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GROUNDWATER CLEANUP REPORT

SOUTH LAKE UNION BLOCK 43 SITE
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

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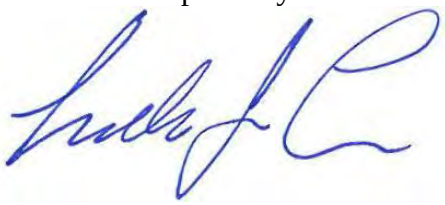

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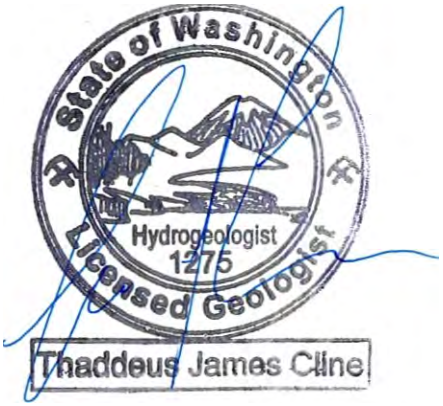

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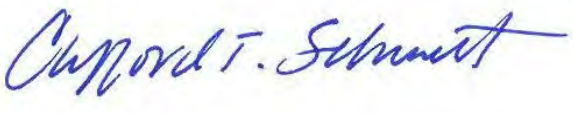

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1.0 INTRODUCTION

Farallon Consulting, L.L.C. (Farallon) has prepared this Groundwater Cleanup Report on behalf of Washington Builders LLC (Washington Builders) to summarize the actions taken to remediate groundwater at the South Lake Union Block 43 Site. The South Lake Union Block 43 Site (herein referred to as the Block 43 Site) consists of all areas where a hazardous substance released at the Block 43 Property have come to be located. The Block 43 Property is the property located at 601 Westlake Avenue North in Seattle, Washington (Figures 1 and 2). The Block 43 Property has been redeveloped with a new 223,960-square-foot multi-story commercial building (Building) that includes four below-grade levels constructed to as deep as 12 feet below mean sea level (msl) (North American Vertical Datum 1988), approximately 42 feet below ground surface (bgs).

The hazardous substances released at the Site include total petroleum hydrocarbons (TPH) as gasoline-range organics (GRO), TPH as diesel-range organics (DRO), and TPH as oil-range organics (ORO); benzene, toluene, ethyl benzene, and xylenes (BTEX); carcinogenic polycyclic aromatic hydrocarbons (cPAHs) (soil only); and arsenic, cadmium (soil only), mercury (soil only), and lead (collectively referred to as the constituents of concern [COCs]). These COCs are associated with releases from former automotive uses (repairs and fueling) and were mostly confined to soil and shallow groundwater at the Block 43 Property. The lateral and vertical extent of these COCs in soil and groundwater both on and off the Block 43 Property constitute the "site" for purposes of the Washington State Model Toxics Control Act and its associated Cleanup Regulations (together, MTCA), as established in Chapter 173-340 of the Washington Administrative Code (WAC 173-340).

Construction of the Building required excavation and removal of all soil to depths ranging from 12 feet above msl in the western portion of the Block 43 Property to 12 feet below msl in the eastern portion of the Block 43 Property (20 to 42 feet bgs) with the exception of an approximately 300-square-foot area at the northeastern corner of the Block 43 Property that was not excavated during construction of the Building. Soil and groundwater in approximately the northern half of the unexcavated area of the Block 43 Property contain elevated concentrations of petroleum-related constituents (labeled as the pocket of residual contamination, Figure 3). The pocket of residual contamination extends vertically from the ground surface to the groundwater table at approximately 15 feet above msl (15 feet bgs). The *Soil Cleanup Report, South Lake Union Block 43 Site, Seattle, Washington* dated July 13, 2015, prepared by HWA Geoscience Inc. (2015) (Soil Report), summarizes the soil cleanup actions conducted at the Block 43 Property between November 2013 and February 2014.

The purpose of this Groundwater Cleanup Report is to describe groundwater conditions at the Block 43 Site, summarize the actions taken to remediate groundwater at the Block 43 Property, and describe the interim cleanup action being conducted to address the pocket of residual contamination. Upon completion of the interim cleanup action and confirmation that concentrations of COCs in soil and groundwater samples collected from the pocket of residual

contamination meet cleanup standards or that remediation has occurred to the extent practicable, a Closure Report will be prepared and submitted to the Washington State Department of Ecology (Ecology) together with a request that Ecology issue a written Property-specific No Further Action determination that no further remedial action is necessary at the Block 43 Property.

The cleanup actions at the Block 43 Site have been conducted as independent cleanup actions in accordance with MTCA. The Block 43 Site was enrolled in the Ecology Voluntary Cleanup Program (VCP) effective May 15, 2015, and assigned VCP Project Identification No. NW2973. The Facility/Site No. is 32368748 and the Contaminated Site Identification No. is 12637.

This Groundwater Cleanup Report is organized into the following sections:

- **Section 2—Background.** This section provides a description of the Block 43 Site location and features and a summary of the completed cleanup action for soil.
- **Section 3—Conceptual Site Model.** This section provides a summary of the conceptual site model, which consists of a description the hydrogeology, media of concern and COCs, extent of residual contamination, and cleanup standards.
- **Section 4—Groundwater Impacts Attributable to Unrelated Site.** This section presents an overview of impacts that migrated to the Block 43 Site through groundwater from an unrelated source to the west.
- **Section 5—Future Interim Cleanup Action.** This section provides a summary of the planned interim cleanup action that is being conducted at the Block 43 Site.
- **Section 6—References.** This section provides a list of the source materials used in preparing this Groundwater Cleanup Report.
- **Section 7—Limitations.** This section presents Farallon's standard limitations associated with conducting the work reported herein and preparing this Groundwater Cleanup Report.

2.0 BACKGROUND

This section provides a description of the location and features at the Block 43 Property, and a summary of past cleanup actions conducted at the Block 43 Property.

2.1 BLOCK 43 PROPERTY LOCATION AND DESCRIPTION

The Block 43 Property is located at 601 Westlake Avenue North, in Seattle, Washington and is bounded on the south by Mercer Street, on the east by Westlake Avenue North, on the north by Broad Street, and on the west by 9th Avenue North. Office and commercial uses are located at north, northwest, southwest, and southeast of the Block 43 Property. Vacant land owned by the City of Seattle recently used as a construction lay-down yard is located west of the Block 43 Property. A ground-level paved parking lot is located to the east and a public park is situated to the northeast. Lake Union is approximately 200 feet to the northeast. Figures 2 and 3 show the Block 43 Property and surrounding areas.

The Block 43 Property is 53,869 square feet in area and was mostly vacant before construction of the Building. Former uses at the Block 43 Property include automobile wrecking, repair, and fueling; construction lay-down and storage; and a retail biofuel station (with aboveground fuel storage tanks) at the northeastern corner of the Block 43 Property. Washington Builders completed construction of the Building in September 2015 and the Building is slated for occupancy in December 2015.

Before 2009, the original Block 43 extended farther west and south. A 15- to 20-foot-wide section of the western portion of the block and approximately 60 feet of the southern portion of the block were acquired by the City of Seattle to facilitate widening of 9th Avenue North and Mercer Street, respectively. In addition, a narrow strip of land at the northeastern corner of the block was acquired adjacent to the pocket of residual contamination. The portion of the original Block 43 acquired by the City of Seattle is shown on Figure 2, except the narrow strip of land due to its limited size.

2.2 COMPLETED CLEANUP ACTION

The Soil Report describes the actions taken to investigate and clean up soil at the Block 43 Property. Approximately 120,200 tons of soil impacted by petroleum-related constituents and metals was excavated, and 12 underground storage tanks (USTs) were decommissioned and removed from the Block 43 Property between November 2013 and February 2014. Excavation occurred in 5- to 10-foot lifts in conjunction with construction of the Building. Contaminated soil was transported off the Block 43 Property for treatment or disposal. The cleanup actions described in the Soil Report were successful at removing all contaminated soil from the Block 43 Property except for the pocket of residual contamination in the northeastern corner.

3.0 CONCEPTUAL SITE MODEL

This section presents the conceptual site model for the Block 43 Site. The conceptual site model includes the hydrogeologic conditions, a description of the source areas, identification of the media and constituents of concern, discussion of the extent of contamination, and the cleanup standards applicable to the remedial actions conducted to date.

3.1 HYDROGEOLOGIC CONDITIONS

Three general stratigraphic units are encountered in the vicinity of the Block 43 Property. Figure 4 shows a cross-section from southwest to northeast across the Block 43 Property along a line shown on Figure 3. Appendices A and B present boring logs and well completion diagrams for on-Block 43 Property subsurface investigation locations and for select off-Block 43 Property locations, respectively. The shallowest stratum at the Block 43 Property consists of fill material with some lacustrine deposits comprising silty sand, sandy silt, and sand with variable gravel content from surface grade of approximately 30 feet above msl to approximately 10 feet above msl (20 feet bgs). This shallowest stratum was removed from the Block 43 Property during construction of the Building except for an approximately 300-square-foot area in the northeastern corner of the Block 43 Property where the pocket of residual contamination remains. Fill material includes wood and construction debris. This stratum is underlain by a dense intermediate unit of heterogeneous and anisotropic native weathered glacial till comprising silt, silty sand, and sandy silt to approximately 20 feet below msl (50 feet bgs). A poorly graded glacial outwash sand with minor silt is encountered below the intermediate unit at approximately 30 feet below msl extending to depths greater than 100 feet below msl (130 feet bgs) in the vicinity of the Block 43 Property. The glacial outwash has been noted to be underlain by very dense fine-grained soil during drilling in the vicinity of the Block 43 Property.

A shallow water-bearing zone in the vicinity of the Block 43 Property is typically encountered at approximately 15 to 20 feet above msl (10 to 15 feet bgs) within the upper fill layer, and extends to a depth of approximately 10 to 0 feet above msl (20 to 30 feet bgs) (Shallow Water-Bearing Zone). Groundwater levels in the Shallow Water-Bearing Zone fluctuate and have been measured as shallow as about 22 feet above msl. The Shallow Water-Bearing Zone was removed from the entire Block 43 Property during construction of the Building except for an approximately 300-square-foot area in the northeastern corner of the Block 43 Property where the pocket of residual contamination remains. An Intermediate Water-Bearing Zone is present from depths of approximately 10 feet above msl to 30 feet below msl (20 to 60 feet bgs) within the weathered till layer. A deep water-bearing zone is present at depths of approximately 30 feet below msl (60 feet bgs) in the poorly graded sand (Deep Outwash Aquifer).

Groundwater elevations calculated for monitoring wells screened in the three groundwater-bearing strata indicate a general downward vertical hydraulic gradient in areas northwest and in the vicinity of the Block 43 Property. The horizontal gradient has been measured to be generally easterly in the vicinity of the Block 43 Property but is affected by underground structures and dewatering systems in the area (Figure 5).

The occurrence and flow direction for groundwater was influenced for approximately 14 months beginning in November 2013 by dewatering activities conducted to facilitate construction of the Building. The construction dewatering system initially extracted groundwater from a series of 17 wells installed at the perimeter of the Block 43 Property in November and December 2013. The original set of dewatering wells was augmented by five additional dewatering wells installed in the interior of the Block 43 Property on February 8, 2014. Locations of dewatering wells are shown on Figure 6. The additional dewatering wells were designed to reduce the upward potentiometric head (water pressure) that was causing groundwater to exfiltrate into the central portion of the Building excavation. The screened interval of most of the dewatering wells extended from the Intermediate Water-Bearing Zone into the Deep Outwash Aquifer. Pumped water required treatment prior to discharge to Lake Union in accordance with National Pollution Discharge and Elimination System Permit No. WAR 301237.

Operation of the construction dewatering system commenced on November 8, 2013 at a low rate of extraction from a few dewatering wells. Pumping was initially from dewatering wells that were screened in the Shallow and Intermediate Water-Bearing Zones, but within a month of startup included dewatering wells screened in the upper portion of the Deep Outwash Aquifer. Over time and as new dewatering wells were installed and connected to the system, the daily amount of groundwater extracted gradually increased. By early January 2014, approximately 200,000 gallons per day (gpd) or 140 gallons per minute (gpm) were being extracted. This rate increased over the next month to 250,000 to 350,000 gpd as the excavation deepened and required further lowering of the groundwater potentiometric surface, and to over 400,000 gpd in March 2014. The peak groundwater extraction rate during construction of the Building was 543,455 gpd (377 gpm) on July 26, 2014, after which the extraction rate gradually declined to less than 100,000 gpd by late September 2014. The daily extraction rates fluctuated from just a few thousand gpd to over 190,000 gpd over the next several months until operation of the construction dewatering system was no longer necessary and the pumping ceased on December 15, 2014. The total amount of groundwater pumped and treated by the construction dewatering system was over 112,000,000 gallons. Table C-1 in Appendix C summarizes the volume of groundwater pumped daily and the cumulative volume of groundwater pumped during the construction project.

Until mid-February 2014, groundwater extraction rates were recorded for the entire construction dewatering system only at the influent to the water treatment system. Upon installation of the additional dewatering wells on February 8, 2014, extraction rates were recorded daily at each of the dewatering wells. Based on the extraction records, there was substantial variability in the rate of extraction at a specific well over time and between dewatering wells dependent on their capability to yield groundwater.

As a result of construction dewatering, the groundwater flow regime in the vicinity of the Block 43 Property was temporarily altered. Instead of a general easterly groundwater flow direction in the Shallow and the Intermediate Water-Bearing Zones and the Deep Outwash Aquifer, flow was radial toward the Block 43 Property during dewatering and for a limited period after dewatering as the water-bearing zones were recharged. The Shallow Water-Bearing

Zone was entirely dewatered and removed from the Block 43 Property except for an approximately 300-square-foot area in the northeastern corner of the Block 43 Property where the pocket of residual contamination remains. Most of the Intermediate Water-Bearing Zone also was dewatered and removed from within the boundary of the Block 43 Property during construction of the Building. Because of the steepened gradient of each water-bearing zone during construction dewatering, the velocity of groundwater flow was substantially increased in the vicinity of the Block 43 Property during construction dewatering.

COCs in groundwater at the Block 43 Property were completely removed with the soil matrix during excavation for construction of the Building. In addition, dewatering of the Shallow Water-Bearing Zone for approximately 14 months captured and removed COCs in groundwater emanating from on-property sources that migrated in groundwater off the Block 43 Property. The removal of petroleum-contaminated groundwater was documented by concentrations of benzene in influent samples to the dewatering treatment system. Concentrations of benzene in the dewatering treatment system influent ranged up to 31 micrograms per liter (µg/l) on February 25, 2014, then decreased to less than the laboratory practical quantitation limit of 1 µg/l before dewatering ceased in December 2014 (Table C-1 and Chart C-1 in Appendix C).

The Shallow Water-Bearing Zone was completely dewatered in the vicinity of the Block 43 Property during construction dewatering; therefore, for this period of time no petroleum-contaminated groundwater was present in the pocket of residual contamination at the northeastern corner of the Block 43 Property. After the dewatering system was shut down in December 2014, groundwater levels rose and the Shallow Water-Bearing Zone was re-established except within the Building footprint. The rising groundwater levels rewetted soil in the pocket of residual contamination, and groundwater in the northeastern corner of the Block 43 Property became recontaminated through contact with the COCs sorbed on soil (Figure 7 and Table 1).

The limited area of petroleum-contaminated groundwater in the Shallow Water-Bearing Zone that remains in the northeastern corner of the Block 43 Property will be treated during the upcoming interim cleanup action (Section 5). The dewatering wells were decommissioned by mid-2015 after dewatering ceased. With the exception of periods when construction dewatering is being conducted at other properties in the South Lake Union area, it is expected that the natural groundwater gradient and easterly flow direction will re-establish for the Shallow and Intermediate Water-Bearing Zones and the Deep Outwash Aquifer at the Block 43 Site.

3.2 SOURCE AREAS

The Soil Report summarizes historical uses of the Block 43 Property and the sources of the COCs that have been identified in soil and groundwater at the Block 43 Site. The COCs are attributable to operation of the former automotive repair and fueling facilities between approximately 1950 and 2009. According to an environmental investigation in 2000, four active USTs were present at the Block 43 Property ranging in capacity from 500 to 1,000 gallons and used to store heating oil and/or bunker C oil. In 2000, six active aboveground storage tanks

(ASTs) were present at the Block 43 Property ranging in capacity from 150 to 300 gallons and used to store water, new or used motor oil, antifreeze, and/or hydraulic oil. There were also several hydraulic lifts. The majority of these features were located in the central and southern portions of the Block 43 Property. In addition to the four USTs disclosed in the 2000 environmental investigation, eight additional abandoned USTs were discovered during excavation for construction of the Building. The location of all 12 USTs that were encountered and decommissioned at the Block 43 Property are shown on Figures 7 and 8.

The *Block 43 UST Site Assessment Report, Seattle, Washington* dated February 28, 2014, prepared by HWA Geoscience Inc. (2014), summarizes the USTs as follows:

- Northeast Area—Four USTs, two pressure tanks associated with distribution of UST contents
    - Suspected UST contents: gasoline
    - Range of approximate capacities: 300 to 525 gallons
- South Area—Four USTs, one pressure tank associated with distribution of UST contents
    - Suspected UST contents: gasoline and diesel
    - Range of approximate capacities: 500 to 2,700 gallons
- East Area—Four USTs
    - Suspected UST contents: gasoline and waste oil
    - Range of approximate capacities: 300 to 2,500 gallons
- Southeast Area—One UST
    - Suspected UST contents: heating oil
    - Approximate capacity: 2,000 gallons

According to the Soil Report, environmental investigations conducted at the Block 43 Property between 2000 and 2012 indicated the presence of petroleum-related constituents (DRO, GRO, and benzene), metals (lead, arsenic, cadmium, and mercury), and cPAHs at concentrations exceeding their MTCA Method A cleanup levels in shallow soil. According to Farallon's review of prior investigation reports, COCs detected at concentrations exceeding their MTCA Method A cleanup levels in soil samples collected from the Shallow Water-Bearing Zone were limited to DRO, GRO, benzene, ethyl benzene, xylenes, arsenic, and lead. The highest concentration of GRO-related COCs appeared to be in the northeastern portion of the Block 43 Property proximate to the former gasoline service station. Other relatively lower concentrations of GRO-related COCs were identified in the western, central, and southern portions of the Block 43 Property near former USTs and ASTs.

3.3 MEDIA AND CONSTITUENTS OF CONCERN AND EXTENT OF CONTAMINATION

The media of concern for the Block 43 Site are soil and groundwater. The COCs for a site consist of those hazardous substances that have been detected at concentrations exceeding MTCA cleanup levels in each medium of concern. The COCs for soil at the Block 43 Site are:

- GRO;
- DRO;
- ORO;
- BTEX;
- cPAHs;
- Arsenic;
- Cadmium;
- Lead; and
- Mercury.

The COCs for groundwater at the Block 43 Site are:

- GRO;
- DRO;
- Benzene, ethyl benzene, and xylenes;
- Arsenic; and
- Lead.

ORO, toluene, cPAHs, cadmium, and mercury were not detected at concentrations exceeding their MTCA Method A cleanup levels in any groundwater samples during any subsurface investigations conducted at the Block 43 Site. Therefore, these soil COCs are not retained as groundwater COCs.

HVOCs are not considered COCs for the Block 43 Site because there is no evidence that a release of HVOCs occurred at the Block 43 Property, and elevated concentrations of HVOCs encountered at the Block 43 Property were limited to samples collected from the Intermediate Water-Bearing Zone and Deep Outwash Aquifer, which migrated through groundwater from a source off the Block 43 Property (see Section 4.0 for further discussion of this other source). Analytical results for HVOCs in groundwater samples collected from the Shallow Water-Bearing Zone are listed in Table 2. Figure 8 shows HVOC analytical results for 14 soil and 7 groundwater samples collected at the Block 43 Property and near-adjacent areas before construction of the Building. Trichloroethene (TCE) was detected at a concentration of 0.0022

milligrams per kilogram in one soil sample collected from a soil boring completed southwest of the Block 43 Property, slightly exceeding the practical quantitation limit and considerably below the MTCA Method A cleanup level. Cis-1,2-dichloroethene (cis-1,2-DCE) was detected at concentrations considerably less than the MTCA Method B cleanup level in two groundwater samples collected from the Shallow Water-Bearing Zone at two locations within the southern part of the Block 43 Property. Other analytical data for soil and groundwater samples collected from the Block 43 Property prior to redevelopment were non-detect for HVOCs. These data do not indicate a release of HVOCs occurred at the Block 43 Property with the potential to impact the Intermediate Water-Bearing Zone or Deep Outwash Aquifer.

Before construction of the Building commenced, Block 43 Site-related COCs were identified in soil above 10 feet msl (20 feet bgs) and groundwater in the Shallow Water-Bearing Zone. Construction of the Building resulted in removal from the Block 43 Property of all soil and groundwater impacted by Block 43 Site-related COCs other than from the pocket of residual contamination in the northeastern corner of the Block 43 Property, which is the only area of the Block 43 Property where the Shallow Water-Bearing Zone was not removed during construction. The COCs that remain in the pocket of residual contamination are GRO and benzene in soil, and GRO, DRO and benzene in groundwater. Because none of the groundwater samples collected from wells in the pocket of residual contamination was analyzed for arsenic, it is not known if arsenic remains a COC for groundwater in this area. Figure 7 and Table 1 present the analytical results for soil and groundwater samples collected from within and adjacent to the pocket of residual contamination. Residual contamination likely extends a limited distance into Westlake Avenue North and Broad Street as shown on Figure 7. Soil and groundwater contamination are bounded in the natural down-gradient direction to the northeast by analytical results for samples collected at monitoring well MW-44, formerly located in Westlake Avenue North.

Residual contamination originating from releases at the Block 43 Property also is present adjacent to the southwestern boundary of the Block 43 Property where a shallow soil sample was collected within Mercer Street along the excavation sidewall for the Building. The sample was collected at a depth of a few feet bgs and contained ORO at concentrations exceeding the MTCA Method A cleanup level. Soil excavated and removed from the Block 43 Property adjacent to this sample location contained ORO to a maximum depth of 25 feet above msl (less than about 10 feet bgs). ORO was not detected concentrations exceeding the laboratory practical quantitation limit in soil samples collected from nearby locations SW (northwest), S2 (east), and FB-1, FB-2, and FB-3 (southwest to south). In addition, ORO was not detected at concentrations exceeding the laboratory practical quantitation limit in groundwater samples collected from boring Geo-10 to the northwest and monitoring wells K-MW-1 to the south and K-MW-2 to the east (Figure 7 and Table 1). These soil and groundwater analytical results demonstrate that the extent of ORO-contaminated soil in this area is very limited and groundwater was not impacted by the release to shallow soil.

3.4 CLEANUP STANDARDS

Under MTCA, cleanup standards consist of cleanup levels and points of compliance. The cleanup levels selected for COCs in soil and groundwater, listed above in Section 3.3, are MTCA Method A cleanup levels for unrestricted land use (WAC 173-340-900, Tables 720-1 for groundwater and 740-1 for soil). The points of compliance where cleanup levels will be achieved are the standard points of compliance, which for soil and groundwater are throughout the Block 43 Site.

4.0 GROUNDWATER IMPACTS ATTIBUTABLE TO UNRELATED SITE

Groundwater under and in the vicinity of the Block 43 Property is impacted by tetrachloroethene (PCE) and its degradation compounds TCE, isomers of dichloroethene (DCE), and vinyl chloride (collectively referred to as HVOCs) released at and from a former dry cleaning facility at 700 Dexter Avenue, known as American Linen Supply Co (American Linen). HVOCs have migrated through groundwater to the northeast, east, and south of the former American Linen facility and comprise a regional plume of unknown extent. This regional plume is herein referred to as the 700 Dexter HVOC Plume. The 700 Dexter HVOC Plume does not constitute the entire site affected by releases attributable to the former American Linen facility; that site is commonly known as the 700 Dexter Site. Conditions pertaining to the 700 Dexter Site are summarized in the *Draft Cleanup Action Plan, 700 Dexter Property, 700 Dexter Avenue North, Seattle, Washington* dated January 31, 2014, prepared by SoundEarth Strategies, Inc. (2014a) (700 Dexter Site DCAP).

According to the 700 Dexter Site DCAP, the 700 Dexter HVOC Plume is present in the Shallow and Intermediate Water-Bearing Zones and in the Deep Outwash Aquifer. The 700 Dexter HVOC Plume appears to have migrated farthest from the American Linen facility in the Deep Outwash Aquifer. The full lateral and vertical extent of the 700 Dexter HVOC Plume, particularly in the Deep Outwash Aquifer, has not been fully characterized.

HVOCs associated with the 700 Dexter HVOC Plume were present in the Deep Outwash Aquifer beneath the Block 43 Property before construction dewatering for the Building commenced. As described in Section 3.1, groundwater generally flows easterly in the Deep Outwash Aquifer, and flowed in this direction before Washington Builders LLC commenced construction dewatering at the Block 43 Property in November 2013. On January 13, 2014, approximately 8 weeks after construction dewatering at Block 43 Property began, SoundEarth Strategies, Inc. collected a groundwater sample from monitoring well MW-128 located approximately 80 feet east of the Block 43 Property. Monitoring well MW-128 is screened from approximately 32 to 42 feet below msl (60 to 70 feet bgs) at the top of the Deep Outwash Aquifer. Cis-1,2-DCE and vinyl chloride were detected at concentrations of 960 µg/l and 290 µg/l, respectively, in the groundwater sample collected from monitoring well MW-128. These concentrations substantially exceed the MTCA Method B and A cleanup levels selected in the 700 Dexter Site DCAP for cis-1,2-DCE and vinyl chloride of 16 µg/l and 0.2 µg/l respectively.

Under static (non-pumping) conditions, the location of monitoring well MW-128 would be hydraulically cross- and down-gradient of the Block 43 Property. As discussed in more detail in Section 3.0, construction dewatering at the Block 43 Property was initially conducted from wells screened in the Shallow and Intermediate Water-Bearing Zones (dewatering wells DP-1 through DP-3, DW-1, DW-4, DW-6, DW-7, DW-9, and DW-10), and later pumping occurred at additional dewatering wells screened in the lower portion of the Intermediate Water-Bearing Zone and upper portion of the Deep Outwash Aquifer (dewatering wells DP-4 through DP-10 and DP-16) from December 2013 through early February 2014 (Figure 6). An increase in the

rate of construction dewatering from wells screened in the Deep Outwash Aquifer did not occur until mid-February 2014, approximately 1 month after the sampling event at monitoring well MW-128 when substantially elevated concentrations of cis-1,2-DCE and vinyl chloride were confirmed at this deep monitoring well. The presence of high concentrations of cis-1,2-DCE and vinyl chloride in the Deep Outwash Aquifer at monitoring well MW-128 in January 2014 confirms that HVOCs associated with the 700 Dexter HVOC Plume had migrated beneath and east of the Block 43 Property before the initiation of construction dewatering at the Block 43 Property.

Washington Builders LLC designed, installed, and used a robust system to treat groundwater captured by the dewatering wells, and sampled the influent and effluent from the system on a daily basis. The treatment system substantially reduced the mass of HVOCs present in groundwater in the South Lake Union area due to the extraction and treatment of over 112,000,000 gallons of contaminated groundwater. Analytical results of the treatment system samples plus groundwater samples collected from dewatering wells demonstrated that HVOCs associated with the 700 Dexter HVOC Plume were being pulled back and westward toward the Block 43 Property once wells screened in the Deep Outwash Aquifer began pumping.

The HVOCs detected in groundwater captured in the dewatering wells did not originate from a source on the Block 43 Property. There is no evidence HVOCs were used or released at the Block 43 Property, and soil and groundwater sampling at the Block 43 Property before dewatering commenced did not detect HVOCs. The occurrence of HVOCs in the Deep Outwash Aquifer under the Block 43 Property appears to be solely due to the release of PCE at and from the former American Linen facility and its natural degradation into TCE, DCE isomers, and vinyl chloride as the plume migrated vertically downward and hydraulically down-gradient to the east. The HVOCs associated with the 700 Dexter Site are completely unrelated to the Block 43 Site and should have no bearing on regulatory closure for the Block 43 Site.

A more detailed discussion of regional groundwater data, the extent of the 700 Dexter HVOC Plume, and the actions taken by Washington Builders LLC to address the 700 Dexter HVOC Plume will be presented in a separate report.

5.0 FUTURE INTERIM CLEANUP ACTION

An interim action is planned to complete cleanup of the Block 43 Site-related COCs that remain in soil and groundwater in the pocket of residual contamination in the northeastern corner of the Block 43 Property, the only area of the Block 43 Property where the Shallow Water-Bearing Zone remains. The objective of the interim cleanup action is to treat the COCs using SVE and AS technologies to meet MTCA Method A cleanup levels. Achieving this objective should qualify the Block 43 Property for a Property-specific No Further Action determination because no COCs would remain within the boundaries of the Block 43 Property at concentrations exceeding applicable cleanup levels, and there is no material risk the Block 43 Property would be recontaminated by any Block 43 Site-related COCs that might remain beyond the Block 43 Property boundaries.

Subsurface components of the SVE/AS system were installed in May 2015 as shown on Figure 9. Two SVE wells were constructed of 2-inch-diameter Schedule 40 polyvinyl chloride (PVC) well casing with screens between 5 and 17 feet bgs. Four AS wells were constructed of 1-inch-diameter Schedule 40 PVC well casing with screens between 23 and 25 feet bgs and were fitted with 1-foot-long sumps. Conveyance piping was connected to each well-head and then routed through an available conduit beneath Westlake Avenue North to Block 37, where the piping was terminated. The SVE well surface completions were placed to match the final grade finish material in this area of the Block 43 Property. The AS wells and conveyance piping were completed below grade, with no ground-surface access vaults. The aboveground components of the SVE/AS system will be constructed at Block 37 after Washington Builders LLC completes its design.

During construction of the SVE/AS system, continuous soil samples were collected with split-spoon samplers driven in advance of the lead auger. Farallon field personnel observed subsurface conditions and retained 15 soil samples from selected intervals for testing by an analytical laboratory. Boring logs and well completion diagrams are included in Appendix A.

Groundwater samples were collected from the two SVE wells after installation and well development were completed using low-flow groundwater sampling techniques. Depth to groundwater was first measured in each SVE well to the nearest 0.01 foot using an electronic water-level measuring device from a surveyed measuring point on the top of the well casing. Each SVE well was then purged at a low-flow rate ranging from 100 to 300 milliliters per minute using a peristaltic or bladder pump and dedicated tubing. Temperature, pH, specific conductance, dissolved oxygen, and oxidation reduction potential were monitored during purging to determine when stabilization of these parameters occurred. Following stabilization of the parameters, groundwater samples were collected directly from the low-flow pump outlet.

Soil and groundwater samples were collected in laboratory-supplied containers, placed on ice in a cooler, and transported to OnSite Environmental Inc. of Redmond, Washington under standard chain-of-custody protocols for laboratory analysis. Analytical results for groundwater samples are presented in Table 1. Soil and groundwater analytical results are shown on Figure 9.

Future work for the interim cleanup action involves completing the design for the aboveground components of the SVE/AS system, constructing and starting up the system, and operating and maintaining the system. As part of the SVE/AS system design, a 1-day pilot test will be conducted to evaluate subsurface conditions for transmission of soil gas. The pilot test will include withdrawing soil gas under vacuum to evaluate conditions for SVE and injecting air under pressure to evaluate conditions for AS. The pilot test will be used to estimate the air flow rates, pressures, and volumes for design of aboveground components of the SVE/AS system. Design work will include preparation of a Compliance Monitoring Plan, identification of permit requirements, power specifications, and placement of equipment on Block 37.

Following start-up of the SVE/AS system, operation and maintenance tasks will be conducted and compliance monitoring will occur in accordance with the Compliance Monitoring Plan. Compliance monitoring is anticipated to include performance and confirmation soil and groundwater monitoring in the pocket of residual contamination. It is anticipated that up to 2 years of operation may be required to achieve cleanup levels in the pocket of residual contamination. A Closure Report will be prepared and submitted to Ecology after cleanup levels are achieved.

6.0 REFERENCES

HWA Geosciences, Inc. 2014. *Block 43 UST Site Assessment Report, Seattle, Washington.* Prepared for AIBS Building, LLC. February 28.

———. 2015. *Soil Cleanup Report, South Lake Union Block 43 Site, Seattle, Washington.* Prepared for Washington Builders LLC. July 13.

SoundEarth Strategies, Inc.. 2014. *Cleanup Action Plan—Draft for Ecology Review, 700 Dexter Property, 700 Dexter Avenue North, Seattle, Washington.* Prepared for Frontier Environmental Management. January 31.

———. 2014b. Letter Regarding Baseline Environmental Report, Phillips 66 Property, 600 Westlake Avenue North, Seattle, Washington. From Chuck C. Cacek and John R. Funderburk. To Maggie Capelle. December 3.

7.0 LIMITATIONS

The conclusions and recommendations contained in this report are based on professional opinions with regard to the subject matter. These opinions have been arrived at in accordance with currently accepted hydrogeologic and engineering standards and practices applicable to this location and are subject to the following inherent limitations:

- **Accuracy of Information.** Certain information utilized by Farallon in this report has been obtained, reviewed, and evaluated from various sources believed to be reliable, including the local health districts, fire departments, and the previously discussed interviews. Although Farallon's conclusions, opinions, and recommendations are based in part on such information, Farallon's services did not include the verification of its accuracy or authenticity. Should such information prove to be inaccurate or unreliable, Farallon reserves the right to amend or revise its conclusions, opinions, and/or recommendations.
- **Reconnaissance**. Farallon performed a reconnaissance of the site that is the subject of this report to document current conditions. Farallon focused on areas deemed more likely to exhibit hazardous materials conditions, while other areas received limited attention or were inaccessible at the time of our reconnaissance.

FIGURES

GROUNDWATER CLEANUP REPORT
South Lake Union Block 43 Site
601 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-020

REFERENCE: 7.5 MINUTE USGS QUADRANGLE WASHINGTON, DATED 2011

0 1,000 2,000 Feet

N

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FIGURE 1

PROPERTY VICINITY MAP
SOUTH LAKE UNION BLOCK 43 SITE
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: tperrin | Checked By: TC | Date: 10/8/2015 | Disc Reference:

Document Path: G:\Projects\397 Vulcan\GIS\BL43_Closure\397-020_Figure_1.mxd

VALLEY ST

AMERICAN LINEN FACILITY

700 DEXTER SITE

8TH AVE N

ROY ST

DEXTER AVE N

CITY PROPERTY

BROAD ST

9TH AVE N

BROAD ST

BLOCK 43

LOWEST FINISHED FLOOR = 15.0'

BOTTOM OF EXCAVATION = 12.0'

LOWEST FINISHED FLOOR = 2.0'

BOTTOM OF EXCAVATION = -2.0'

LOWEST FINISHED FLOOR = -7.0'

BOTTOM OF EXCAVATION = -12.0'

FORMER AREA OF BLOCK 43
ACQUIRED BY CITY OF SEATTLE (2009)

MERCER ST

WESTLAKE AVE N

VALLEY ST

BLOCK 37

TERRY AVE N

BLOCK 31

BLOCK 44

BLOCK 38

LEGEND

- PROPERTY BOUNDARY
- LIMIT OF EXCAVATION
- FORMER PROPERTY BOUNDARY (PRE-2009)
- ABOVE-GROUND BUILDING FOOT PRINT
- UNDERGROUND PARKING LEVELS

LOWEST FINISHED FLOOR = 7.0' = FINAL ELEVATIONS OF UNDERGROUND PARKING AND EXCAVATIONS IN FEET MEAN SEA LEVEL

N

0 100

Scale in Feet

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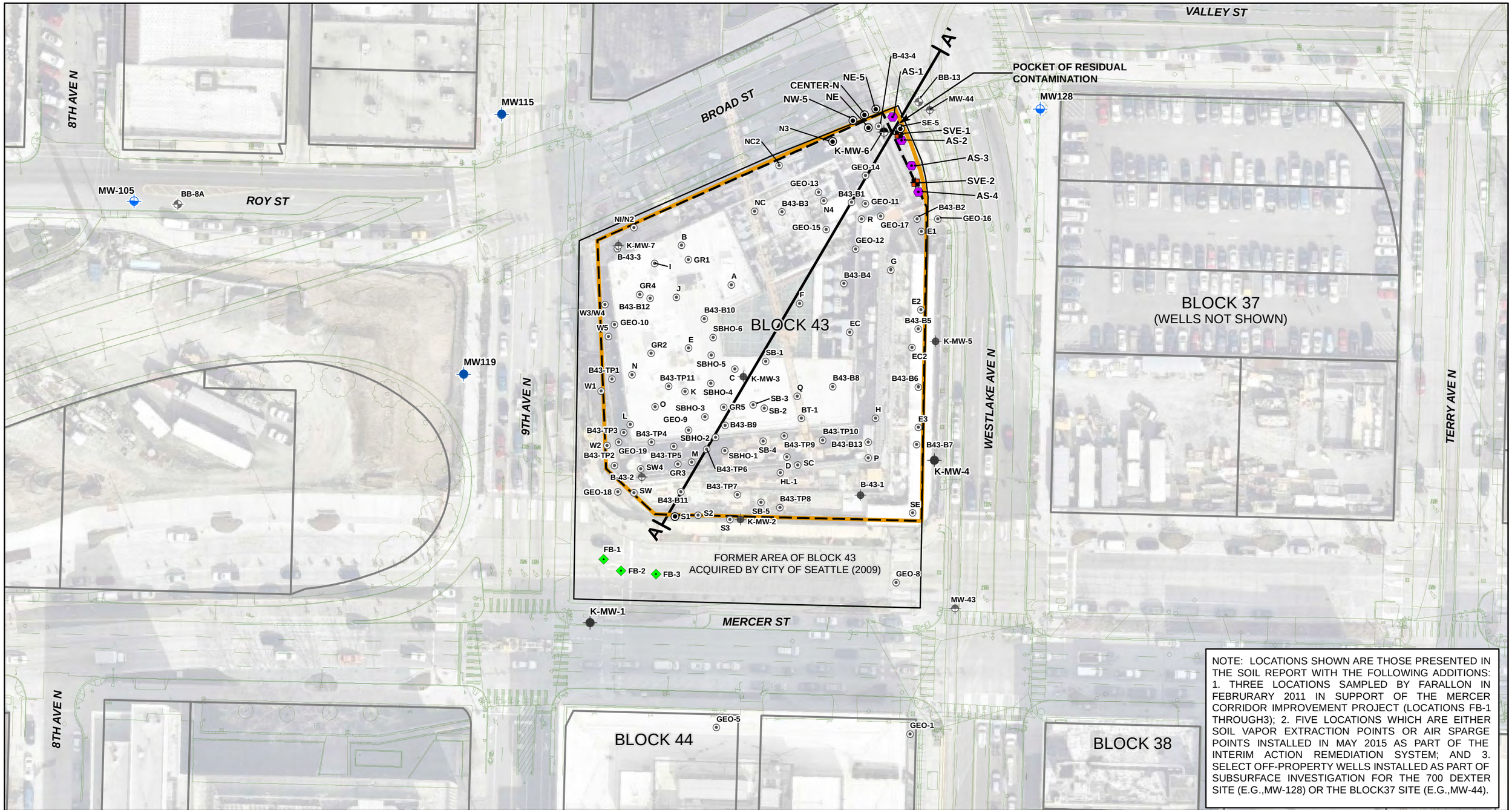
FIGURE 2

PROPERTY PLAN
SOUTH LAKE UNION BLOCK 43 SITE
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: tperrin | Checked By: TC | Date: 10/9/2015 | Disc Reference:

Document Path: G:\Projects\397 Vulcan\GIS\BL43 Closure\397-020 Figure 2.mxd



NOTE: LOCATIONS SHOWN ARE THOSE PRESENTED IN THE SOIL REPORT WITH THE FOLLOWING ADDITIONS: 1. THREE LOCATIONS SAMPLED BY FARALLON IN FEBRURARY 2011 IN SUPPORT OF THE MERCER CORRIDOR IMPROVEMENT PROJECT (LOCATIONS FB-1 THROUGH3); 2. FIVE LOCATIONS WHICH ARE EITHER SOIL VAPOR EXTRACTION POINTS OR AIR SPARGE POINTS INSTALLED IN MAY 2015 AS PART OF THE INTERIM ACTION REMEDIATION SYSTEM; AND 3. SELECT OFF-PROPERTY WELLS INSTALLED AS PART OF SUBSURFACE INVESTIGATION FOR THE 700 DEXTER SITE (E.G.,MW-128) OR THE BLOCK37 SITE (E.G.,MW-44).

LEGEND

- SHALLOW WATER-BEARING ZONE WELL
- DECOMMISSIONED SHALLOW WATER-BEARING ZONE WELL
- INTERMEDIATE WATER-BEARING ZONE WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
- DEEP OUTWASH AQUIFER WELL
- SB-1 SAMPLE LOCATION IDENTIFIER
- **K-MW-1** BOLD DENOTES THE SAMPLE LOCATION IS CURRENT
- DECOMMISSIONED MONITORING WELL
- SOIL BORING OR SAMPLE LOCATION
- AIR SPARGE WELL
- VAPOR EXTRACTION / MONITORING WELL
- TEST PIT
- PROPERTY BOUNDARY
- LIMIT OF EXCAVATION
- FORMER PROPERTY BOUNDARY (PRE-2009)
- PRE-MERCER CORRIDOR WIDENING SURVEY LINE
- KING COUNTY PARCELS
- A — A' CROSS SECTION

N

0 60
Scale in Feet

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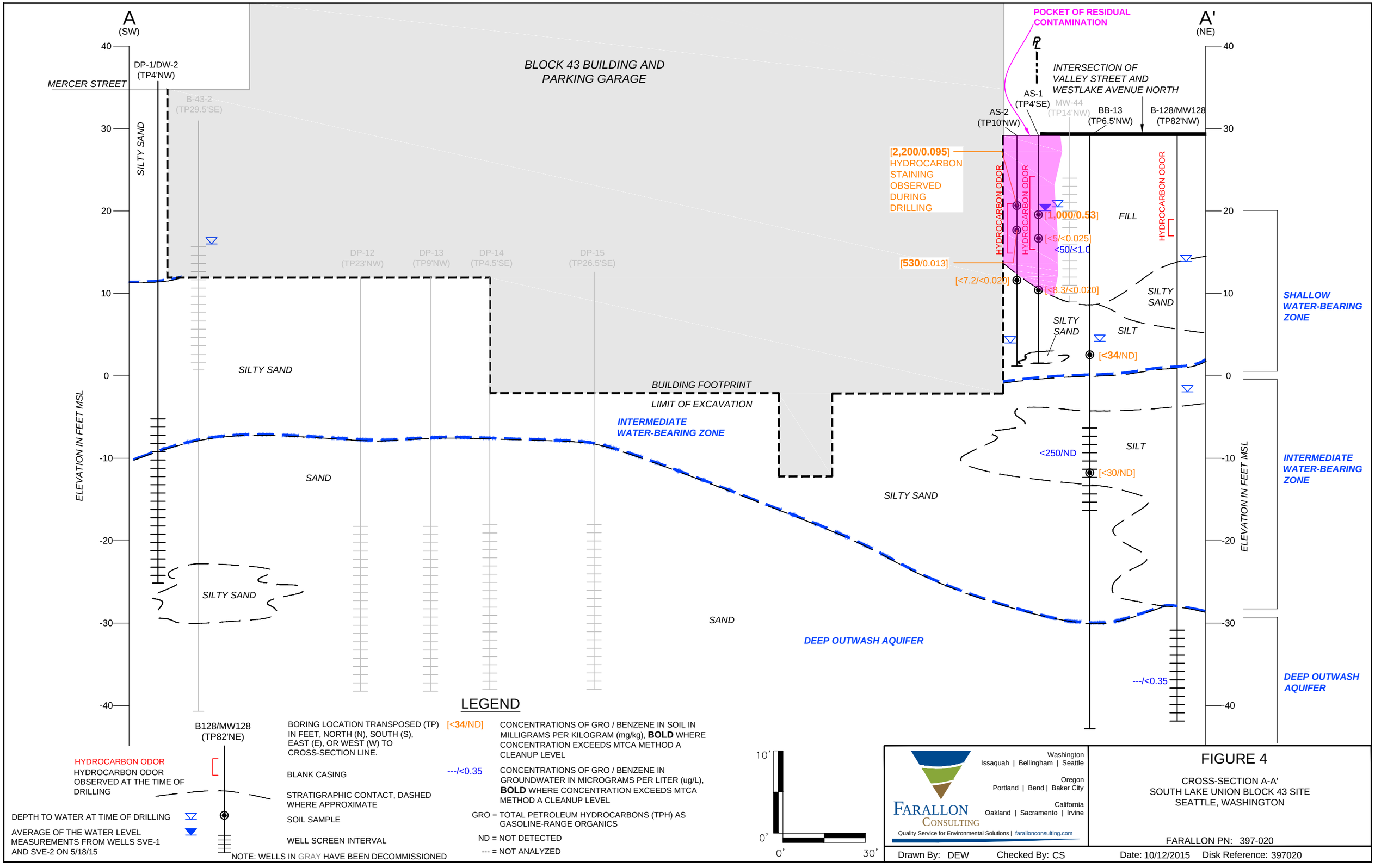
FIGURE 3

PROPERTY PLAN WITH SAMPLING LOCATIONS
SOUTH LAKE UNION BLOCK 43 SITE
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: tperrin | Checked By: TC | Date: 10/14/2015 | Disc Reference:
Document Path: G:\Projects\397 Vulcan\GIS\BL43_Closure\397-020_Figure_3wells.mxd



LEGEND

B128/MW128 (TP82'NE) — BORING LOCATION TRANSPOSED (TP) IN FEET, NORTH (N), SOUTH (S), EAST (E), OR WEST (W) TO CROSS-SECTION LINE.

HYDROCARBON ODOR — HYDROCARBON ODOR OBSERVED AT THE TIME OF DRILLING

BLANK CASING

STRATIGRAPHIC CONTACT, DASHED WHERE APPROXIMATE

SOIL SAMPLE

WELL SCREEN INTERVAL

DEPTH TO WATER AT TIME OF DRILLING

AVERAGE OF THE WATER LEVEL MEASUREMENTS FROM WELLS SVE-1 AND SVE-2 ON 5/18/15

NOTE: WELLS IN GRAY HAVE BEEN DECOMMISSIONED

[<34/ND] — CONCENTRATIONS OF GRO / BENZENE IN SOIL IN MILLIGRAMS PER KILOGRAM (mg/kg), **BOLD** WHERE CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL

---/<0.35 — CONCENTRATIONS OF GRO / BENZENE IN GROUNDWATER IN MICROGRAMS PER LITER (ug/L), **BOLD** WHERE CONCENTRATION EXCEEDS MTCA METHOD A CLEANUP LEVEL

GRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS GASOLINE-RANGE ORGANICS

ND = NOT DETECTED

--- = NOT ANALYZED

10' / 0' / 0' / 30'

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FIGURE 4

CROSS-SECTION A-A'
SOUTH LAKE UNION BLOCK 43 SITE
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: DEW Checked By: CS Date: 10/12/2015 Disk Reference: 397020

8TH AVE N

ROY ST

BROAD ST

9TH AVE N

WESTLAKE AVE N

TERRY AVE N

MERCER ST

8TH AVE N

K-MW-6
(19.94*)

K-MW-7
(19.31)

K-MW-5
(18.85*)

K-MW-3
(19.40)

K-MW-4
(18.71)

K-MW-2
(19.06)

K-MW-1
(21.57)

19.00

20.00

21.00

20.00

19.00

BLOCK 43

BLOCK 37

BLOCK 44

LEGEND

- DECOMMISSIONED SHALLOW WATER-BEARING ZONE WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
- KING COUNTY PARCELS
- PROPERTY BOUNDARY
- LIMIT OF EXCAVATION
- GROUNDWATER ELEVATION CONTOUR
- (19.18) GROUNDWATER ELEVATION (FEET)
- APPROXIMATE GROUNDWATER FLOW DIRECTION

DATE OF MEASUREMENTS TAKEN APRIL 30TH, 2003
KANE ENVIRONMENTAL, INC MAY 2ND, 2003

* INDICATES ANOMALOUS DATA AND NOT USED IN INTERPRETATION BY KANE ENVIRONMENTAL, INC.

