for the samples.

5.11 If a pump is used to collect the sample, then use the same pump used to purge the well and, if need be, reduce the discharge rate to facilitate filling sample containers and to avoid problems that can occur while filling sample containers (as listed in Number 5.14, below). Alternately, the purge pump may be removed and a thoroughly decontaminated bailer can be used to collect the sample.

5.12 Remove each appropriate container's cap only when ready to fill each with the water sample, and then replace and secure the cap immediately.

5.13 Fill each appropriate, pre-labeled sample container carefully and cautiously to prevent: 1) agitating or creating turbulence; 2) breaking the container; 3) entry of, or contact with, any other medium; and 4) spilling/splashing the sample and exposing the sampling team to contaminated water. Immediately place the filled sample container in a ice-filled (wet ice or blue pack) cooler for storage. If wet ice is used it is recommended that it be repackaged in zip-lock bags to help keep the cooler dry and the sample labels secure. Check the work plan as to whether wet ice or blue packs are specified for cooling the samples because certain regulatory agencies may specify the use of one and not the other.

5.14 "Top-off" containers for volatile organic compounds (VOCs) and tightly seal with Teflon™-lined septums held in place by open-top screw caps to prevent volatilization. Ensure that there are no bubbles by turning the container upside down and tapping it gently.

5.15 Filter water samples (Procedure 4.6) collected for dissolved metals analysis prior to preservation to remove the suspended sediment from the sample. If water samples are to be collected for total metals analysis, then collect a second set of samples without field filtering.

In the event that the regulatory agency(ies) want unfiltered samples for metals analysis, a second set of filtered samples should also be collected. Because unfiltered samples are indications of total metals (dissolved and suspended) they are not representative of aquifer conditions because ground water does not transport sediment (except in some rare cases). Thus, the results for dissolved metals in ground water should be based on filtered samples even if both filtered and unfiltered sets are presented in a report.

5.16 Add any necessary preservative(s) to the appropriate container(s) prior to, or after (preferred), the collection of the sample, unless the appropriate preservative(s) have already been added by the laboratory before shipment.

5.17 Collect quality control (QC) samples as required in the work plan to monitor sampling and laboratory performance. Refer to the SOP for Collection of Quality Control Samples.

5.18 Conduct field analyses after sample collection is complete by measuring and recording the temperature, conductivity, pH, etc. (as called for in the work plan). Note and record the "final" physical appearance of the water (after purging and sampling) on an appropriate field form and in the field notebook.

5.19 Wipe the well cap with a clean rag, replace the well cap and protective cover (if present). Lock the protective cover.

5.20 Verify that each sample is placed in an individual "zip-lock" bag, wrapped with "bubble wrap," placed in the cooler, and that the cooler has sufficient ice (wet ice or blue packs) to preserve the samples for transportation to the analytical laboratory.

5.21 Decontaminate bailers, hoses, and pumps as discussed in the decontamination SOP. Wrap decontaminated equipment with a suitable material (e.g., clean plastic bag or aluminum foil). Discard cords, rags, gloves, etc. in a manner consistent with site conditions.

5.22 Complete all necessary field forms, field notebook entries, and the chain-of-custody forms. Retain one copy of each chain-of-custody form. Secure the cooler with sufficient packing tape and a custody seal.

5.23 Samples collected from Monday through Friday will be delivered within 24 hours of collection. If Saturday delivery is not available, samples collected on Friday must be delivered by Monday morning. Consult the work plan to determine if any of the analytes require a shorter delivery time.

END OF PROCUDURE

STANDARD OPERATING PROCEDURE 4.6
FOR FILTRATION OF GROUNDWATER AND SURFACE-WATER SAMPLES FOR DISSOLVED METALS ANALYSIS

Date: May 5, 2000

1.0 PURPOSE

The purpose of this standard operating procedure (SOP) is to establish guidelines for the field filtration of groundwater samples for dissolved metals analysis prior to sample preservation. Filtering is implemented when the water sample contains suspended fine-grained materials (fines) that cannot be prohibited from entering the water sample by well development or well design. However, as fines are not always distinctly visible in the water sample, all water samples to be analyzed for dissolved metals will undergo filtration. Groundwater samples from bedrock formations to be analyzed for dissolved metals must also be filtered.

It should be noted that filtration of groundwater for metals analysis has been a standard practice with the United States Geological Survey (USGS) for many years. However, it should also be noted that certain regulatory agencies insist that groundwater samples for metals analysis are not filtered. In this case, the analytical results are actually representative of total metals (i.e., dissolved and suspended). Nevertheless, in order to quantify the concentrations of dissolved metals in groundwater, filtration will be employed.