N

0 60

Scale in Feet

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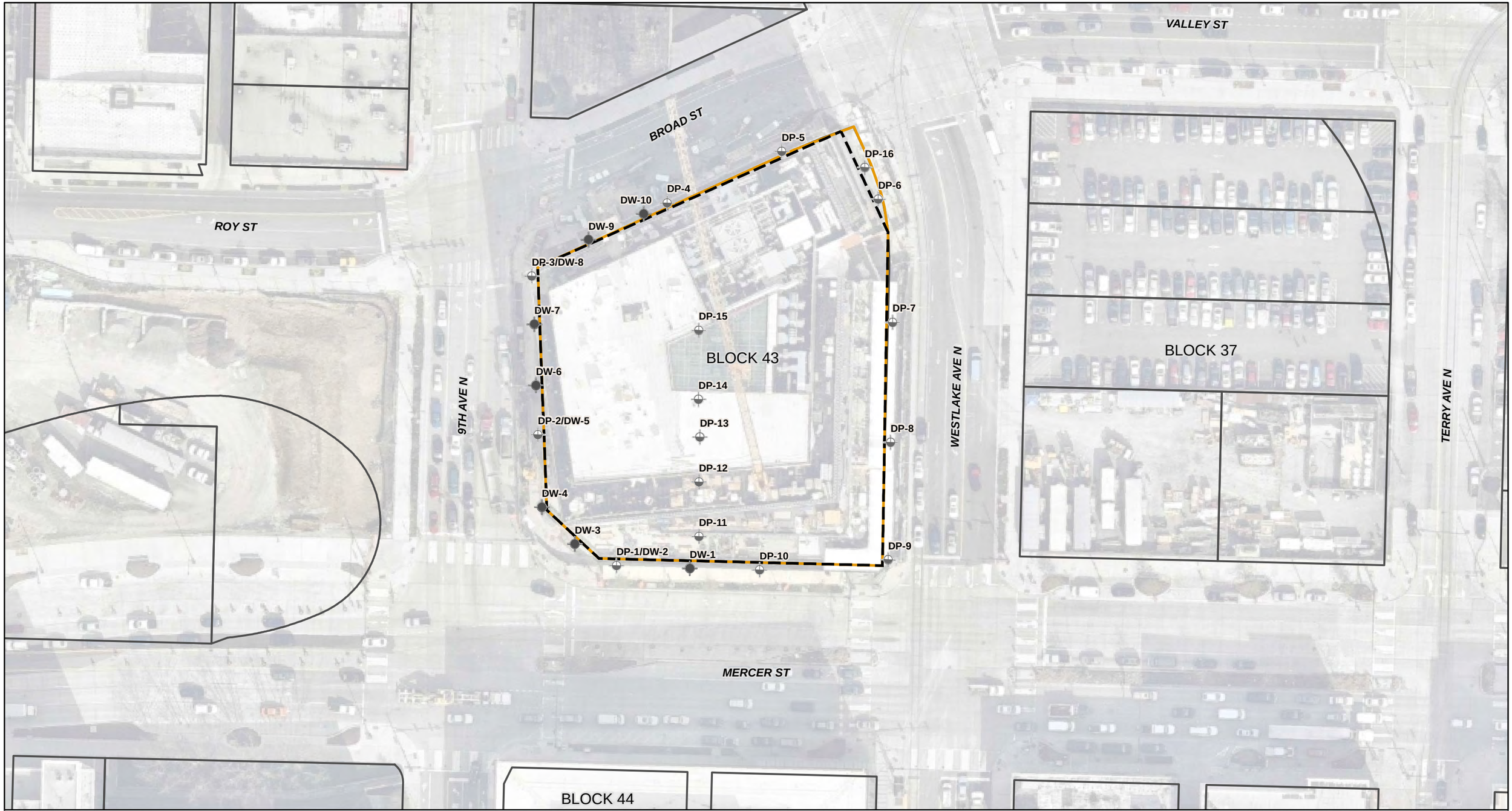
FIGURE 5

SHALLOW WATER-BEARING ZONE FLOW
SOUTH LAKE UNION BLOCK 43 SITE
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: tperrin Checked By: TC Date: 10/14/2015 Disc Reference:

Document Path: G:\Projects\397 Vulcan\GIS\BL43_Closure\397-020_Figure_5_Shallowwells.mxd



LEGEND

- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
- DECOMMISSIONED DEEP WATER-BEARING ZONE WELL
- PROPERTY BOUNDARY
- LIMIT OF EXCAVATION

N

0 60

Scale in Feet

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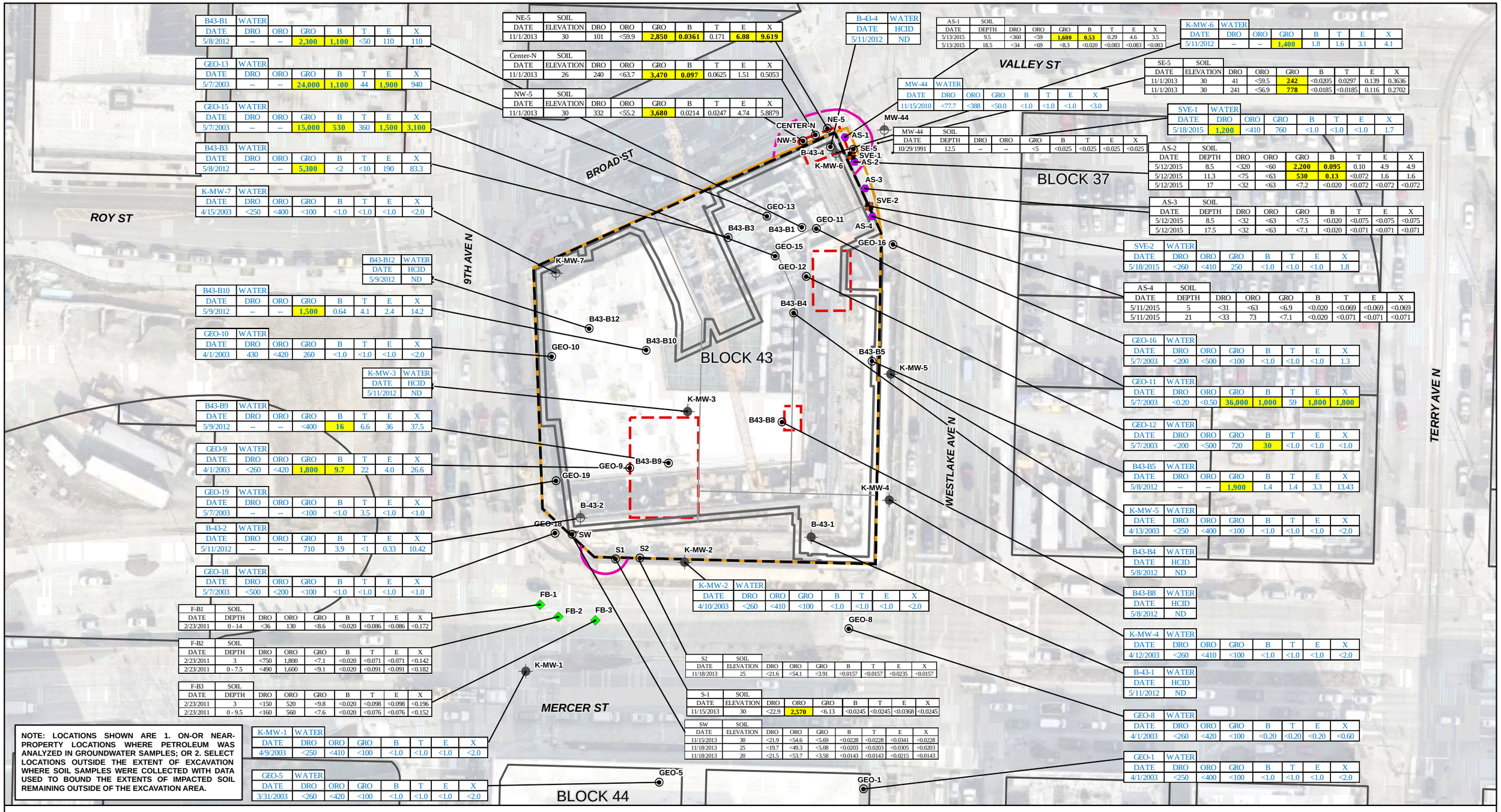
FIGURE 6

CONSTRUCTION DEWATERING WELLS
SOUTH LAKE UNION BLOCK 43 SITE
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: tperrin | Checked By: TC | Date: 10/9/2015 | Disc Reference:

Document Path: G:\Projects\397 Vulcan\GIS\BL43_Closure\397-020_Figure_6 Dewaterwells.mxd



B43-B1	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/8/2012	--	--	2,300	1,100	<50	110	110

GEO-13	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/7/2003	--	--	24,000	1,100	44	1,900	940

GEO-15	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/7/2003	--	--	15,000	530	360	1,500	3,100

B43-B3	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/8/2012	--	--	5,300	<2	<10	190	83.3

K-MW-7	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/15/2003	<250	<400	<100	<1.0	<1.0	<1.0	<2.0

B43-B12	WATER
DATE	HCID
5/9/2012	ND

B43-B10	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/9/2012	--	--	1,500	0.64	4.1	2.4	14.2

GEO-10	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/1/2003	430	<420	260	<1.0	<1.0	<1.0	<2.0

K-MW-3	WATER
DATE	HCID
5/11/2012	ND

B43-B9	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/9/2012	--	--	<400	16	6.6	36	37.5

GEO-9	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/1/2003	<260	<420	1,800	9.7	22	4.0	26.6

GEO-19	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/7/2003	--	--	<100	<1.0	3.5	<1.0	<1.0

B-43-2	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/11/2012	--	--	710	3.9	<1	0.33	10.42

GEO-18	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/7/2003	<500	<200	<100	<1.0	<1.0	<1.0	<1.0

F-B1	SOIL							
DATE	DEPTH	DRO	ORO	GRO	B	T	E	X
2/23/2011	0 - 14	<36	130	<8.6	<0.020	<0.086	<0.086	<0.172

F-B2	SOIL							
DATE	DEPTH	DRO	ORO	GRO	B	T	E	X
2/23/2011	3	<750	1,800	<7.1	<0.020	<0.071	<0.071	<0.142
2/23/2011	0 - 7.5	<490	1,600	<9.1	<0.020	<0.091	<0.091	<0.182

F-B3	SOIL							
DATE	DEPTH	DRO	ORO	GRO	B	T	E	X
2/23/2011	3	<150	520	<9.8	<0.020	<0.098	<0.098	<0.196
2/23/2011	0 - 9.5	<160	560	<7.6	<0.020	<0.076	<0.076	<0.152

K-MW-1	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/9/2003	<250	<410	<100	<1.0	<1.0	<1.0	<2.0

GEO-5	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
3/31/2003	<260	<420	<100	<1.0	<1.0	<1.0	<2.0

NE-5	SOIL							
DATE	ELEVATION	DRO	ORO	GRO	B	T	E	X
11/1/2013	30	101	<59.9	2,850	0.0361	0.171	6.08	9.619

Center-N	SOIL							
DATE	ELEVATION	DRO	ORO	GRO	B	T	E	X
11/1/2013	26	240	<63.7	3,470	0.097	0.0625	1.51	0.5053

NW-5	SOIL							
DATE	ELEVATION	DRO	ORO	GRO	B	T	E	X
11/1/2013	30	332	<55.2	3,680	0.0214	0.0247	4.74	5.8879

B-43-4	WATER
DATE	HCID
5/11/2012	ND

AS-1	SOIL							
DATE	DEPTH	DRO	ORO	GRO	B	T	E	X
5/13/2015	9.5	<360	<59	1,600	0.53	0.29	4.6	3.5
5/13/2015	18.5	<34	<69	<8.3	<0.020	<0.083	<0.083	<0.083

MW-44	WATER							
DATE	DRO	ORO	GRO	B	T	E	X	
11/15/2010	<77.7	<388	<50.0	<1.0	<1.0	<1.0	<3.0	

MW-44	SOIL							
DATE	DEPTH	DRO	ORO	GRO	B	T	E	X
10/29/1991	12.5	--	--	<5	<0.025	<0.025	<0.025	<0.025

K-MW-6	WATER							
DATE	DRO	ORO	GRO	B	T	E	X	
5/11/2012	--	--	1,400	1.8	1.6	3.1	4.1	

SE-5	SOIL							
DATE	ELEVATION	DRO	ORO	GRO	B	T	E	X
11/1/2013	30	41	<59.5	242	<0.0205	0.0297	0.139	0.3636
11/1/2013	30	241	<56.9	778	<0.0185	<0.0185	0.116	0.2702

SVE-1	WATER							
DATE	DRO	ORO	GRO	B	T	E	X	
5/18/2015	1,200	<410	760	<1.0	<1.0	<1.0	1.7	

AS-2	SOIL							
DATE	DEPTH	DRO	ORO	GRO	B	T	E	X
5/12/2015	8.5	<320	<60	2,200	0.095	0.10	4.9	4.9
5/12/2015	11.3	<75	<63	530	0.13	<0.072	1.6	1.6
5/12/2015	17	<32	<63	<7.2	<0.020	<0.072	<0.072	<0.072

AS-3	SOIL							
DATE	DEPTH	DRO	ORO	GRO	B	T	E	X
5/12/2015	8.5	<32	<63	<7.5	<0.020	<0.075	<0.075	<0.075
5/12/2015	17.5	<32	<63	<7.1	<0.020	<0.071	<0.071	<0.071

SVE-2	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/18/2015	<260	<410	250	<1.0	<1.0	<1.0	1.8

AS-4	SOIL							
DATE	DEPTH	DRO	ORO	GRO	B	T	E	X
5/11/2015	5	<31	<63	<6.9	<0.020	<0.069	<0.069	<0.069
5/11/2015	21	<33	73	<7.1	<0.020	<0.071	<0.071	<0.071

GEO-16	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/7/2003	<200	<500	<100	<1.0	<1.0	<1.0	1.3

GEO-11	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/7/2003	<0.20	<0.50	36,000	1,000	59	1,800	1,800

GEO-12	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/7/2003	<200	<500	720	30	<1.0	<1.0	<1.0

B43-B5	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
5/8/2012	--	--	1,900	1.4	1.4	3.3	13.43

K-MW-5	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/13/2003	<250	<400	<100	<1.0	<1.0	<1.0	<2.0

B43-B4	WATER
DATE	HCID
5/8/2012	ND

B43-B8	WATER
DATE	HCID
5/8/2012	ND

K-MW-4	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/12/2003	<260	<410	<100	<1.0	<1.0	<1.0	<2.0

B-43-1	WATER
DATE	HCID
5/11/2012	ND

GEO-8	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/1/2003	<260	<420	<100	<0.20	<0.20	<0.20	<0.60

GEO-1	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/1/2003	<250	<400	<100	<1.0	<1.0	<1.0	<2.0

K-MW-2	WATER						
DATE	DRO	ORO	GRO	B	T	E	X
4/10/2003	<260	<410	<100	<1.0	<1.0	<1.0	<2.0

S2	SOIL							
DATE	ELEVATION	DRO	ORO	GRO	B	T	E	X
11/18/2013	25	<21.6	<54.1	<3.91	<0.0157	<0.0157	<0.0235	<0.0157

S-1	SOIL							
DATE	ELEVATION	DRO	ORO	GRO	B	T	E	X
11/15/2013	30	<22.9	2,570	<6.13	<0.0245	<0.0245	<0.0368	<0.0245

SW	SOIL							
DATE	ELEVATION	DRO	ORO	GRO	B	T	E	X
11/15/2013	30	<21.9	<54.6	<5.69	<0.0228	<0.0228	<0.0341	<0.0228
11/18/2013	25	<19.7	<49.3	<5.08	<0.0203	<0.0203	<0.0305	<0.0203
11/18/2013	20	<21.5	<53.7	<3.58	<0.0143	<0.0143	<0.0215	<0.0143

NOTE: LOCATIONS SHOWN ARE 1. ON-OR NEAR-PROPERTY LOCATIONS WHERE PETROLEUM WAS ANALYZED IN GROUNDWATER SAMPLES; OR 2. SELECT LOCATIONS OUTSIDE THE EXTENT OF EXCAVATION WHERE SOIL SAMPLES WERE COLLECTED WITH DATA USED TO BOUND THE EXTENTS OF IMPACTED SOIL REMAINING OUTSIDE OF THE EXCAVATION AREA.

LEGEND

- DECOMMISSIONED SHALLOW WATER-BEARING ZONE WELL
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
- SOIL BORING
- AIR SPARGE WELL
- VAPOR EXTRACTION/MONITORING WELL
- TEST PIT
- PROPERTY BOUNDARY
- LIMIT OF EXCAVATION
- ESTIMATED EXTENT OF PETROLEUM HYDROCARBONS IN SOIL EXCEEDING MTCA METHOD A CLEANUP LEVELS APPROXIMATE WHERE DASHED
- UNDERGROUND STORAGE TANK SITE LOCATION

NOTES:

DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS
GRO = TPH AS GASOLINE RANGE ORGANICS
ORO = TPH AS OIL RANGE ORGANICS
BTEX = BENZENE, TOLUENE, ETHYLBENZENE,AND XYLENES
HCID = HYDROCARBON IDENTIFICATION
MTBE = METHYL TERT-BUTYL ETHER
ND = NOT DETECTED
BOLD = RESULTS DENOTE CONCENTRATIONS EXCEEDING APPLICABLE CLEAN UP LEVELS
-- = DENOTES SAMPLE WAS NOT ANALYZED
µg/L = MICROGRAM PER LITER
mg/kg = MILLIGRAM PER KILOGRAM

GROUNDWATER UNITS µg/L
SOIL UNITS mg/kg
YELLOW HIGHLIGHT DENOTES EXCEEDANCE OF CLEAN UP LEVEL
DEPTH MEASURED IN FEET BELOW GROUND SURFACE

N

0 60
Scale in Feet

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FIGURE 7

SOIL AND GROUNDWATER PETROLEUM DATA
SOUTH LAKE UNION BLOCK 43 SITE
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: tperrin | Checked By: TC | Date: 10/9/2015 | Disc Reference:
Document Path: G:\Projects\397 Vulcan\GIS\BL43_Closure\397-020_Figure_7 PetroleumSoilwells.mxd

B-6.0	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
6	<0.071	<0.071	<0.071	<0.071	<0.071

PIPE-SW	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
3.5	<0.61	<0.61	<0.61	<0.61	<0.61

B-43-4	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
7.5	<0.0171	<0.0257	<0.0171	<0.0171	<0.00171
10	<0.0280	<0.0420	<0.0280	<0.0280	<0.00280

P27-B5	WATER				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
UNK	<10	<10	<10	--	--

P27-B4	WATER				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
15 - 20	<0.2	<0.2	<0.2	--	--

UST-W5	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
5	<0.0211	<0.0316	<0.0211	<0.0211	<0.00211

UST-B8	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
8	<0.0223	<0.0334	<0.0223	<0.0223	<0.00223

UST-S5	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
5	<0.0205	<0.0307	<0.0205	<0.0205	<0.00205

GEO-9	WATER				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
13 - 18	1.1	<0.20	3.9	<0.20	<0.20

P27-B2	WATER				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
UNK	<0.2	<0.2	<0.2	--	--

P27-B1	WATER				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
UNK	<0.2	<0.2	<0.2	--	--

K-MW-4	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
15.5	--	<0.0012	<0.0012	<0.0012	<0.0012

FB1	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
0 - 14	<0.0077	0.0022	--	--	--

FB2	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
3	<0.0057	<0.0011	--	--	--
0 - 7.5	<0.0076	<0.0015	--	--	--

P27-B3	WATER				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
UNK	<0.2	<0.2	0.2	--	--

GEO-8	WATER				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
0 - 4	<0.20	<0.20	<0.20	<0.20	<0.20

K-MW-2	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
5.5	<0.011	<0.0011	<0.0011	<0.0011	<0.0011

FB-3	SOIL				
DEPTH	PCE	TCE	cis-1,2	trans-1,2	VC
3	<0.0078	<0.0016	--	--	--
0 - 9.5	<0.0057	<0.0011	--	--	--

LEGEND

- SOIL BORING
- DECOMMISSIONED INTERMEDIATE WATER-BEARING ZONE WELL
- TEST PIT
- POINT RECONNAISSANCE
- GRAB SAMPLE
- PROPERTY BOUNDARY
- LIMIT OF EXCAVATION
- UNDERGROUND STORAGE TANK SITE LOCATION

NOTE: LOCATIONS SHOWN ARE THOSE WHERE SOIL OR GROUNDWATER SAMPLES WERE TESTED FOR HVOCS PRIOR TO CONSTRUCTION OF THE BUILDING.

NOTES:
SOIL UNITS mg/kg
GROUNDWATER UNITS µg/L
DEPTH MEASURED IN FEET BELOW GROUND SURFACE

PCE = TETRACHLOROETHENE
TCE = TRICHLOROETHENE
cis-1,2 = CIS-1,2-DICHLOROETHENE
trans-1,2 = TRANS-1,2-DICHLOROETHENE
VC = VINYL CHLORIDE
-- = DENOTES SAMPLE WAS NOT ANALYZED
µg/L = MICROGRAM PER LITER
MG/KG = MILLIGRAM PER KILOGRAM

N

0 60
Scale in Feet

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FIGURE 8

SOIL AND GROUNDWATER HVOC DATA
SOUTH LAKE UNION BLOCK 43 SITE
601 WESTLAKE AVENUE NORTH
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: tperrin | Checked By: TC | Date: 10/9/2015 | Disc Reference:

Document Path: G:\Projects\397 Vulcan\GIS\BL43_Closure\397-020_Figure_8 hvoc wells.mxd

DATE	DEPTH	DRO	GRO	B
10/29/1991	12.5'	<5	<5	<0.025

GROUNDWATER ANALYTICAL RESULTS:

DATE	DRO	GRO	B
11/16/2009	<240	<50	<0.50
2/22/2010	166	<50	<1.0

MW-44

DATE	DEPTH	DRO	GRO	B
5/13/2015	9.5'	<360	**1,600**	**0.53**
	18.5'	<34	<8.3	<0.020

AS-1

DATE	DEPTH	DRO	GRO	B
5/13/2015	7.5'	<550	**590**	**0.12**
	16.0'	<34	**89**	0.021
	21.2'	<32	<6.3	<0.020

SVE-1

GROUNDWATER ANALYTICAL RESULTS:

DATE	DRO	GRO	B
5/18/2015	**1,200**	760	<1.0

AS-2

DATE	DEPTH	DRO	GRO	B
5/12/2015	8.5'	<320	**2,200**	**0.095**
	11.3'	<75	**530**	**0.13**
	17.0'	<32	<7.2	<0.020

DATE	DEPTH	DRO	GRO	B
5/12/2015	8.5'	<32	<7.5	<0.020
	17.5'	<32	<7.1	<0.020

AS-3

GROUNDWATER ANALYTICAL RESULTS:

DATE	DRO	GRO	B
5/18/2015	<260	250	<1.0

SVE-2

NEW BUILDING
WITH UNDERGROUND
PARKING

AS-4

DATE	DEPTH	DRO	GRO	B
5/12/2015	7.0'	<31	<7.1	<0.020
	13.0'	<31	<7.2	<0.020
	16.0'	<35	<8.0	<0.020

DATE	DEPTH	DRO	GRO	B
5/11/2015	5.0'	<31	<6.9	<0.020
	21.0'	<33	<7.1	<0.020

CONVEYANCE
PIPING TRENCH

AIR SPARGE RADIUS OF
INFLUENCE (TYP)

SVE RADIUS
OF INFLUENCE (TYP)

WESTLAKE AVENUE

0 10
Scale in feet

DETAIL

BROAD STREET

MW-44

SEE DETAIL

WESTLAKE AVENUE

NEW BUILDING
WITH UNDERGROUND
PARKING

9TH AVENUE

6" CONVEYANCE LINE

APPROXIMATE LOCATION OF
SVE/AS EQUIPMENT SYSTEM

MERCER STREET

0 70
Scale in feet

LEGEND

PROPERTY LINE

BUILDING FOOTPRINT

AIR SPARGE WELL

VAPOR EXTRACTION/MONITORING WELL

< = INDICATES CONCENTRATIONS NOT DETECTED ABOVE THE STATED LABORATORY PRACTICAL QUANTITATION LIMIT

SOIL ANALYTICAL RESULTS IN MILLIGRAMS PER KILOGRAM

GROUNDWATER RESULTS IN MICROGRAMS PER LITER AND ALL GROUNDWATER RESULTS ARE SHOWN IN **BLUE**

DRO = TOTAL PETROLEUM HYDROCARBONS (TPH) AS DIESEL-RANGE ORGANICS

GRO = TPH AS GASOLINE-RANGE ORGANICS

B = BENZENE

NA = NOT ANALYZED

BOLD = INDICATES CONCENTRATIONS EXCEED WASHINGTON STATE DEPARTMENT OF ECOLOGY MODEL TOXICS CONTROL ACT CLEANUP REGULATION METHOD (A) CLEANUP LEVELS

DEPTH IN FEET BELOW GROUND SURFACE

ALL LOCATIONS ARE APPROXIMATE

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FIGURE 9

REMEDIATION SYSTEM AT BLOCK 43 PROPERTY
SOUTH LAKE UNION BLOCK 43 SITE
SEATTLE, WASHINGTON

FARALLON PN: 397-020

Drawn By: DEW Checked By: TC Date: 10/12/2015 Disk Reference: 397-020

TABLES

GROUNDWATER CLEANUP REPORT
South Lake Union Block 43 Site
601 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-020

Table 1
Groundwater Analytical Results - Petroleum Hydrocarbons
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Sample Identification	Sample Location	Sampled By	Date	Analytical Results (micrograms per liter)								
				HCID[1]	DRO[2]	ORO[2]	GRO[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Xylenes[4]	MTBE
MW-43	MW-43	EPI[5]	12/17/98	--	**	**	**	**33**	**	**	**	--
SB-2	SB-2	EPI[5]	05/07/00	--	**	**	**	**8.4** a	**	**	**	--
SB-3	SB-3	EPI[5]	05/07/00	--	**	**	**	**24** a	**	**	**	--
SB-4	SB-4	EPI[5]	05/07/00	--	**	**	**	**33** a	**	**	**	--
SB-4 (DUP)	SB-4 (DUP)	EPI[5]	05/07/00	--	**	**	**	**30** a	**	**	**	--
SB-5	SB-5	EPI[5]	05/07/00	--	**	**	**	**12** a	**	**	**	--
SB-HO-1	SB-HO-1	EPI[5]	05/07/00	--	**	**	**	**21** a	**	**	3	--
SB-HO-2	SB-HO-2	EPI[5]	05/07/00	--	**	**	**	**9.6** a	**	**	7.7	--
SB-HO-3	SB-HO-3	EPI[5]	05/07/00	--	**	**	**	**9.6** a	**	**	**	--
SB-HO-4	SB-HO-4	EPI[5]	05/07/00	--	**	**	**	**	**	**	**	--
SB-HO-5	SB-HO-5	EPI[5]	05/07/00	--	**	**	**	**	**	**	**	--
SB-HO-6	SB-HO-6	EPI[5]	05/07/00	--	**	**	**	**	**	**	**	--
SB-HO-7	SB-HO-7	EPI[5]	05/07/00	--	**	**	**	**	**	**	**	--
Geo-1-W1	GEO-1	Kane[6]	04/01/03	--	<250	<400	<100	<1.0	<1.0	<1.0	<2.0	--
Geo-5-W1	GEO-5	Kane[6]	03/31/03	--	<260	<420	<100	<1.0	<1.0	<1.0	<2.0	--
Geo-8-W1	GEO-8	Kane[6]	04/01/03	--	<260	<420	<100	<0.20	<0.20	<0.20	<0.60	<0.20 c
Geo-9-W1	GEO-9	Kane[6]	04/01/03	--	<260	<420	**1,800**	**9.7**	22	4.0	26.6	<0.20 c
Geo-10-W1	GEO-10	Kane[6]	04/01/03	--	430	<420	260 b	<1.0	<1.0	<1.0	<2.0	--
K-MW-1	K-MW-1	Kane[6]	04/09/03	--	<250	<410	<100	<1.0	<1.0	<1.0	<2.0	<10 d
K-MW-2	K-MW-2	Kane[6]	04/10/03	--	<260	<410	<100	<1.0	<1.0	<1.0	<2.0	<10 d
K-MW-3	K-MW-3	Kane[6]	04/11/03	--	<260	<410	350	**16**	1.1	2.2	3.5	<10 d
K-MW-4	K-MW-4	Kane[6]	04/12/03	--	<260	<410	<100	<1.0	<1.0	<1.0	<2.0	<10 d
K-MW-5	K-MW-5	Kane[6]	04/13/03	--	<250	<400	<100	<1.0	<1.0	<1.0	<2.0	<10 d
K-MW-6	K-MW-6	Kane[6]	04/14/03	--	<260	<410	**5,000**	**35**	12	22	26	<10 d
K-MW-7	K-MW-7	Kane[6]	04/15/03	--	<250	<400	<100	<1.0	<1.0	<1.0	<2.0	--
GEO-11	GEO-11	Kane[7]	05/07/03	--	<0.20 d	<0.50 d	**36,000** d	**1,000** d	59 d	**1,800** d	**1,800** d	--
GEO-11 (DUP)	GEO-11 (DUP)	Kane[7]	05/07/03	--	<200 d	<500 d	**32,000** d	--	--	--	--	--
GEO-12	GEO-12	Kane[6]	05/07/03	--	<200 d	<500 d	720 d	**30** d	<1.0 d	<1.0 d	<1.0 d	--
GEO-13	GEO-13	Kane[7]	05/07/03	--	--	--	**24,000** d	**1,100** d	44 d	**1,900** d	940 d	--
GEO-15	GEO-15	Kane[7]	05/07/03	--	--	--	**15,000** d	**530** d	360 d	**1,500** d	**3,100** d	--
GEO-16	GEO-16	Kane[6]	05/07/03	--	<200 d	<500 d	<100 d	<1.0 d	<1.0 d	<1.0 d	1.3 d	--
GEO-18	GEO-18	Kane[6]	05/07/03	--	<500 d	<200 d	<100 d	<1.0 d	<1.0 d	<1.0 d	<1.0 d	--
GEO-19	GEO-19	Kane[6]	05/07/03	--	--	--	<100 d	<1.0 d	3.5 d	<1.0 d	<1.0 d	--
MW-44	MW-44	ATC[8]	11/15/10	--	<77.7	<388	<50.0	<1.0	<1.0	<1.0	<3.0	--
K-MW-3	K-MW-3	GeoEngineers[9]	03/19/12	--	394 e	<100 e	<50.0	<1.00 a	<1.00 a	<1.00 a	<1.00 a	--
K-MW-6	K-MW-6	GeoEngineers[9]	03/19/12	--	361 e	<100 e	**1,810**	2.16 a	1.98 a	2.25 a	4.53 a	--
GEI-43-1	B-43-1	GeoEngineers[9]	03/19/12	--	151 e	<100 e	<50.0	<1.00 a	<1.00 a	<1.00 a	<1.00 a	--
GEI-43-2	B-43-2	GeoEngineers[9]	03/19/12	--	**2,760** e	<100 e	120	3.18 a	<1.00 a	<1.00 a	<1.00 a	--
B43-B1-GW	B43-B1	HWA[10]	05/08/12	G	--	--	**2,300**	**1,100** c	<50 c	110 c	110 c	<10 c
B43-B3-GW	B43-B3	HWA[10]	05/08/12	G	--	--	**5,300**	<2 c	<10 c	190 c	83.3 c	<2 c
B43-B4-GW	B43-B4	HWA[10]	05/08/12	ND	--	--	--	--	--	--	--	--
MTCA Method A Cleanup Levels for Groundwater[10]					**500**	**500**	**800**	**5**	**1,000**	**700**	**1,000**	**20**

Table 1
Groundwater Analytical Results - Petroleum Hydrocarbons
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Sample Identification	Sample Location	Sampled By	Date	Analytical Results (micrograms per liter)								
				HCID[1]	DRO[2]	ORO[2]	GRO[3]	Benzene[4]	Toluene[4]	Ethylbenzene[4]	Xylenes[4]	MTBE
B43-B5-GW	B43-B5	HWA[10]	05/08/12	G	--	--	**1,900**	1.4 c	1.4 c	3.3 c	13.43 c	<2 c
B43-B8-GW	B43-B8	HWA[10]	05/08/12	ND	--	--	--	--	--	--	--	--
B43-B9-GW	B43-B9	HWA[10]	05/09/12	G	--	--	<400	**16** c	6.6 c	36 c	37.5 c	0.22 c
B43-B10-GW	B43-B10	HWA[10]	05/09/12	G	--	--	**1,500**	0.64 c	4.1 c	2.4 c	14.2 c	<0.20 c
B43-B12-GW	B43-B12	HWA[10]	05/09/12	ND	--	--	--	--	--	--	--	--
B43-1-GW	B43-1	HWA[10]	05/11/12	ND	--	--	--	--	--	--	--	--
B43-2-GW	B43-2	HWA[10]	05/11/12	G	--	--	710	3.9 c	<1 c	0.33 c	10.42 c	<0.20 c
B43-KMW3-GW	K-MW-3	HWA[10]	05/11/12	ND	--	--	--	--	--	--	--	--
B43-4-GW	B43-4	HWA[10]	05/11/12	ND	--	--	--	--	--	--	--	--
B43-KMW6-GW	K-MW-6	HWA[10]	05/11/12	G	--	--	**1,400**	1.8 c	1.6 c	3.1 c	4.1 c	<0.20 c
B43-DUP-GW (duplicate of B43-KMW6-GW)	K-MW-6	HWA[10]	05/11/12	G	--	--	**1,300**	1.8 c	1.6 c	3 c	3.58 c	<0.20 c
SVE-1-051815	SVE-1	Farallon	05/18/15	--	**1,200**	<410	760	<1.0	<1.0	<1.0	1.7	--
SVE-2-051815	SVE-2	Farallon	05/18/15	--	<260	<410	250	<1.0	<1.0	<1.0	1.8	--
MTCA Method A Cleanup Levels for Groundwater[11]					**500**	**500**	**800**	**5**	**1,000**	**700**	**1,000**	**20**

NOTES:

Result in **bold** denote concentration exceeds applicable cleanup level.
< denotes analyte not detected at or exceeding the reporting limit listed.
-- denotes sample was not analyzed for this constituent.
[1]Analyzed by Northwest Method Hydrocarbon Identification (HCID).
[2]Analyzed by Northwest Method NWTPH-Dx.
[3]Analyzed by Northwest Method NWTPH-Gx.
[4]Analyzed by U.S. Environmental Protection Agency Method 8021B.
[5]Environmental Partners Inc. Limited Phase II Investigation June 27, 2000 (incomplete)
[6]Kane Environmental, Inc. Phase II Environmental Site Assessment. May 2, 2003.
[7]Kane Environmental, Inc. Supplemental Phase II Investigation. May 15, 2003.
[8]ATC Associates Inc. Groundwater Monitoring Report (Second Quarter 2011), ConocoPhillips Facility. August 24, 2011.
[9]GeoEngineers. Limited Subsurface Environmental Characterization. April 18, 2012.
[10]HWA GeoSciences Inc. Phase II Environmental Site Assessment Report. June 14, 2012.
[11]Washington State Model Toxics Control Act Cleanup Regulation Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2013.

BTEX = benzene, toluene, ethylbenzene, and xylenes
DRO = total petroleum hydrocarbons (TPH) as diesel-range organics
G = Gasoline
GRO = TPH as gasoline-range organics
HCID = Hydrocarbon identification
MTBE = Methyl tert-butyl ether
ND = Not detected
ORO = TPH as oil-range organics
a) Analyzed by EPA Method 8021B.
b) Gasoline results are being influenced by the presence of diesel-range organics.
c) Analyzed by EPA Method 8260B.
d) Analysis method unknown.
e) Method NWTPH-DX/Dx Extended Range.
** Uncertain if sample was analyzed for constituent based on the available information (incomplete copy of report).

Table 2
Groundwater Analytical Results - Halogenated VOCs
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Location	Sample Identification	Sampled By	Sample Date	Analytical Results[1] (micrograms per liter)				
				PCE	TCE	cis-1,2-DCE	trans-1,2-DCE	Vinyl Chloride
GEO-7-W1	GEO-7	Kane[4]	3/31/2003	<0.20	<0.20	<0.20	<0.20	<0.20
GEO-8-W1	GEO-8	Kane[4]	4/1/2003	<0.20	<0.20	<0.20	<0.20	<0.20
GEO-9-W1	GEO-9	Kane[4]	4/1/2003	1.1	<0.20	3.9	<0.20	<0.20
P27-B1-W	P27-B1	PI Resources[5]	2/5/2008	<0.2	<0.2	<0.2	--	--
P27-B2-W	P27-B2	PI Resources[5]	2/4/2008	<0.2	<0.2	<0.2	--	--
P27-B3-W	P27-B3	PI Resources[5]	2/4/2008	<0.2	<0.2	0.2	--	--
P27-B4-W	P27-B4	PI Resources[5]	2/4/2008	<0.2	<0.2	<0.2	--	--
P27-B5-W	P27-B5	PI Resources[5]	2/5/2008	<10	<10	<10	--	--
MTCA Method A Cleanup Levels[2]				**5**	**5**	**NE**	**NE**	**0.2**
MTCA Method B Cleanup Levels[3]				**20.8**	**0.54**	**16**	**160**	**0.029**

NOTES:

Result in **bold** denotes concentration exceeds applicable Washington State Model Toxics Control Action Cleanup Regulation (MTCA) Method A or B cleanup level.

< denotes analyte not detected at or exceeding the reporting limit listed.

Only select analytes and analytes with detections exceeding the laboratory reporting limit are shown.

[1]Analyzed by U.S. Environmental Protection Agency Method 8260.

[2]Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2007.

[5]Washington State Model Toxics Control Act Cleanup Regulation (MTCA) Cleanup Levels and Risk Calculations, Standard Method B Values for Groundwater, from CLARC Master spreadsheet downloaded on 9/24/2015 from https://fortress.wa.gov/ecy/clarc/CLARCDataTables.aspx

[4]Kane Environmental Inc. Phase II Environmental Site Assessment, 535 and 601 Westlake Avenue North Seattle, Washington. May 2, 2003.

[5]P.I. Resources LLC. Broad St & Westlake Ave N. UST Removal Site Assessment Report, Mercer Corridor Improvements Project. June 2013.

DCE = dichloroethene

ND - Not detected and reporting limit is unknown

NE = Not established

PCE = tetrachloroethene

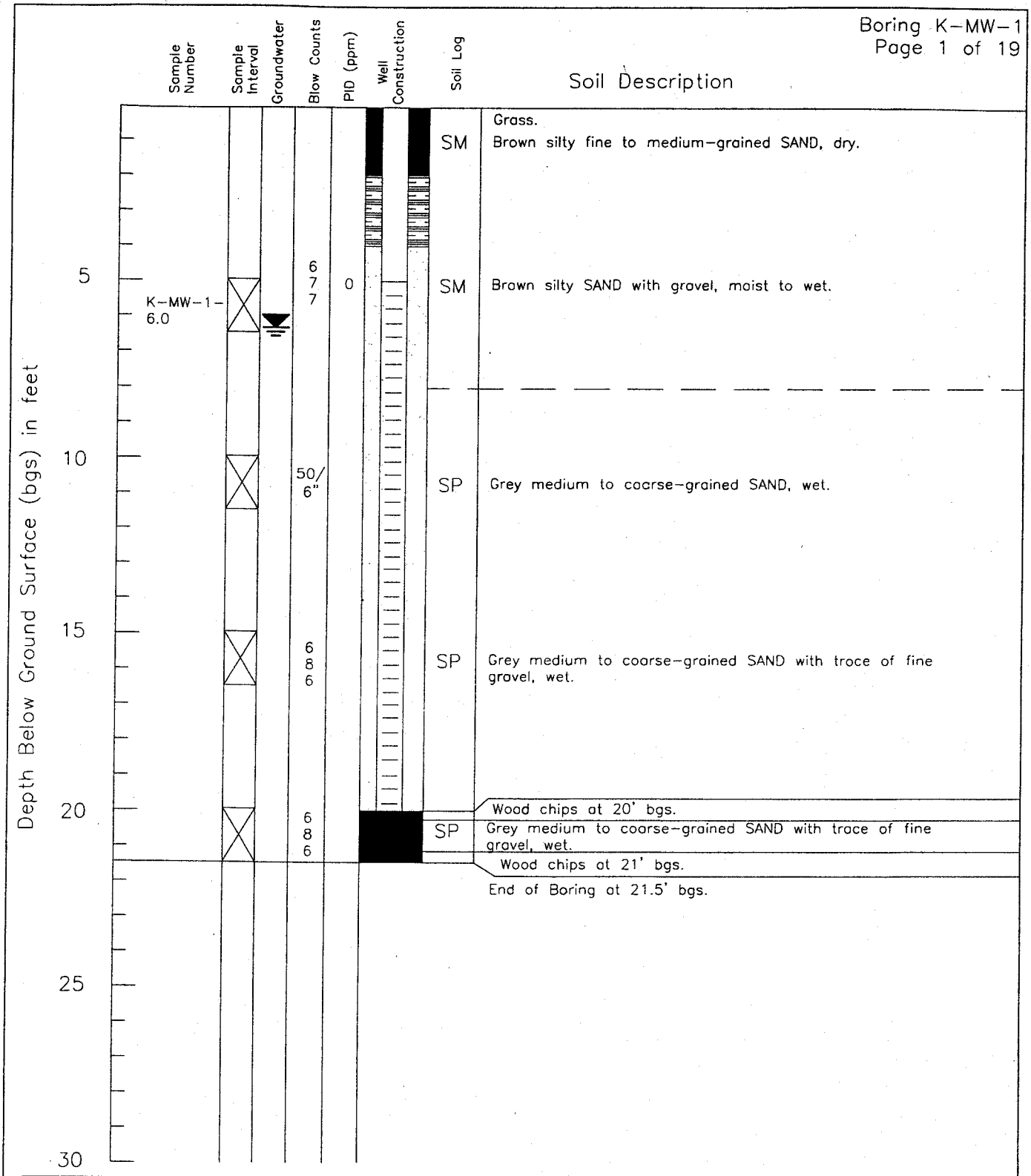
TCE = trichloroethene

VOCs = volatile organic compounds

APPENDIX A
PROPERTY WELL CONSTRUCTION DIAGRAMS AND BORING LOGS

GROUNDWATER CLEANUP REPORT
South Lake Union Block 43 Site
601 Westlake Avenue North
Seattle, Washington

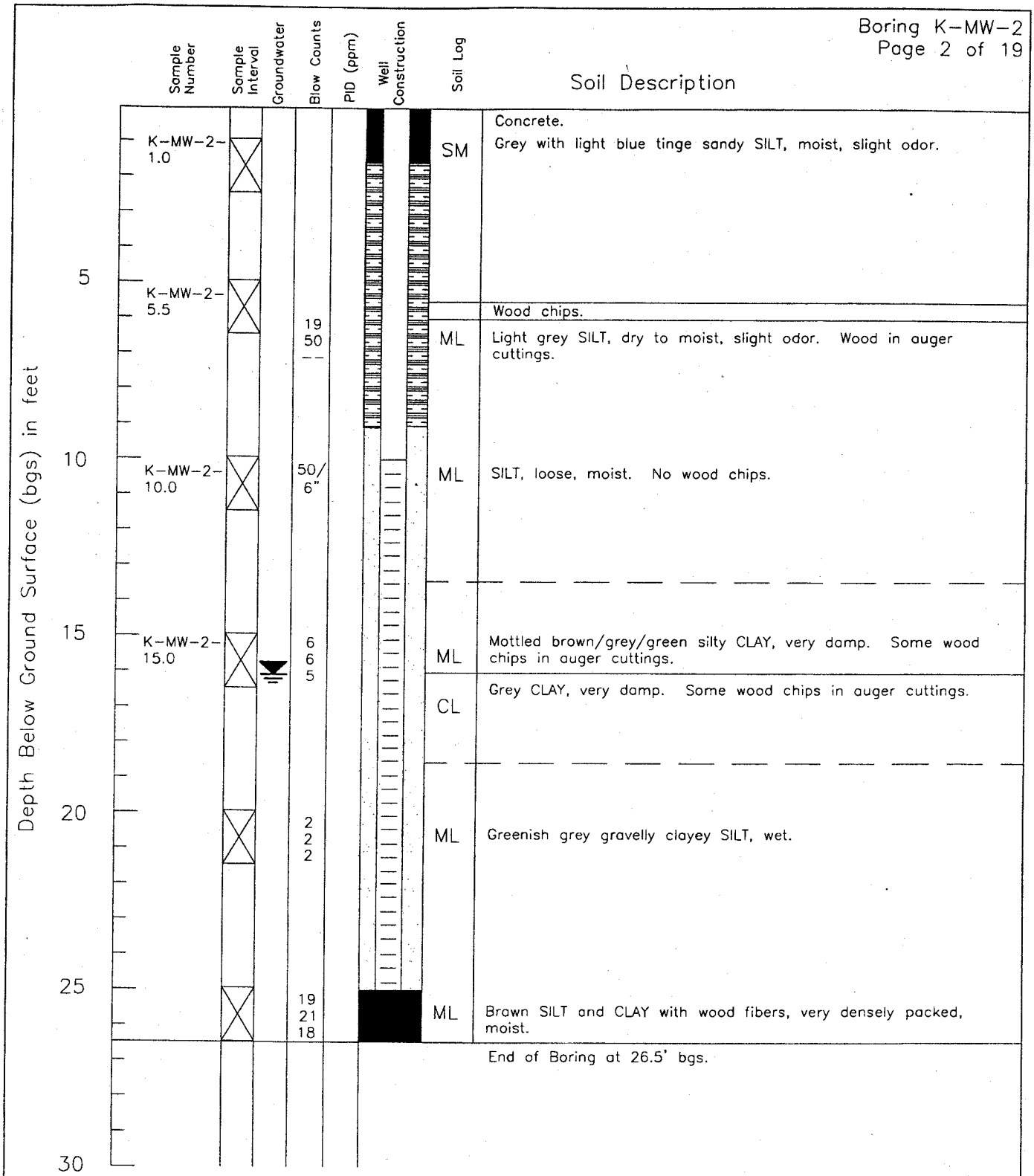
Farallon PN: 397-020



Logged by: IY	Hammer Size: 130 lbs.
Driller: Cascade Drilling, Inc.	Date Drilled: 3/31/03
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches
Sampling Method: Split spoon	Hole Depth: 21.5 feet
Casing Type: 2-inch PVC	Well Diameter: 2 inches
Annular Pack: 2/12 Silica sand	Well Depth: 20 feet
Slot Size: 0.010 inch	Screened Interval: 5 – 20 feet

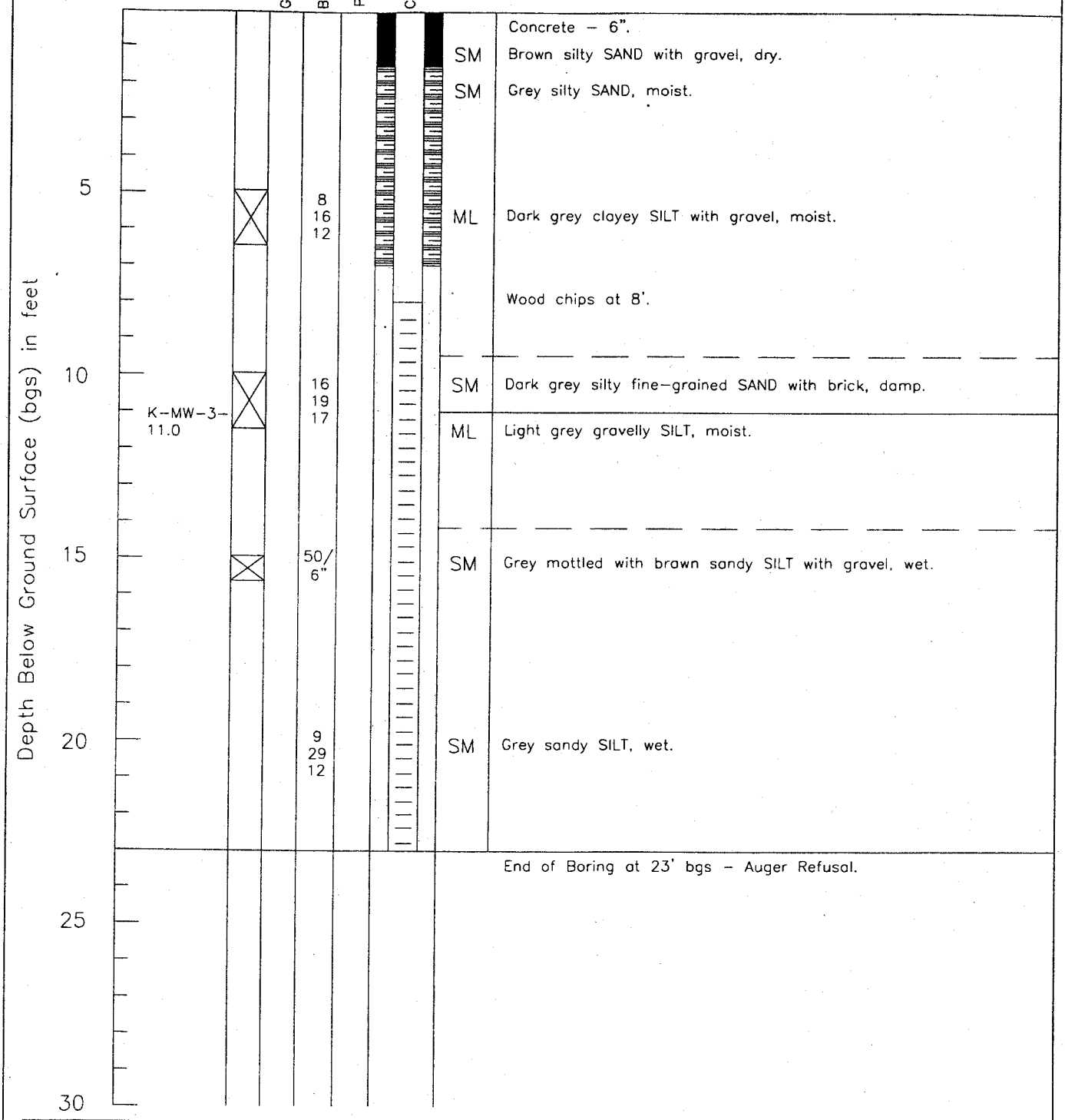
Soils classified visually using the Unified Soils Classification System

KANE Environmental, Inc.	Seattle Investment Properties 601 Westlake North Seattle, Washington	Soil Boring and Groundwater Monitoring Well Logs



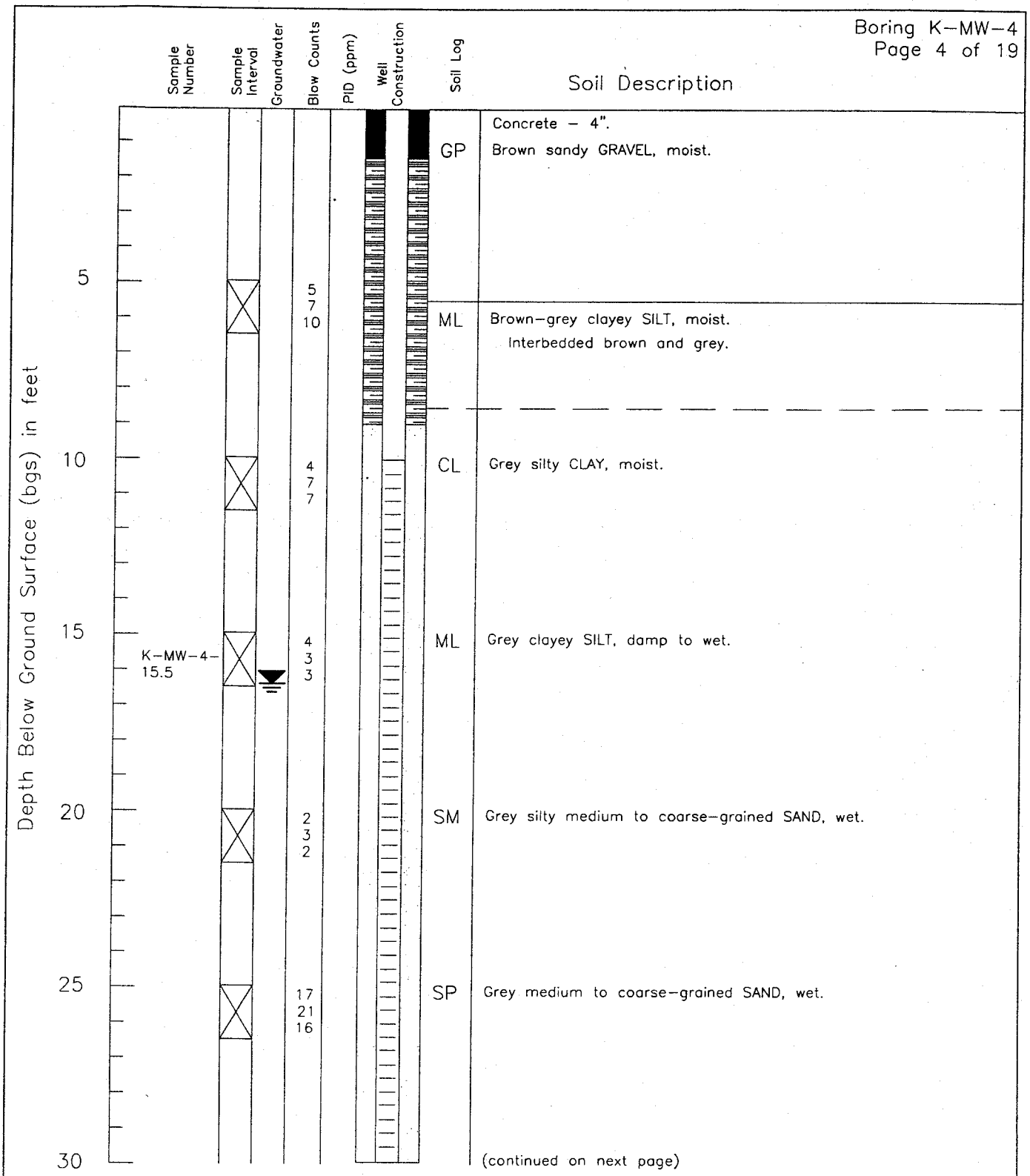
Logged by: IY	Hammer Size: 130 lbs.
Driller: Cascade Drilling, Inc.	Date Drilled: 4/1/03
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches
Sampling Method: Split spoon	Hole Depth: 26.5 feet
Casing Type: 2-inch PVC	Well Diameter: 2 inches
Annular Pack: 2/12 Silica sand	Well Depth: 25 feet
Slot Size: 0.010 inch	Screened Interval: 10 - 25 feet

Soils classified visually using the Unified Soils Classification System



Logged by: IY	Hammer Size: 130 lbs.
Driller: Cascade Drilling, Inc.	Date Drilled: 4/1/03
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches
Sampling Method: Split spoon	Hole Depth: 23 feet
Casing Type: 2-inch PVC	Well Diameter: 2 inches
Annular Pack: 2/12 Silica sand	Well Depth: 23 feet
Slot Size: 0.010 inch	Screened Interval: 8 - 23 feet

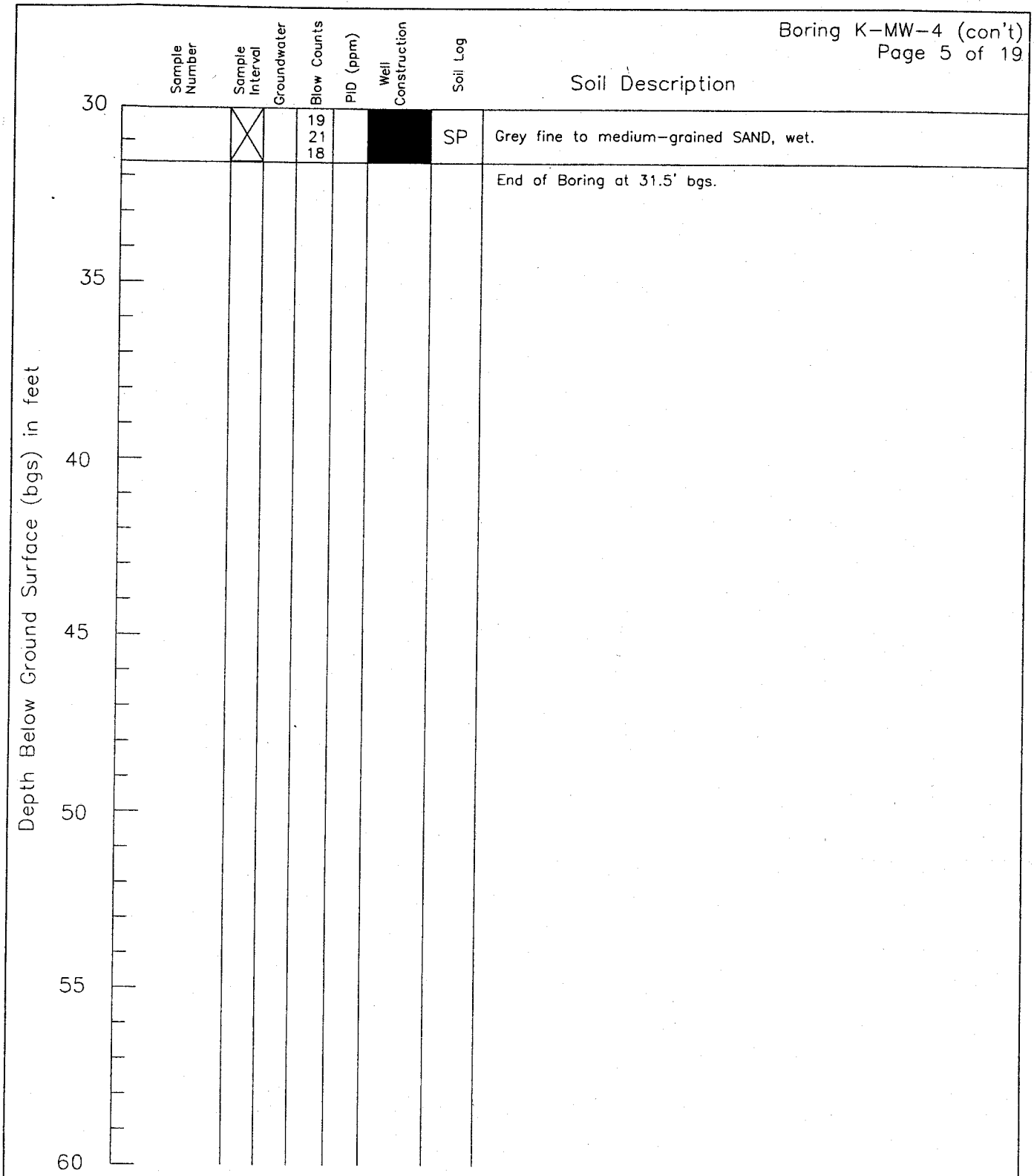
Soils classified visually using the Unified Soils Classification System



Logged by: IY
Driller: Cascade Drilling, Inc.
Drilling Method: Hollow Stem Auger
Sampling Method: Split spoon
Casing Type: 2-inch PVC
Annular Pack: 2/12 Silica sand
Slot Size: 0.010 inch

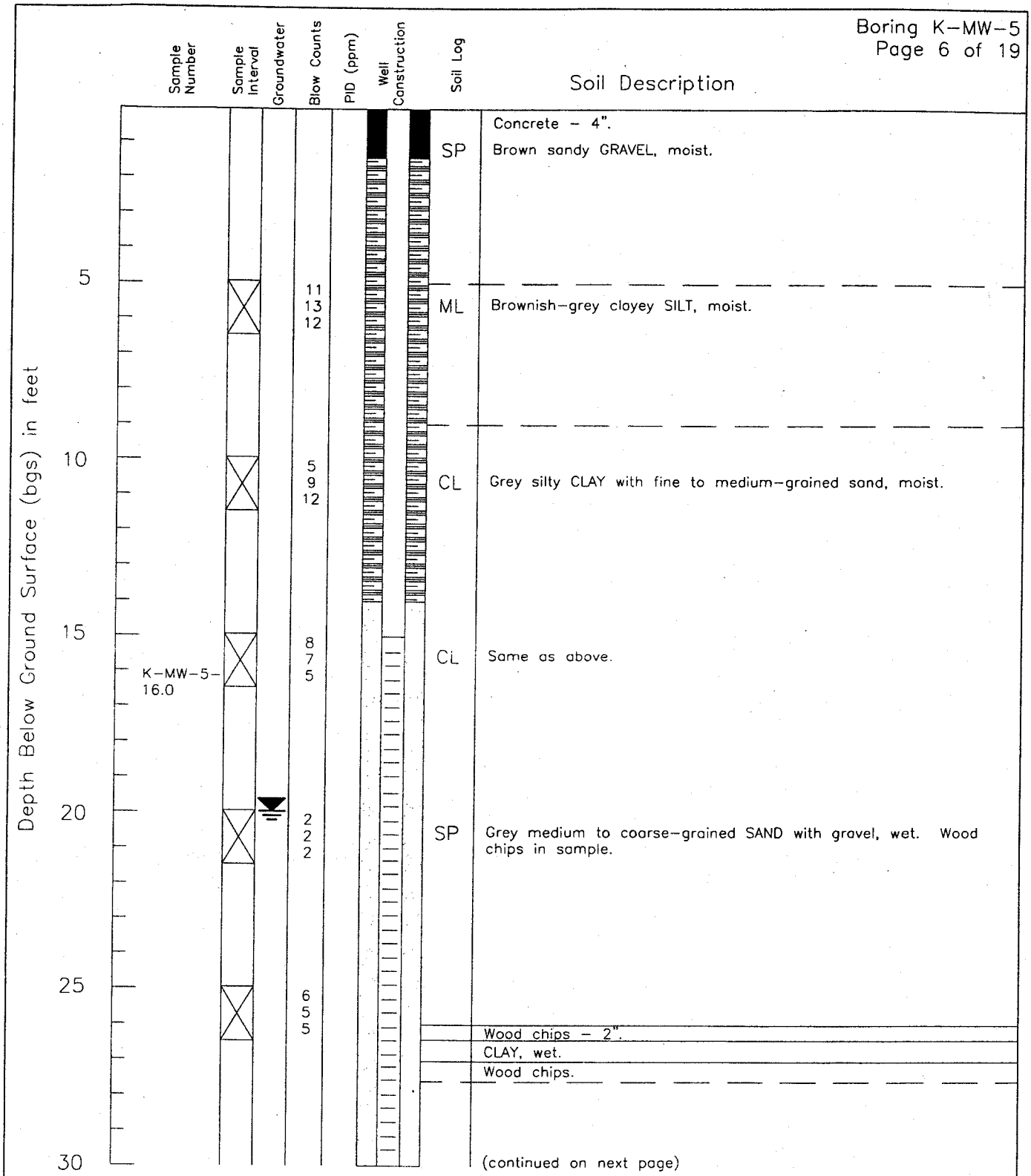
Hammer Size: 130 lbs.
Date Drilled: 3/31/03
Hole Diameter: 8 inches
Hole Depth: 31.5 feet
Well Diameter: 2 inches
Well Depth: 30 feet
Screened Interval: 10 - 30 feet

Soils classified visually using the Unified Soils Classification System



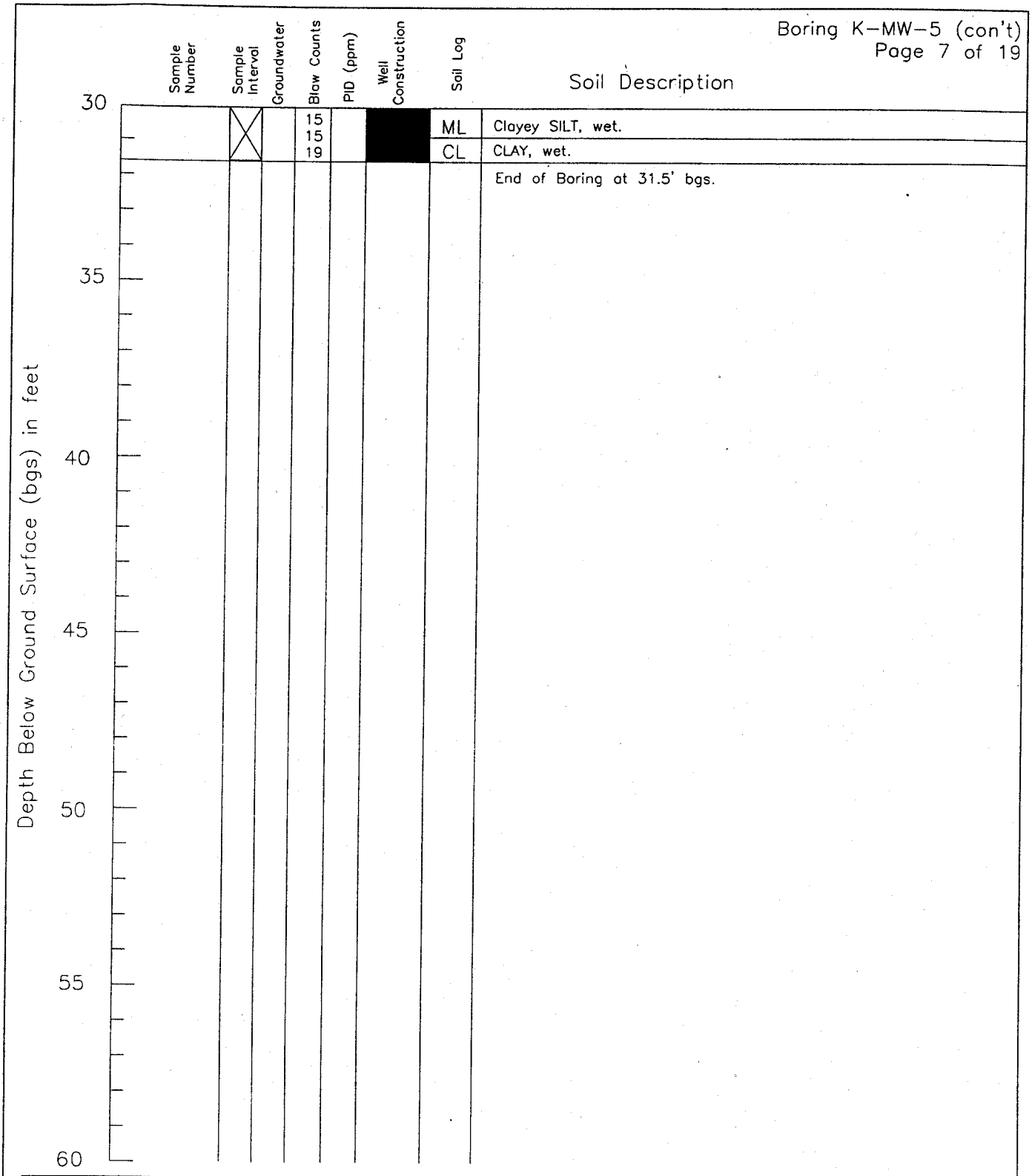
Logged by: IY	Hammer Size: 130 lbs.
Driller: Cascade Drilling, Inc.	Date Drilled: 3/31/03
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches
Sampling Method: Split spoon	Hole Depth: 31.5 feet
Casing Type: 2-inch PVC	Well Diameter: 2 inches
Annular Pack: 2/12 Silica sond	Well Depth: 30 feet
Slot Size: 0.010 inch	Screened Interval: 10 – 30 feet

Soils classified visually using the Unified Soils Classification System



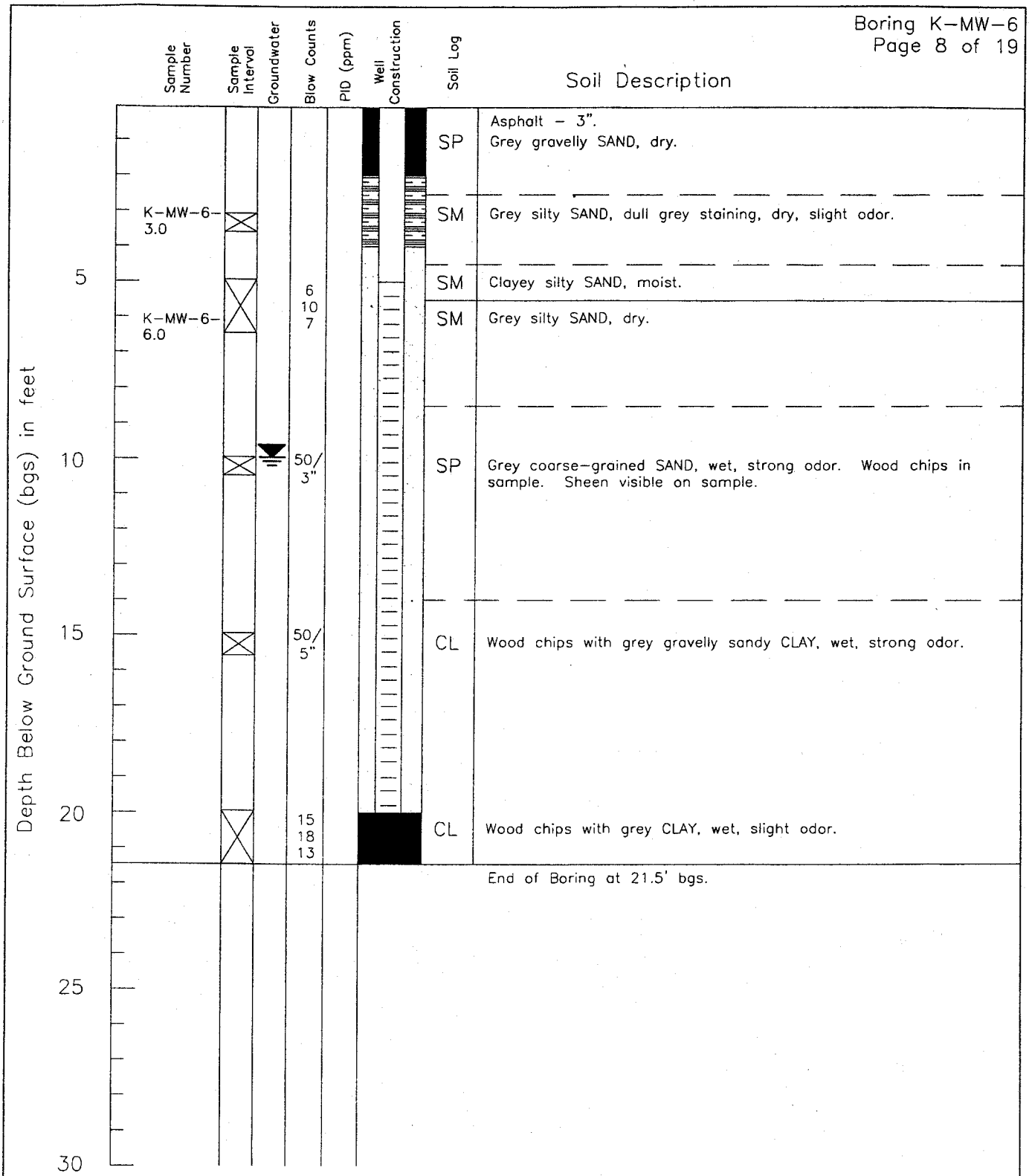
Logged by: IY	Hammer Size: 130 lbs.
Driller: Cascade Drilling, Inc.	Date Drilled: 3/31/03
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches
Sampling Method: Split spoon	Hole Depth: 31.5 feet
Casing Type: 2-inch PVC	Well Diameter: 2 inches
Annular Pock: 2/12 Silica sand	Well Depth: 30 feet
Slot Size: 0.010 inch	Screened Interval: 10 - 30 feet

Soils classified visually using the Unified Soils Classification System



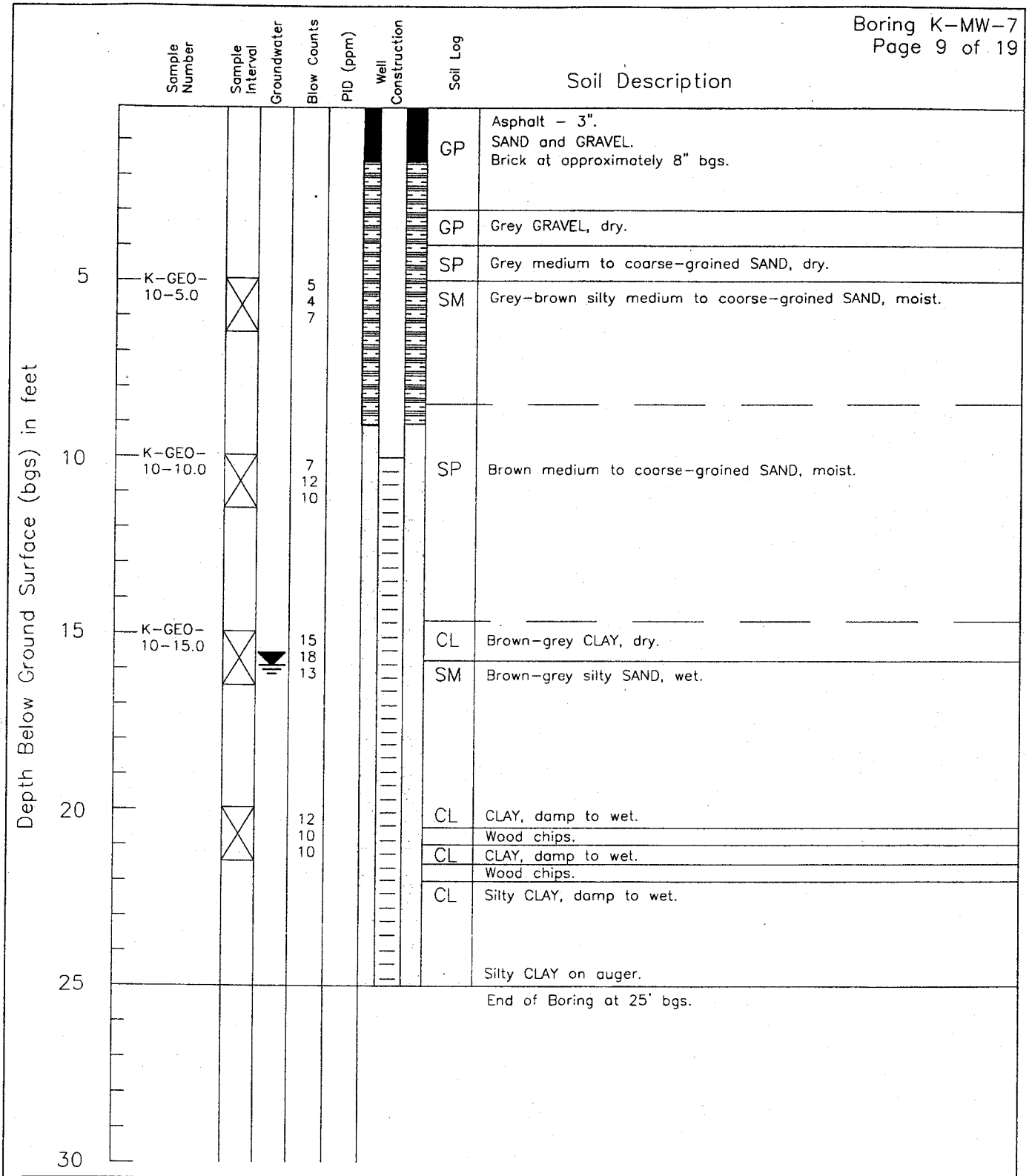
Logged by: IY	Hammer Size: 130 lbs.
Driller: Cascade Drilling, Inc.	Date Drilled: 3/31/03
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches
Sampling Method: Split spoon	Hole Depth: 31.5 feet
Casing Type: 2-inch PVC	Well Diameter: 2 inches
Annular Pack: 2/12 Silica sand	Well Depth: 30 feet
Slot Size: 0.010 inch	Screened Interval: 10 - 30 feet

Soils classified visually using the Unified Soils Classification System



Logged by: IY	Hammer Size: 130 lbs.
Driller: Cascade Drilling, Inc.	Date Drilled: 4/1/03
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches
Sampling Method: Split spoon	Hole Depth: 21.5 feet
Casing Type: 2-inch PVC	Well Diameter: 2 inches
Annular Pack: 2/12 Silica sand	Well Depth: 20 feet
Slot Size: 0.010 inch	Screened Interval: 5 - 20 feet

Soils classified visually using the Unified Soils Classification System



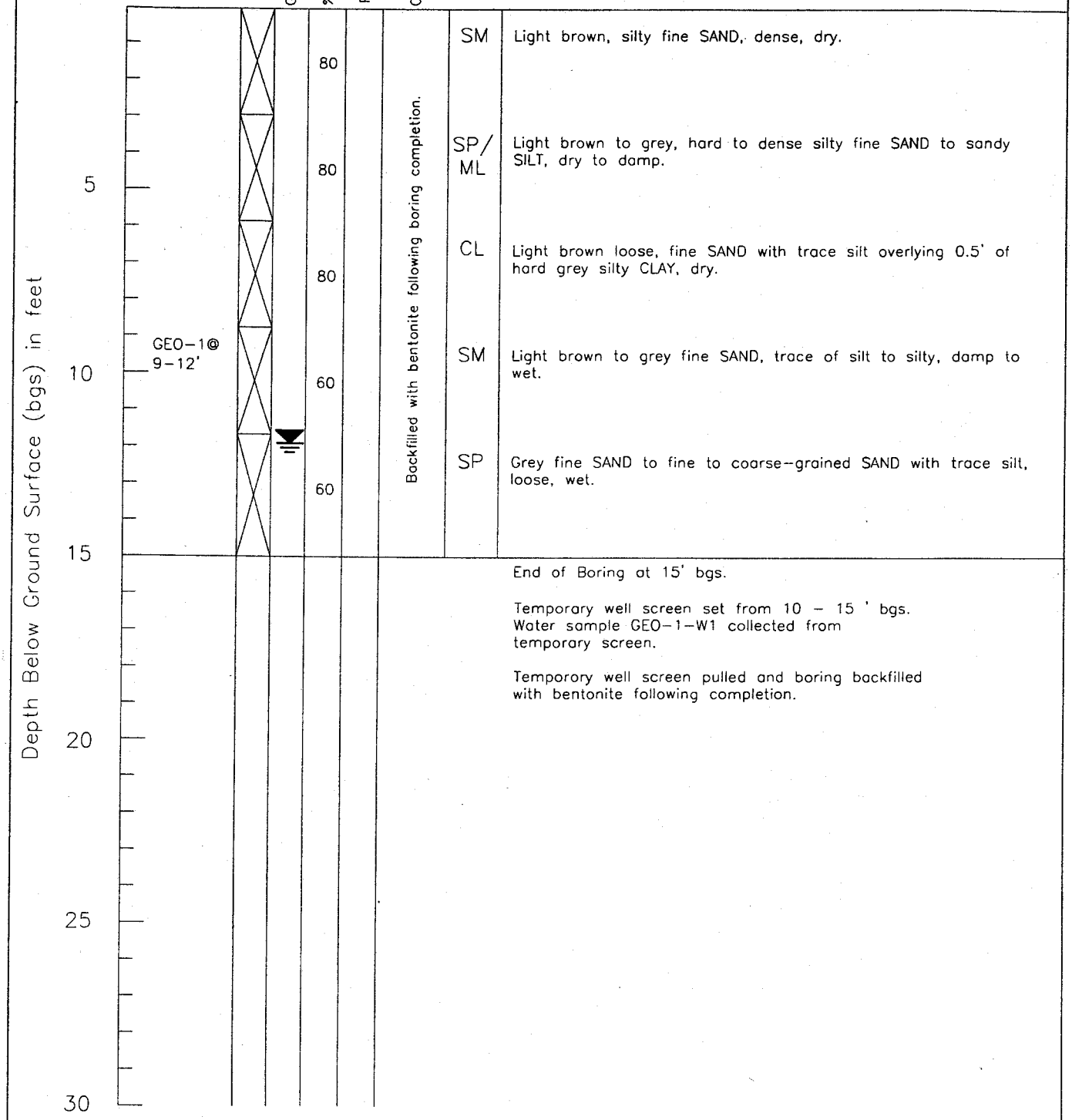
Logged by: IY	Hammer Size: 130 lbs.
Driller: Cascade Drilling, Inc.	Date Drilled: 4/1/03
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches
Sampling Method: Split spoon	Hole Depth: 25 feet
Casing Type: 2-inch PVC	Well Diameter: 2 inches
Annular Pack: 2/12 Silica sand	Well Depth: 25 feet
Slot Size: 0.010 inch	Screened Interval: 10 - 25 feet

Soils classified visually using the Unified Soils Classification System

KANE Environmental, Inc.

Seattle Investment Properties
601 Westlake North
Seattle, Washington

Soil Boring and Groundwater Monitoring Well Logs



Logged by: TC
Driller: ESN Northwest
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Date Drilled: 4/1/03
Hole Diameter: 2 inches
Hole Depth: 15 feet
Well Diameter: NA
Well Depth: NA
Screened Interval: NA

No permanent well installed.

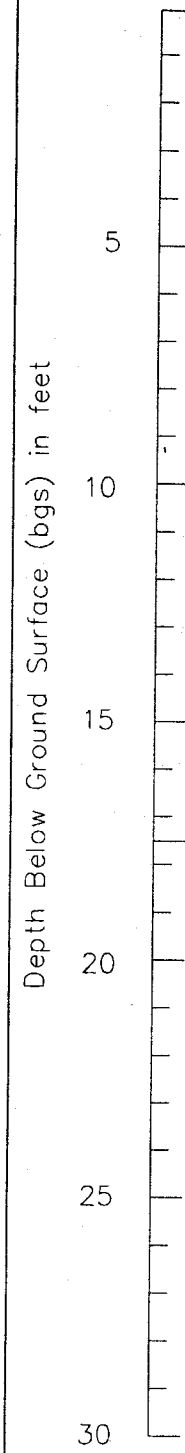
Soils classified visually using the Unified Soils Classification System

Depth Below Ground Surface (bgs) in feet	Sample Number	Sample Interval	Groundwater	% Recovery	PID (ppm)	Well Construction	Soil Log	Soil Description
				100		Backfilled with bentonite following boring completion.	ML	Fine gravelly SILT, hard, dry to damp.
							SP	Grey silty fine to coarse-grained SAND and fine gravel, dense, dry.
5				100			SP	Olive-grey to light grey silty fine to coarse-grained SAND and fine gravel, dense, dry to damp.
	GEO-2@ 6-8'							
				100			SP	Olive-grey to grey silty fine to coarse-grained SAND and fine gravel, dense, dry to damp.
10								End of Boring at 8' bgs. Boring backfilled with bentonite following completion.
15								
20								
25								
30								

Logged by: TC
Driller: ESN Northwest
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Date Drilled: 3/31/03
Hole Diameter: 2 inches
Hole Depth: 8 feet
Well Diameter: NA
Well Depth: NA
Screened Interval: NA

Soils classified visually using the Unified Soils Classificotion System



Soil Log	Soil Description
SM	Dark grey very fine-grained sandy SILT, dense, dry to damp.
SM	Brown fine-grained sandy SILT, stiff, dry to damp.
ML	Brown fine-grained sandy SILT, stiff, dry to damp.
SM	Dark grey-brown silty fine-grained SAND.
SM	Brown fine to medium-grained SAND with trace silt, dense, dry to damp.
SM	Brown fine to medium-grained SAND, trace of silt to silty, dense, dry to damp.
SM	Brown very silty fine to medium-grained SAND, damp.
SM	Brown fine to medium-grained SAND, trace of silt to silty, dense, dry to damp.
SP	2 inches of olive-grey silty fine to medium-grained SAND with fine to coarse-grained gravel, very dense, damp.

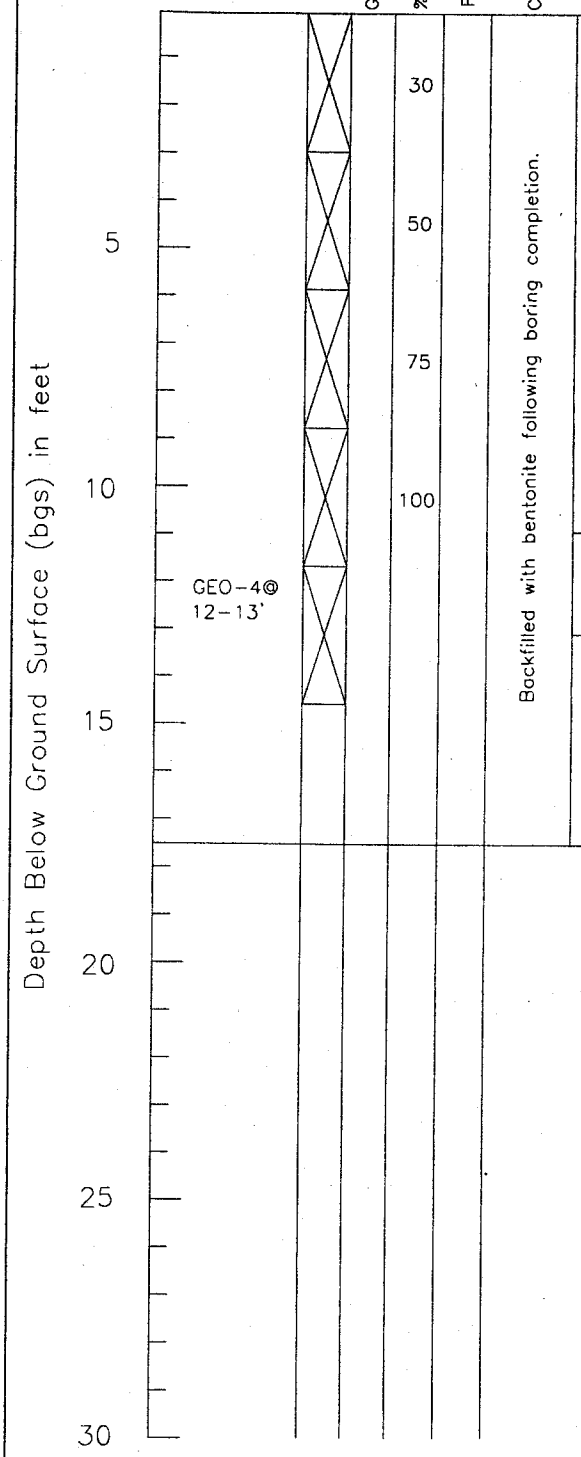
End of Boring at 17.5' bgs - Geoprobe Refusal.

Boring backfilled with bentonite following completion.

Logged by: TC
Driller: Cascode Drilling, Inc.
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Dote Drilled: 3/31/03
Hole Diameter: 2 inches
Hole Depth: 17.5 feet
Well Diameter: NA
Well Depth: NA
Screened Intervol: NA

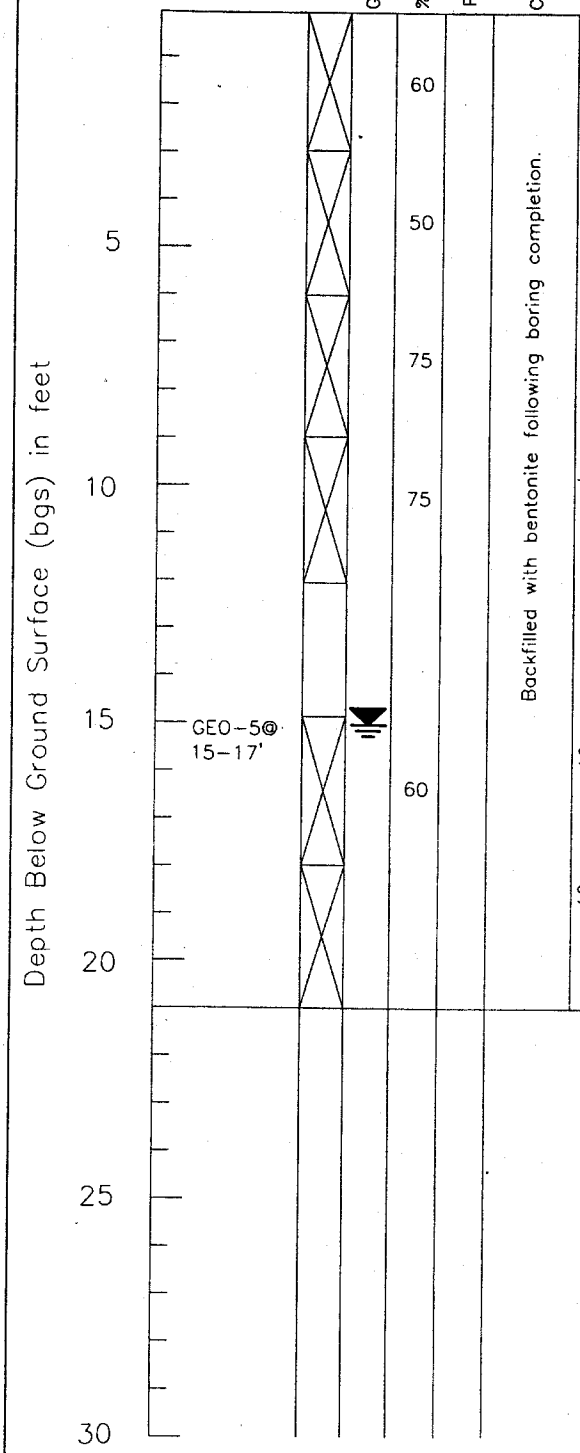
Soils classified visually using the Unified Soils Classification System



Logged by: TC
Driller: Cascade Drilling, Inc.
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Date Drilled: 3/31/03
Hole Diameter: 2 inches
Hole Depth: 14.5 feet
Well Diameter: NA
Well Depth: NA
Screened Interval: NA

Soils classified visually using the Unified Soils Classification System



Soil Log	Soil Description
SW	Grey fine-grained SAND, dense, dry.
SM	Grey silty fine-grained SAND, very dense, dry.
SM	Grey fine-grained SAND, slightly silty, dense, dry.
SM/ ML	Grey fine-grained SAND with trace of silt, loose, dry, interbedded with grey SILT to silty fine-grained SAND, hard, dry.
ML/ CL	Grey clayey SILT to silty CLAY, hard, dry to damp.
SW	Grey silty fine-grained SAND, loose, dry to damp.
SM/ ML	Grey fine-grained SAND with trace of silt, damp to wet, with narrow interbeds of grey clayey SILT to silty CLAY, soft to hard, mixed with woodchips.
SM/ ML	Grey fine to medium-grained SAND, loose, wet, with interbeds of grey clayey SILT to silty CLAY, soft to hard, with decaying wood.

End of Boring at 21' bgs.

Temporary well screen set from 13 – 18 ' bgs. Water sample GEO-5-W1 collected from temporary screen.

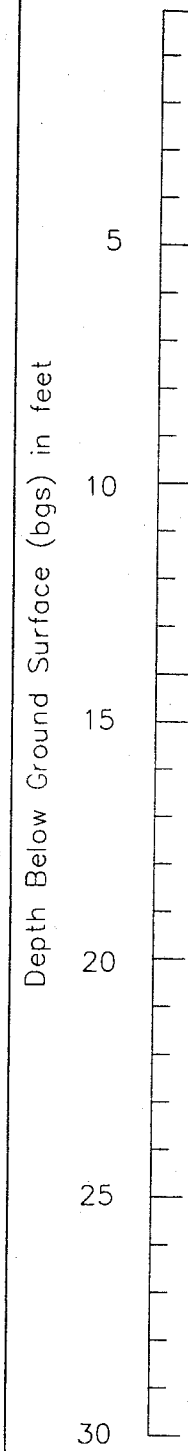
Temporary well screen pulled and boring backfilled with bentonite following completion.

Logged by: TC
Driller: Cascode Drilling, Inc.
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Dote Drilled: 3/31/03
Hole Diameter: 2 inches
Hole Depth: 21 feet
Well Diameter: NA
Well Depth: NA
Screened Interval: NA

No permanent well installed.

Soils classified visually using the Unified Soils Classification System



Soil Description	
	Dark grey mixture of asphalt, sand, and gravel to 1'.
SM	Grey very silty fine-grained SAND, dense, dry to damp.
SM	Brown silty fine-grained SAND, dense, dry.
SM	Brown very silty fine-grained SAND, dense, damp.
SM	Brown fine-grained SAND with trace of silt, dense, dry to wet.
SM	Brown fine-grained SAND with trace of silt, dense, damp.
SM	Brown trace of silt to very silty fine-grained SAND dry to wet, overlying brown to grey silty fine to coarse-grained SAND, very dense, damp.
	End of Boring at 14' bgs – Probe Refusal.
	Boring backfilled with bentonite following completion.