Within this framework, filtration refers to the filtering of water either directly or at the end of a filtration series through a 0.45 micrometer (micron) membrane filter. The presence of a large quantity of fines may require the prefiltering of the sample with a larger-size membrane filter prior to the 0.45 micron filter to avoid clogging the 0.45 micron filter and using an exorbitant amount of time to filter the sample.

Filtration must be done as soon as possible after a water sample is collected, preferably at the same time that the water is produced. If there is a delay between the time that the water sample is collected and the time that filtration occurs, then the time lag and reason for the delay must be documented. The filtering equipment and membrane must be suitable for the intended analysis. Where permitted by regulatory agencies, disposable in-line filters and disposable funnel-type filters may be used. Depending upon the sampling needs, sterile disposable filtering devices may be preferable since they eliminate the need for field decontamination. Materials known to adversely affect the analytical procedure must not be used. The site sampling and analysis plan (SAP) must be referred to for these and other site specific filtration conditions.

In the event that surface water is being analyzed for dissolved metals, the filtration process described below is also used.

2.0 MATERIALS AND EQUIPMENT

To field filter groundwater samples, specific equipment and materials are required. The equipment and materials listed below may be needed in addition to the materials and equipment listed in various sampling SOPs.

a. Non-phosphate, laboratory-grade detergent.

b. Distilled/Deionized water.

c. Potable water.

d. Field forms (e.g., daily log, sampling, etc.) and field notebook.

e. Filtration apparatus (e.g., disposable plastic filtering apparatus, disposable in-line filters, Gelman apparatus, Buchner funnel, etc.), filters, prefilters.

f. Plasticware (e.g., premeasured buckets, beakers, flasks, funnels).

g. Teflon™ tape.

h. Vacuum pump (e.g., hand-operated or electric).

i. Appropriate tubing and fittings.

j. Disposable gloves.

k. Sample jars with appropriate preservative (e.g., nitric acid) and labels.

3.0 DECONTAMINATION

3.1 Decontamination is not necessary if sterile, disposable plastic filtering equipment is utilized. If applicable, it may be useful to collect a distilled water field blank through a representative disposable filter to demonstrate proper "decontamination." If re-usable filtering equipment is being used, the following is the minimum decontamination procedure:

a. Wear disposable gloves while cleaning filtering equipment to avoid contamination and change gloves as needed.

b. Prepare a non-phosphate, laboratory-grade detergent solution and distilled or deionized water in a bucket.

c. Remove vacuum tubing from flask.

d. Remove filter membrane from funnel.

e. Disassemble filtering apparatus (flask and funnel) and scrub each piece of equipment with a brush and solution.

f. Rinse with potable water.

g. Rinse with copious amounts of distilled or deionized water.

h. Allow to dry and wrap equipment with a suitable material (e.g., clean plastic bag) in preparation for the next use.

3.2 The decontamination procedure must consider regulatory agency(ies) specifications which must be provided in the site SAP, and may include decontamination variations such as nitric acid rinses, acetone rinses, etc.

4.0 PROCEDURE

4.1. Ensure that the filtering equipment is disposable and dedicated or is properly decontaminated before each use.

4.2. Assemble the filtering apparatus (funnel and flask), and connect the vacuum pump in case it is needed to augment gravity filtration.

4.3. Place a clean (new) 0.45-micron pore-size filter in the funnel. Use larger, pore-size filters if prefiltering is required (i.e., if significant suspended sediment is present that would quickly clog the 0.45-micron filter and prevent continuous filtration or result in excessive time for filtration).

4.4. Obtain the water sample using an appropriate, decontaminated sample-collection device (e.g., bailer, pump).

4.5. Pass the unpreserved water sample through the 0.45 micron filter into the flask. If the sample contains significant sediment, then pass it through a prefilter before using the 0.45 micron filter. Apply a vacuum using the vacuum pump if needed to facilitate filtering.

4.6. Transfer the filtered water sample to the appropriate, prelabeled sample container containing the preservative (e.g., nitric acid) being careful not to overfill the container and dilute the preservative.

4.7. Follow standard operating procedures for sample documentation, shipping, and tracking (i.e., record keeping).

4.8. Decontaminate all reusable filtering (and sampling) equipment that came in contact with the water sample. Properly disposal of all non-reusable equipment in a manner appropriate with site conditions.