Logged by: TC
Driller: Cascade Drilling, Inc.
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annulor Pack: NA
Slot Size: NA

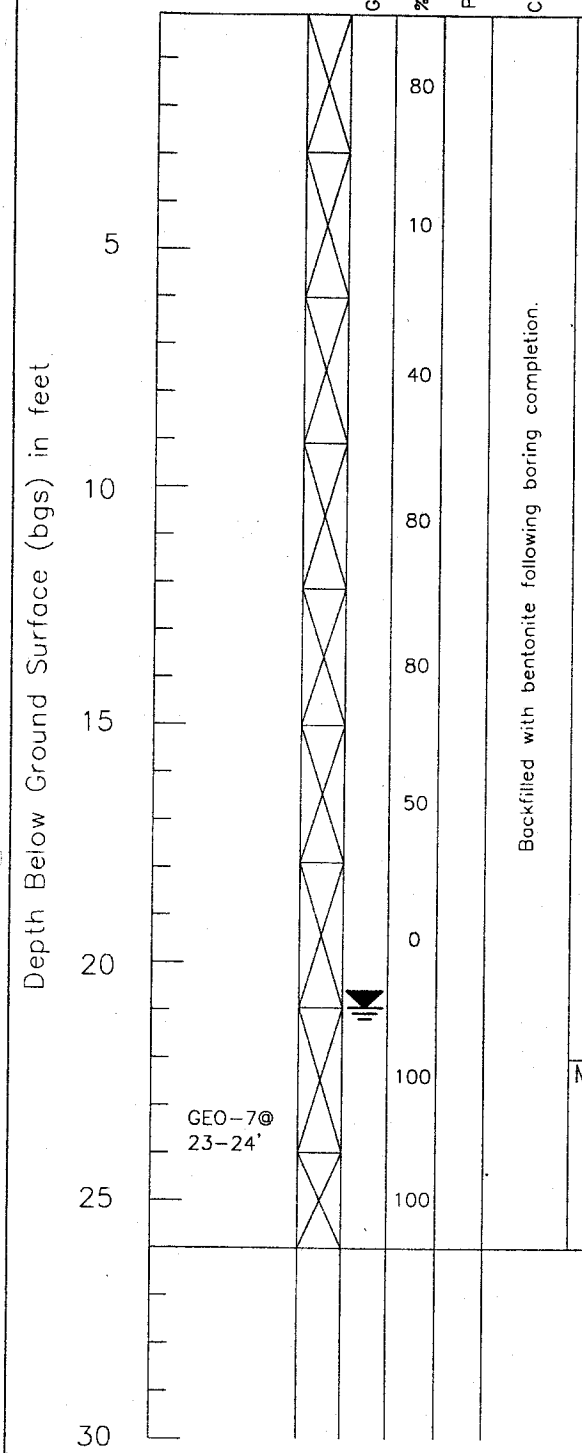
Hammer Size: NA
Dote Drilled: 3/31/03
Hole Diameter: 2 inches
Hole Depth: 14 feet
Well Diameter: NA
Well Depth: NA
Screened Intervol: NA

Soils classified visually using the Unified Soils Classification System

KANE
Environmental, Inc.

Seattle Investment Properties
601 Westlake North
Seattle, Washington

Soil Boring and Groundwater Monitoring Well Logs



Soil Log	Soil Description
ML	Olive-grey with numerous reddish-brown to yellowish-brown mottles; fine-grained sandy SILT, hard to stiff, dry.
	Brick - no recovery.
ML	Olive-grey fine-grained sandy SILT with trace of fine gravel, hard to stiff, dry.
ML	Brown to olive-grey clayey, fine-grained sandy SILT, hard dry to damp.
ML	Olive-grey clayey, fine-grained sandy SILT, hard, dry to damp.
ML	Brown to grey fine-grained sandy SILT, stiff, damp.
	No recovery.
SM	Olive-grey very silty SAND with troce of fine gravel, dense, dry to damp.
ML/ SM	Brown fine-grained sandy SILT, stiff to hard, damp, with 2" of brown fine-grained SAND, loose, dry.
SM	Olive-grey silty to very silty SAND with trace of fine gravel, dense, wet.

End of Boring at 26' bgs - Probe Refusal

Temporary well screen set from 19 - 24' bgs. Water sample GEO-7-W1 collected from temporary screen.

Temporary well screen pulled and boring backfilled with bentonite following completion.

Logged by: TC
Driller: Cascade Drilling, Inc.
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Date Drilled: 3/31/03
Hole Diameter: 2 inches
Hole Depth: 26 feet
Well Diameter: NA
Well Depth: NA
Screened Interval: NA

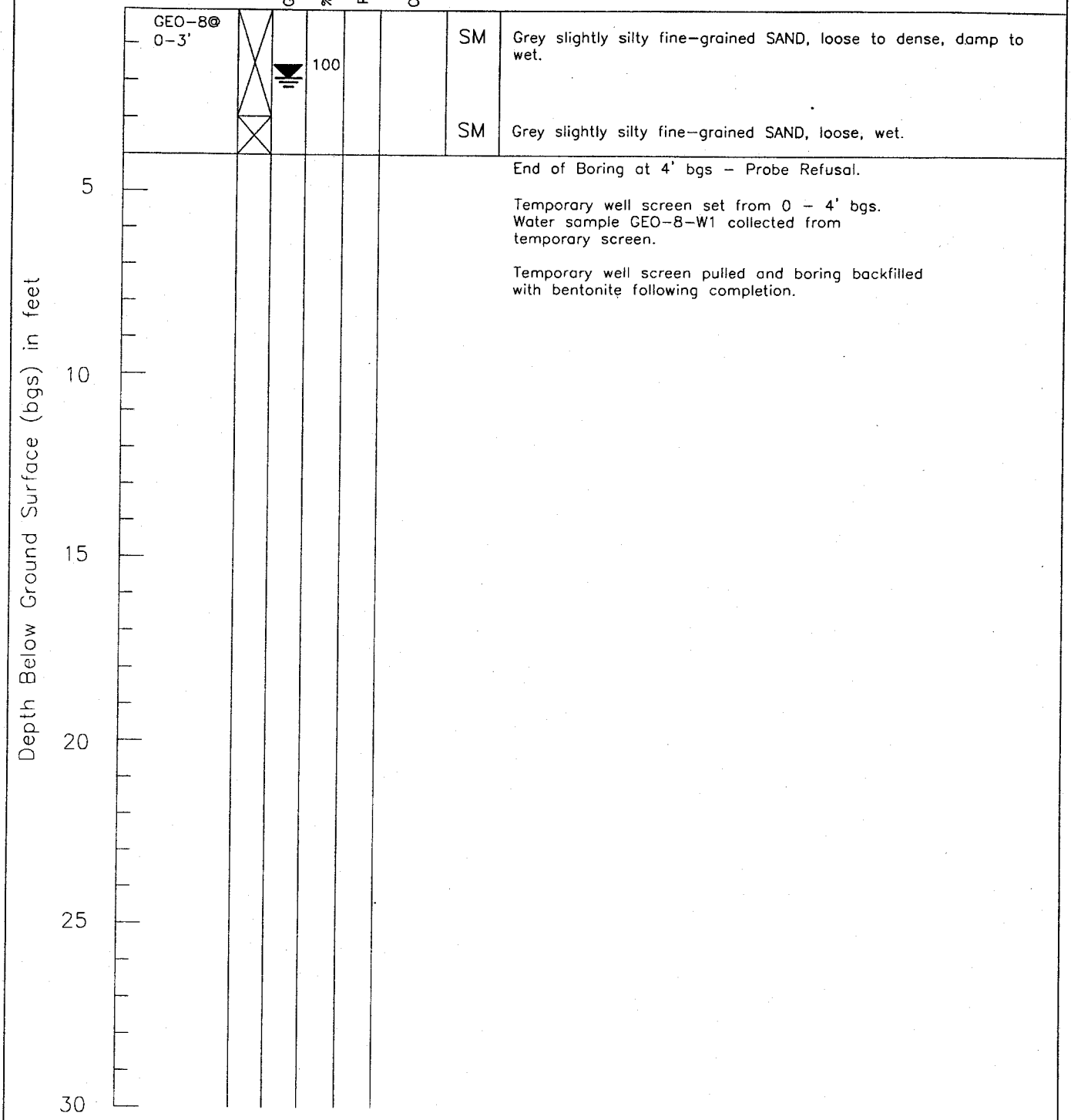
No permanent well installed.

Soils classified visually using the Unified Soils Classification System

KANE Environmental, Inc.

Seattle Investment Properties
601 Westlake North
Seattle, Washington

Soil Boring and Groundwater Monitoring Well Logs

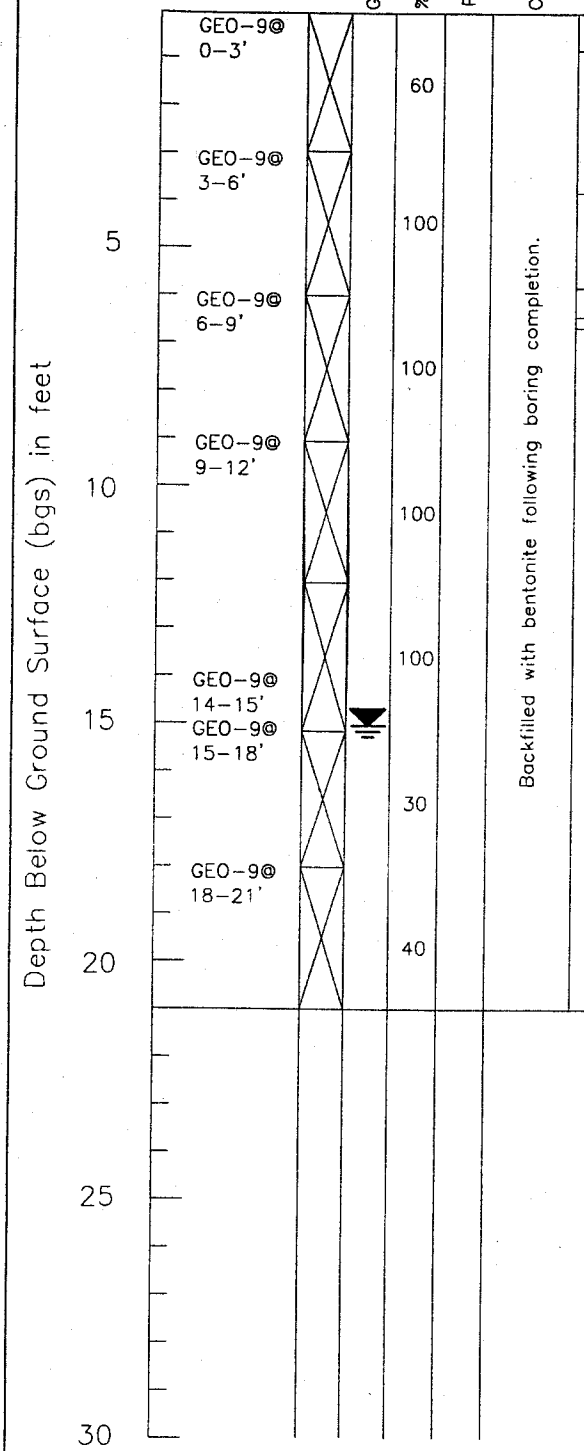


Logged by: TC
Driller: ESN Northwest
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Date Drilled: 4/1/03
Hole Diameter: 2 inches
Hole Depth: 4 feet
Well Diameter: NA
Well Depth: NA
Screened Interval: NA

No permanent well installed.

Soils classified visually using the Unified Soils Classification System



Soil Log	Soil Description
ML	Olive-grey to grey sandy SILT, friable, hard.
CL	Grey silty CLAY, stiff, dry to damp.
CL	Grey silty CLAY, hard, dry.
OH	Dark-grey decaying wood.
SP	Grey silty fine-grained SAND with fine gravel, loose, dry.
	2" lens of woodchips.
ML	Grey fine to coarse-grained sandy SILT with fine gravel, damp.
ML	Grey slightly fine-grained gravelly, fine-grained sandy SILT, hard, dry.
ML	Grey silty fine to coarse-grained gravelly, fine to medium-grained sandy SILT, loose, dry, overlying grey fine-grained gravelly, silty, fine to coarse-grained SAND, loose, wet.
SP	Grey fine to coarse-grained gravelly SAND with troce of silt, dense, wet.
SP	Grey silty, fine-grained gravelly, fine to coarse-groined SAND, loose, wet.

End of Boring at 21' bgs.

Temporary well screen set from 13 - 18' bgs. Water sample GEO-9-W1 collected from temporary screen.

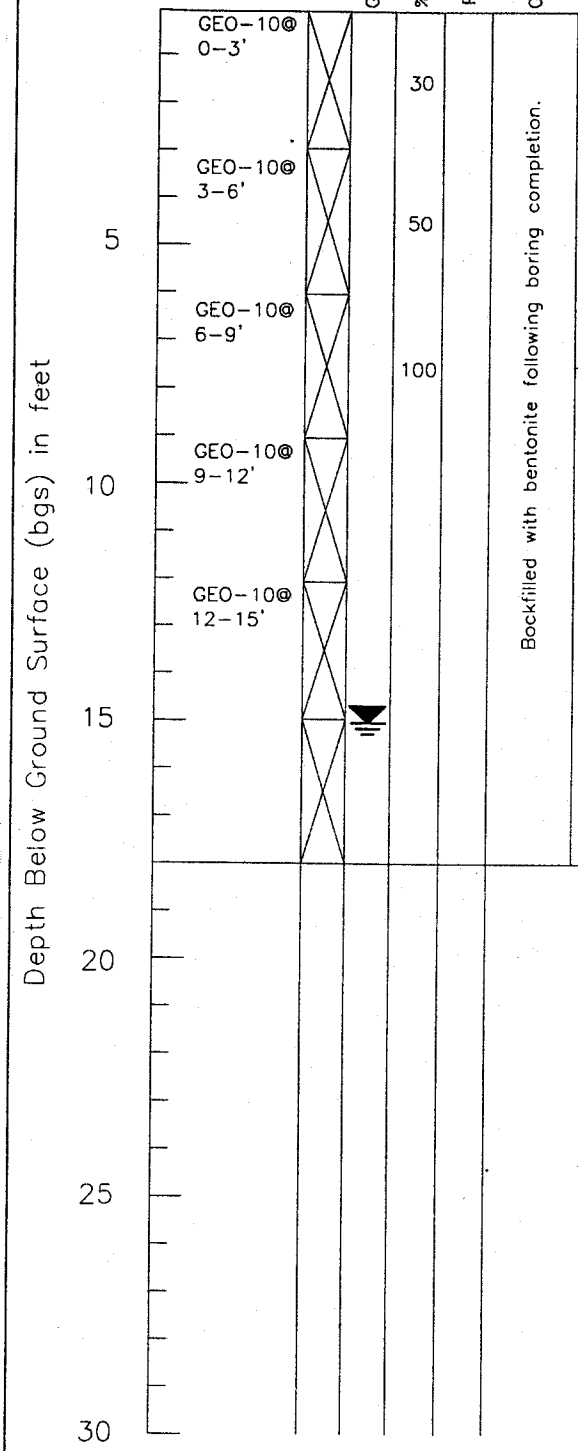
Temporary well screen pulled ond boring backfilled with bentonite following completion.

Logged by: TC
Driller: ESN Northwest
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Date Drilled: 4/1/03
Hole Diameter: 2 inches
Hole Depth: 21 feet
Well Diameter: NA
Well Depth: NA
Screened Interval: NA

No permanent well installed.

Soils classified visually using the Unified Soils Classification System



Soil Log	Soil Description
SP	Grey fine-grained gravelly, fine to coarse-grained SAND, slightly silty, loose, dry.
SM	Brown fine-grained SAND, slightly silty, loose, dry.
SM	Brown to olive-grey silty to very silty fine-grained SAND, dense, damp.
CL	Grey silty CLAY, stiff, damp.
CL	Same as above.
CL	Grey to brown fine to medium-grained sandy SILT, stiff, damp.
SM	Fine-grained SAND with trace of silt, loose to dense, moist to wet.

End of Boring at 18' bgs.

Temporary well screen set from 13 - 18' bgs. Water sample GEO-10-W1 collected from temporary screen.

Temporary well screen pulled and boring backfilled with bentonite following completion.

Logged by: TC
Driller: ESN Northwest
Drilling Method: Hydraulic direct-push probe
Sampling Method: 3-foot split spoon
Casing Type: NA
Annular Pack: NA
Slot Size: NA

Hammer Size: NA
Date Drilled: 4/1/03
Hole Diameter: 2 inches
Hole Depth: 18 feet
Well Diameter: NA
Well Depth: NA
Screened Interval: NA

No permanent well installed.

Soils classified visually using the Unified Soils Classificotion System

PROJECT NUMBER	BORING NUMBER	SHEET	OF
31479.AA.P3.10	P27-B4	1	1

2/4/08

SOIL BORING LOG

PROJECT Mercer Corridor Phase II LOCATION Parcel 24, near Mercer St. + 9th Ave

ELEVATION _____ DRILLING CONTRACTOR Cascade Drilling; Kasey

DRILLING METHOD AND EQUIPMENT Geoprobe 6600, 4' rods w/1.5" acetate liners

WATER LEVELS _____ START 1330 FINISH 1348 LOGGER N. Baden

DEPTH BELOW SURFACE (FT)	SAMPLE INTERVAL	SAMPLE NUMBER AND TYPE	SAMPLE RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
0						PID
	↓		2.16'		Sand and Clay, SC, Light gray, loose to dense, moist fine to med. Sand grading to fine to med Sand and Clay at 1.5', little med. gravel.	P27-B4-2.0-4.0 @ 1400 0'-4' 0.0 Note: driller notes refusal on old fill area will move borehole over ~1'
5	↓		2.5		Sand and Clay, SC, yellowish orange to light gray, dense, moist, fine to medium, little medium subangular gravel.	4-8' 0.0
	↓		1.05		Sand and Clay, SC, yellowish orange to olive gray, soft, moist to wet, fine to medium, little subangular gravel.	P27-B4 - 10.0-12.0 @ 14:25 8-12 0.0
10	↓		3.3		Sand and Silt, ML, yellowish orange to olive gray, soft, wet, fine to medium, little fine gravel	▽ 14' 12-16' 0.0
15	↓		0'		Very wet, no recovery	16-20'
20						20' BOH
25						

NB 3

PROJECT NUMBER	BORING NUMBER	SHEET	OF
314749.AA.P3.10	P27-BS	1	1

SOIL BORING LOG

2/5/08

PROJECT Mercer Corridor Phase II LOCATION P27-BS near Broad St and 9th Ave

ELEVATION _____ DRILLING CONTRACTOR GR & Cascade Drilling, Kasey (operator)

DRILLING METHOD AND EQUIPMENT Geoprobe 6600, 4' rods w/1.5" ID acetate liners

WATER LEVELS _____ START 0820 FINISH 0830 LOGGER N. Baden

DEPTH BELOW SURFACE (FT)	SAMPLE: INTERVAL	SAMPLE: NUMBER AND TYPE	SAMPLE: RECOVERY (FT)	STANDARD PENETRATION TEST RESULTS 6"-6"-6" (N)	SOIL DESCRIPTION: SOIL NAME, USCS GROUP SYMBOL, COLOR, MOISTURE CONTENT, RELATIVE DENSITY OR CONSISTENCY, SOIL STRUCTURE, MINERALOGY	COMMENTS: DEPTH OF CASING, DRILLING RATE, DRILLING FLUID LOSS, TESTS AND INSTRUMENTATION
0						PID
			2.1		SM, Sand and Silt, olive gray, dense, SAFF, moist, fine to medium grained, some medium to fine subangular gravel	0-4' 1.2
						driller notes odor from borehole
						4'
5			0.6		SM, Sand and Silt, olive gray to dark gray, wet, loose, some fine to medium subangular gravel.	4-8' 8.9
						strong odor from sample
						Bott 8'
10						One Soil Sample P27-BS-2.0-4.0 @ 0845 at Project Manager's direction due to small soil interval above water table
						- will relocate soil and water FD and MS/MSD per direction of PM
15						
20						
25						

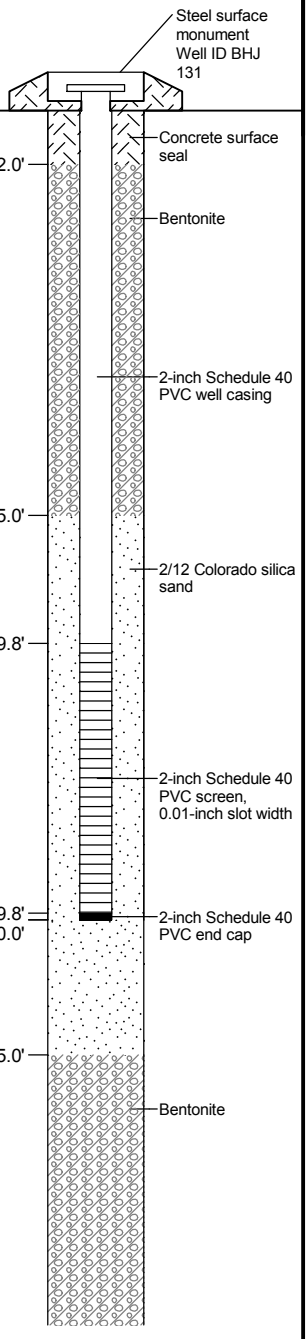
Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	3/14/2012	3/14/2012	61.5	TML	DPC	Geologic Drill	HSA

Hammer Data	Drilling Equipment	
Manual 140 (lbs) / 30 (in) Drop	XL Trailer Mounted	A 2 (in) well was installed on 3/14/2012 to a depth of 30 (ft).
Surface Elevation (ft) Vertical Datum: 31.8	Top of Casing Elevation (ft): 30.4	Groundwater Date Measured: 3/19/2012 Depth to Water (ft): 10.6 Elevation (ft): 21.20
Easting (X): 1222019.21 Northing (Y): 473730.19	Horizontal Datum: NAD83	

Notes: 4.25" I.D./4.75" O.D.

Depth (feet)	Elevation (feet)	Interval Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor
0	30	3			1			SM	Light brown silty fine to coarse sand with gravel and wood debris (medium dense, moist to wet)		
		6	17		2				Brick fragments	NS	<1
								GP-GM	Gray fine to coarse gravel with silt and sand (very loose, wet)	NS	<1
5	25	6	20		3						
10	20	5	2		4					NS	<1
								CC	Concrete from 11 to 12 feet; brick fragments		
		4	3		5			GP-GM	Gray fine to coarse gravel with silt and sand (very loose, wet) (fill)	NS	<1
15	15	4	1		6					NS	<1
		5	2		7			ML	Gray silt with sand (soft, wet) (recent deposits)	NS	<1
20	10	18	5		8			SM	Gray silty fine to medium sand (loose, wet)	NS	<1
25	5	9	10		9			SP-SM	Gray fine to coarse sand with silt (loose, wet) (outwash)	NS	<1
30	0	14	5		10			ML/CL	Gray silt/clay with sand (medium stiff, wet)	NS	<1
35	5	14	28		11 %F			ML	Gray silt with sand (stiff to very stiff, wet) %F = 74; MC = 23%	NS	<1
40	10	6	10		12 %F				Grades to with occasional sand %F = 89; MC = 28%	NS	<1
45											

WELL LOG



Note: See Figure A-1 for explanation of symbols.

Log of Monitoring Well B-43-1

GeoEngineers

Project: Block 43 - South Lake Union Development
Project Location: Seattle, Washington
Project Number: 7087-017-00

Figure A-2
Sheet 1 of 2

Redmond: Date:4/17/12 Path:C:\USERS\TNASH\DESKTOP\7087017700_LOGS.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_WELL

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor	WELL LOG
-15	45		15	31		13 %F			ML	Grades to with sand %F = 71; MC = 19%	NS	<1	Bentonite
-20	50		7	50		14 %F			SP-SM	Gray fine to medium sand with silt (very dense, wet) (glacially consolidated soils) %F = 6; MC = 20%	NS	<1	
-25	55		10	86/11"		15					NS	<1	
	60		18	57		16				Heave at 60 feet	NS	<1	60.0'

Note: See Figure A-1 for explanation of symbols.

Log of Monitoring Well B-43-1 (continued)

GeoEngineers

Project: Block 43 - South Lake Union Development
Project Location: Seattle, Washington
Project Number: 7087-017-00

Figure A-2
Sheet 2 of 2

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	3/12/2012	3/12/2012	71.5	TML	DPC	Geologic Drill	HSA

Hammer Data	Manual 140 (lbs) / 30 (in) Drop	Drilling Equipment	XL Trailer Mounted
Surface Elevation (ft) Vertical Datum	37.4	Top of Casing Elevation (ft)	37.1
Easting (X) Northing (Y)	1222021.93 473730.03	Horizontal Datum	NAD83

A 2 (in) well was installed on 3/12/2012 to a depth of 30 (ft).

Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
3/19/2012	16.7	20.70

Notes: 4.25" I.D./4.75" O.D.

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor
35	0		3			1			SM	Dark brown silty fine to medium sand with gravel (loose to medium dense, most to wet) (fill)		
			15	14		2				Wood debris	NS	<1
30	5		2	4		3 %F				Driving on rock; wood debris %F = 44; MC = 43%	NS	<1
			12	10		4				Grades to grayish-brown	NS	<1
25	10		12	9		5				Brick fragments	NS	<1
			14	6		6					NS	<1
20	15		8	4		7				Grades to wet	NS	<1
			15	7		8					NS	<1
15	20		15	4		9				Wood debris	NS	<1
			8	13		10			SM	Dark gray silty fine to medium sand with organic matter (medium dense to very dense, wet) (recent deposits)	NS	<1
10	30		6	55		11					NS	<1
5	35		15	27		12 %F			SP-SM	Gray fine to medium sand with silt and occasional gravel (medium dense to very dense, wet) (glacially consolidated soils) %F = 7; MC = 21%	NS	<1
0	40		15	55		13					NS	<1
-5	45								SP	(Description on next page)		

WELL LOG

Steel surface monument Well ID BHJ 181

Concrete surface seal — 2.0'

2-inch Schedule 40 PVC well casing

13.0'

14.8'

2/12 Colorado silica sand

2-inch Schedule 40 PVC screen, 0.01-inch slot width

29.8'

30.0'

2-inch Schedule 40 PVC end cap

32.0'

Bentonite

Note: See Figure A-1 for explanation of symbols.

Log of Monitoring Well B-43-2

GeoEngineers

Project: Block 43 - South Lake Union Development

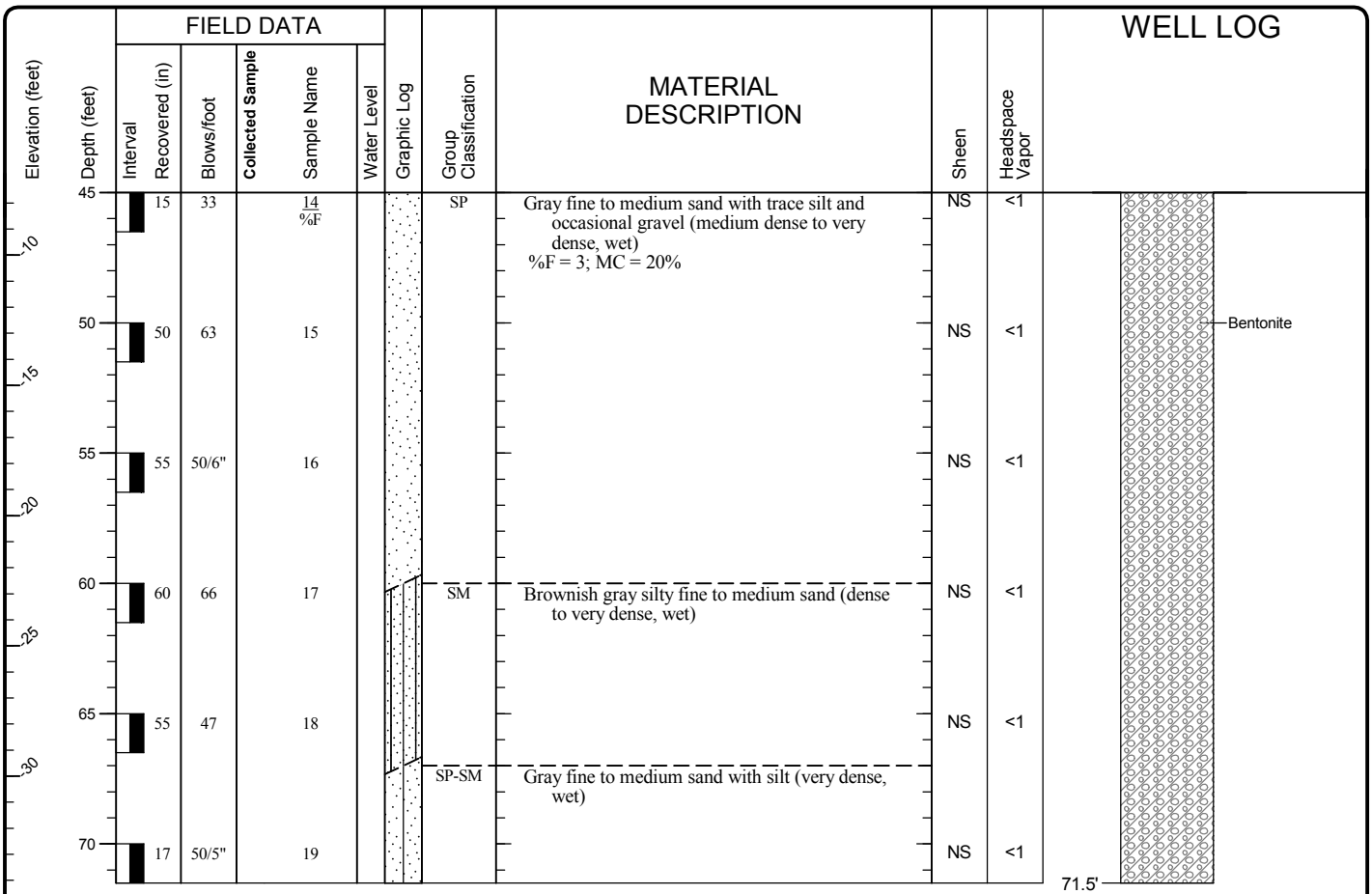
Project Location: Seattle, Washington

Project Number: 7087-017-00

Figure A-3

Sheet 1 of 2

Redmond: Date:4/17/12 Path:C:\USERS\TNASH\DESKTOP\708701700_LOGS.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_WELL



Note: See Figure A-1 for explanation of symbols.

Log of Monitoring Well B-43-2 (continued)

GeoEngineers

Project: Block 43 - South Lake Union Development
Project Location: Seattle, Washington
Project Number: 7087-017-00

Figure A-3
Sheet 2 of 2

Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	3/13/2012	3/13/2012	71.5	TML	DPC	Geologic Drill	HSA

Surface Elevation (ft) Vertical Datum	Hammer Data	Drilling Equipment
34.9	Manual 140 (lbs) / 30 (in) Drop	XL Trailer Mounted

Easting (X)	Northing (Y)	System Datum	Groundwater Date Measured	Depth to Water (ft)	Elevation (ft)
1222022.34	473731.17	NAD83	3/13/2012	20.0	14.9

Notes: 4.25" I.D./4.75" O.D.

Elevation (feet)	Depth (feet)	FIELD DATA: Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
30	0								SM	Brownish-gray silty fine to medium sand with gravel (loose, moist) (fill)			
			3			1							
			9	5		2					NS	<1	
25	5		6	8		3					NS	<1	Wood debris
			9	5		4					NS	<1	
20	10		9	5		5					NS	<1	
			3	4		6					NS	<1	
15	15		0.5	4		7					NS	<1	
				7		8					NS	<1	No recovery
10	20		18	5		9	▽		ML	Gray silt/clay with sand (medium stiff, wet)	NS	<1	
													Roots
5	25		18	2		10			SM	Light brown silt fine to medium sand (very loose, wet) (recent deposits)	NS	<1	
									ML/CL	Gray sandy silt/clay (medium stiff, moist)			
0	30		15	5		11					NS	<1	
									ML	Gray sandy silt (stiff, wet) %F = 58; MC = 26%			
-5	35		16	9		12 %F					NS	<1	
										%F = 68; MC = 47%			
-10	40		4	11		13 %F					NS	<1	Heave between 40 and 50 feet Added mud
									ML	Gray sandy silt (hard, wet) (glacially consolidated soils)			
	45												

Note: See Figure A-1 for explanation of symbols.

Redmond: Date:4/17/12 Path:C:\USERS\TNASH\DESKTOP\7087017\00_LOGS.GPJ DBTemplate/LibTemplate:GEOENGINEERS8.GDT/GEI8_ENVIRONMENTAL_STANDARD

Log of Boring B-43-3

GeoEngineers

Project: Block 43 - South Lake Union Development
Project Location: Seattle, Washington
Project Number: 7087-017-00

Figure A-4
Sheet 1 of 2

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name Testing	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor (ppm)	REMARKS
	45		18	51		14 %F				%F = 59; MC = 22%	NS	<1	
			15	88/11"		15			SM	Gray silty fine sand (very dense, wet)	NS	<1	
-15	50		14	62		16					NS	<1	
-20	55		15	62		17					NS	<1	
-25	60		10	93/11"		18			SP-SM	Gray fine to medium sand with silt (very dense, wet)	NS	<1	
-30	65		10	83		19			SM	Gray silty fine to medium sand (dense to very dense, wet)	NS	<1	
-35	70		9	31		20					NS	<1	

Note: See Figure A-1 for explanation of symbols.

Log of Boring B-43-3 (continued)

GeoEngineers

Project: Block 43 - South Lake Union Development
Project Location: Seattle, Washington
Project Number: 7087-017-00

Figure A-4
Sheet 2 of 2

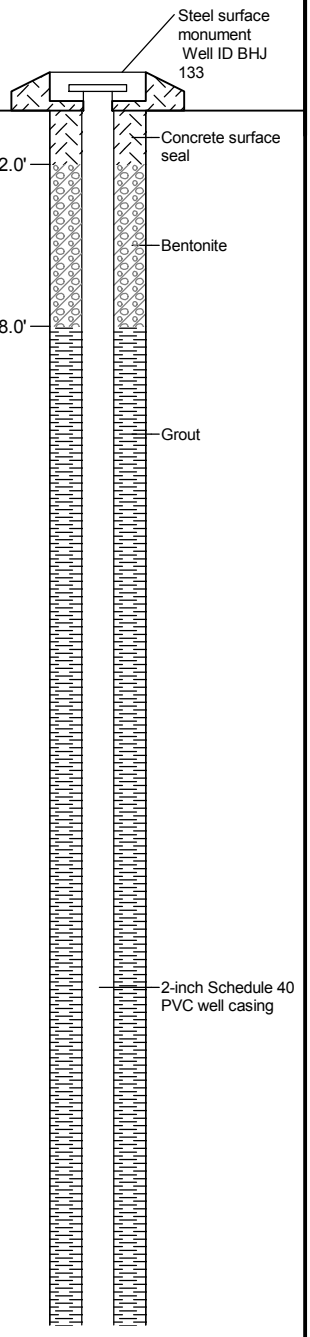
Drilled	Start	End	Total Depth (ft)	Logged By	Checked By	Driller	Drilling Method
	3/12/2012	3/12/2012	80	TML	DPC	Geologic Drill	HSA

Hammer Data	Drilling Equipment	
Auto 140 (lbs) / 30 (in) Drop	D-50 Track Mounted	A 2 (in) well was installed on 3/13/2012 to a depth of 75.25 (ft).
Surface Elevation (ft) Vertical Datum: 29.4	Top of Casing Elevation (ft): 29.0	Groundwater
Easting (X): 1222019.4 Northing (Y): 473732.08	Horizontal Datum: NAD83	Date Measured: 3/19/2012; Depth to Water (ft): 11.3; Elevation (ft): 18.15

Notes: 4.25" I.D./4.75" O.D.

Elevation (feet)	Depth (feet)	Interval	Recovered (in)	Blows/foot	Collected Sample	Sample Name	Water Level	Graphic Log	Group Classification	MATERIAL DESCRIPTION	Sheen	Headspace Vapor
	0								AC	Aprroximately 3 inches asphalt concrete and 4 inches pea gravel		
			3	3		1			SM	Brown silty fine to coarse sand with gravel (very loose to medium dense, moist) (fill)	SS	85
			10	4		2					SS	<1
	5		8	3		3					SS	<1
			5	5		4				Grades to wet	SS	12
	10		10	2		5				Strong petroleum odor	NS	114
			8	4		6					NS	52
	15		5	13		7					SS	25
			7	3		8					NS	<1
	20		18	2		9				Wood debris	NS	<1
	25		18	2		10			ML/CL	Gray silt/clay with sand (very soft, wet) (recent deposits)	NS	<1
	30		18	9		11 %F			SP	Gray fine to medium sand with trace silt and occasional gravel(loose, wet) %F = 5; MC = 19%	NS	<1
	35		12	4		12 %F			SM	Gray silty fine to medium sand with occasional gravel (loose, wet) %F = 29; MC = 21% Heave at 35 feet; Added mud	NS	<1
	40		14	5		13 %F			SP-SM	Gray fine to coarse sand with silt and occasional gravel (loose, wet) %F = 10; MC = 15%	NS	<1
	45											

WELL LOG



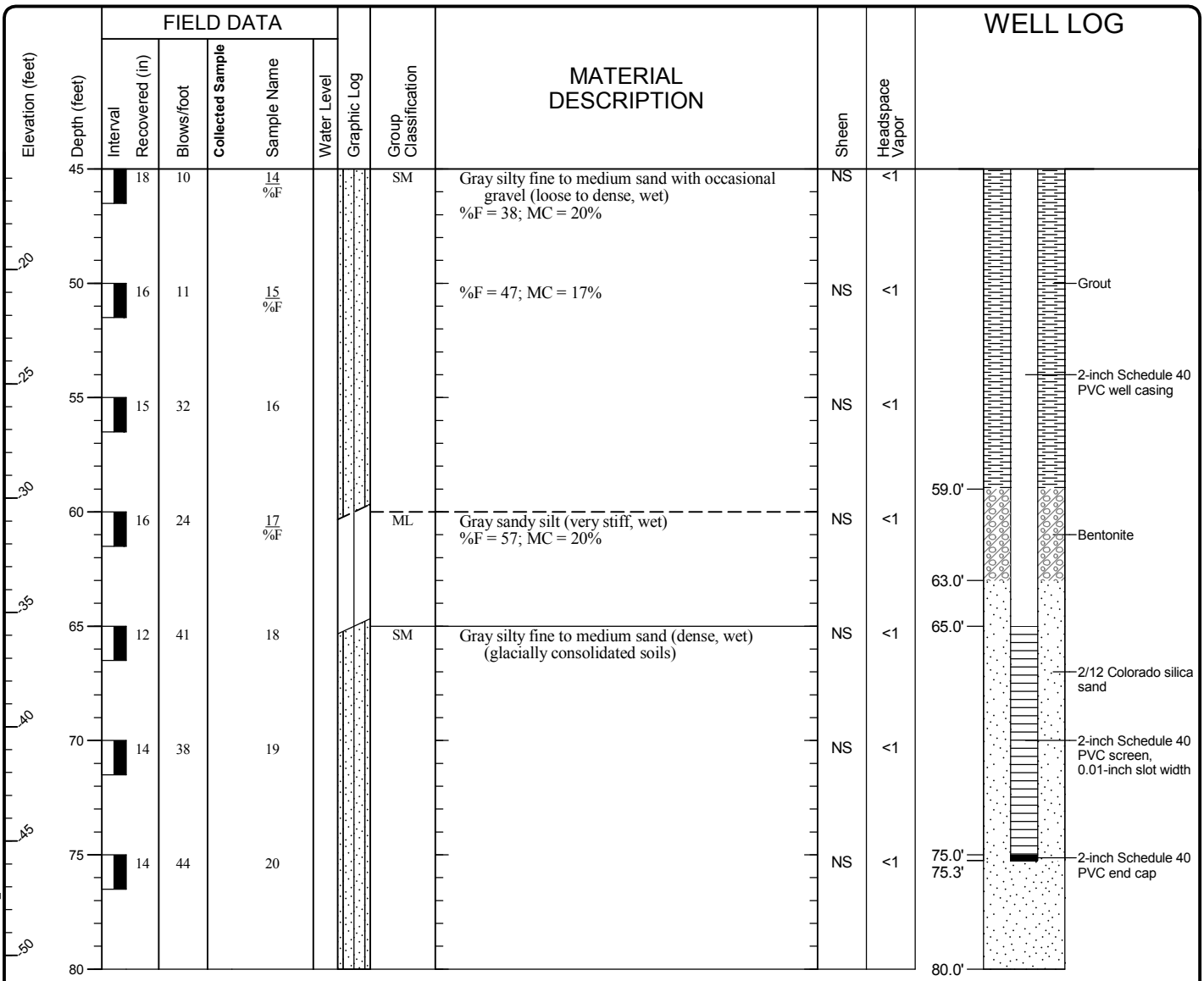
Note: See Figure A-1 for explanation of symbols.

Log of Monitoring Well B-43-4

GeoEngineers

Project: Block 43 - South Lake Union Development
Project Location: Seattle, Washington
Project Number: 7087-017-00

Figure A-5
Sheet 1 of 2



Note: See Figure A-1 for explanation of symbols.

Log of Monitoring Well B-43-4 (continued)

GeoEngineers

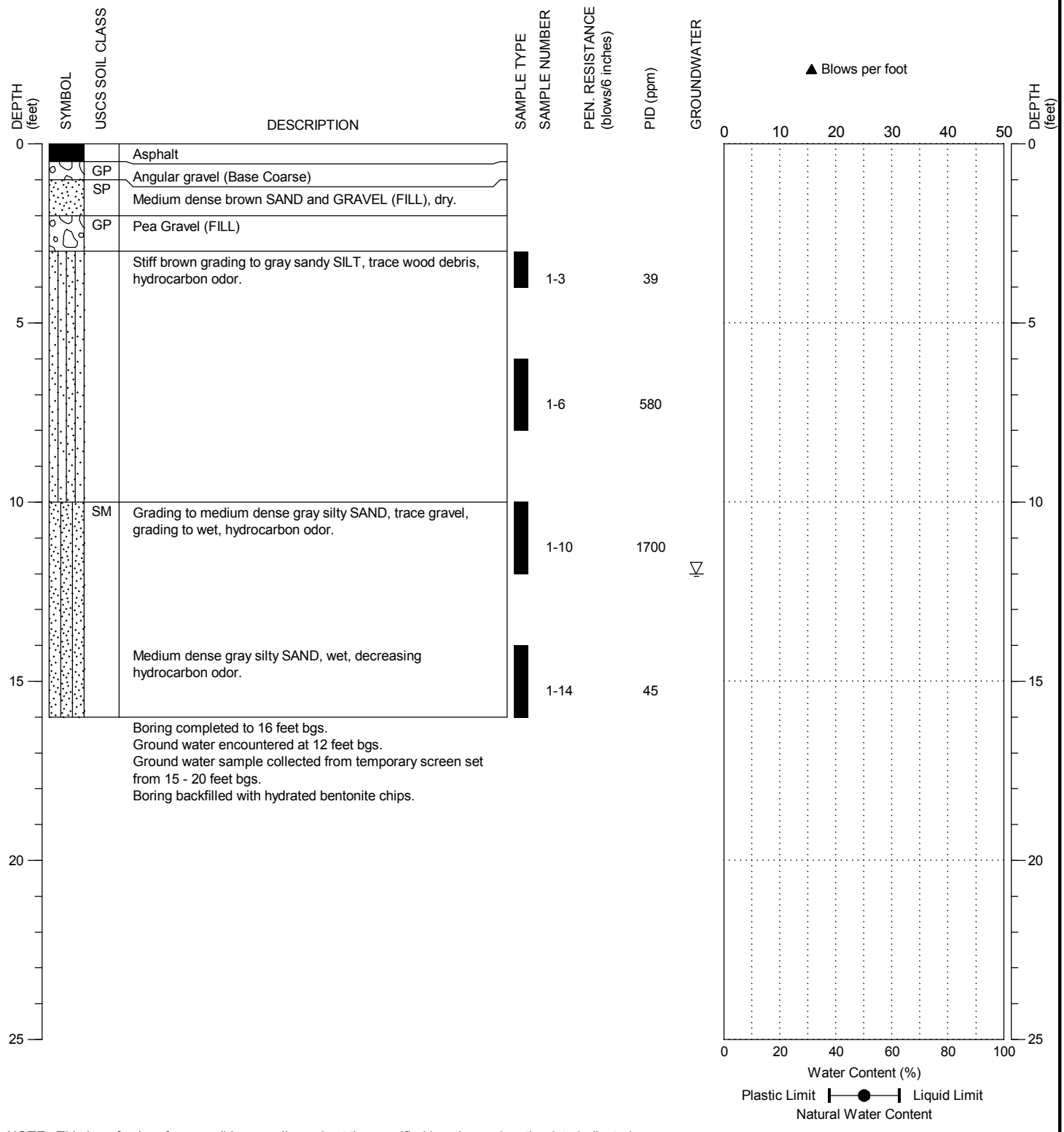
Project: Block 43 - South Lake Union Development
Project Location: Seattle, Washington
Project Number: 7087-017-00

Figure A-5
Sheet 2 of 2

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Center of Propel parcel

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: V. Atkins



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B01

PAGE: 1 of 1

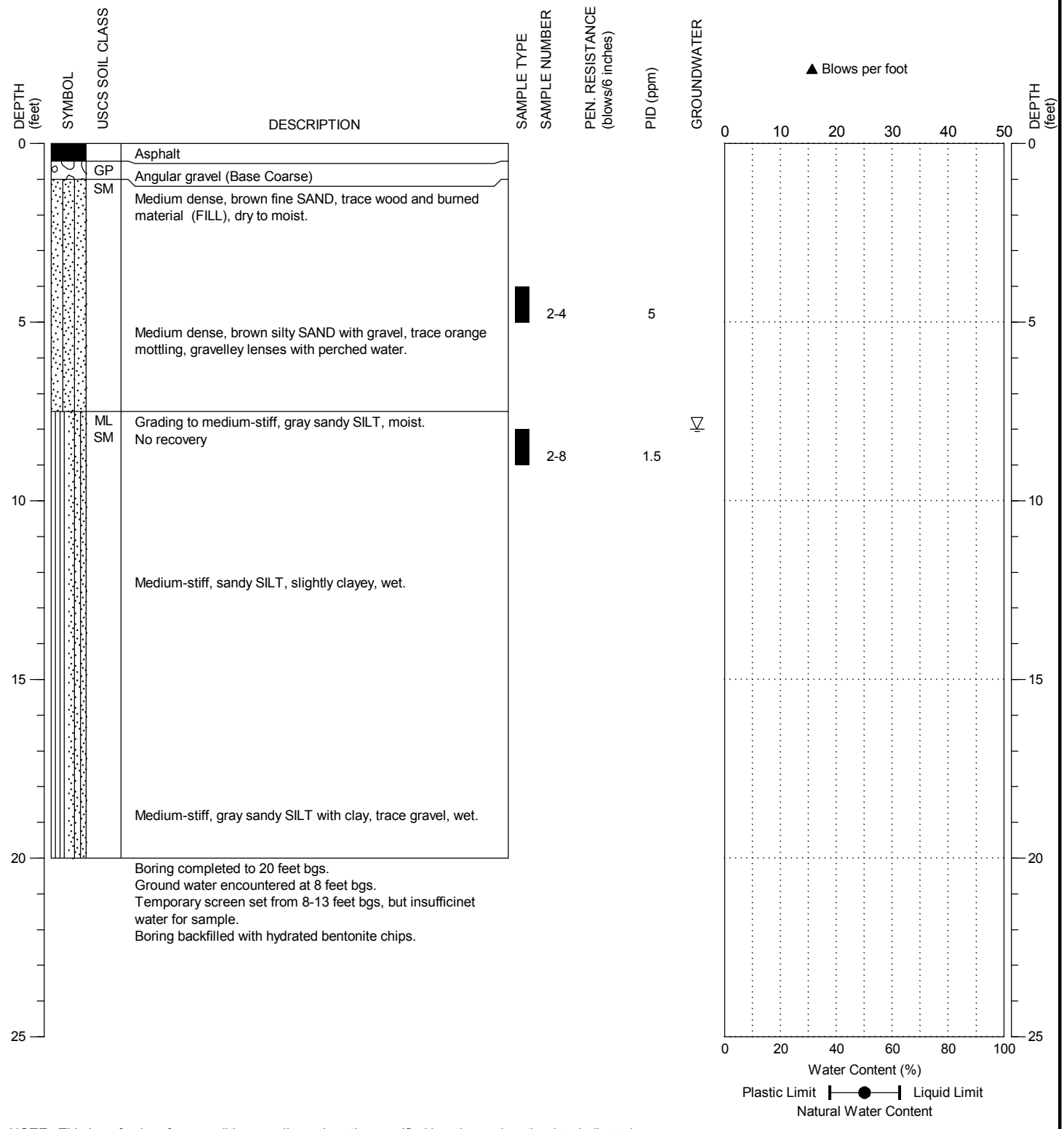
PROJECT NO.: 2012-046-22 FIGURE: B-2

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: East side, Propel parcel

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: V. Atkins



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B02

PAGE: 1 of 1

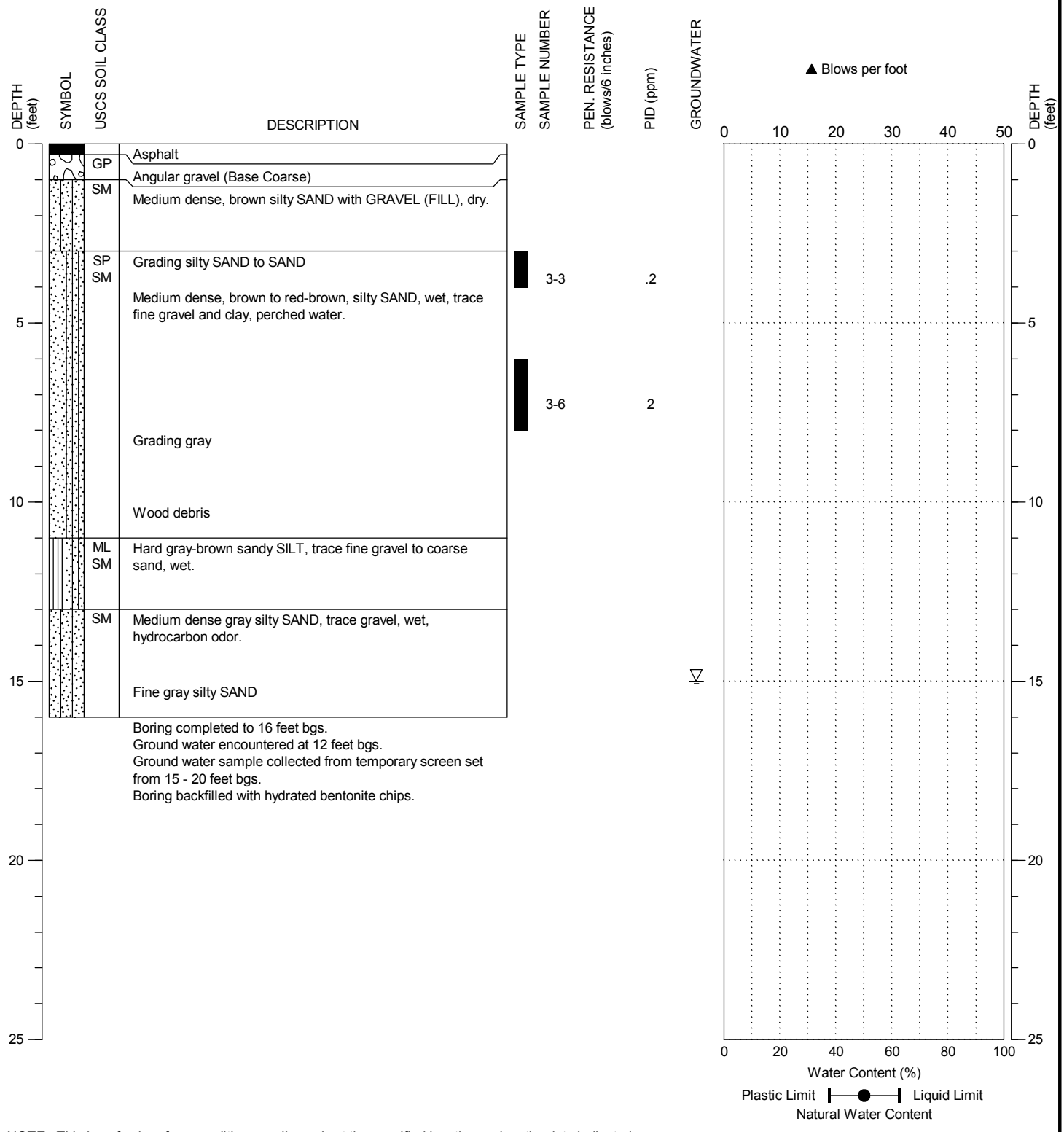
PROJECT NO.: 2012-046-22 FIGURE: B-3

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Southwest corner, Propel parcel

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson



Boring completed to 16 feet bgs.
Ground water encountered at 12 feet bgs.
Ground water sample collected from temporary screen set from 15 - 20 feet bgs.
Boring backfilled with hydrated bentonite chips.

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B03

PAGE: 1 of 1

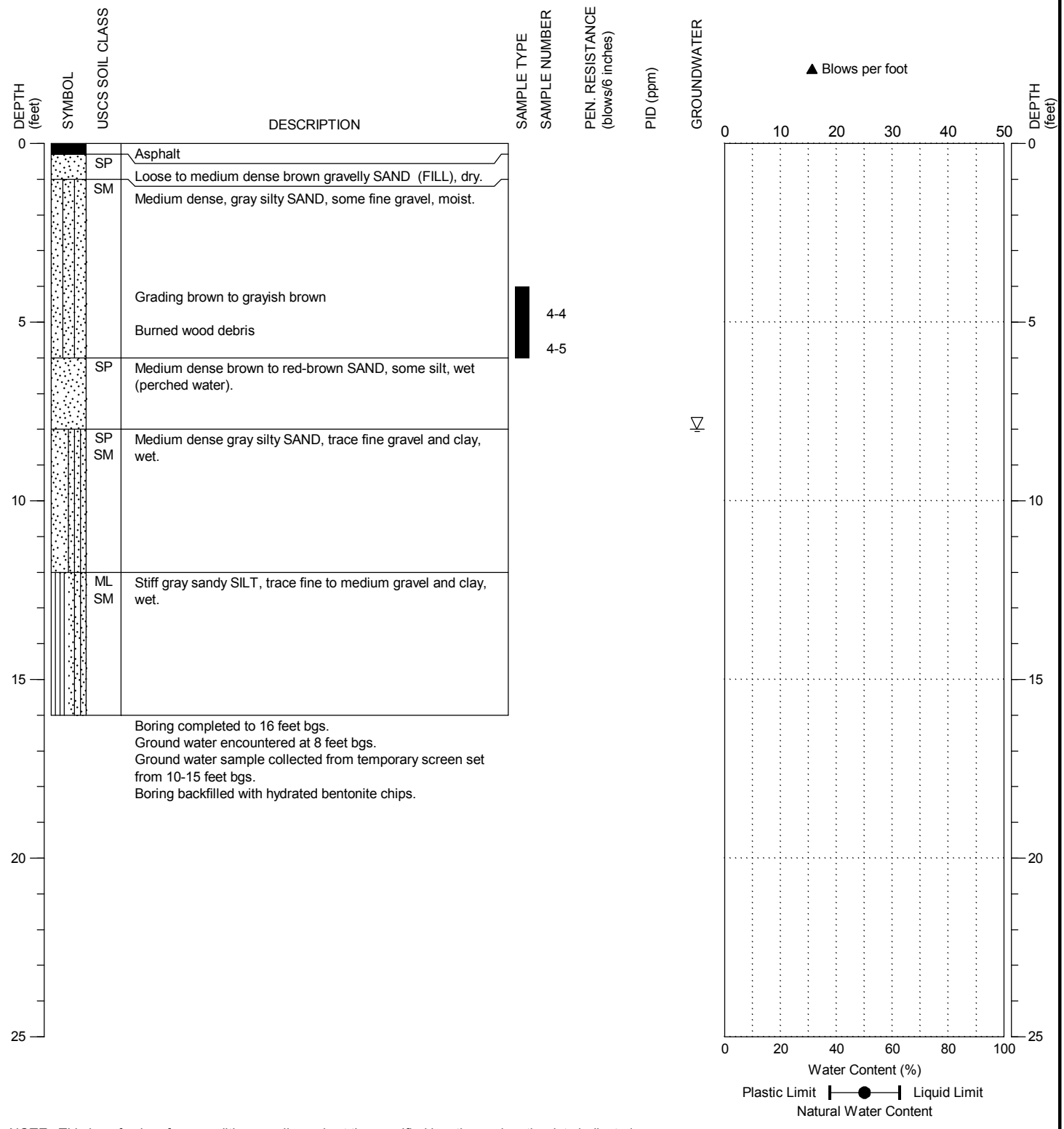
PROJECT NO.: 2012-046-22 FIGURE: B-4

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: North center, gravel parking lot

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B04

PAGE: 1 of 1

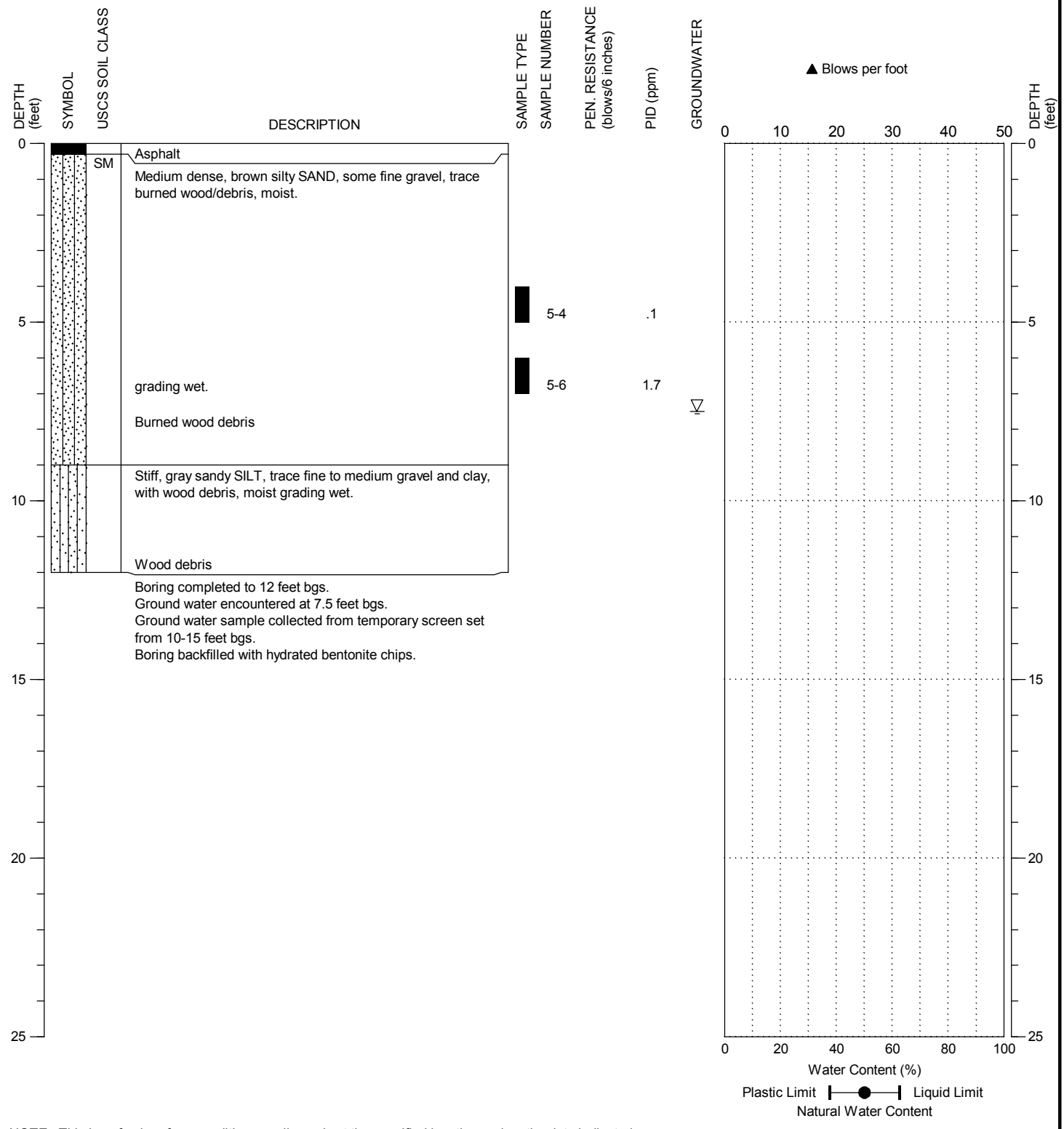
PROJECT NO.: 2012-046-22 FIGURE: B-5

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: East side, gravel parking lot

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B05

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-6

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Northeast corner, Parcel B

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION
0		SP	Medium dense, brown gravelly SAND with debris (glass and plastic) dry to moist.
5		SP	Limited recovery. Loose to medium dense, brown SAND with fine gravel, moist.
		GP	Loose pea GRAVEL backfill. Move boring 8 feet northwest of original location. Encounter same materials.
10			Boring completed to 10 feet bgs. Ground water not encountered. Boring backfilled with hydrated bentonite chips.
15			
20			
25			

SAMPLE TYPE
SAMPLE NUMBER
PEN. RESISTANCE (blows/6 inches)
PID (ppm)
GROUNDWATER

▲ Blows per foot

0 10 20 30 40 50

DEPTH (feet)

0 20 40 60 80 100

Water Content (%)

Plastic Limit — Liquid Limit

Natural Water Content

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B06

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-7

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: East side, Parcel B

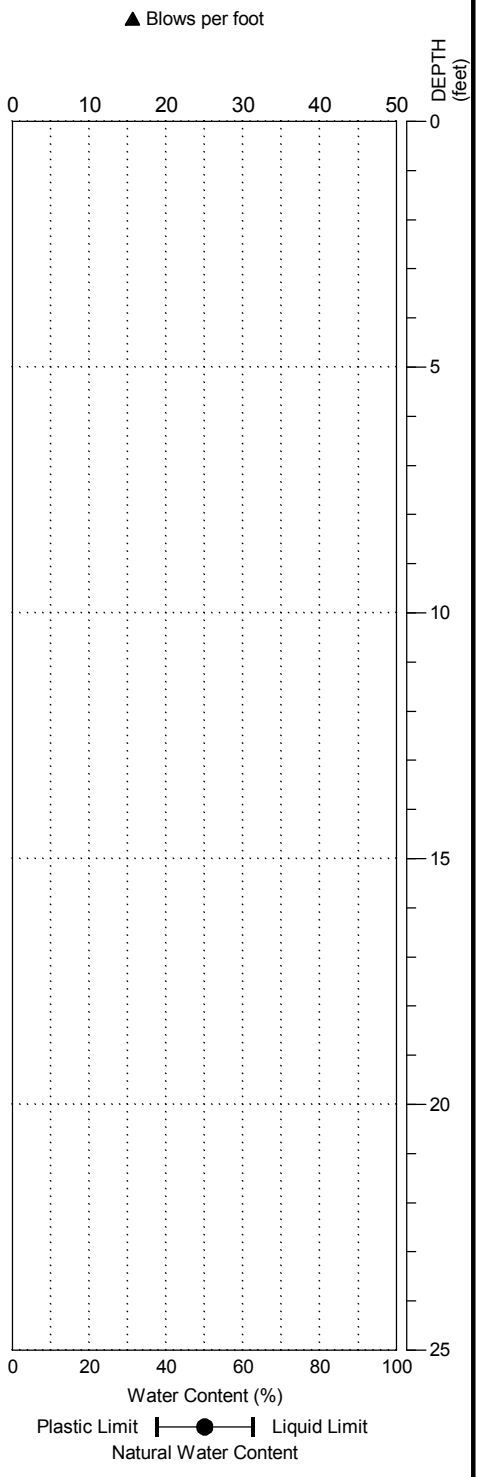
SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION
0		SP	Loose to medium dense, brown SAND, trace fine gravel, dry to moist.
			Medium dense, brown gravelly SAND, trace sitl and clay, moist.
5		GP	Loose pea GRAVEL backfill.

Boring completed to 8 feet bgs.
Ground water not encountered.
Boring backfilled with hydrated bentonite chips.

SAMPLE TYPE
SAMPLE NUMBER
PEN. RESISTANCE (blows/6 inches)
PID (ppm)
GROUNDWATER



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B07

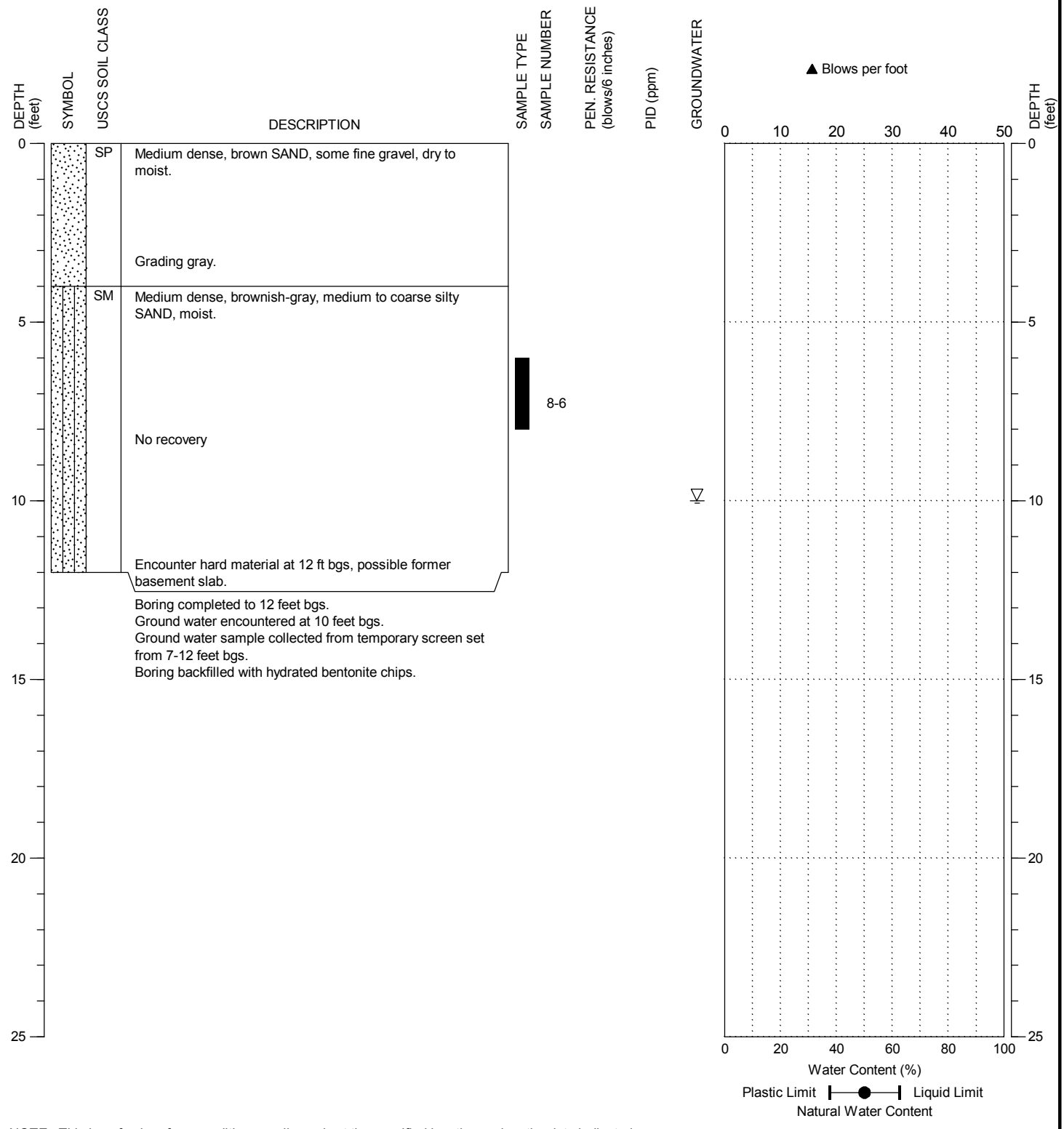
PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-8

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: North center, Parcel B

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/8/2012
DATE COMPLETED: 5/8/2012
LOGGED BY: J. Thompson



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B08

PAGE: 1 of 1

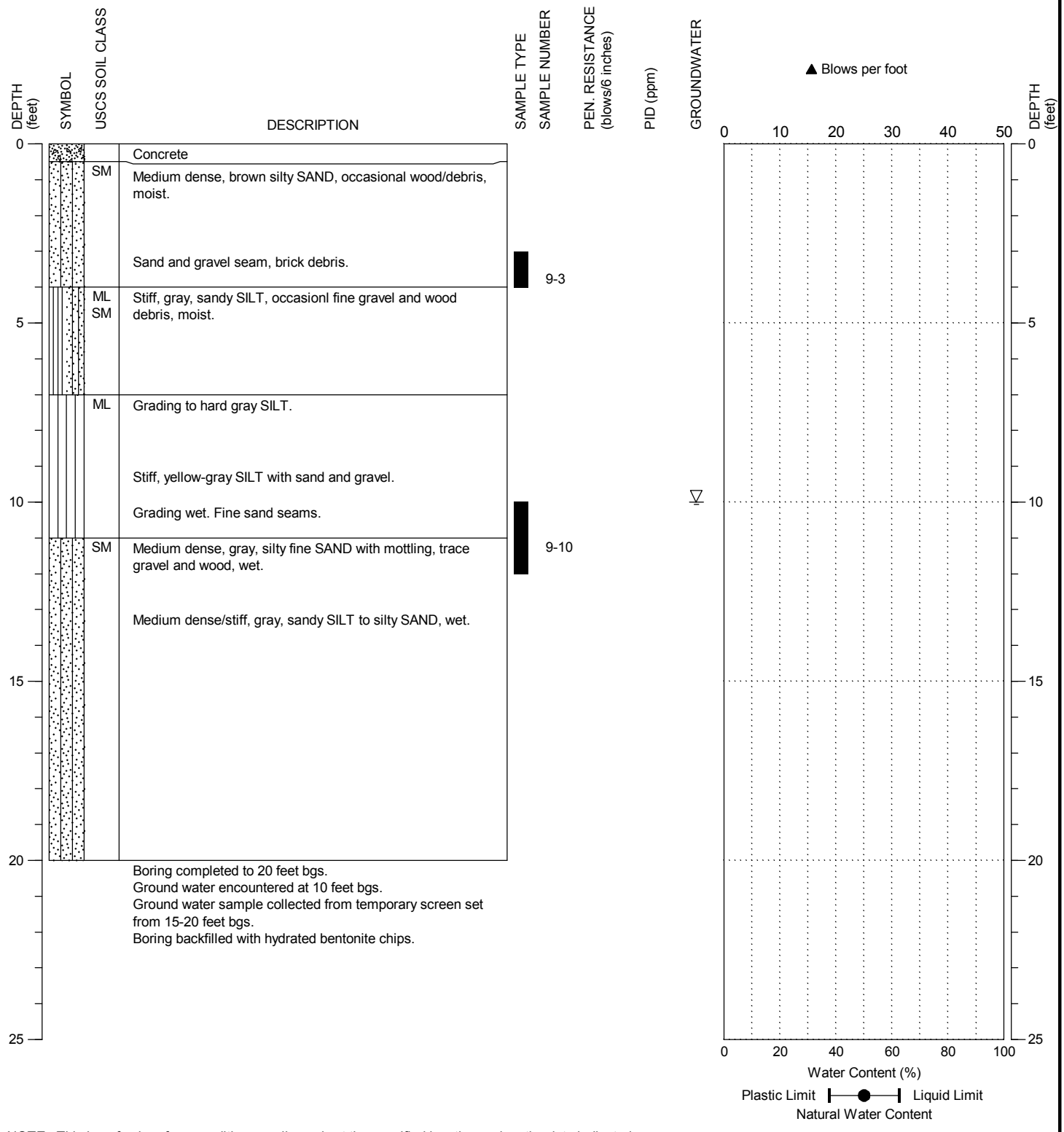
PROJECT NO.: 2012-046-22 FIGURE: B-9

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Adjacent west of USTs, Parcel B alleyway

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: V. Atkins



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B09

PAGE: 1 of 1

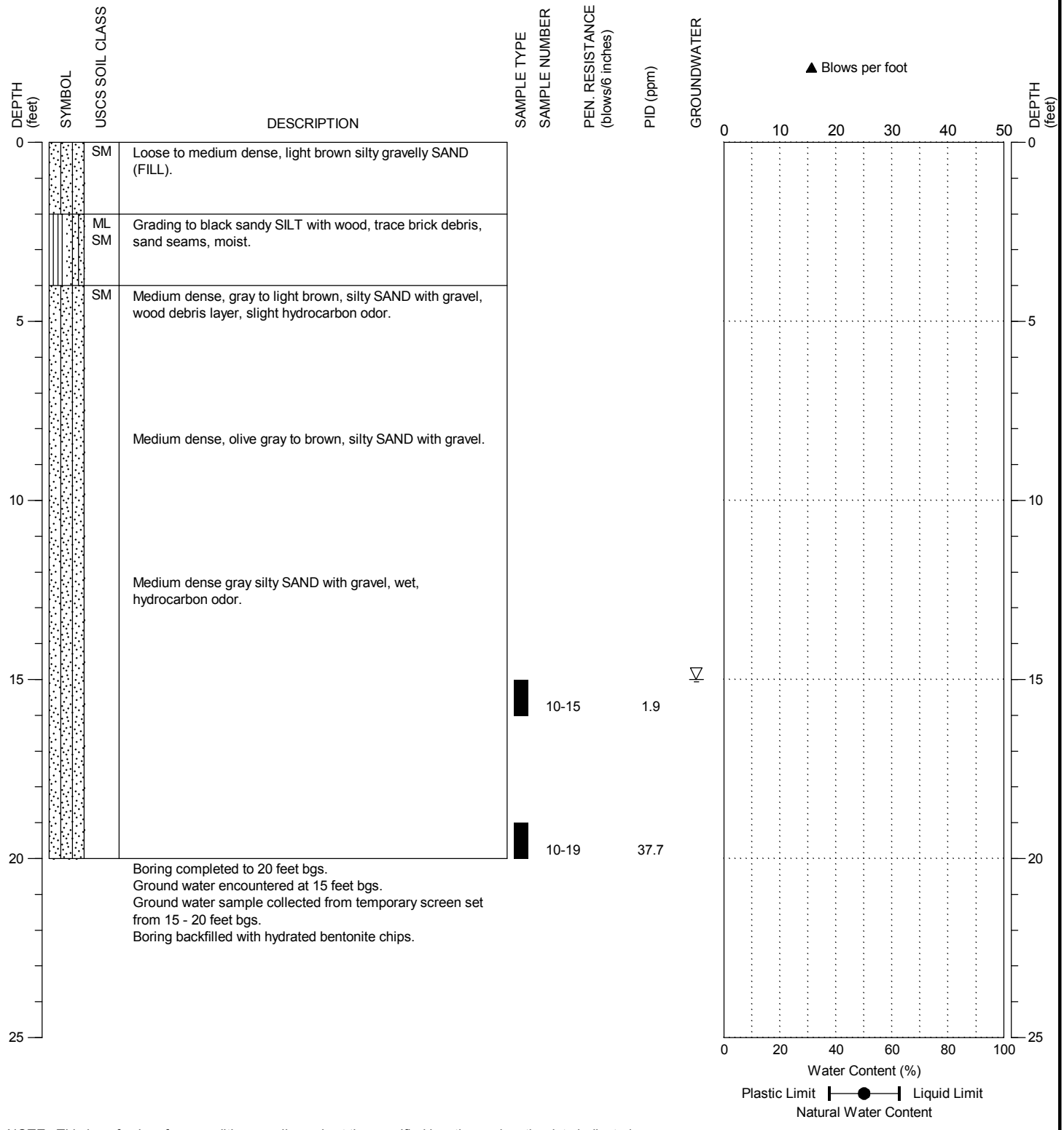
PROJECT NO.: 2012-046-22 FIGURE: B-10

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Adjacent northwest of OWS, Parcel C

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: D. Coltrane



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B10

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-11

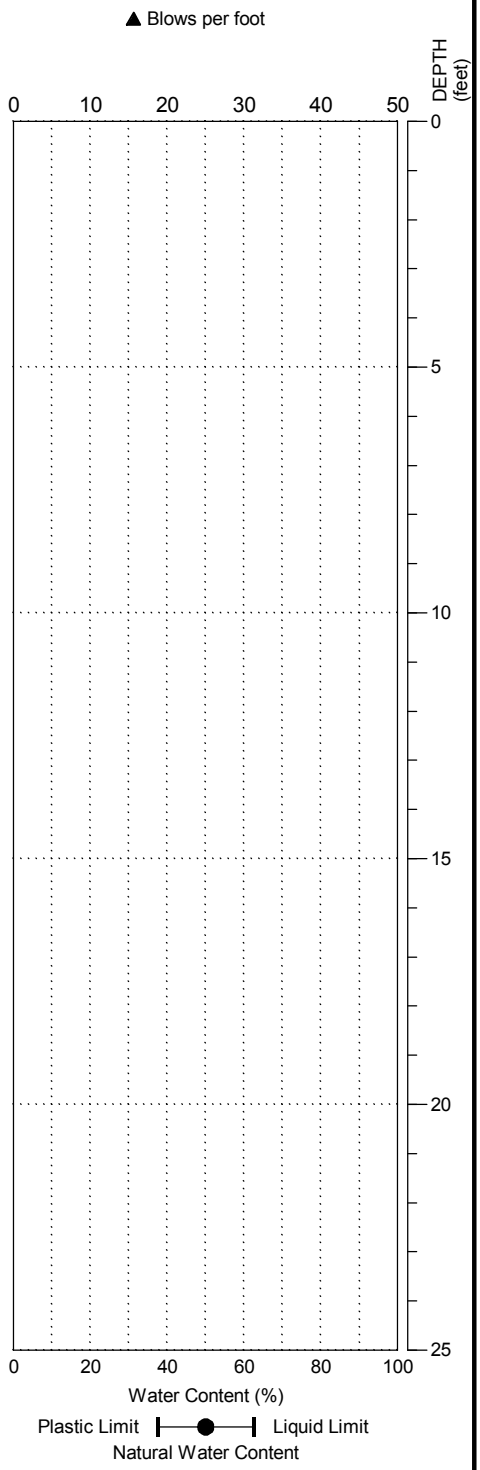
BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: Sothwest corner , Parcel C

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: D. Coltrane

DEPTH (feet)	SYMBOL	USCS SOIL CLASS	DESCRIPTION	SAMPLE TYPE / SAMPLE NUMBER	PEN. RESISTANCE (blows/6 inches)	PID (ppm)	GROUNDWATER
0		SM	Loose to medium dense, gray, silty gravelly SAND (FILL), trace brick and concrete debris, dry to moist.				
					11-2.5	.3	
5			As above, gray to light gray, moist.				
					11-6.5	.7	
10			Encounter refusal at 10 feet bgs, possible concrete. Move boring and encounter refusal again.				
			Boring completed to 10 feet bgs. Ground water not encountered. Boring backfilled with hydrated bentonite chips.				
15							
20							
25							



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B11

PAGE: 1 of 1

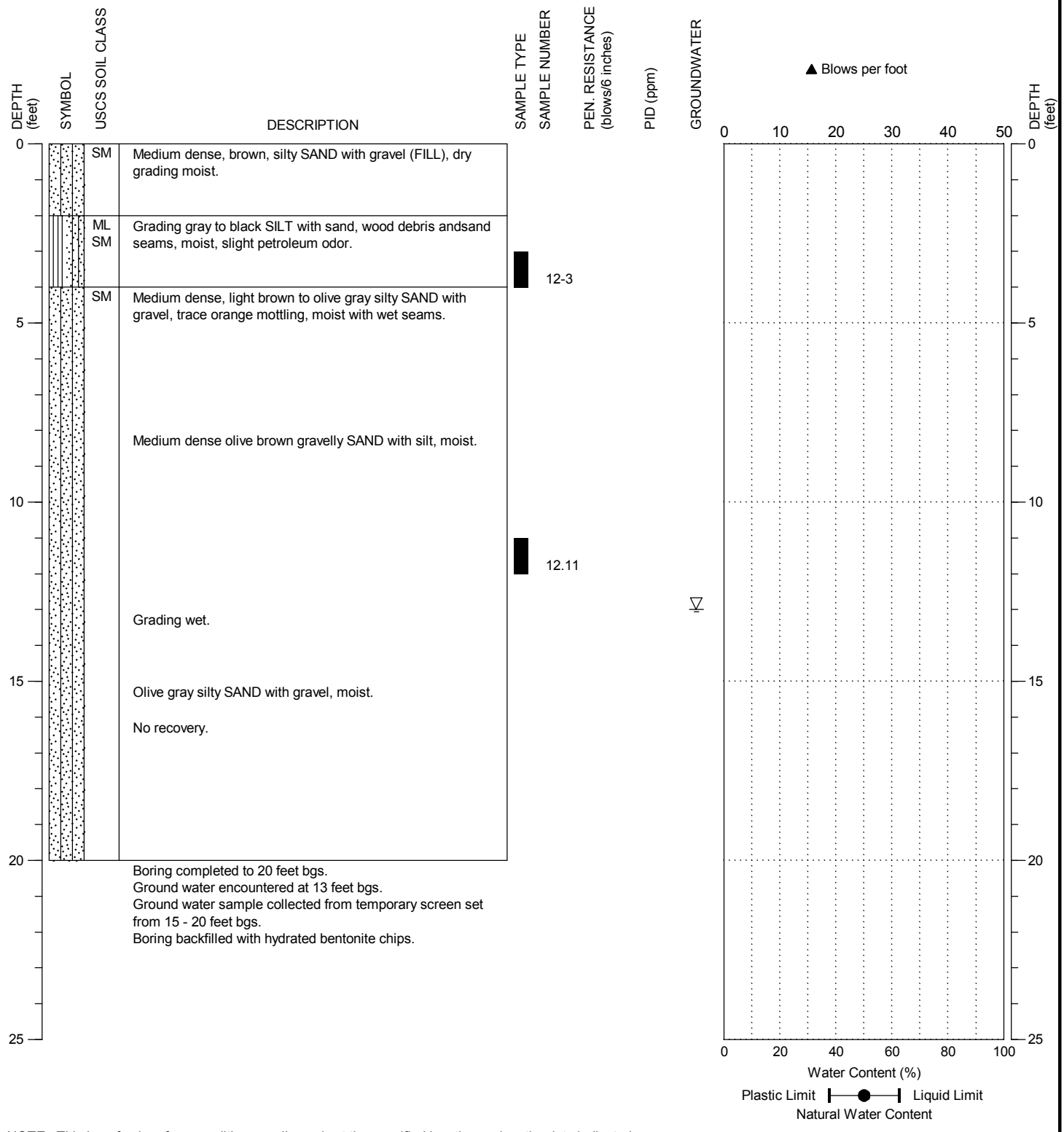
PROJECT NO.: 2012-046-22 FIGURE: B-12

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: North center, Parcel C

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: D. Coltrane



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B12

PAGE: 1 of 1

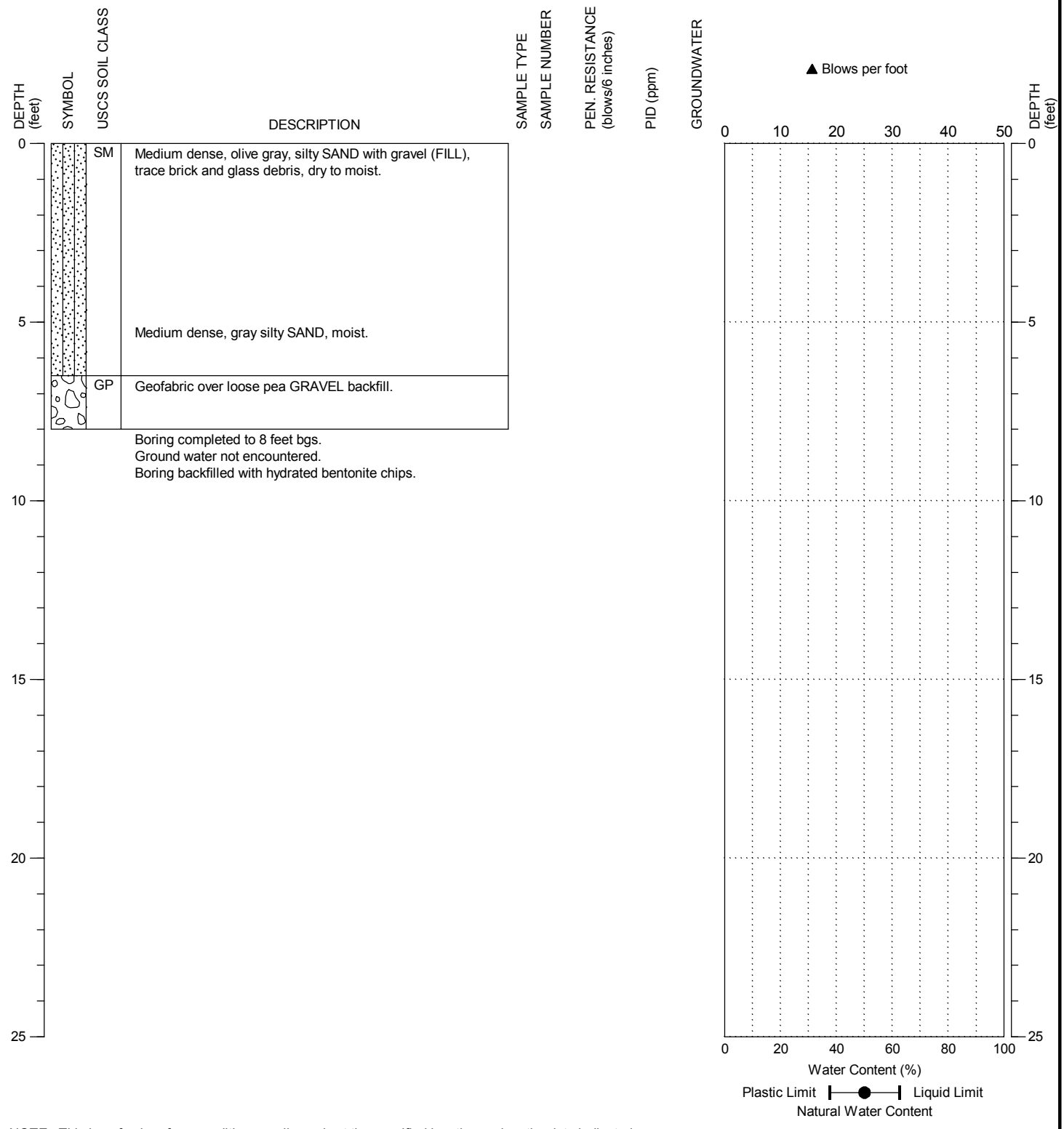
PROJECT NO.: 2012-046-22 FIGURE: B-13

BORINGE 2012-046-22.GPJ 6/8/12

DRILLING COMPANY: ESN Northwest
DRILLING METHOD: GeoProbe
SAMPLING METHOD: 48" Macrocore Sampler with HDPE liner
LOCATION: East center. Parcel E

SURFACE ELEVATION: ± feet
CASING ELEVATION ± feet

DATE STARTED: 5/9/2012
DATE COMPLETED: 5/9/2012
LOGGED BY: D. Coltrane



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

BORING:
B43-B13

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-14

BORINGE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: West prop line, Parcel C
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Angular GRAVEL (FILL), dry.				
		GM	Medium dense, brown silty SAND and GRAVEL (FILL), trace brick and debris, dry to moist.		1-1.5		
		SM	Medium dense, gray SILT and SAND (FILL), slight hydrocarbon odor.				
		SM	Medium dense, brown silty SAND, with gravel, occasional oxidation or mottling, moist.				
3							
6							
9			Occasional dense gray-brown silty SAND layers		1-9		
12			Test pit completed to 10.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP01

PROJECT NO.: 2012-046-22 FIGURE: B-1

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Southwest property corner
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense gray angular GRAVEL (FILL), dry.				
3		SM	Medium dense, dark gray silty SAND with gravel (FILL), trace debris (brick and pipe), dry to moist. Slight hydrocarbon odor.			2.3	
6		SM	Medium dense, red brown to brown silty SAND and GRAVEL, occasional oxidation or mottling, moist.			2.8	
9							
12			Test pit completed to 11 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP02

PROJECT NO.: 2012-046-22 FIGURE: B-2

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: West side Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense gray angular GRAVEL (FILL), dry.				
3		SM	Medium dense, dark gray silty SAND with gravel (FILL), trace debris (brick and pipe), dry to moist. Slight hydrocarbon odor.				
					3-5		
6			Medium dense, gray- brown silty SAND with GRAVEL, with sandy SILT layers, moist, occasional wet seams.				
			Concrete and wood debris.		3-8		
9			Sidewalls caving.				
			Test pit completed to 11 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
12							
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP03

PROJECT NO.: 2012-046-22 FIGURE: B-3

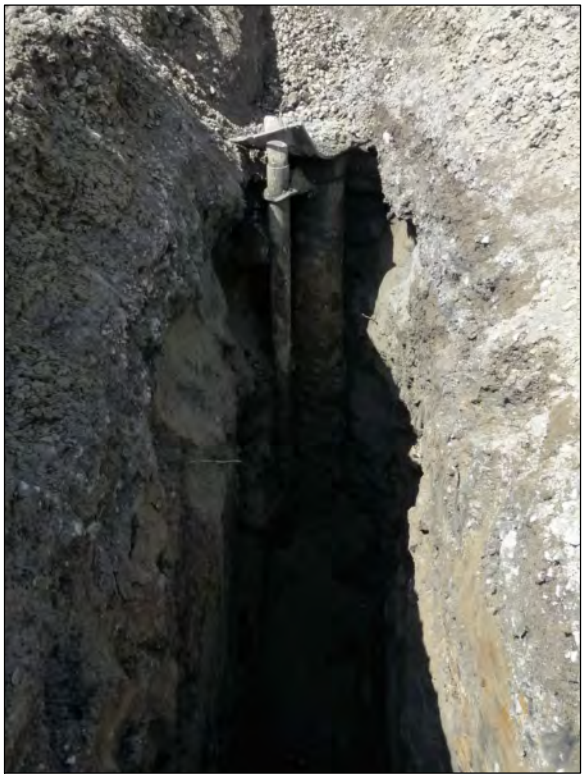
PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Center Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense, gray angular GRAVEL (FILL), dry.				
		GM	Very dense, gray silty GRAVEL (FILL) with concrete debris.				
3		SM	Medium dense, gray to brown silty SAND with gravel (FILL), trace debris, dry to moist. In-place hydraulic lift encountered in west end of test pit. Lift surrounded by fine gravel backfill and extendeds to 9 feet bgs. Lift was left in place and is located 22' north and 8' east of GEI well B-43-2. Clay pipe		4-5		
6			Woody debris layer				
9			Large concrete debris or footing.		4-9		
12			Test pit completed to 10.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO



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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP04

PROJECT NO.: 2012-046-22 FIGURE: B-4

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Center Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Angular GRAVEL (FILL), dry.				
		GM	Dense brown, silty SAND and GRAVEL (FILL), dry to moist.				
3		SM	Medium dense, gray silty SAND (FILL), with debris (brick), moist, slight hydrocarbon odor.				
6		SM	Medium dense, gray silty SAND, with wood debris, moist.		5-6		
9		ML SM	Medium dense, gray silty SAND to sandy SILT, moist with occasional wet seams. Large concrete debris. Occasional dense gray-brown silty SAND layers		5-10		
12			Test pit completed to 10.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP05

PROJECT NO.: 2012-046-22 FIGURE: B-5

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: East Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense, gray angular GRAVEL (FILL), dry.				
		SM	Dense, gray silty SAND (FILL) with debris (brick).				
3		SM	Grading medium dense, brown to red-brown silty SAND, moist. Rebar and metal debris Caving at 4 feet				
		PT	Woody debris layer		6-4		
6		ML	Stiff, gray SILT with sand and clay, moist.		6-6		
			Concrete debris				
9			Test pit completed to 9.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
12							
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP06

PROJECT NO.: 2012-046-22 FIGURE: B-6

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Southeast Parcel C, former hydraulic lift area
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0			Concrete slab				
		SM	Medium dense, gray-brown silty SAND (FILL) with debris.				
3			Rebar				
			Concrete slab/footing				
6					7-6		
			Large concrete debris.				
			Test pit completed to 7.5 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
9							
12							
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP07

PAGE: 1 of 1

PROJECT NO.: 2012-046-22 FIGURE: B-7

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Southwest parcel B
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION
0		GP	Angular GRAVEL (FILL)
		SP	Medium dense, brown SAND with silt (FILL), dry to moist.
			Caving.
3			Concrete rubble.
			Concrete slab at 4 feet bgs.
			Test pit completed to 4 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.
6			
9			
12			
15			

SAMPLE TYPE | SAMPLE NUMBER | MOISTURE CONTENT(%) | OTHER TESTS

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP08

PROJECT NO.: 2012-046-22 FIGURE: B-8

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: West side Parcel B
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION
0		GP	Angular GRAVEL (FILL)
		SP	Medium dense, yellow-brown SAND with silt (FILL), dry to moist.
3			Concrete rubble.
			Concrete slab at 4 feet bgs.
			Test pit completed to 4 feet bgs.
			Ground water not encountered.
			Test pit backfilled with excavated material and bucket compacted.
6			
9			
12			
15			

SAMPLE TYPE
SAMPLE NUMBER
MOISTURE CONTENT(%)
OTHER TESTS

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP09

PROJECT NO.: 2012-046-22 FIGURE: B-9

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: Center Parcel B
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION
0		GP	Angular GRAVEL (FILL)
		SP	Medium dense, yellow-brown SAND with silt (FILL), dry to moist.
3			Concrete rubble.
			Concrete slab at 4 feet bgs.
			Test pit completed to 4 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.
6			
9			
12			
15			

SAMPLE TYPE
SAMPLE NUMBER
MOISTURE CONTENT(%)
OTHER TESTS

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP10

PROJECT NO.: 2012-046-22 FIGURE: B-10

PICTURE 2012-046-22.GPJ 6/8/12

EXCAVATION COMPANY: Gary Merlino Construction
EXCAVATING EQUIPMENT: Komatsu PC78 Trackhoe
SURFACE ELEVATION: ± Feet

LOCATION: North center Parcel C
DATE COMPLETED: 5/10/12
LOGGED BY: V. Atkins

DEPTH (feet)	SYMBOL	USCS SOIL CLASS.	DESCRIPTION	SAMPLE TYPE	SAMPLE NUMBER	MOISTURE CONTENT(%)	OTHER TESTS
0		GP	Dense, gray angular GRAVEL (FILL), dry.				
		SM	Medium dense, brown silty SAND (FILL) with debris (brick).				
		ML SM	Grading to medium gray silty SAND to sandy SILT, with debris, moist. Slight hydrocarbon odor.				
3		SP	Medium dense, brown SAND with silt, wood debris, moist.		11-3		
		SM	Medium dense, gray silty SAND with wood debris, moist, slight hydrocarbon odor.		11-5		
6			Layer of dimensional wood debris.				
			Grading gray-brown silty SAND.				
9			Grading to very dense, gray silty SAND with gravel, moist.		11-9		
12			Test pit completed to 10 feet bgs. Ground water not encountered. Test pit backfilled with excavated material and bucket compacted.				
15							

TEST PIT PHOTO

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HWA GEOSCIENCES INC.