APPENDIX F

Field Sampling Forms

Boring/Well ID:

Client/Proj: ____

Site Name: ____ Drilling Co/Driller: ____

Start Date: ____ Drill Method: ____

Start Time: ____ Sampler Type: ____

End Date: ____ Logged By: ____

End Time: ____ Checked By: ____

Boring Diameter: ____

Total Depth of Boring: ____

Well Diam./Material: ____

Depth of Well: ____

Screened Interval: ____

Screen Slot Size: ____

▼ Initial Water Depth: ____

▽ Static Water Depth: ____

Measuring Point Elev.: ____

Ground Surface Elev.: ____

Stick-up/Flush-mount: ____

Soil Description

% gravel, % sand (fine, med, coars), % fines; density (sand/gravel) - VL, L, MD, D, VD (silt/clay) - VS, S, MST, ST, VST, H; mositure (D, M, W, S); angularity (R, SR, SA, A); plastic (NP, SP, P, VP, EH); grading (W, M, P); odor

Supplementary Descriptors/Observations:
- Nature of deposit (fill, topsoil, geologic formation, etc.)
- Maximum gravel diameter
- Cementation
- Structure
- Presence of mica, shells, roots/root holes, organic material, etc.
- Sand/gravel angularity
- Staining
- Odor (mention only if organic or unusual or if NONE)
- Caving or sloughing of borehole
- Difficult drilling

Relative Percentages
"some" = 30 to 45%
"little" = 15 to 25%
"few" = 5 to 10%
"trace" = 0 to 5%

Roll Test for Fine Grained Soils:
- If sample breaks easily it contains little clay (=SILT)
- If it can be rolled into a thread of 1/8" in diameter without breaking, it contains clay (=SILT/CLAY)
- If the thread can be rolled and re-rolled it likely contains mostly clay (=CLAY)

Depth (feet)	Sample Interval	Blow Counts	Recovery Length (Inches)	OVM/PID (ppm)	Soil Description	USCS Classification	Boring/Well Completion Details	Depth (feet)

Notes:

Location of Boring:

GROUNDWATER SAMPLING FORM

Project Name ______________________ Well No. ______________________

Project Number ______________________ Well Type ☐Monitor ☐Extraction ☐Other ______________

Recorded By ______________________ Sampled by ______________________ Date ______________

WELL PURGING

PURGE VOLUME

Well casing diameter

☐ 2-inch ☐ 4-inch ☐Other ________

Well Total Depth (TD, ft. below TOC) : ________

Depth to Water (WL, ft. below TOC) : ________

Depth to free phase hydrocarbons (FP, ft. below TOC) : ________

Number of casing volumes to be purged

☐ 4 ☐ 10 ☐Other ________

PURGE METHOD

☐Bailer \ Type ______________________

☐Pump \ Type ______________________

☐Other ______________________

PUMP INTAKE

☐Near top Depth (ft) ________

☐Near Bottom Depth (ft) ________

☐Other ______________________

PURGE VOLUME CALCULATION

________ X ________ X ________ = ________ gals

Water Column Length Multiplier No. Vols CALCULATED PURGE VOLUME

Total Purge Time ________ (Multiplier : 2" = 0.17, 4" = 0.66, 6" = 1.5) ________ gals ACTUAL PURGE VOLUME

Recharge Rate ________ Purge Rate ________

GROUNDWATER PARAMETER MEASUREMENTS Meter Type ______________________

Time / Gallons	pH	Cond. (mmhos/cm)	Temp ☐deg C ☐deg F	Turbidity (NTU)	Color / Odor Remarks
/					
/					
/					
/					
/					
/					
/					
/					

Comments during well purge ______________________

Purge water storage/disposal ☐Drummed onsite ☐Other ________

WELL SAMPLING

SAMPLING METHOD Date/Time Sampled ________ / ________

Bailer - Type ☐ ________ Sample port ☐ Other ☐ ________

GROUNDWATER SAMPLE PARAMETER MEASUREMENTS Meter Type ______________________

Date / Time / % Recharge	pH	Cond. (mmhos/cm)	Temp ☐deg C ☐deg F	Turbidity (NTU)	Color / Odor Remarks
/ /					

SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments

QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.
Trip	
Rinsate	
Transfer	
Other:	

ROUX

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OAKLAND, CALIFORNIA 94621
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PASSIVE SOIL GAS SAMPLERS LOG

PROJECT NAME: 7825 San Leandro Street
PROJECT NO.: 1793.0030
WEATHER CONDITIONS:

	Field Sample ID	Start Date	Start Time	Stop Date	Stop Time	Sampling Hole Depth (inches)	Surface Type (Soil, Asphalt, Concrete, Gravel)	Notes
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

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Soil Vapor Sampling Log

Site:

Date:

Sample ID:

Samplers:

Summa Canister ID:

Sample Manifold ID:

Helium Monitor Make/Model:

Shut-In Test

	Time	Vacuum (in Hg)	
Shut-In Start			**Vacuum must be held for at least 1 minute**
Shut-In End			

Pre-Sample Purge and Helium Leak Test

Purging Method:

Purging Notes:

	Time	Vacuum (in Hg)	Flow Rate (mL/min)	Volume Purged (mL)
Purge Start				
1 Purge Volume				
3 Purge Volumes				

Minimum Helium Detected in Shroud (% v):

Maximum Helium Detected in Purge Line (% v):

Sample Collection

	Time	Vacuum (in Hg)	Helium in Shroud (%v)	Notes
Sample Start				
Sample End				

Notes:

APPENDIX G

TTLC, STLC, and TCLP Threshold Trigger Values

Table G-1
TTLC/STLC/TCLP Threshold Trigger Values

Analyte	TTLC Limit (mg/kg)	STLC Trigger (mg/kg)	STLC Limit (mg/L)	TCLP Trigger (mg/kg)	TCLP Limit (mg/L)
Metals					
Antimony	500	150	15	--	--
Arsenic	500	50	5	100	5
Barium	10,000	1,000	100	2,000	100
Beryllium	75	7.5	0.75	--	--
Cadmium	100	10	1	20	1
Chromium (III)	2,500	50	5	100	5
Chromium (VI)	500	50	5	--	--
Cobalt	8,000	800	80	--	--
Copper	2,500	250	25	--	--
Lead	1,000	50	5	100	5
Mercury	20	2	0.2	4	0.2
Molybdenum	3,500	3,500	350	--	--
Nickel	2,000	200	20	--	--
Selenium	100	10	1	20	1
Silver	500	50	5	100	5
Thallium	700	70	7	--	--
Vanadium	2,400	240	24	--	--
Zinc	5,000	2,500	250	--	--
Volatile Organics					
Benzene	--	--	--	10	0.5
2-Butanone (MEK)	--	--	--	4000	200
Carbon Tetrachloride	--	--	--	10	0.5
Chlorobenzene	--	--	--	2000	100
Chloroform	--	--	--	120	6
1,2-Dichloroethane	--	--	--	10	0.5
1,1-Dichloroethene	--	--	--	14	0.7
Tetrachloroethene	--	--	--	14	0.7
Trichloroethene	2040	2040	204	10	0.5
Vinyl Chloride	--	--	--	4	0.2
Semivolatile Organics					
1,4-Dichlorobenzene	--	--	--	2.6	7.5
2,4-Dinitrotoluene	--	--	--	2.6	0.13
Hexachlorobenzene	--	--	--	10	0.13
Hexachlorobutadiene	--	--	--	60	0.5
Hexachloroethane	--	--	--	4000	3
2-Methylphenol	--	--	--	4000	200
3-Methylphenol	--	--	--	4000	200
4-Methylphenol	--	--	--	40	200
Nitrobenzene	--	--	--	2000	2
Pentachlorophenol	17	17	1.7	100	100
Pyridine	--	--	--	8000	5

Table G-1
TTLC/STLC/TCLP Threshold Trigger Values

Analyte	TTLC Limit (mg/kg)	STLC Trigger (mg/kg)	STLC Limit (mg/L)	TCLP Trigger (mg/kg)	TCLP Limit (mg/L)
2,4,5-Trichlorophenol	--	--	--	40	400
2,4,6-Trichlorophenol	--	--	--		2
Pesticides/PCB/Herbicides					
Aldrin	1.4	1.4	0.14	--	--
g-BHC (Lindane)	4	4	0.4	8	0.4
Chlordane	2.5	2.5	0.25	0.6	0.03
DDD, DDE, DDT	1	1	0.1	--	--
Dieldrin	8	8	0.8	--	--
Endrin	0.2	0.2	0.02	0.4	0.02
Heptachlor	4.7	4.7	0.47	0.16	0.008
Kepone	21	21	2.1	--	--
Methoxychlor	100	100	10	200	10
Mirex	21	21	2.1	--	--
PCB's	50	50	5	--	--
Toxaphene	5	5	0.5	10	0.5
2,4-D	100	--	10	--	10
2,4,5-TP (Silvex)	10	--	1	--	1

Notes:

mg/L = milligrams per liter
mg/kg = milligrams per kilogram
PCB = polychlorinated biphenyl
STLC = Soluble Threshold Limit Concentration
TCLP = Toxicity Characteristic Leaching Procedure
TTLC = Total Threshold Limit Concentration