Vulcan Block 43
City Investors XX, LLC
601 Westlake Avenue North
Seattle, Washington

LOG OF TEST PIT
B43-TP11

PROJECT NO.: 2012-046-22 FIGURE: B-11

PICTURE 2012-046-22.GPJ 6/8/12

04.13.027

DP-15

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission ("x" in circle)

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. PE 01368

Unique Ecology Well ID Tag No. BIJ 123

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake & Mercer

City Seattle County King

Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4E (WM) or WWM circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: (X) DeWater ☐ Domestic ☐ Irrigation ☐ Industrial ☐ Test Well ☐ Municipal ☐ Other

TYPE OF WORK: Owner's number of well (if more than one) Multiple

(X) New well ☐ Deepened ☐ Reconditioned

Method: ☐ Dug ☐ Bored ☐ Driven ☐ Cable (X) Rotary ☐ Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 50 ft.

Depth of completed well 50 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded ____" Diam. from ____ ft. to ____ ft.

☐ Liner installed ____" Diam. from ____ ft. to ____ ft.

(X) Threaded 4" Diam. from 0 ft. to 50 ft.

Perforations: ☐ Yes (X) No

Type of perforator used _____

SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: (X) Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 4" Slot size .030 from 30 ft. to 50 ft.

Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: (X) Yes ☐ No (X) Size of gravel (sand) 8x30

Materials placed from 50 ft. to 30 ft.

Surface Seal: (X) Yes ☐ No To what depth? 0 ft.

Material used in seal Type I/II Cement

Did any strata contain unusable water? ☐ Yes (X) No

Type of water? _____ Depth of strata _____

Method of sealing strata off Tremmie

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes (X) No If yes, by whom? _____

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Black sandy silts	0'	20'
Black med-fine sands	20'	50'

Start Date 2/8/14 Completed Date 2/8/14

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

(X) Driller ☐ Engineer ☐ Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2836

Drilling Company Malcolm Drilling

Address 6701 S. 192nd St.

City, State, Zip Kent, WA 98031

Contractor's Registration No. 439189009 Date 2/17/14

IF TRAINEE,

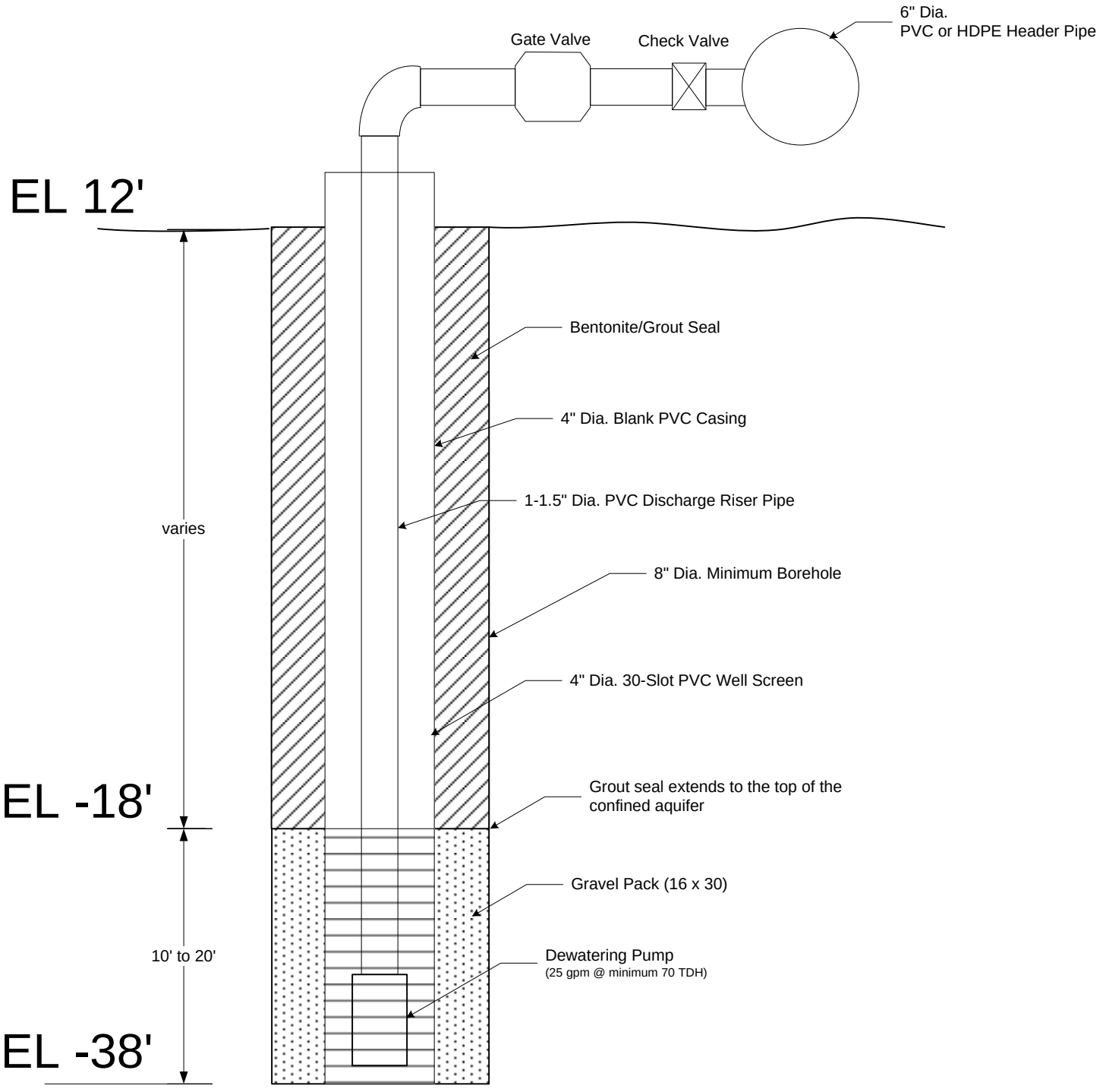
Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DP-15



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DP-14

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

ECOLOGY

Construction/Decommission *("x" in circle)*

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT Notice of Intent No. PE 01368

Unique Ecology Well ID Tag No. BIT 122

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4E (WM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: [X] DeWater [ ] Domestic [ ] Irrigation [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

[X] New well [ ] Reconditioned [ ] Deepened Method: [ ] Dug [ ] Bored [ ] Driven [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 50 ft. Depth of completed well 50 ft.

CONSTRUCTION DETAILS

Casing installed: [ ] Welded _____" Diam. from _____ ft. to _____ ft. [ ] Liner installed _____" Diam. from _____ ft. to _____ ft. [X] Threaded 4" Diam. from 0 ft. to 50 ft.

Perforations: [ ] Yes [X] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [X] Yes [ ] No [ ] K-Pac Location _____

Manufacturer's Name Western Wall Screen

Type Sched 40 PVC Model No. _____

Diam. 4" Slot size .030 from 30 ft. to 50 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [X] Yes [ ] No [X] Size of gravel/sand 8x30

Materials placed from 50 ft. to 30 ft.

Surface Seal: [X] Yes [ ] No To what depth? 0 ft.

Material used in seal Type I/II Cement

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? _____ Depth of strata _____

Method of sealing strata off Tremmie

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [X] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Black sandy silts	0'	20'
Black med-fine sands	20'	50'

Start Date 2/2/14 Completed Date 2/8/14

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2836

Drilling Company Malcolm Drilling

Address 6701 S 192nd St.

City, State, Zip Kent, WA 98031

Contractor's Registration No. 439189009 Date 2/17/14

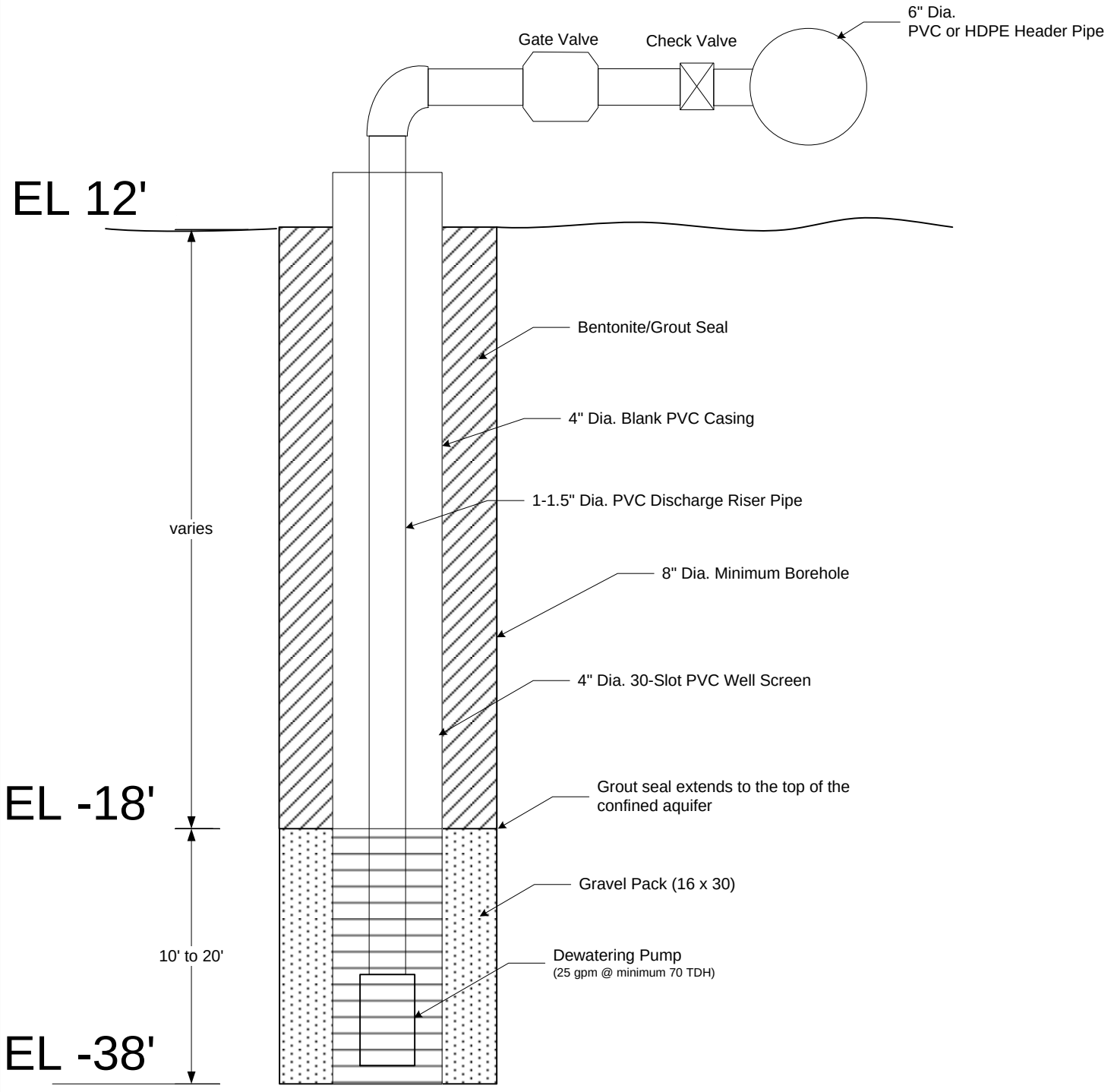
If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DP-14



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DP-13

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

STATE OF WASHINGTON ECOLOGY

Construction/Decommission ("x" in circle)

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT Notice of Intent No. PE 01368

Unique Ecology Well ID Tag No. BIT 121

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake & Mercer

City Seattle County King

Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4E (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: [X] DeWater [ ] Domestic [ ] Irrigation [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

[X] New well [ ] Reconditioned [ ] Deepened

Method: [ ] Dug [ ] Bored [ ] Driven [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 50 ft.

Depth of completed well 50 ft.

CONSTRUCTION DETAILS

Casing Installed: [ ] Welded _____" Diam. from _____ ft. to _____ ft.

[ ] Liner installed _____" Diam. from _____ ft. to _____ ft.

[X] Threaded 4" Diam. from 0 ft. to 50 ft.

Perforations: [ ] Yes [X] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [X] Yes [ ] No [ ] K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 4" Slot size .030 from 30 ft. to 50 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [X] Yes [ ] No [X] Size of gravel/sand 8x30

Materials placed from 50 ft. to 20 ft.

Surface Seal: [X] Yes [ ] No To what depth? 0 ft.

Material used in seal Type I/II Cement

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? _____ Depth of strata _____

Method of sealing strata off Tremie

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [X] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Black sandy silts	0'	20'
Black med-fine sands	20'	50'

Start Date 2/8/14 Completed Date 2/8/14

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2836

Drilling Company Malcolm Drilling

Address 6701 S. 192nd St.

City, State, Zip Kent, WA 98031

Contractor's Registration No. 439189009 Date 2/17/14

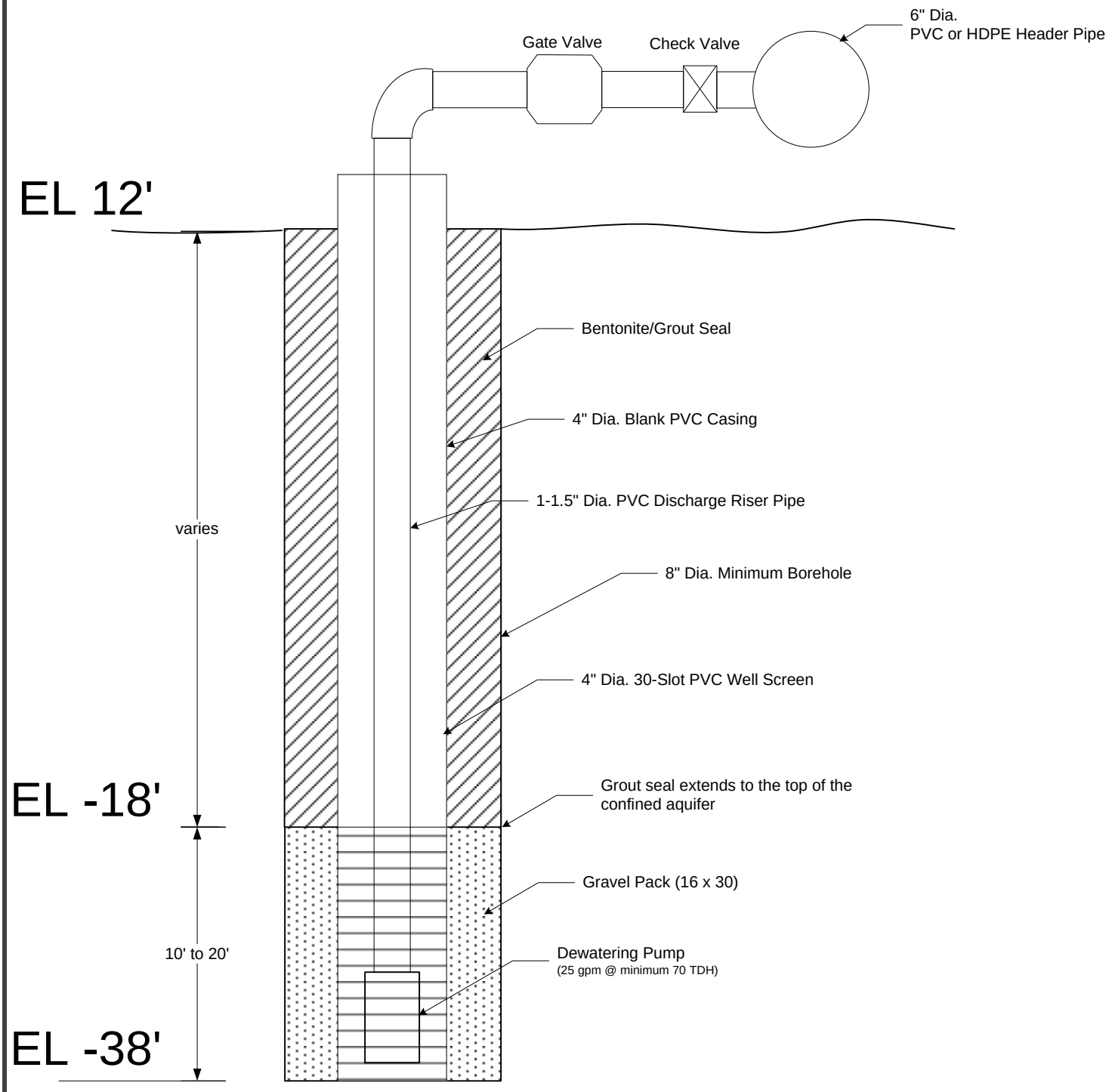
If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DP-13



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DP-12

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

STATE OF WASHINGTON DEPARTMENT OF ECOLOGY

Construction/Decommission ("x" in circle)

- [x] Construction
- [ ] Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. PE 01368

Unique Ecology Well ID Tag No. BIJ 120

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4E E WM or WWM (circle one)

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 408880 3385

PROPOSED USE: [x] DeWater [ ] Domestic [ ] Irrigation [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

[x] New well [ ] Reconditioned [ ] Deepened

Method: [ ] Dug [ ] Bored [ ] Driven [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 50 ft.

Depth of completed well 50 ft.

CONSTRUCTION DETAILS

Casing Installed: [ ] Welded _____" Diam. from _____ ft. to _____ ft.

[ ] Liner installed _____" Diam. from _____ ft. to _____ ft.

[x] Threaded 4" Diam. from 0 ft. to 50 ft.

Perforations: [ ] Yes [x] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: [x] Yes [ ] No [ ] K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 4" Slot size .030 from 30 ft. to 50 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [x] Yes [ ] No [x] Size of gravel/sand 8x30

Materials placed from 50 ft. to 30 ft.

Surface Seal: [x] Yes [ ] No To what depth? 0 ft.

Material used in seal Type I/II Cement

Did any strata contain unusable water? [ ] Yes [x] No

Type of water? _____ Depth of strata _____

Method of sealing strata off Tremie

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [x] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Black sandy silts	0'	20'
Black med-fine sands	20'	50'

Start Date 2/8/14 Completed Date 2/8/14

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[x] Driller [ ] Engineer [ ] Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2836

IF TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Drilling Company Malcolm Drilling

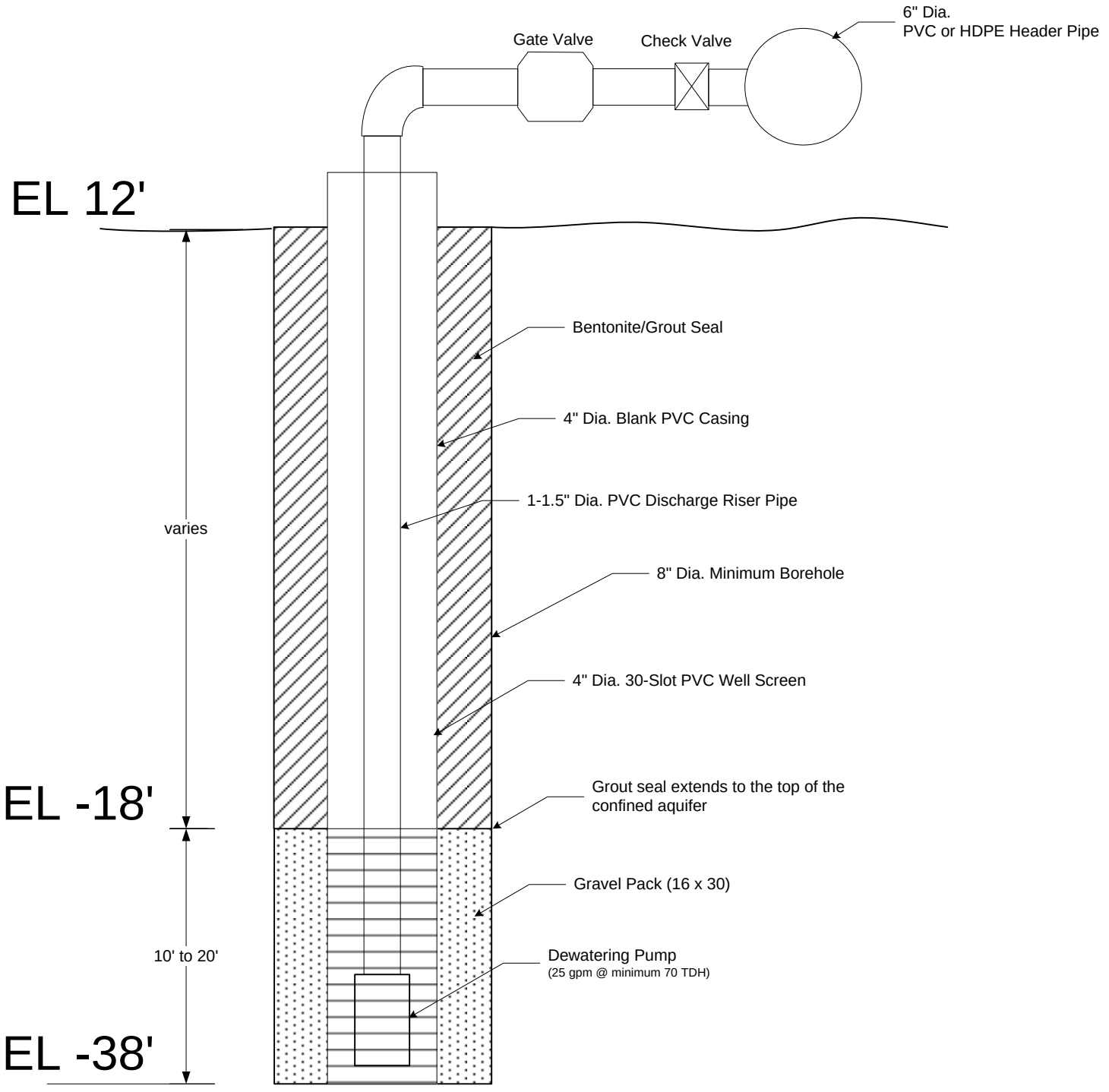
Address 6701 S. 192nd St.

City, State, Zip Kent, WA 98031

Contractor's Registration No. 439189009 Date 2/17/14

Ecology is an Equal Opportunity Employer.

DP-12



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DP-11

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. PE 01368

Unique Ecology Well ID Tag No. BIT 119

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4E (E)WM or WWM (circle one)

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: (X) DeWater ( ) Domestic ( ) Irrigation ( ) Industrial ( ) Test Well ( ) Municipal ( ) Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

(X) New well ( ) Deepened ( ) Reconditioned

Method: ( ) Dug ( ) Bored ( ) Driven ( ) Cable (X) Rotary ( ) Jetted

DIMENSIONS: Diameter of well 6 inches, drilled 50 ft.

Depth of completed well 50 ft.

CONSTRUCTION DETAILS

Casing Installed: ( ) Welded _____" Diam. from _____ ft. to _____ ft.

( ) Liner installed _____" Diam. from _____ ft. to _____ ft.

(X) Threaded 6" Diam. from 0 ft. to 50 ft.

Perforations: ( ) Yes (X) No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: (X) Yes ( ) No ( ) K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 4" Slot size .030 from 30 ft. to 50 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: (X) Yes ( ) No (X) Size of gravel/sand 8x30

Materials placed from 50 ft. to 20 ft.

Surface Seal: (X) Yes ( ) No To what depth? 0 ft.

Material used in seal Type I/II Cement

Did any strata contain unusable water? ( ) Yes (X) No

Type of water? _____ Depth of strata _____

Method of sealing strata off Tremie

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ( ) Yes (X) No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ( ) Yes ( ) No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Black sand, silts	0'	20'
Black med-fine sands	20'	50'

Start Date 2/9/14 Completed Date 2/9/14

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

(X) Driller ( ) Engineer ( ) Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2836

Drilling Company Malcolm Drilling

Address 19701 S. 192nd St.

City, State, Zip Kent WA 98031

Contractor's Registration No. MALCOM*189009 Date 2/17/14

If TRAINEE, Driller's Licensed No. _____

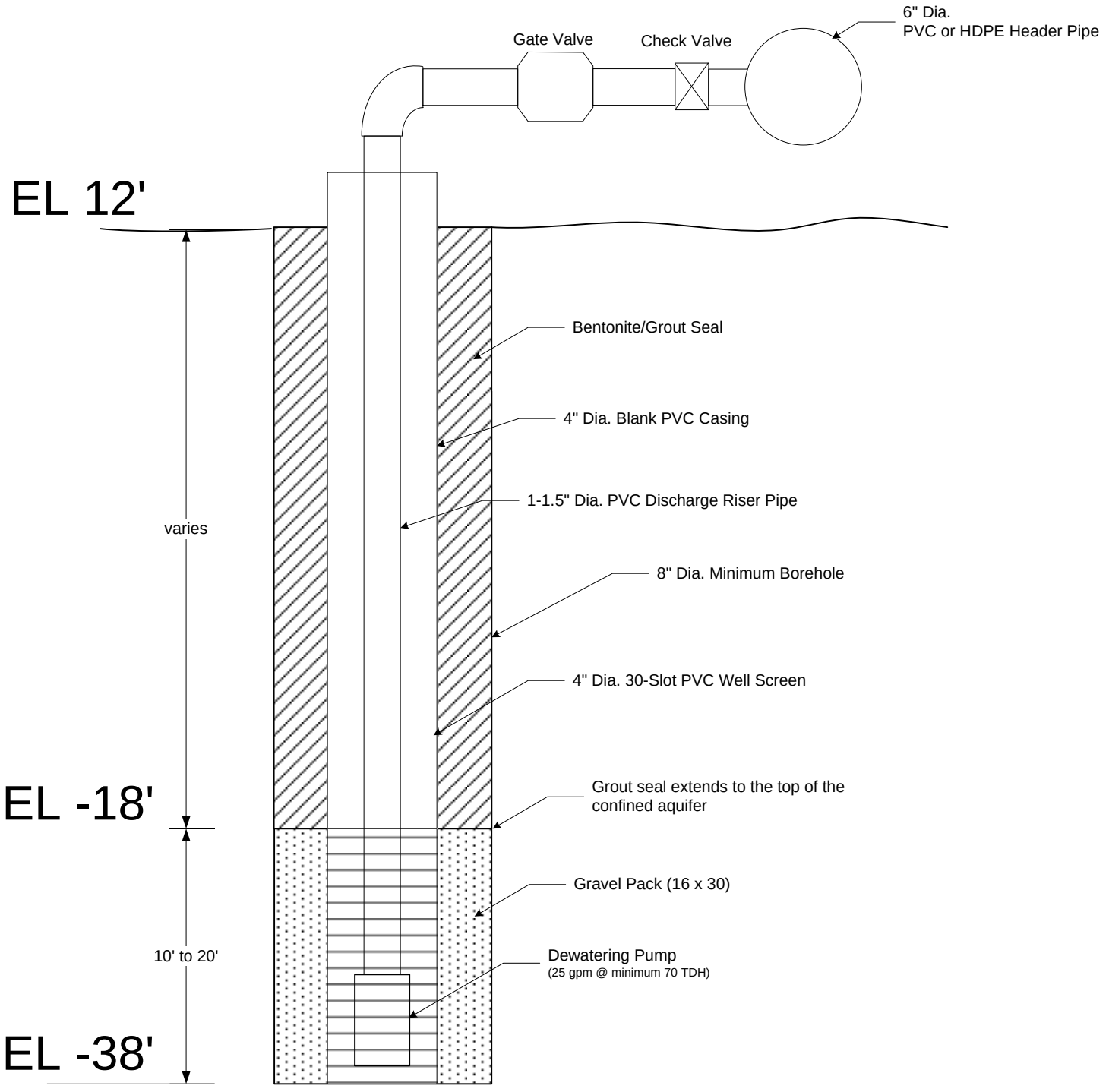
Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05)

The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.

DP-11



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP-10

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method :* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 4 inches, drilled 70 ft.
Depth of completed well 70 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☒ Threaded 8" Diam. From 0 ft. to 70 ft.

Perforations: ☐ Yes ☐ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location 50' to 70'

Manufacturer's Name Western Well

Type PVC Model No. _____

Diam. 4 Slot size .030 from 50 ft. to 70 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No Size of gravel/sand 10/20

Materials placed from 50 ft. to 70 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 50ft.

Material used in seal Neat cement grout

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off Treemee grout

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 40ft. below top of well Date 12/6

Artesian pressure 0 lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☒ Yes ☐ No If yes, by whom? driller

Yield: 5 gal./min. with 30 ft. drawdown after 1 hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test 12/6/13

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BAP 928

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake and mercer

City Seattle County King

Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4R EWM ☒ Or WWM ☐
(s, t, r Still REQUIRED)

Lat/Long Lat Deg ____ Lat Min/Sec ____
Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 4088803385

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Silts and wood debre	0	48
Silts with traces of sands	48	55
Moist water @ 48'.		
Black sands with traces of	55	70
Silts		

Start Date 12/6/13 Completed Date 12/6/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Matt Kennedy

Driller/Engineer/Trainee Signature

Driller or trainee License No. 2807

IF TRAINEE: Driller's License No:

Driller's Signature:

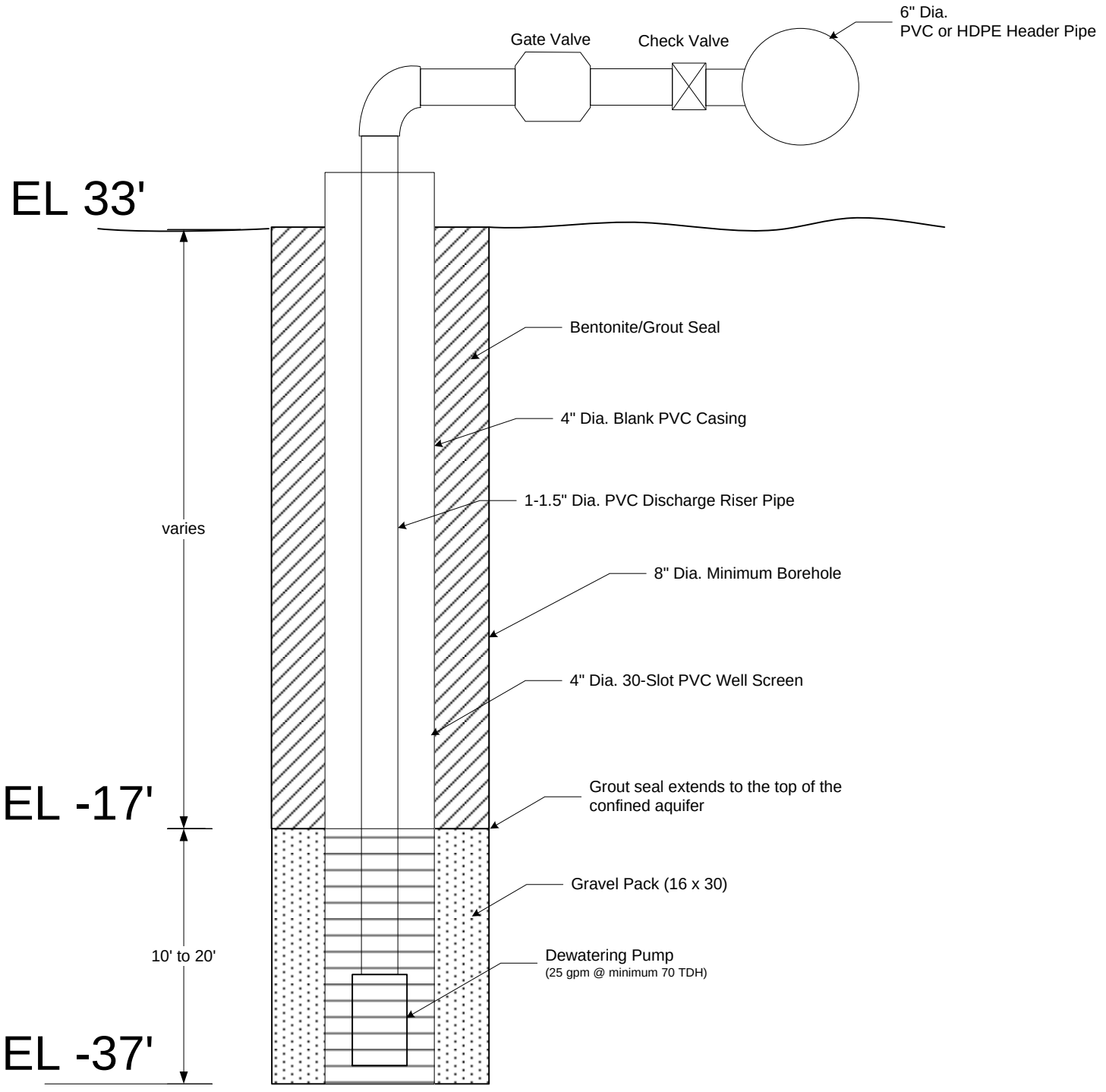
Drilling Company Malcolm Drilling

Address 8701 s 192nd street

City, State, Zip Kent Wa 98031

Contractor's Registration No. malcod*263bs Date 12/13/13

DP-10



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP-09

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 70 ft. Depth of completed well 70 ft.

CONSTRUCTION DETAILS

Casing ☐ Welded _____" Diam. from _____ ft. to _____ ft.

Installed: ☐ Liner installed _____" Diam. from _____ ft. to _____ ft.

☒ Threaded 8" Diam. From 0 ft. to 70 ft.

Perforations: ☐ Yes ☐ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location 50' to 70'

Manufacturer's Name Western Well

Type PVC Model No. _____

Diam. 4 Slot size .030 from 50 ft. to 70 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No Size of gravel/sand 10/20

Materials placed from 50 ft. to 70 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 50 ft.

Material used in seal Neat cement grout

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off Treemee grout

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 40 ft. below top of well Date 12/6

Artesian pressure 0 lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after 1 hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BAP 948

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake and mercer

City Seattle County King

Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4R EWM ☒ Or WWM ☐

(s, t, r Still REQUIRED)

Lat/Long Lat Deg ___ Lat Min/Sec ___

Long Deg ___ Long Min/Sec ___

Tax Parcel No. (Required) 4088803385

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Silts and wood debre	0	48
Silts with traces of sands	48	55
Moist water @ 48'.		
Black sands with traces of	55	70
Silts		

Start Date 12/12/13 Completed Date 12/12/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print)

Driller/Engineer/Trainee Signature

Driller or trainee License No. 2589

IF TRAINEE: Driller's License No:

Driller's Signature:

Drilling Company Malcolm Drilling

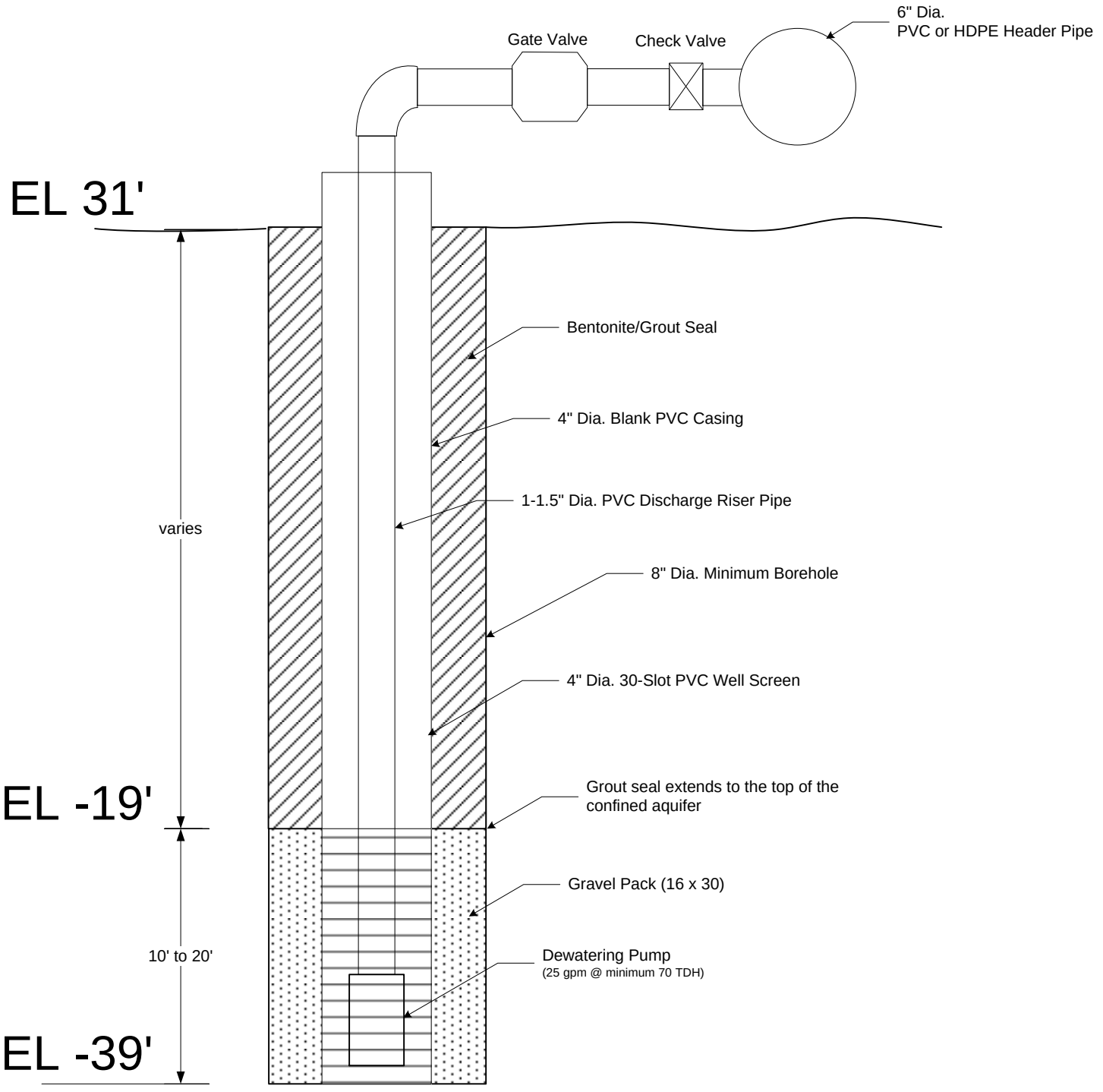
Address 8701 s 192nd street

City, State, Zip Kent Wa 98031

Contractor's Registration No. malcod*263bs Date _____

ECY 050-1-20 (Rev 02/10) *If you need this document in an alternate format, please call the Water Resources Program at 360-407-6872. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

DP-09



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP-08

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 70 ft.
Depth of completed well 70ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft.
☐ Liner installed _____" Diam. from _____ ft. to _____ ft.
☒ Threaded 8" Diam. From 0 ft. to 70 ft.

Perforations: ☐ Yes ☐ No
Type of perforator used _____
SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location 50' to 70'
Manufacturer's Name Western Well
Type PVC Model No. _____
Diam. 4 Slot size .030 from 50 ft. to 70 ft.
Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No Size of gravel/sand 10/20
Materials placed from 50 ft. to 70 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 50ft.
Material used in seal Neat cement grout
Did any strata contain unusable water? ☐ Yes ☒ No
Type of water? _____ Depth of strata _____
Method of sealing strata off Treemee grout

PUMP: Manufacturer's Name _____
Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.
Static level 40ft. below top of well Date 12/6
Artesian pressure 0 lbs. per square inch Date _____
Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level
Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____
Yield: _____ gal./min. with ____ ft. drawdown after 1 hrs.
Yield: _____ gal./min. with ____ ft. drawdown after _____ hrs.
Yield: _____ gal./min. with ____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____
Bailer test _____ gal./min. with ____ ft. drawdown after ____ hrs.
Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.
Artesian flow _____ g.p.m. Date _____
Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CURRENT

Notice of Intent No. DE 01368
Unique Ecology Well ID Tag No. BAP 949
Water Right Permit No. _____
Property Owner Name City Investors
Well Street Address Westlake and mercer
City Seattle County King
Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4R (s, t, r Still REQUIRED) EWM ☒ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____
Long Deg ____ Long Min/Sec ____
Tax Parcel No. (Required) 4088803385

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Silts and wood debre	0	48
Silts with traces of sands	48	55
Moist water @ 48'.		
Black sands with traces of	55	70
Silts		

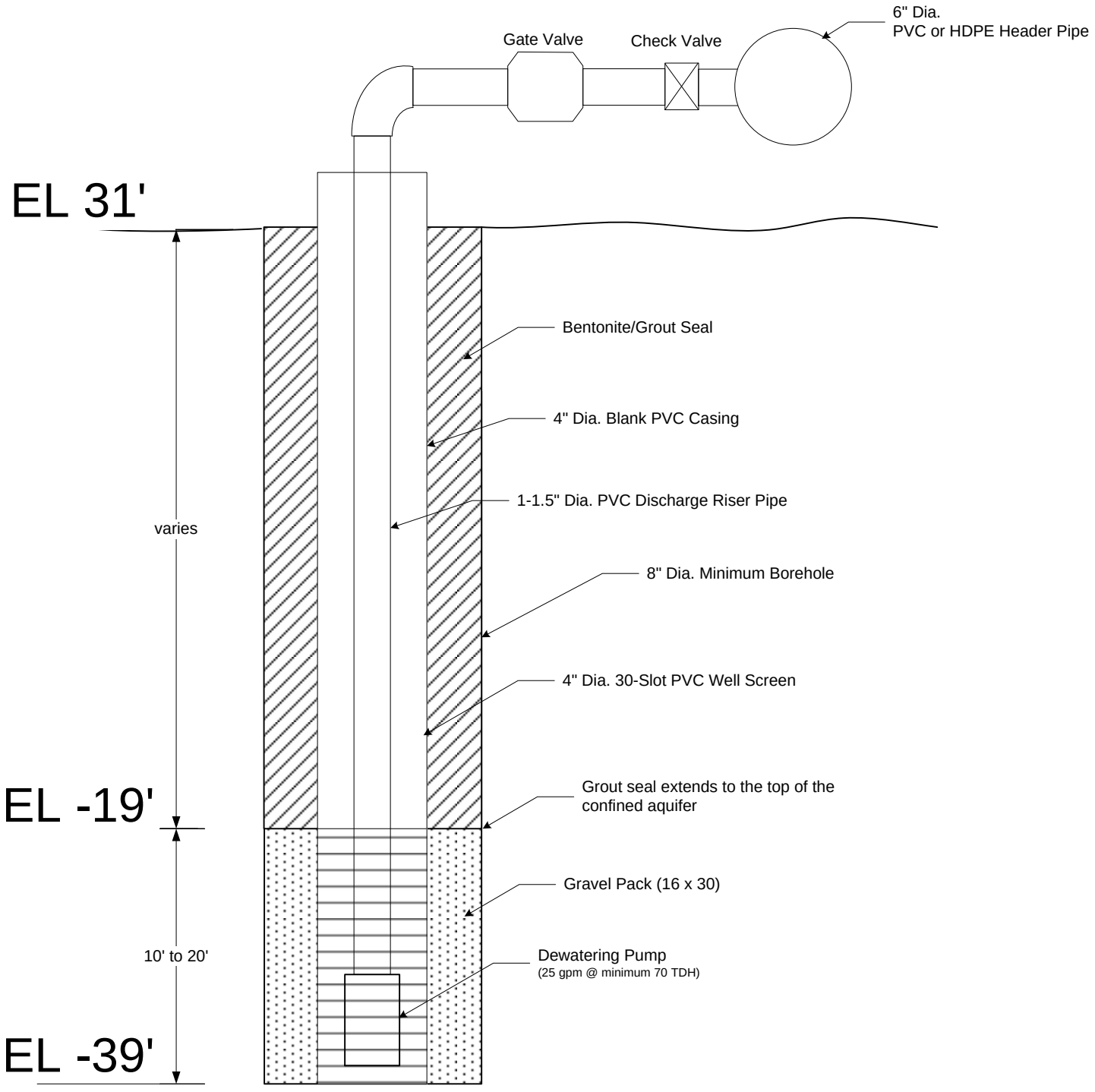
Start Date 12/12/13 Completed Date 12/12/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print)
Driller/Engineer/Trainee Signature
Driller or trainee License No. 2589
IF TRAINEE: Driller's License No:
Driller's Signature: Gail Smith

Drilling Company Malcolm Drilling
Address 8701 s 192nd street
City, State, Zip Kent Wa 98031
Contractor's Registration No. malcod*263bs Date 12-22-13

DP-08



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP-07

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted ☐ Deepened

DIMENSIONS: Diameter of well 8 inches, drilled 70 ft. Depth of completed well 70 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☒ Threaded 8" Diam. From 0 ft. to 70 ft.

Perforations: ☐ Yes ☐ No

Type of perforator used _____

SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location 50' to 70'

Manufacturer's Name Western Well

Type PVC Model No. _____

Diam. 4 Slot size .030 from 50 ft. to 70 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No Size of gravel/sand 10/20

Materials placed from 50 ft. to 70 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 50 ft.

Material used in seal Neat cement grout

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off Treemee grout

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 40 ft. below top of well Date 12/6

Artesian pressure 0 lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with ____ ft. drawdown after 1 hrs.

Yield: _____ gal./min. with ____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with ____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BAP 947

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake and mercer

City Seattle County King

Location NE 1/4-1/4 SE 1/4 Sec 30 Twn 25N R 4R (s, t, r Still REQUIRED) EWM ☒ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 4088803385

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Silts and wood debre	0	48
Silts with traces of sands	48	55
Moist water @ 48'.		
Black sands with traces of	55	70
Silts		

Start Date 12/12/13 Completed Date 12/12/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) _____

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. _____

IF TRAINEE: Driller's License No: 2589

Driller's Signature _____

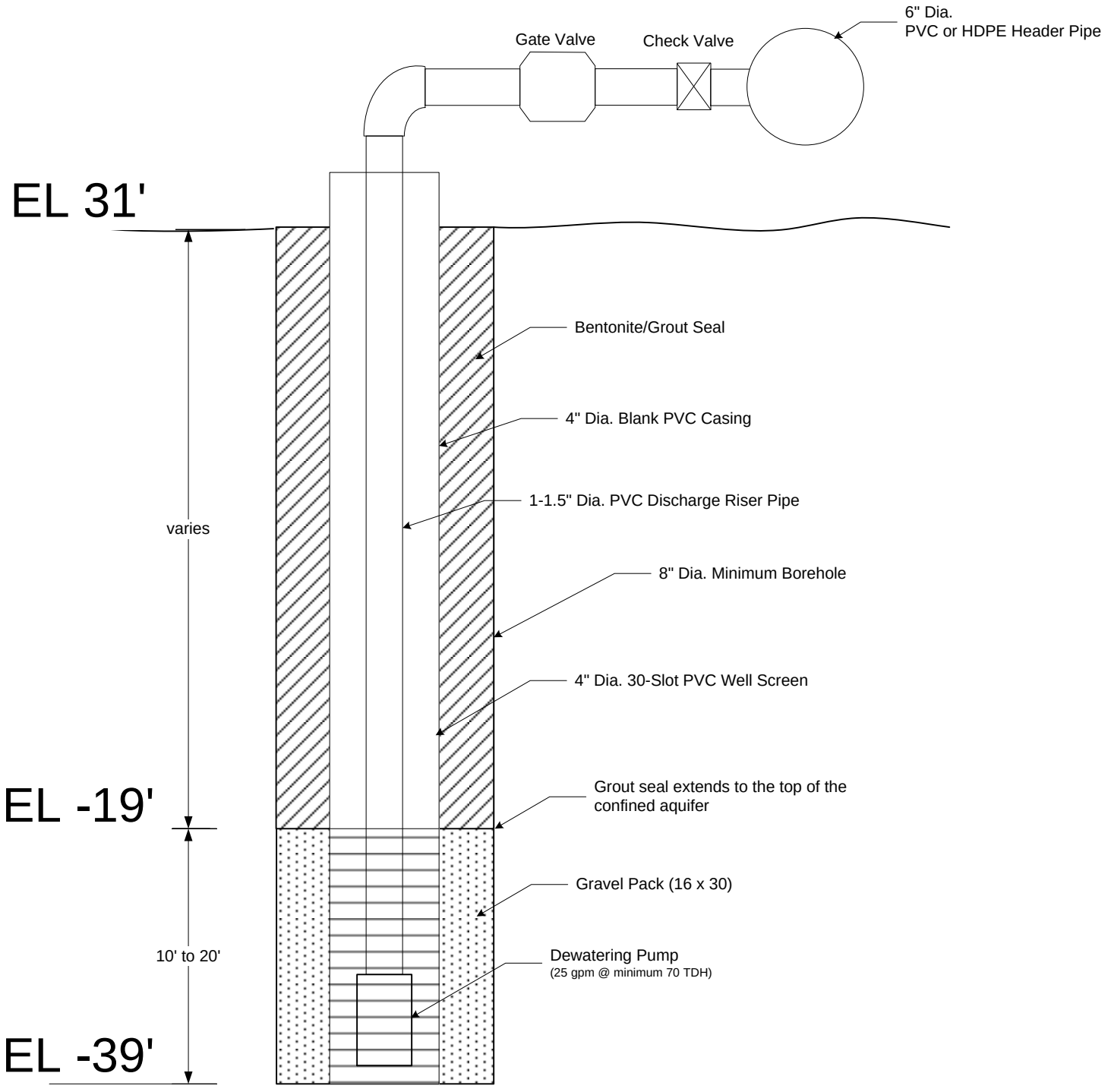
Drilling Company Malcolm Drilling

Address 8701 s 192nd street

City, State, Zip Kent Wa 98031

Contractor's Registration No. malcod*263bs Date 12-22-13

DP-07



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP-06

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BAP 946

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake and mercer

City Seattle County King

Location NE1/4-1/4 SE1/4 Sec 30 Twn 25N R 4R (s, t, r Still REQUIRED) EWM ☒ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 4088803385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 70 ft. Depth of completed well 70 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft. ☐ Liner installed _____" Diam. from _____ ft. to _____ ft. ☒ Threaded 8" Diam. From 0 ft. to 70 ft.

Perforations: ☐ Yes ☐ No

Type of perforator used _____

SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location 50' to 70'

Manufacturer's Name Western Well

Type PVC Model No. _____

Diam. 4 Slot size .030 from 50 ft. to 70 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No Size of gravel/sand 10/20

Materials placed from 50 ft. to 70 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 50 ft.

Material used in seal Neat cement grout

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off Treemee grout

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level 40 ft. below top of well Date 12/6

Artesian pressure 0 lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with ____ ft. drawdown after 1 hrs.

Yield: _____ gal./min. with ____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with ____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Silts and wood debre	0	48
Silts with traces of sands	48	55
Moist water @ 48'.		
Black sands with traces of	55	70
Silts		

Start Date 12/12/13 Completed Date 12/12/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) _____

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. _____

IF TRAINEE: Driller's License No: ~~28~~ 12589

Driller's Signature: _____

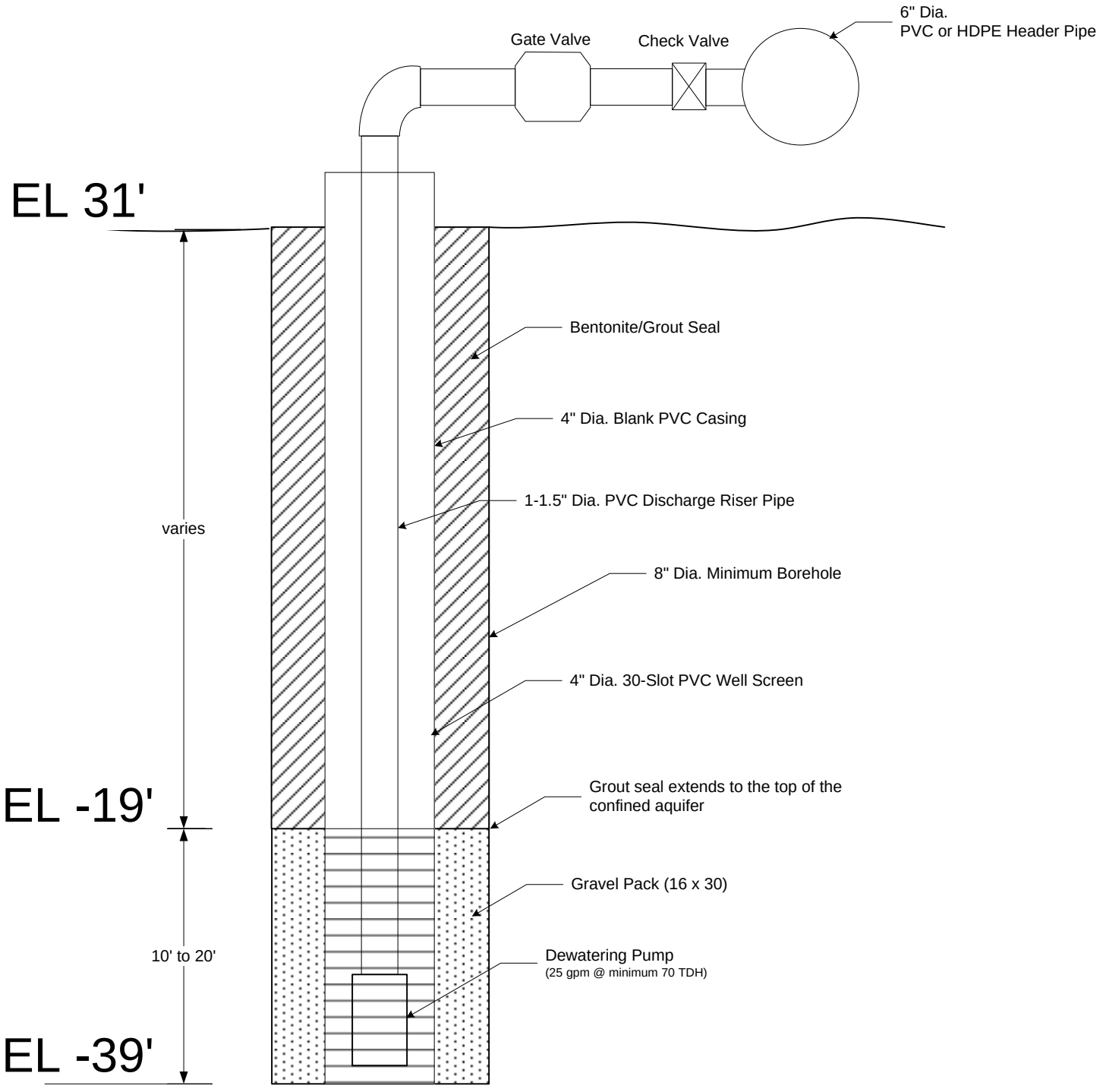
Drilling Company Malcolm Drilling

Address 8701 s 192nd street

City, State, Zip Kent Wa 98031

Contractor's Registration No. malcod*263bs Date 12-22-13

DP-06



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP-05

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BAP 945

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake and mercer

City Seattle County King

Location NE1/4-1/4 SE1/4 Sec 30 Twn 25N R 4R (s, t, r Still REQUIRED) EWM ☒ Or WWM ☐

Lat/Long Lat Deg ____ Lat Min/Sec ____ Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 4088803385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 70 ft. Depth of completed well 70 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded ____" Diam. from ____ ft. to ____ ft. ☐ Liner installed ____" Diam. from ____ ft. to ____ ft. ☒ Threaded 8" Diam. From 0 ft. to 70 ft.

Perforations: ☐ Yes ☐ No

Type of perforator used _____

SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location 50' to 70'

Manufacturer's Name Western Well

Type PVC Model No. _____

Diam. 4 Slot size .030 from 50 ft. to 70 ft.

Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☒ Yes ☐ No Size of gravel/sand 10/20

Materials placed from 50 ft. to 70 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 50 ft.

Material used in seal Neat cement grout

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off Treemee grout

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.

Static level 40 ft. below top of well Date 12/6

Artesian pressure 0 lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: ____ gal./min. with ____ ft. drawdown after 1 hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.

Artesian flow ____ g.p.m. Date _____

Temperature of water ____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Silts and wood debre	0	48
Silts with traces of sands	48	55
Moist water @ 48'.		
Black sands with traces of	55	70
Silts		

Start Date 12/12/13 Completed Date 12/12/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) _____

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2589

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

Drilling Company Malcolm Drilling

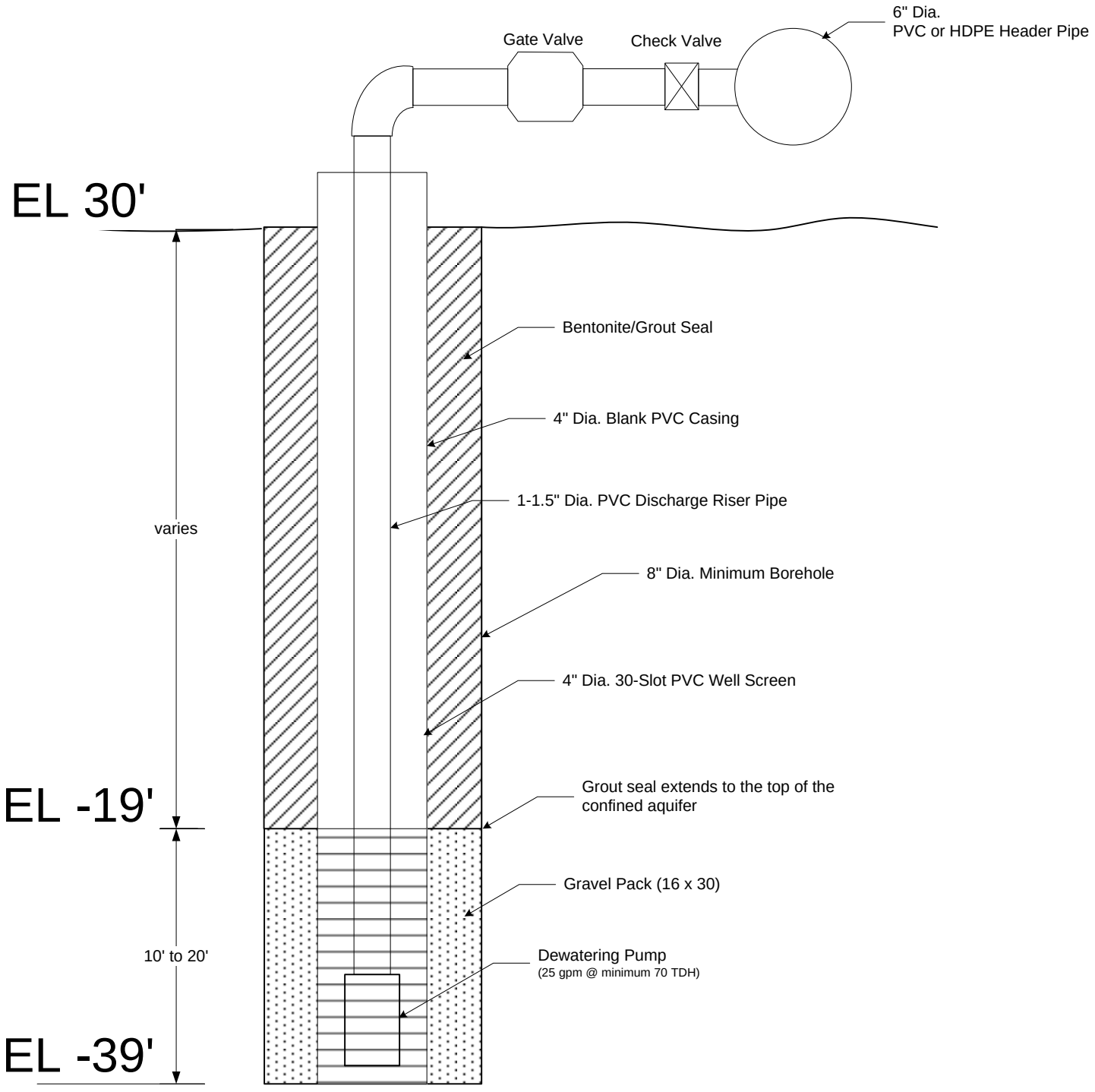
Address 8701 s 192nd street

City, State, Zip Kent Wa 98031

Contractor's Registration No. malcod*263bs Date 12-27-13

ECY 050-1-20 (Rev 02/10) *If you need this document in an alternate format, please call the Water Resources Program at 360-407-6872. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.*

DP-05



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP-04

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

DEPARTMENT OF ECOLOGY State of Washington

Construction/Decommission *("x" in circle)*

☒ Construction

☐ Decommission *ORIGINAL INSTALLATION*

Notice of Intent Number _____

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BAP - 944

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake and mercer

City Seattle County King

Location NE1/4-1/4 SE1/4 Sec 30 Twn 25N R 4R EWM ☒ Or WWM ☐

(s, t, r Still REQUIRED)

Lat/Long Lat Deg ____ Lat Min/Sec ____

Long Deg ____ Long Min/Sec ____

Tax Parcel No. (Required) 4088803385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) _____

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 8 inches, drilled 70 ft. Depth of completed well 70 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded ____" Diam. from ____ ft. to ____ ft. ☐ Liner installed ____" Diam. from ____ ft. to ____ ft. ☒ Threaded 8" Diam. From 0 ft. to 70 ft.

Perforations: ☐ Yes ☐ No

Type of perforator used _____

SIZE of perfs ____ in. by ____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location 50' to 70'

Manufacturer's Name Western Well

Type PVC Model No. _____

Diam. 4 Slot size .030 from 50 ft. to 70 ft.

Diam. ____ Slot size ____ from ____ ft. to ____ ft.

Gravel/Filter packed: ☒ Yes ☐ No Size of gravel/sand 10/20

Materials placed from 50 ft. to 70 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 50 ft.

Material used in seal Neat cement grout

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off Treemee grout

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level ____ ft.

Static level 40 ft. below top of well Date 12/6

Artesian pressure 0 lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: ____ gal./min. with ____ ft. drawdown after 1 hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Yield: ____ gal./min. with ____ ft. drawdown after ____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test ____ gal./min. with ____ ft. drawdown after ____ hrs.

Airtest ____ gal./min. with stem set at ____ ft. for ____ hrs.

Artesian flow ____ g.p.m. Date _____

Temperature of water ____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Silts and wood debre	0	48
Silts with traces of sands	48	55
Moist water @ 48'.		
Black sands with traces of	55	70
Silts		

Start Date 12/12/13 Completed Date 12/12/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) _____

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2589

IF TRAINEE: Driller's License No: _____

Driller's Signature: _____

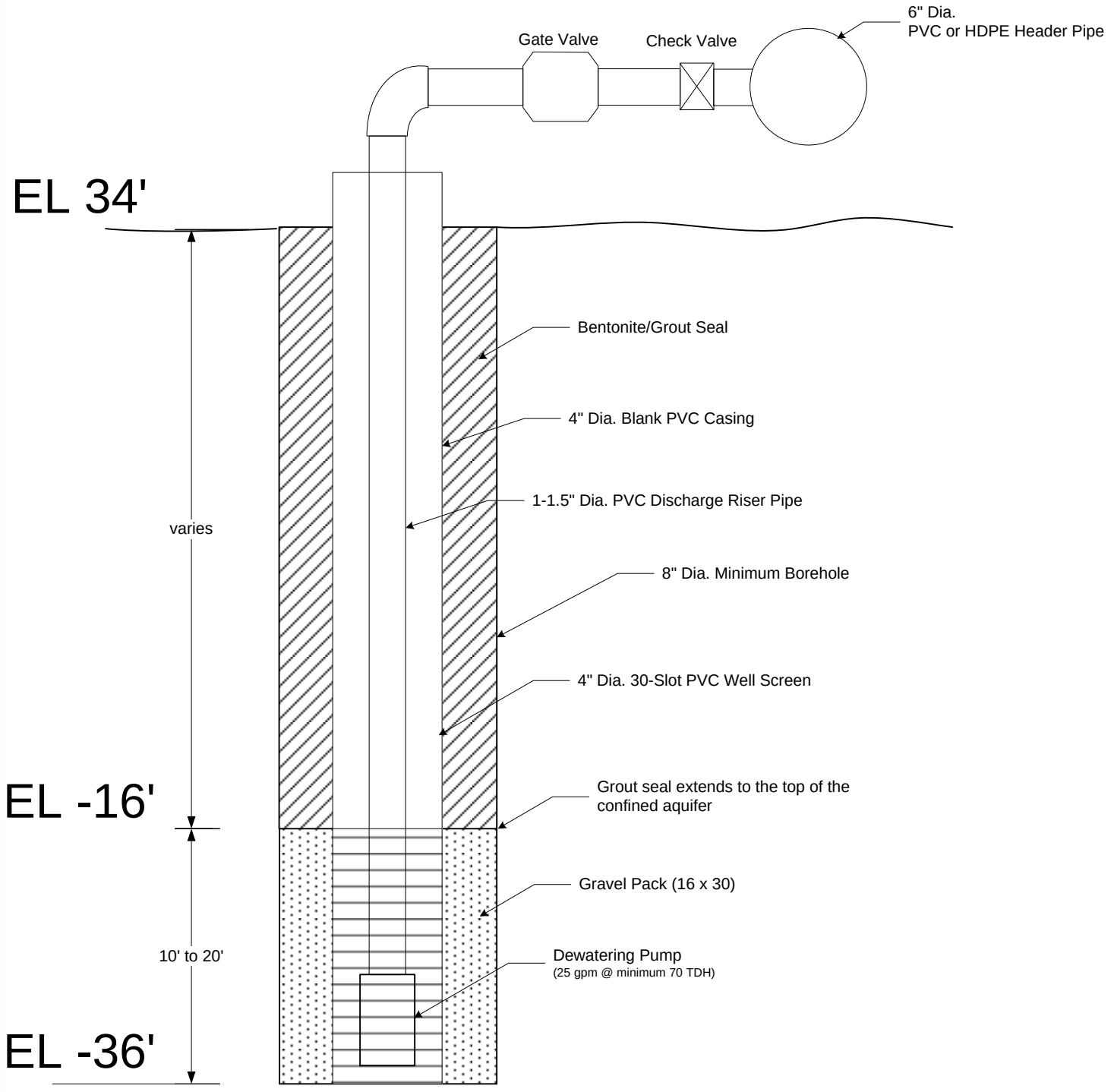
Drilling Company Malcolm Drilling

Address 8701 s 192nd street

City, State, Zip Kent Wa 98031

Contractor's Registration No. malcod*263bs Date 12-12-13

DP-04



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP-03 (DW-8)

04.13.027

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(x) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BIJ 109

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 25N/R 4E (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 408883 0338 5

PROPOSED USE: [ ] Domestic [ ] Industrial [ ] Municipal [x] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

[x] New well [ ] Reconditioned [ ] Deepened

Method: [ ] Dug [ ] Bored [x] Driven [ ] Cable [x] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 60 ft.

Depth of completed well 60 ft.

CONSTRUCTION DETAILS

Casing Installed: [ ] Welded _____" Diam. from _____ ft. to _____ ft.

[x] Liner installed 12" Diam. from 0 ft. to 60 ft.

[ ] Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [x] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: [x] Yes [ ] No [ ] K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 12" Slot size .030 from 30 ft. to 60 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [x] Yes [ ] No [x] Size of gravel/sand 4x8

Materials placed from 60 ft. to 4 ft.

Surface Seal: [x] Yes [ ] No To what depth? 4 ft.

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? [ ] Yes [x] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [x] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown fine soil fill like	0'	12'
Gre. sand silts w/ small gravels	12'	21'
Gre./Black silty sands	21'	46'
Med. Fine Black Sands	46'	59'
Very dense grey silt	59'	60'

Start Date 11/12/13 Completed Date 11/12/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[x] Driller [ ] Engineer [ ] Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2831

Drilling Company Malcolm Drilling

Address 8701 S. 192nd St.

City, State, Zip Kent WA 98031

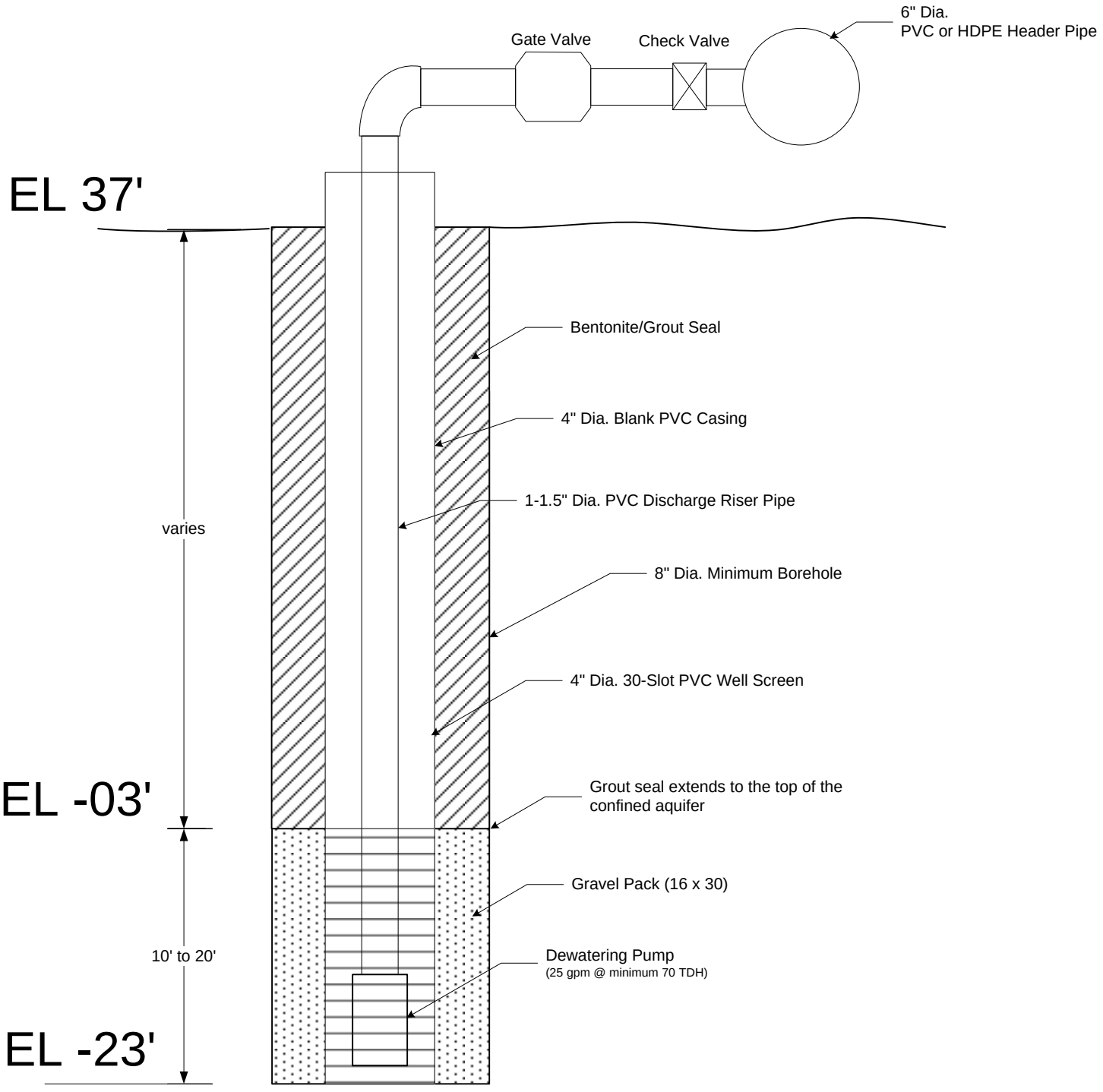
Contractor's Registration No. 439189009 Date 2/10/14

If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

DP-03 (DW-8)



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DP-02 (DW-5)

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

ECOLOGY

Construction/Decommission *("x" in circle)*

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BIT 106

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 25N/R 4E (EWM or WWM) circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 408880 3385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal (X) DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

(X) New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable (X) Rotary ☐ Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 60 ft.

Depth of completed well 60 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft.

(X) Liner installed 12" Diam. from 0 ft. to 60 ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes (X) No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: (X) Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 12" Slot size .030 from 20 ft. to 60 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: (X) Yes ☐ No (X) Size of gravel/sand 4x9

Materials placed from 60 ft. to 4 ft.

Surface Seal: (X) Yes ☐ No To what depth? 4 ft.

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? ☐ Yes (X) No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes (X) No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown fine-med Sandy silts	0'	20'
Brown/Gre. sandy silts w/ trace/organics.	20'	26'
Gray silty sands	26'	42'
Med-Fine Black Sands	42'	58'
Grey silt, very dense	58'	60'

Start Date 11/8/13 Completed Date 11/18/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

(X) Driller ☐ Engineer ☐ Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2936

Drilling Company Nielsen Drilling

Address 9701 S. 192nd St.

City, State, Zip Kent, WA 98031

Contractor's Registration No. 439189009 Date 2/10/14

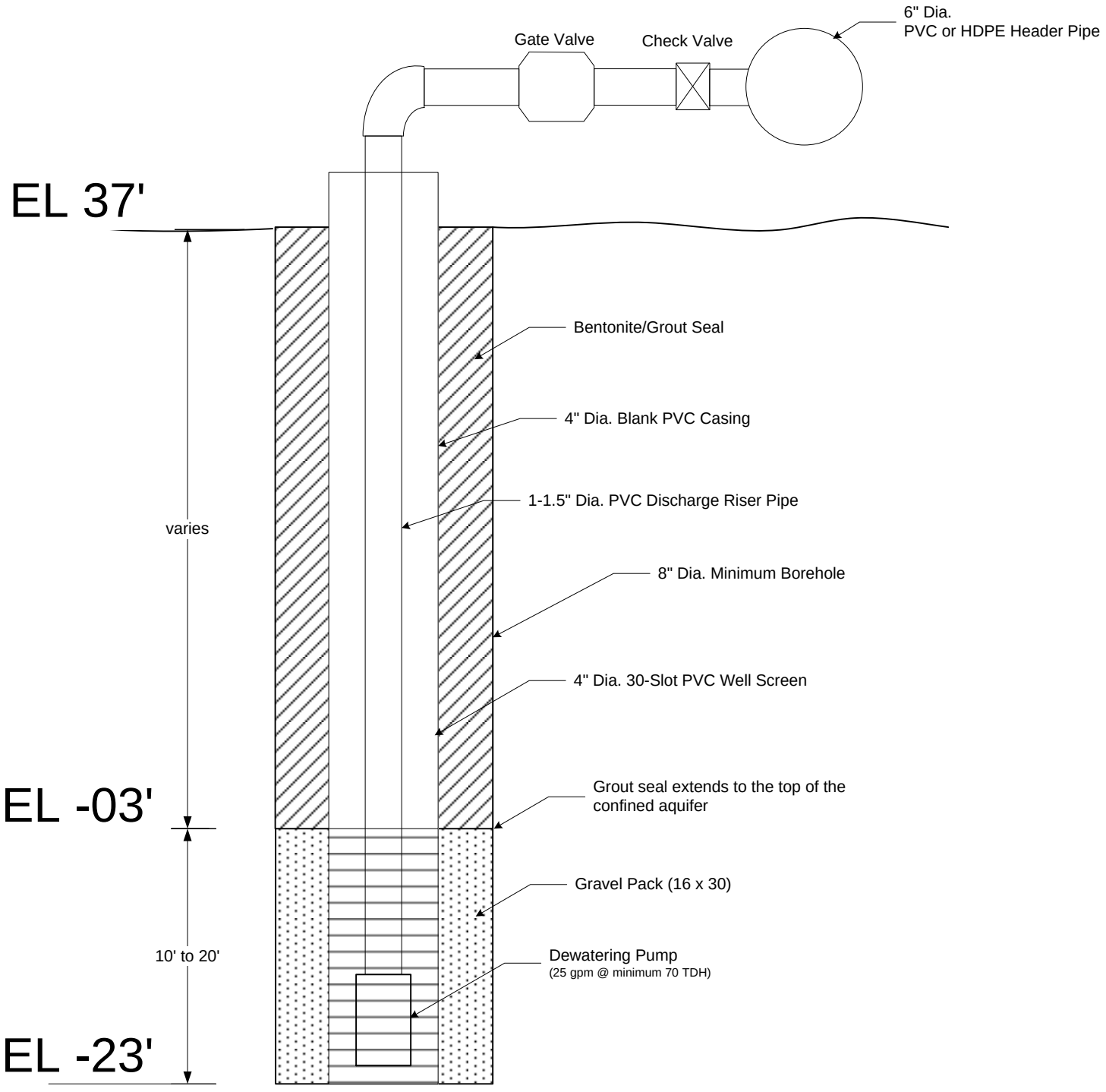
If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DP-02 (DW 5)



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DP-01 (DW-2)

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

- (X) Construction
- ( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

PROPOSED USE: [ ] Domestic [ ] Industrial [ ] Municipal [X] DeWater [ ] Irrigation [ ] Test Well [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

[X] New well [ ] Reconditioned [ ] Deepened

Method: [ ] Dug [ ] Bored [ ] Driven [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 60 ft.

Depth of completed well 60 ft.

CONSTRUCTION DETAILS

Casing Installed: [ ] Welded [X] Liner installed 12" Diam. from 0 ft. to 60 ft. [ ] Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [X] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [X] Yes [ ] No [ ] K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 12" Slot size .030 from ~~0~~ 40 ft. to 60 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [X] Yes [ ] No [X] Size of gravel/sand 4x8

Materials placed from ~~60~~ 40' ft. to 4 ft.

Surface Seal: [X] Yes [ ] No To what depth? 1 ft.

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [X] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CURRENT

Notice of Intent No. DE01368

Unique Ecology Well ID Tag No. BTJ103

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 25N R 4E (E/W WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Med-Fine grey sand, silts	0'	24'
Gvcs. Brown silty sands w/ trace organics	24'	30'
Gvcs. Silty Sands	30'	44'
Med-Fine black sands w/ some silts	44'	60'

Assume screened 40'-60'

Start Date 11/5/13 Completed Date 11/5/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2831

Drilling Company Malcolm Drilling

Address 8701 S 192nd St.

City, State, Zip Kent, WA 98031

Contractor's Registration No. 439189009 Date 2/10/14

IF TRAINEE,

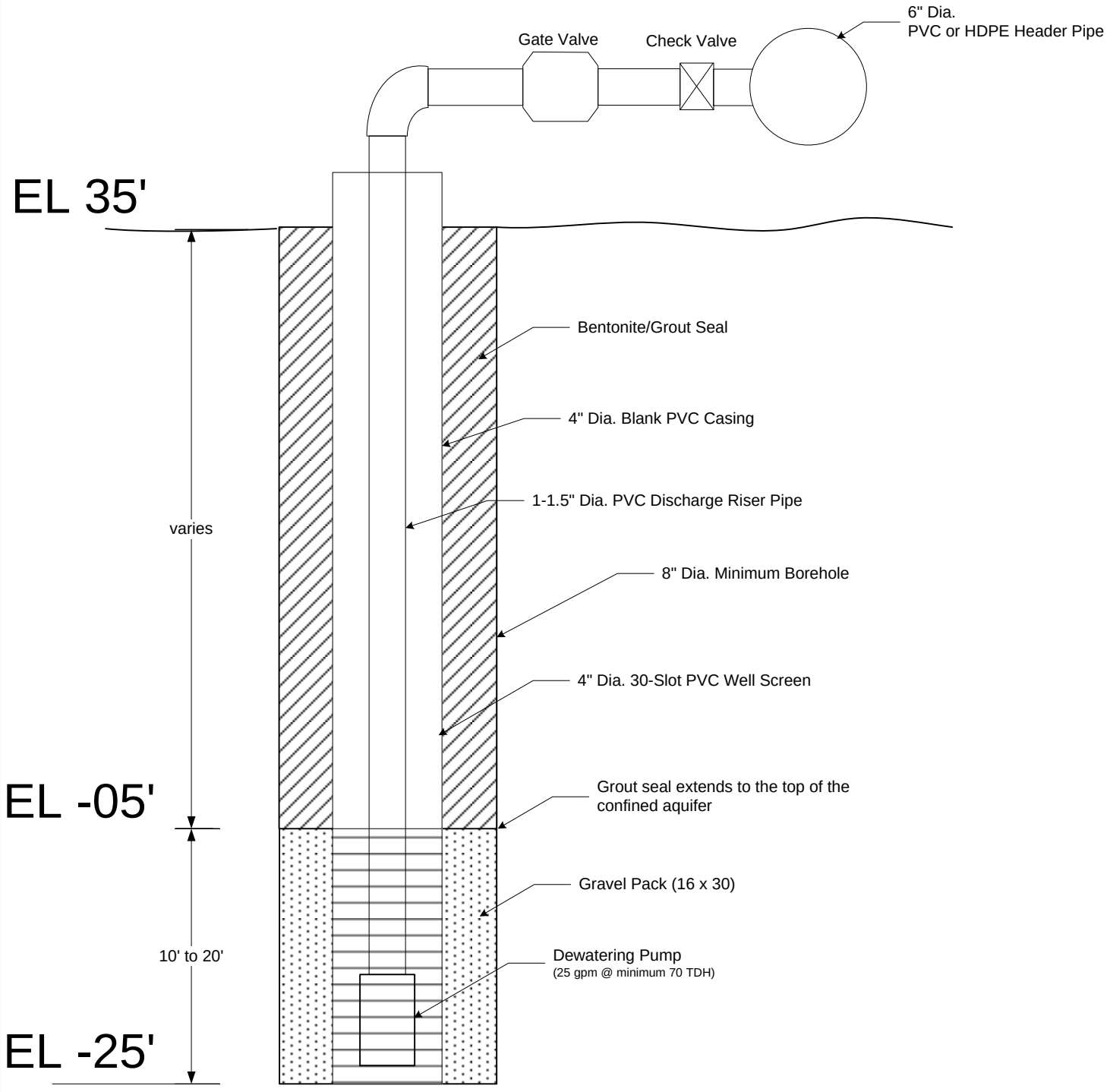
Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DP-01 (DW-2)



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DW-1

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. DE 013698

Unique Ecology Well ID Tag No. BIT 110

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 24 N/R 4E (WWM or EWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☒ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 32 inches, drilled 40 ft.

Depth of completed well 40 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft.

☒ Liner installed 17" Diam. from 0 ft. to 40 ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 12 Slot size .030 from 20 ft. to 40 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 4x8

Materials placed from 40 ft. to 4 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 4 ft.

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown/Grey sandy topsoil	0'	10'
Grey sand silts	10'	20'
Grey/Black silty sands	20'	40'

Start Date 11/12/13 Completed Date 11/17/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2831

Drilling Company Malcolm Drilling

Address 8701 S 192nd St

City, State, Zip Kent WA 98031

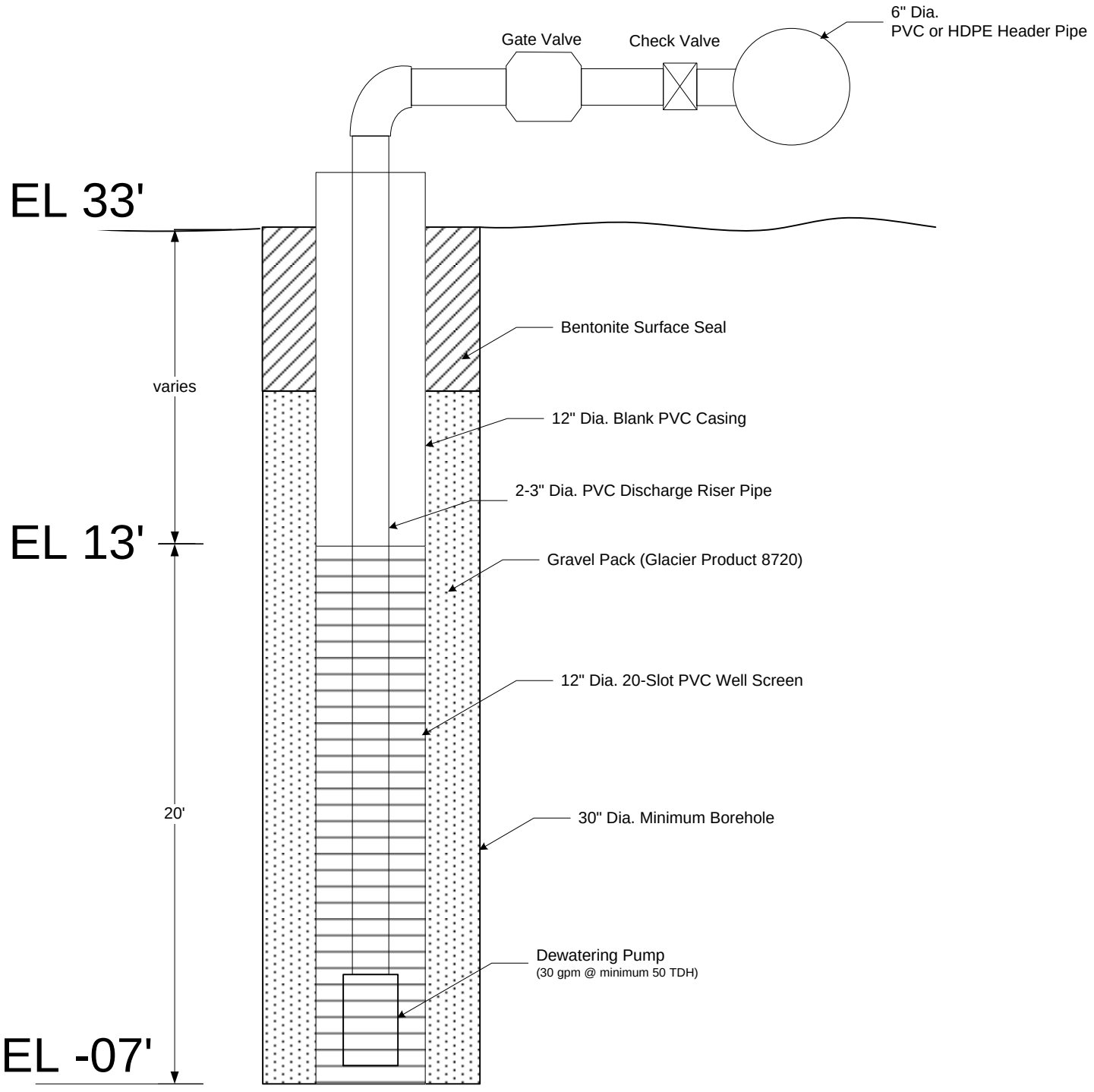
Contractor's Registration No. 439189009 Date 2/10/14

If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

DW-1



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 4
Typical Shallow Dewatering Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DW-3

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

☒ Construction

○ Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. PE 01318

Unique Ecology Well ID Tag No. BIJ 108

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 25N/R 4E (WWM or EWM) circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) Mistake

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☒ Bored ☐ Driven ☐ Cable ☐ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 40 ft.

Depth of completed well 40 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft.

☒ Liner installed 12" Diam. from 0 ft. to 40 ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam 12" Slot size .030 from 20 ft. to 40 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 4x8

Materials placed from 40 ft. to 4 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 1 ft.

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown top soils fill like w/ wood debris	0'	8'
Grey sandy silts w/ traces of small gravels	8'	20'
Med-Fine grey/black silty sands	20'	40'

Start Date 11/12/13 Completed Date 11/12/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2836

Drilling Company Malcolm Drilling

Address 8701 S. 192nd St.

City, State, Zip Kent, WA 98031

Contractor's Registration No. 439189009 Date 2/10/14

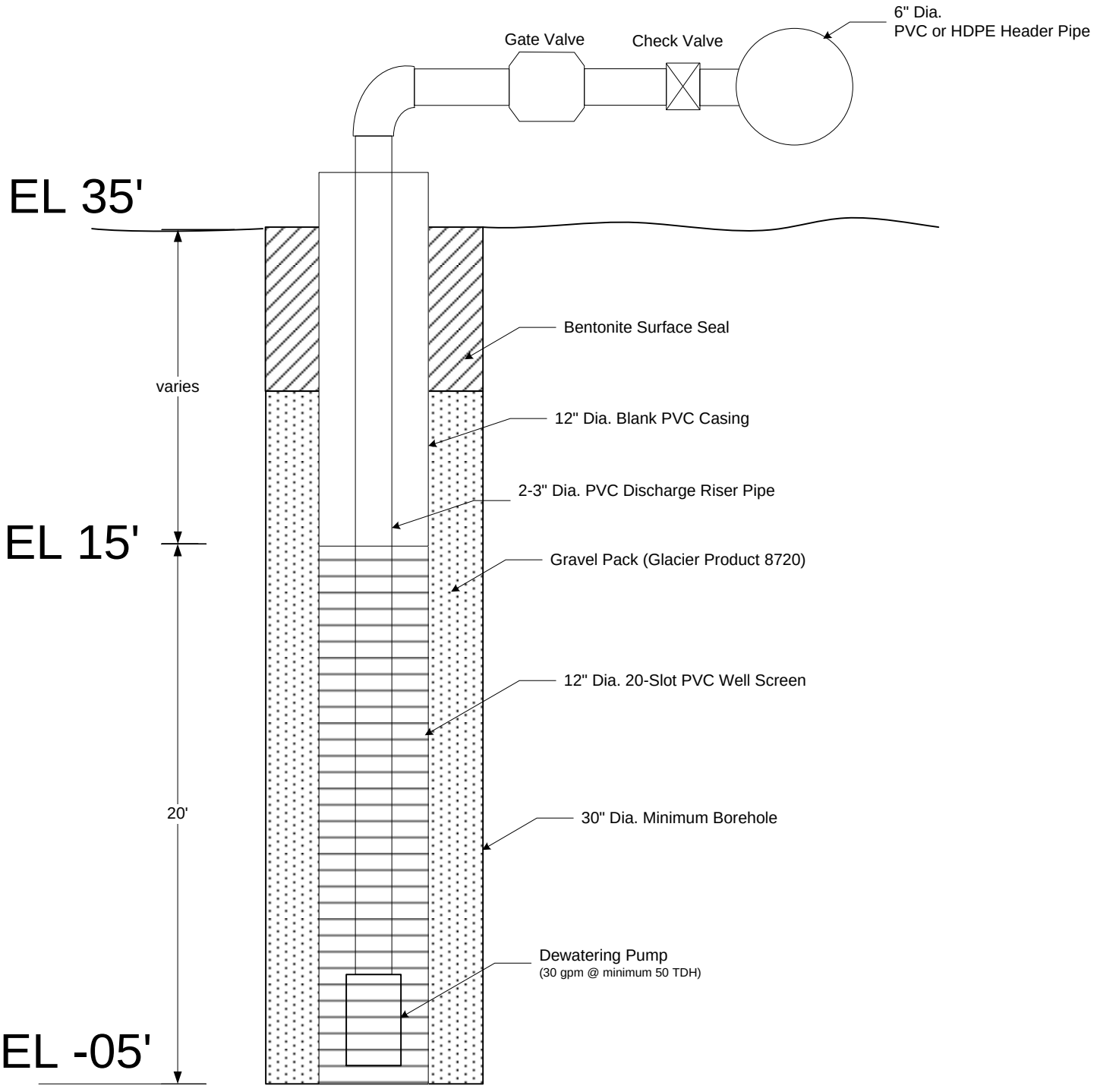
If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DW-3



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 4
Typical Shallow Dewatering Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DW-4

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. DE 01369

Unique Ecology Well ID Tag No. BTT 107

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake & Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 24N/R 4E (WWM or EWM) circle one

Lat/Long (s, t, r Still **REQUIRED**) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) M. Triple

☒ New well ☐ Reconditioned ☐ Deepened *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 40 ft.

Depth of completed well 40 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft.

☒ Liner installed 12" Diam. from 0 ft. to 40 ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western Well Screen

Type S.hed 40 PVC Model No. _____

Diam. 12" Slot size .030 from 20 ft. to 40 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 4x8

Materials placed from 40 ft. to 4 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 1 ft

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown fine-med sandy silt	0'	18'
Brown & grey sandy silt w/ trace organics	18'	24'
Grey silty sands	24'	40'

Start Date 11/8/13 Completed Date 11/9/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2836

If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Drilling Company M. Tolm Drilling

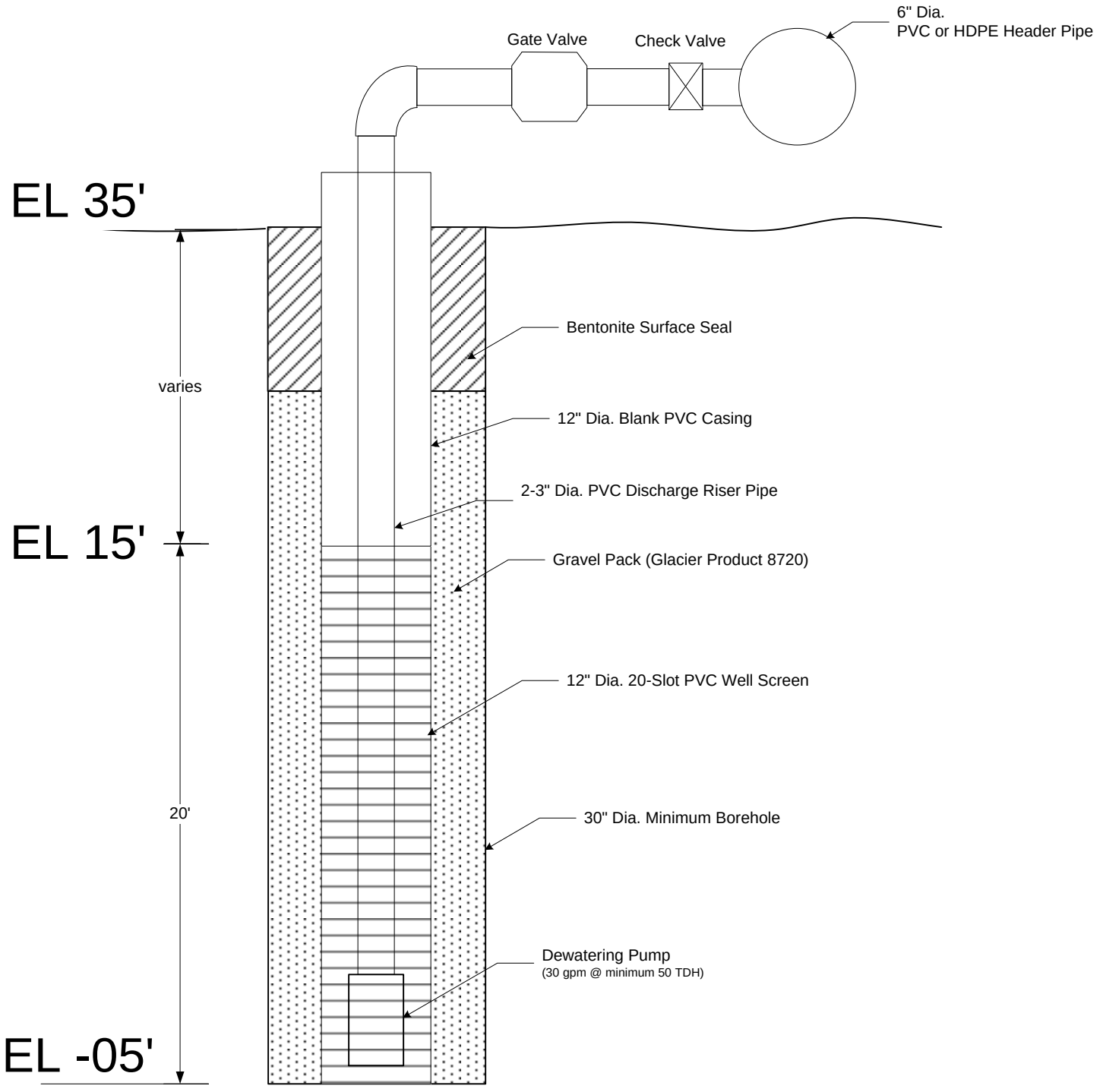
Address 6701 S 192nd St

City, State, Zip Kent WA 98031

Contractor's Registration No. 439189009 Date 2/10/14

Ecology is an Equal Opportunity Employer.

DW-4



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 4
Typical Shallow Dewatering Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04,13.027

DW-6

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

ECOLOGY

Construction/Decommission *("x" in circle)*

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. DE 01368

Unique Ecology Well ID Tag No. BIT 105

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake & Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 25N R 4E (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: [X] DeWater [ ] Domestic [ ] Irrigation [ ] Industrial [ ] Test Well [ ] Municipal [ ] Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

[X] New well [ ] Reconditioned [ ] Deepened

Method: [ ] Dug [ ] Bored [X] Driven [ ] Cable [X] Rotary [ ] Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 40 ft.

Depth of completed well 40 ft.

CONSTRUCTION DETAILS

Casing Installed: [ ] Welded [X] Liner installed 12" [ ] Threaded

Diam. from _____ ft. to _____ ft.

Diam. from 0 ft. to 40 ft.

Diam. from _____ ft. to _____ ft.

Perforations: [ ] Yes [X] No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: [X] Yes [ ] No [ ] K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Slhd 40 PVC Model No. _____

Diam. 12" Slot size .030 from 20 ft. to 40 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: [X] Yes [ ] No [X] Size of gravel/sand 4x8

Materials placed from 40 ft. to 4 ft.

Surface Seal: [X] Yes [ ] No To what depth? 1 ft

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? [ ] Yes [X] No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____ H.P. _____

Type: _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? [ ] Yes [X] No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? [ ] Yes [ ] No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Brown Sandy Silts	0'	20'
Brown / Grey Sandy Silts w/ trace Organics	20'	26'
Med-Fine grey silty sands.	26'	40'

Start Date 11/8/13 Completed Date 11/8/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

[X] Driller [ ] Engineer [ ] Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2936

Drilling Company Malcolm Drilling

Address 8701 S. 192nd St.

City, State, Zip Kent WA 98031

Contractor's Registration No. 439189009 Date 2/10/14

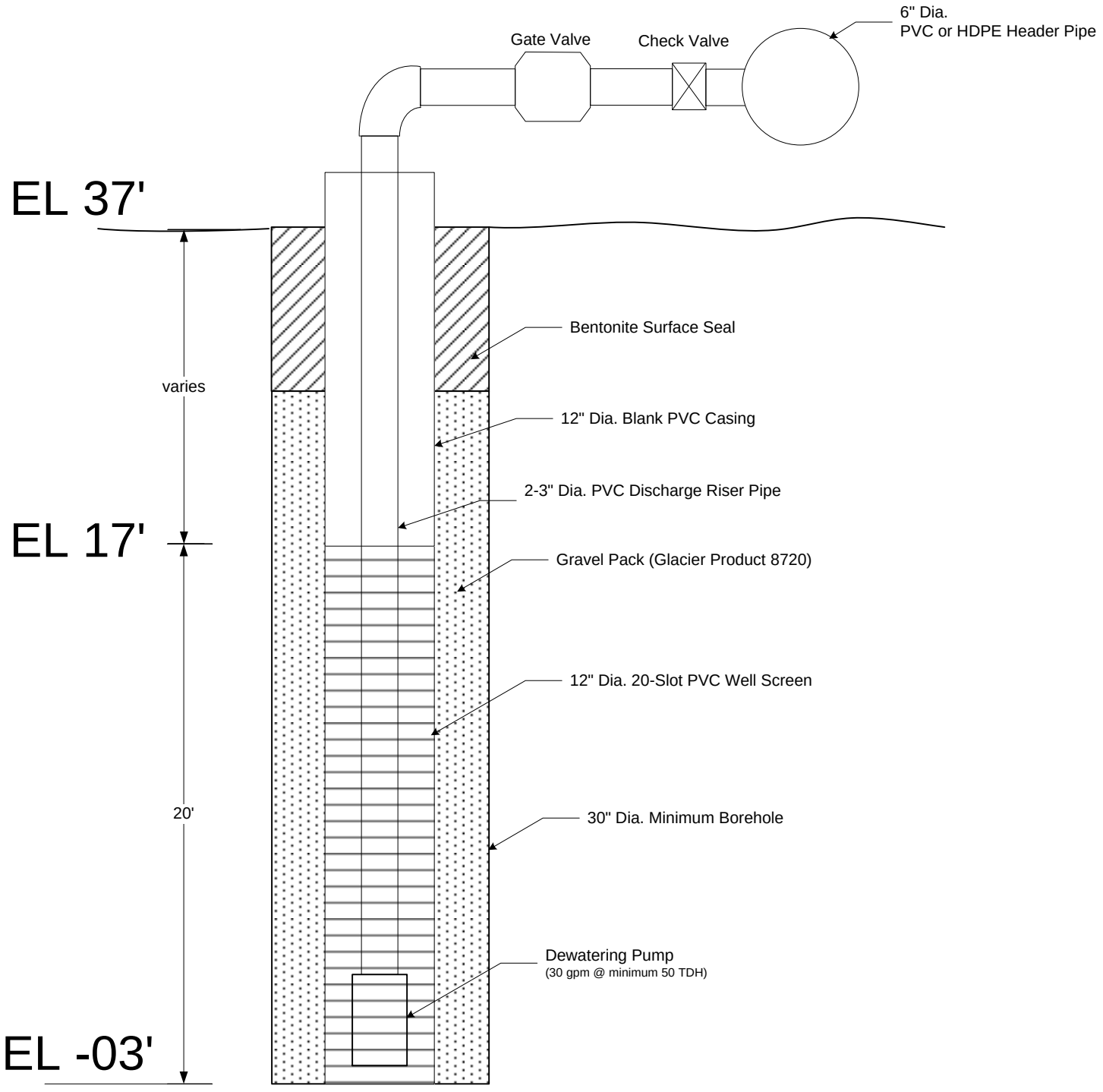
If TRAINEE, Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DW-6



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 4
Typical Shallow Dewatering Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04,13,027

DW-7

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. QE01368

Unique Ecology Well ID Tag No. BIT 104

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 25N R 4E (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 408883 0338 5

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 40 ft. Depth of completed well 40 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft.

☒ Liner installed 12" Diam. from 0 ft. to 40 ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs _____ from _____ ft. to _____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 12" Slot size .030 from 20 ft. to 40 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 4x8

Materials placed from 40 ft. to 4 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 4 ft.

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Mod-Fine Brown sandy silts	0'	18'
Brown/Grey sand, silts w/ shale/organics	18'	24'
Grey, silty sands	24'	40'

Start Date 11/8/13 Completed Date 11/8/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

(X) Driller ☐ Engineer ☐ Trainee Name (Print) Mike Kittler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2931

Drilling Company Malcolm Drilling

Address 8701 S 192nd St

City, State, Zip Kent WA 98031

Contractor's Registration No. 439189 009 Date 2/10/14

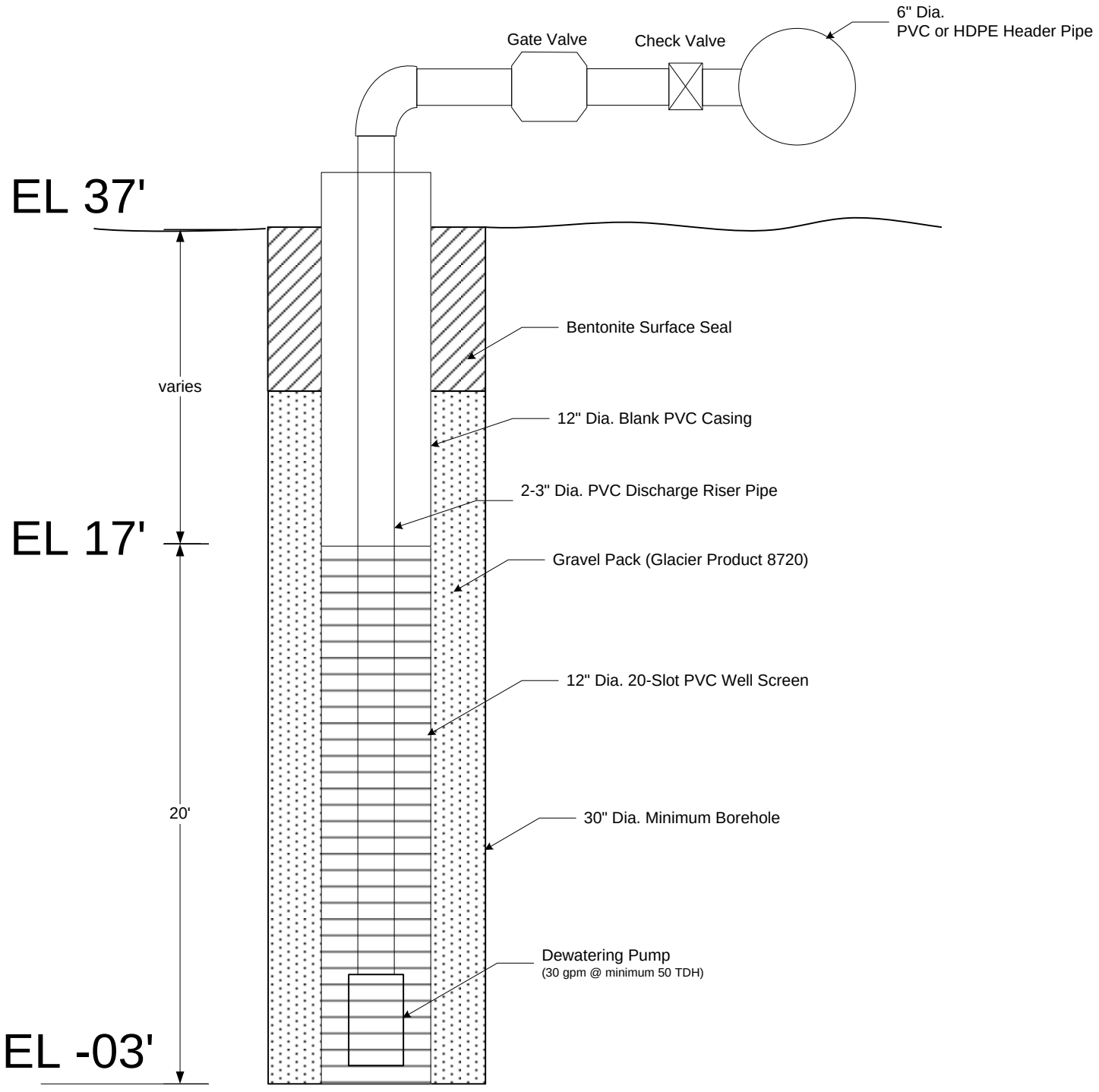
If TRAINEE,

Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

DW-7



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 4
Typical Shallow Dewatering Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DW-9

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. PE01368

Unique Ecology Well ID Tag No. BTJ 102

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake & Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 25N/R 4E (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____ Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) Multiple

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 40 ft. Depth of completed well 40 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft. ☒ Liner installed 12" Diam. from 0 ft. to 40 ft. ☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 12" Slot size .030 from 20 ft. to 40 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 4x8

Materials placed from 40 ft. to 4 ft.

Surface Seal: ☒ Yes ☐ No To what depth? 4 ft.

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Med gray sands & silts	0'	24'
Coarse sands w/ trace gravels	24'	29'
Med-Fine gray silty sands	29'	40'

Start Date 11/5/13 Completed Date 11/5/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☐ Driller ☐ Engineer ☐ Trainee Name (Print) Alex Kistler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 2936

Drilling Company Malcolm Drilling

Address 8701 S 192nd St.

City, State, Zip Kent WA 98031

Contractor's Registration No. MALCOM*189NC Date 2/10/14

If TRAINEE,

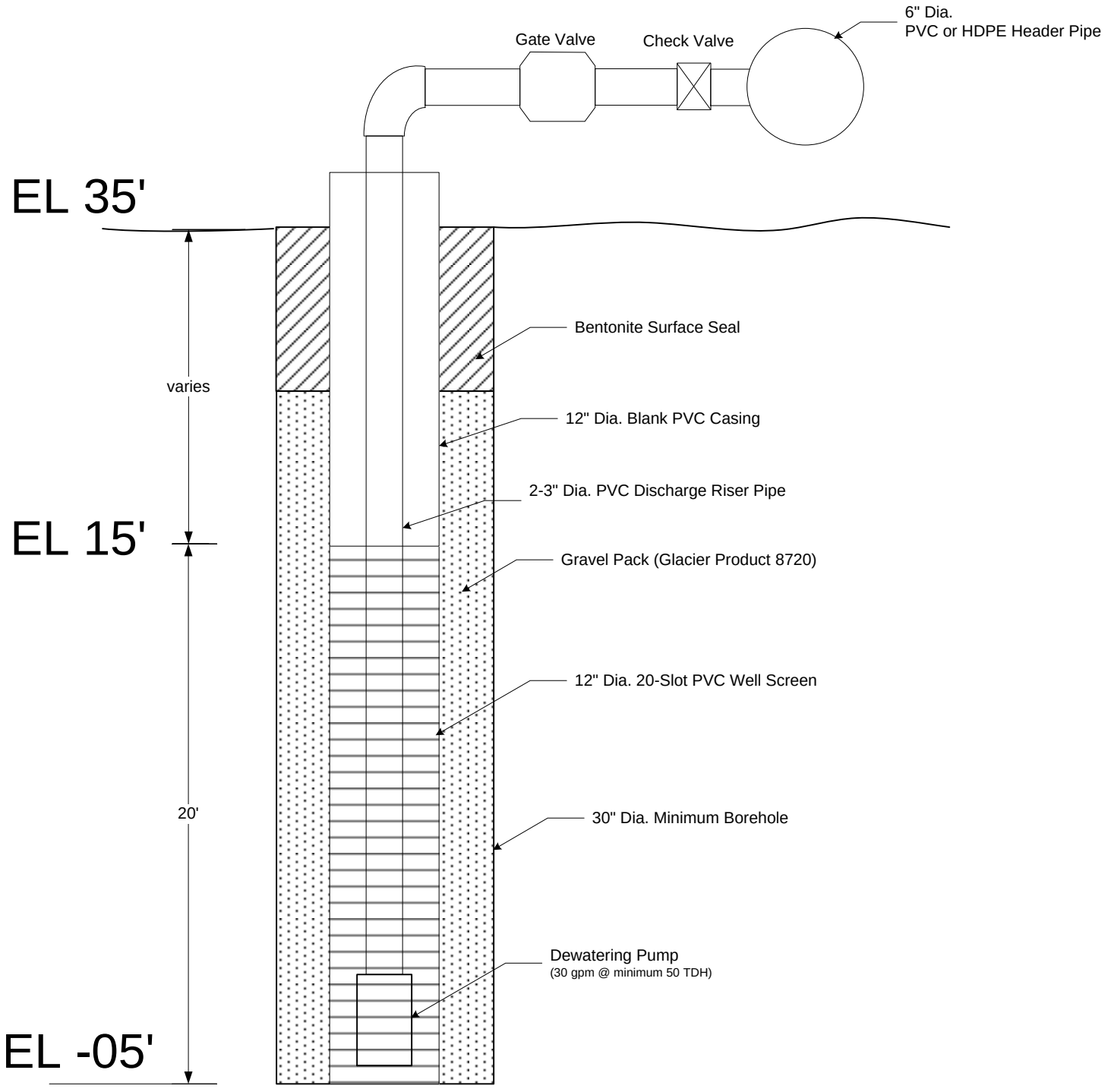
Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DW-9



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 4
Typical Shallow Dewatering Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

04.13.027

DW-10

WATER WELL REPORT

Original & 1st copy – Ecology, 2nd copy – owner, 3rd copy – driller

Construction/Decommission *("x" in circle)*

(X) Construction

( ) Decommission *ORIGINAL INSTALLATION Notice of Intent Number* _____

CURRENT

Notice of Intent No. AE 01368

Unique Ecology Well ID Tag No. BIT 101

Water Right Permit No. _____

Property Owner Name City Investors

Well Street Address Westlake + Mercer

City Seattle County King

Location SE 1/4-1/4 NE 1/4 Sec 30 Twn 25N R 4E (EWM or WWM) circle one

Lat/Long (s, t, r Still REQUIRED) Lat Deg _____ Lat Min/Sec _____

Long Deg _____ Long Min/Sec _____

Tax Parcel No. 4088803385

PROPOSED USE: ☐ Domestic ☐ Industrial ☐ Municipal ☒ DeWater ☐ Irrigation ☐ Test Well ☐ Other _____

TYPE OF WORK: Owner's number of well (if more than one) MW-01

☒ New well ☐ Reconditioned *Method:* ☐ Dug ☐ Bored ☐ Driven ☐ Deepened ☐ Cable ☒ Rotary ☐ Jetted

DIMENSIONS: Diameter of well 36 inches, drilled 40 ft.

Depth of completed well 40 ft.

CONSTRUCTION DETAILS

Casing Installed: ☐ Welded _____" Diam. from _____ ft. to _____ ft.

☒ Liner installed 12 " Diam. from 0 ft. to 40 ft.

☐ Threaded _____" Diam. from _____ ft. to _____ ft.

Perforations: ☐ Yes ☒ No

Type of perforator used _____

SIZE of perfs _____ in. by _____ in. and no. of perfs ____ from ____ ft. to ____ ft.

Screens: ☒ Yes ☐ No ☐ K-Pac Location _____

Manufacturer's Name Western Well Screen

Type Sched 40 PVC Model No. _____

Diam. 12" Slot size .030 from 20 ft. to 40 ft.

Diam. _____ Slot size _____ from _____ ft. to _____ ft.

Gravel/Filter packed: ☒ Yes ☐ No ☒ Size of gravel/sand 4x8

Materials placed from 40 ft. to EI ft.

Surface Seal: ☒ Yes ☐ No To what depth? 1 ft.

Material used in seal 3/8" Bentonite Chips

Did any strata contain unusable water? ☐ Yes ☒ No

Type of water? _____ Depth of strata _____

Method of sealing strata off _____

PUMP: Manufacturer's Name _____

Type: _____ H.P. _____

WATER LEVELS: Land-surface elevation above mean sea level _____ ft.

Static level _____ ft. below top of well Date _____

Artesian pressure _____ lbs. per square inch Date _____

Artesian water is controlled by _____ (cap, valve, etc.)

WELL TESTS: Drawdown is amount water level is lowered below static level

Was a pump test made? ☐ Yes ☒ No If yes, by whom? _____

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Yield: _____ gal./min. with _____ ft. drawdown after _____ hrs.

Recovery data (time taken as zero when pump turned off) (water level measured from well top to water level)

Time	Water Level	Time	Water Level	Time	Water Level

Date of test _____

Bailer test _____ gal./min. with _____ ft. drawdown after _____ hrs.

Airtest _____ gal./min. with stem set at _____ ft. for _____ hrs.

Artesian flow _____ g.p.m. Date _____

Temperature of water _____ Was a chemical analysis made? ☐ Yes ☐ No

CONSTRUCTION OR DECOMMISSION PROCEDURE

Formation: Describe by color, character, size of material and structure, and the kind and nature of the material in each stratum penetrated, with at least one entry for each change of information. (USE ADDITIONAL SHEETS IF NECESSARY.)

MATERIAL	FROM	TO
Med-Fine gray sandy silts	0'	29'
Green/Brown silty sands w/ trace organics	29'	30'
Med-Course silty sands	30'	38'
Gray silt; very dense	38'	40'

Start Date 11/4/13 Completed Date 11/4/13

WELL CONSTRUCTION CERTIFICATION: I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

☒ Driller ☐ Engineer ☐ Trainee Name (Print) Mike Kohler

Driller/Engineer/Trainee Signature _____

Driller or trainee License No. 3876

Drilling Company Malcolm Drilling

Address 8701 S 192nd St.

City, State, Zip Kent WA 98031

Contractor's Registration No. 439189009 Date 2/10/14

If TRAINEE,

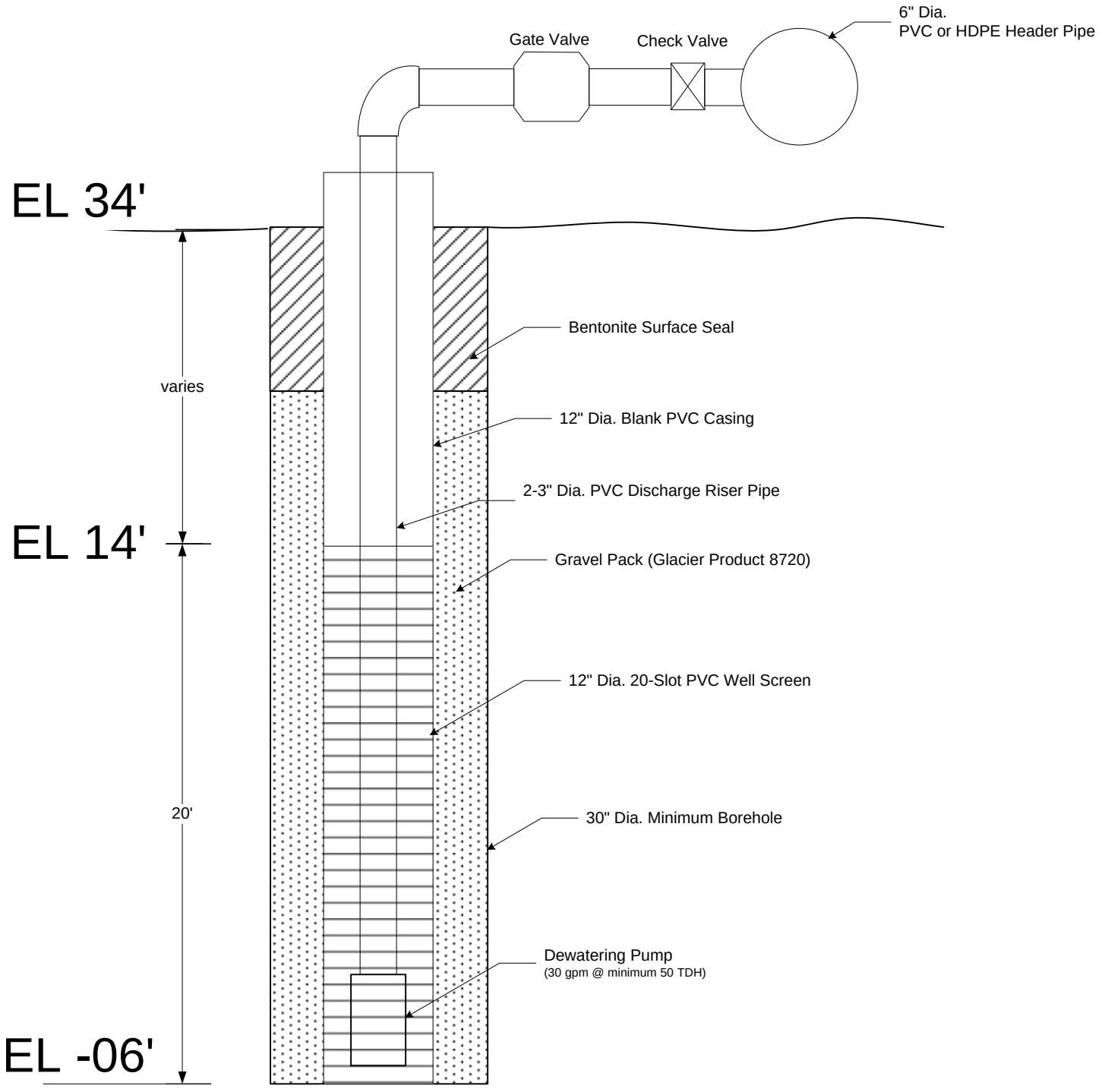
Driller's Licensed No. _____

Driller's Signature _____

Ecology is an Equal Opportunity Employer.

ECY 050-1-20 (Rev 3/05) **The Department of Ecology does NOT warranty the Data and/or Information on this Well Report.**

DW-10

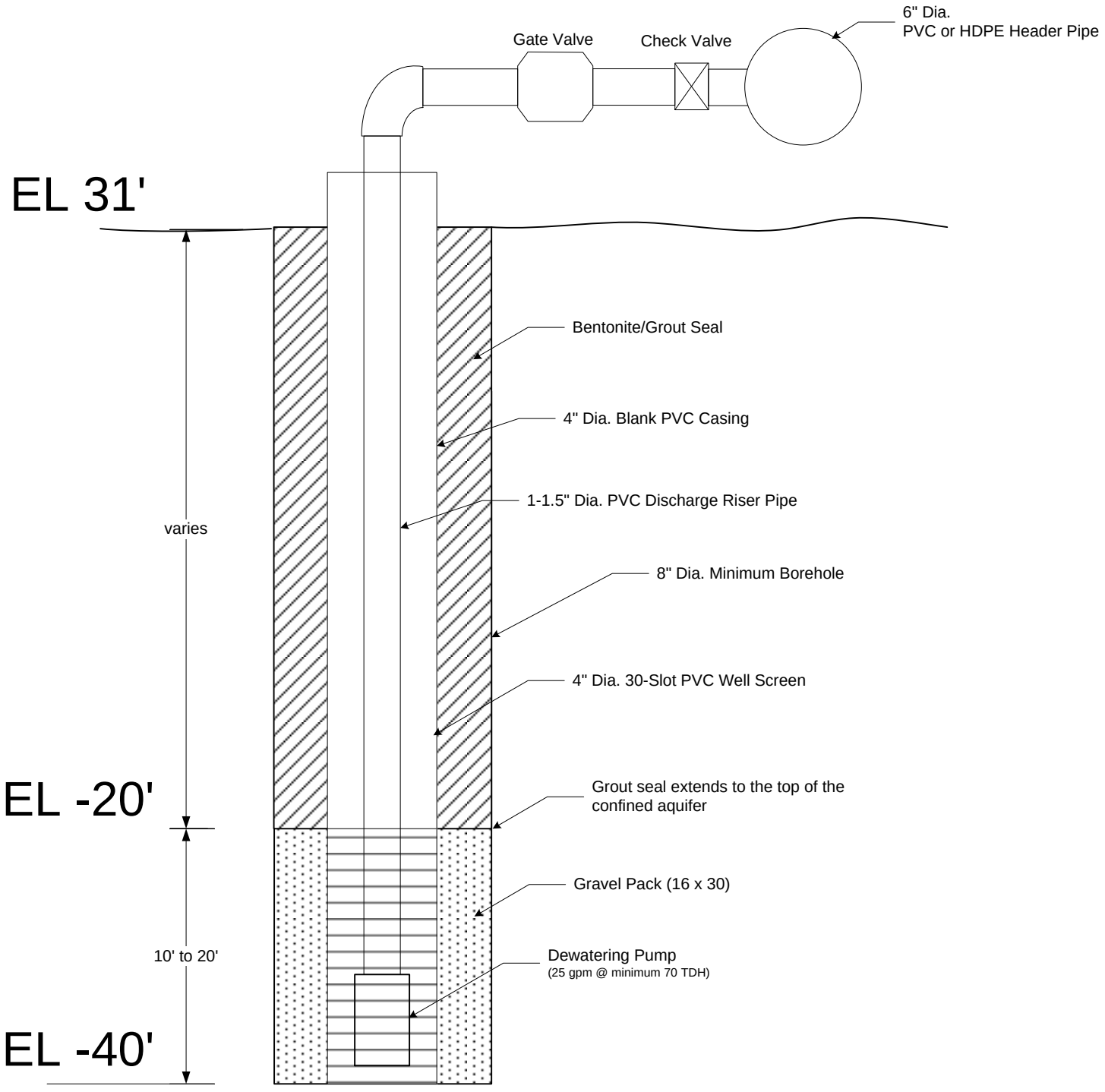


Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 4
Typical Shallow Dewatering Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

DP 16 (Previously the NE Monitoring Well)



Not to Scale

MIDDOUR CONSULTING LLC
groundwater control for underground construction

FIGURE 2
Typical Depressurization Well Schematic
BLOCK 43 GWCP | Seattle, WA
Project No. 13001015.01 | May 17, 2013

Log of Boring: AS-1

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/13/15 1155	**Sampler Type:**	SPT
Date/Time Completed:	5/13/15 1350	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	27.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-4.0': Air Knifed. Fill material.								Native soil backfill
5		5.0-5.8': Sandy SILT (60% silt, 30% sand, 10% gravel), medium sand, fine to coarse gravel, medium stiff, moist, slight hydrocarbon-like odor.	ML		53	2/3/3	1,544			
		5.8-6.5': No recovery.								
		6.5-7.4': SILT with sand (80% sand, 20% silt), fine sand, fine gravel, gray, medium stiff, moist, hydrocarbon-like odor, no staining.	ML		60	2/3/4	796	AS1-6.5-051315		
		7.4-8.0': No recovery.								
		8.0-8.8': SILT with sand (80% sand, 20% silt), fine sand, fine gravel, gray, medium stiff, moist, hydrocarbon-like odor, no staining.	ML		87	2/3/4	509.2			
		8.8-9.3': SILT (90% silt, 10% sand), fine sand, gray, medium stiff, moist, hydrocarbon-like odor, no staining.	ML							

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Silt	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-1

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/13/15 1155	**Sampler Type:**	SPT
Date/Time Completed:	5/13/15 1350	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	27.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		9.3-9.5': No recovery	ML				1,879	AS1-9.5-051315	X	
10		9.5-10.0': SILT (90% silt, 10% sand), fine sand, gray, medium stiff, moist, strong hydrocarbon-like odor, no staining.	ML		66	1/3/3	745			1" Schedule 40 PVC
		10.0-10.5': SILT with sand (75% silt, 25% sand), fine to medium sand, gray, medium stiff, moist, strong hydrocarbon-like odor, no staining.								
		10.5-11': No recovery.	ML				1,445			
		11.0-12.3': SILT with sand (80% silt, 20% sand), fine sand, fine gravel, gray, medium stiff, moist, very strong hydrocarbon-like odor, no staining.			87	0/3/3				
		12.3-12.5': No recovery.	ML				1,186			
		12.5-13.5': SILT with sand (80% silt, 20% sand), fine sand, gray, soft, moist, hydrocarbon-like odor, no staining.			66	2/2/2				
		13.5-14.0': No recovery.								
		14.0-14.5': SILT (90% silt, 10% sand), fine sand, gray, medium stiff, moist, no odor, no staining.	ML				168			
15		14.5-15.0': Sandy SILT (70% silt, 25% sand, 5% gravel), medium sand, fine gravel, medium stiff, moist, no odor, no staining.	ML		66	2/3/4				Bentonite Seal
		15.0-15.5': No recovery.								
		15.5-16.6': Sandy SILT (70% silt, 25% sand, 5% gravel), medium sand, fine gravel, medium stiff, moist, no odor, no staining.	ML		73	1/4/4	48.7	AS1-16.0-051315		
		16.6-17.0': No recovery.								
		17.0-18.2': SILT with sand (80% silt, 20% sand), fine to medium sand, gray, stiff, moist, no odor, no staining.	ML		80	3/3/6	6.8			
		18.2-18.5': No recovery.					1.5	AS1-18.5-051315	X	

Well Construction Information

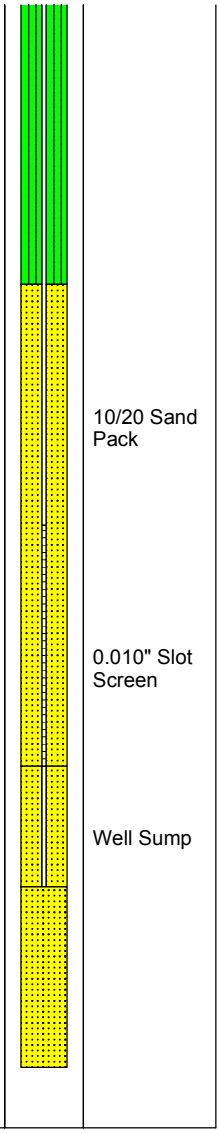
Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Silt	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-1

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/13/15 1155	**Sampler Type:**	SPT
Date/Time Completed:	5/13/15 1350	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	27.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed
		18.5-19.2': SILT (90% silt, 10% sand), fine sand, moist, no odor, no staining.	ML	80				
20		19.7-20.0': No recovery.						
		20.0-21.3': SILT with sand (80% silt, 15% sand, 5% gravel), fine to medium sand, fine gravel, gray, stiff, moist, no odor, no staining.	ML	87	7/6/8	1.0		
		21.3-21.5': No recovery.						
		21.5-22.5': SILT with sand (85% silt, 15% sand), fine sand, gray, moist, no odor, no staining.	ML	66		2.0		
		22.5-23.0': No recovery.						
		23.0-24.5': No recovery.		0	7/6/8			
25		24.5-26.0': No recovery.		0	7/7/10			
		26.0-26.3': SILT with sand (85% silt, 15% sand), fine sand, gray, medium stiff, moist, no odor, no staining.	ML					
		26.3-27.2': Silty SAND (80% silt, 20% sand), medium sand, gray, loose, moist, no odor, no staining.	SM	80	0/2/3	3.0	AS1-26.7-051315	
		27.2-27.5': No recovery.						



Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Silt	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-2

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/12/15 1325	**Sampler Type:**	SPT
Date/Time Completed:	5/12/15 1530	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	25
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	27.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-4.5': Air Knifed. Fill material.			100					Native soil backfill
5		5.0-5.6': Silty SAND (75% sand, 20% silt, 5% gravel), fine to coarse sand, fine gravel, gray, loose, moist, no odor, no staining.	SM				1.5			
		5.6-6.5': No recovery.			40	3/3/3				
		6.5-6.7': Silty SAND (60% sand, 40% silt), fine to medium sand, fine gravel, gray, very loose, moist, no odor, no staining.	SM				3.1	AS2-6.5-051215		
		6.7-7.1': SILT with sand (85% silt, 15% sand), fine sand, gray, soft, moist, no odor, no staining.	ML		40	2/2/2				
		7.1-8.0': No recovery.								
		8.0-9.1': Sandy SILT (70% silt, 25% sand, 5% gravel), fine to medium sand, fine gravel, gray, moist, petroleum-like odor at 8.5', gray staining at 8.5'.	ML		73		1,262	AS2-8.5-051215	X	

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Sand	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-2

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/12/15 1325	**Sampler Type:**	SPT
Date/Time Completed:	5/12/15 1530	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	25
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	27.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		9.1-9.5': No recovery.								
		9.5-9.9': Sandy SILT (70% silt, 25% sand, 5% gravel), fine to medium sand, fine gravel, gray, moist, petroleum-like odor, no staining.	ML				847			
10		9.9-10.3': SILT with sand (80% silt, 20% sand), fine sand, gray, moist, petroleum-like odor, no staining.	ML		53					1" Schedule 40 PVC
		10.3-11.0': No recovery.								
		11.0-11.3': SILT with sand (80% silt, 20% sand), fine sand, gray, moist, petroleum-like odor, no staining.	ML				1,067	AS2-11.3-051215	X	
		11.3-12.1': Sandy SILT (70% silt, 25% sand, 5% gravel), fine to medium sand, fine gravel, gray, moist, petroleum-like odor, no staining.	ML		73					
		12.1-12.5': No recovery.								
		12.5-13.8': SILT with sand (80% silt, 20% sand), fine sand, gray, medium stiff, moist, very slight petroleum-like odor, no staining.	ML		87	2/2/3	5.3			
		13.8-14.0': No recovery.					9.5			
		14.0-14.8': SILT (90% silt, 10% sand), fine sand, gray, medium stiff, moist, no odor, no staining.	ML							
15		14.8-15.5': No recovery.			53	2/3/5				Bentonite Seal
		15.5-16.3': SILT (90% silt, 10% sand), fine sand, gray, medium stiff, moist, no odor, no staining.	ML				11.0	AS2-15.5-051215		
		16.3-17.0': No recovery.			53	10/5/3				
		17.0-18.2': SILT (90% silt, 10% sand), fine sand, gray, moist, no odor, no staining.	ML				1.3	AS2-17.0-051215	X	

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Sand	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-2

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/12/15 1325	**Sampler Type:**	SPT
Date/Time Completed:	5/12/15 1530	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	25
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	27.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		18.2-18.5': No recovery.			80					
		18.5-19.6': SILT (90% silt, 10% sand), fine sand, gray, very soft, moist, no odor, no staining.	ML				3.4			
					73	0/1/1				
		19.6-20.0': No recovery.								
20		20.0-20.5': SILT (90% silt, 10% sand), fine sand, gray, soft, moist, no odor, no staining.	ML							
		20.5-21.5': Sandy SILT (70% silt, 30% sand), fine to medium sand, gray, soft, moist, no odor, no staining.	ML		33	0/2/2	0.5			
		21.5-23.0': SILT (90% silt, 10% sand, <5% gravel), fine sand, trace of fine gravel, gray, medium stiff, moist, no odor, no staining.	ML		100	2/3/3	0.4			10/20 Sand Pack
		23.0-24.5': SILT (90% silt, 10% sand), fine sand, gray, moist, no odor, no staining, sand lense at 24.0'.	ML		100		0.4			0.010" Slot Screen
		24.5-25.0': SILT (90% silt, 10% sand), fine sand, gray, stiff, moist, no odor, no staining.	ML							
25		25.0-26.0': SILT (90% silt, 10% sand), coarse sand, gray, stiff, moist, no odor, no staining, wet at 25.0'.	ML		100	5/5/8				Well Sump
							2.5	AS2-26.0-051215		

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Sand	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-3

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA

Farallon PN: 397-020

Logged By: Anna Sigel

Date/Time Started:	5/12/15 0950	**Sampler Type:**	SPT
Date/Time Completed:	5/12/15 1225	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	26.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-4.0': Air Knifed. Fill material.			100					Native soil backfill
		4.0-5.0': SILT with sand (80% silt, 20% sand), fine sand, gray, soft, moist, no odor, no staining.	ML				0.2			
5		5.0-5.5': No recovery.			66	2/2/2				
		5.5-6.3': SILT with sand (80% silt, 20% sand), fine sand, gray, soft, moist, no odor, no staining.	ML							
		6.3-7.0': No recovery.			53	0/2/1	0.3			
		7.0-7.5': Sandy SILT (60% silt, 40% sand), fine sand, gray, medium stiff, moist, no odor, no staining.	ML				0.2			
		7.5-7.8': SILT with sand, (75% silt, 25% sand), fine sand, gray, medium stiff, moist.	ML		53	1/3/4				
		7.8-8.5': No recovery.								
		8.5-9.0': Sandy SILT (70% silt, 30% sand), fine sand, gray, medium stiff, moist, slight petroleum-like odor, no staining.	ML				0.5	AS3-8.5-051215	X	

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Silt	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-3

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/12/15 0950	**Sampler Type:**	SPT
Date/Time Completed:	5/12/15 1225	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	26.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		9.0-10.0': No recovery.			33	4/3/3				
10		10.0-10.8': SILT with sand (85% silt, 15% sand), fine sand, gray, soft, moist, no odor, no staining.	ML				0.0			1" Schedule 40 PVC
		10.8-11.5': No recovery.			53	2/3/1				
		11.5-12.5': SILT with sand (85% silt, 15% sand), fine sand, gray, soft, moist, no odor, no staining.	ML				0.0			
		12.5-13.0': No recovery.			66	2/2/2				
		13.0-14.0': SILT with sand (85% silt, 15% sand), fine sand, gray, very stiff, moist, no odor, no staining, wood debris at 13.0' and 14.0'.	ML				0.0			
		14.0-14.5': No recovery.			66	3/3/20				
		14.5-14.8': SILT with sand (85% silt, 15% sand), fine sand, gray, stiff, moist, no odor, no staining, wood debris.	ML							
15		14.8-16.0': No recovery.			20	3/5/7				Bentonite Seal
		16.0-16.5: SILT, stiff, and wood debris.	ML							
		16.5-17.5': No recovery.			33	10/5/7				
		17.5-17.8': Silty SAND (60% sand, 40% silt), medium sand, gray, medium stiff, moist, no odor, no staining.	SM				0.0	AS3-17.5-051215	X	

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Silt	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

FARALLON CONSULTING

Log of Boring: AS-3

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA

Farallon PN: 397-020

Logged By: Anna Sigel

Date/Time Started:	5/12/15 0950	**Sampler Type:**	SPT
Date/Time Completed:	5/12/15 1225	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	26.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		17.8-18.0': SILT with sand (80% silt, 20% sand), fine sand, medium stiff, moist, no odor, no staining, wood debris.	ML	33	2/3/2				
		18.0-19.0': No recovery.							
		19.0-20.1': SILT with sand (80% silt, 20% sand), fine sand, moist, no odor, no staining, wood debris.	ML	73		0.0			
20		20.1-20.5': No recovery.							
		20.5-22.0': SILT with sand (80% silt, 20% sand), fine sand, medium stiff, moist, no odor, no staining, wood debris.	ML	100	2/3/3	0.0			
		22.0-23.3': SILT with sand (80% silt, 20% sand), fine sand, medium stiff, moist, no odor, no staining, wood debris.	ML	87	1/2/3	0.0			10/20 Sand Pack
		23.3-23.5': No recovery.							
		23.5-25.0': SILT with sand (80% silt, 20% sand), fine sand, medium stiff, moist, no odor, no staining, wood debris.	ML	100	2/3/4	0.3			0.010" Slot Screen
25		25.0-25.5': SILT with sand (85% silt, 15% sand), medium sand, gray, stiff, moist, no odor, no staining.	ML			0.8	AS3-25.0-051215		
		25.5-26.5': No recovery.		33	3/5/7				Well Sump

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Silt	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-4

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/11/15 1230	**Sampler Type:**	SPT
Date/Time Completed:	5/11/15 1530	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	21
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	26
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-5.0': Air Knifed. Fill material.			100					Native soil backfill
5		5.0-6.1': Silty SAND (80% sand, 20% silt), fine sand, gray, loose, moist, no odor, no staining.	SM		66	2/2/3	0.1	AS4-5.0-051115	X	
		6.1-6.5': No recovery.								
		6.5-6.9': Silty SAND (80% sand, 20% silt), fine sand, gray, loose, moist, no odor, no staining.	SM				0.2			
		6.9-11.0': No recovery. Drill cuttings from 9.5-11.0' indicate a Silty SAND with wood debris.			27	2/4/5				
					0					

Well Construction Information

Monument Type: NA
Casing Diameter (inches): 1
Screen Slot Size (inches): 0.010
Screened Interval (ft bgs): 23-25
Filter Pack: #10/20 Sand
Surface Seal: Sand
Annular Seal: Bentonite 3/8"
Boring Abandonment: NA
Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Surveyed Location: X: NA Y: NA

Log of Boring: AS-4

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/11/15 1230	**Sampler Type:**	SPT
Date/Time Completed:	5/11/15 1530	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	21
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	26
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
10					0					1" Schedule 40 PVC
		11.0-13.5': Well-graded SAND with silt (90% sand, 10% silt) fine to coarse sand, trace of fine gravel, gray, loose, moist, no odor, no staining.	SW-SM		100	0/3/3	0.6			
					66	2/3/3	0.5			
		13.5-14.0': No recovery.								
		14.0-15.5': Well-graded SAND with silt (90% sand, 10% silt), fine to coarse sand, trace of fine gravel, gray, very loose, moist, no odor, no staining.	SW-SM		100	2/1/2	0.3			Bentonite Seal
15		15.5-18.0': Poorly graded SAND with silt (90% sand, 10% silt), fine sand, gray, loose, moist, no odor, no staining.	SW-SM		100	2/2/3	0.2			

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Sand	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: AS-4

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/11/15 1230	**Sampler Type:**	SPT
Date/Time Completed:	5/11/15 1530	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	21
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	26
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	26
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		18.0-18.5': No recovery.			66					
		18.5-20.0': Poorly graded SAND with silt (90% sand, 10% silt), fine sand, gray, loose, moist, no odor, no staining.	SW-SM		100	2/3/4	0.4			
20		20.0-21.0': Silty SAND (85% sand, 15% silt), fine sand, gray, loose, moist, no odor, no staining.	SM		66	0/2/4				
		21.0-21.5': No recovery.					1.7	AS4-21.0-051115	X	Water Level
		21.5-21.8': Silty SAND (70% sand, 30% silt), medium sand, gray, loose, moist, no odor, no staining, wood debris.	SM							10/20 Sand Pack
		21.8-22.1': Silty SAND (65% sand, 35% silt), medium sand, gray, loose, moist, no odor, no staining.	SM ML		66	2/2/3				
		22.1-22.5': SILT (85% silt, 15% sand), fine sand, gray, loose, moist, no odor, no staining.								
		22.5-23.0': No recovery.	SM							
		23.0-23.5': Silty SAND (80% sand, 20% silt), medium sand, brown, loose, moist, no odor, no staining.			33	2/3/5				0.010" Slot Screen
		23.5-24.5': No recovery.								
25		24.5-25.5': Poorly graded SAND with silt (90% sand, 10% silt), fine to medium sand, gray, medium dense, moist, no odor, no staining.	SP-SM		66	3/5/6	0.2	AS4-25.0-051115		
		25.5-26.0': No recovery.								Well Sump

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	1	**Surface Seal:**	Sand	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	23-25	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: SVE-1

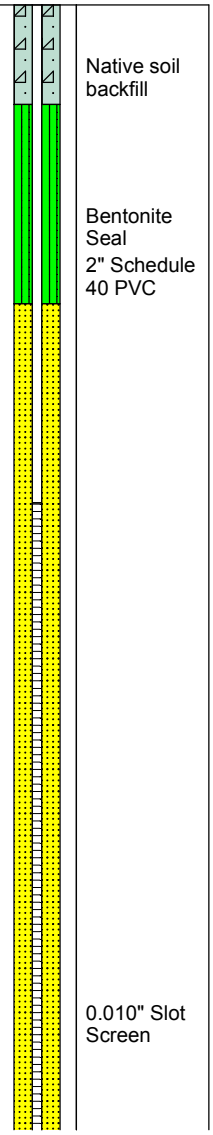
Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA

Farallon PN: 397-020

Logged By: Anna Sigel

Date/Time Started:	5/13/15 0825	**Sampler Type:**	SPT
Date/Time Completed:	5/13/15 1040	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	22
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	17
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Lithologic Description	USCS	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed
0	0.0-4.0': Air Knifed. Fill material.		100				
5	4.5-5.3': Poorly graded GRAVEL with silt and sand (50% gravel, 40% sand, 10% silt), fine to medium sand, fine to medium gravel, brown, loose, moist, slight hydrocarbon-like odor at 5.3', no staining.	GP-GM	53	2/3/5	1,203		
	5.3-6.0': No recovery.						
	6.0-6.3': Poorly graded SAND with gravel (65% sand, 30% gravel, 5% silt), medium sand, fine to coarse gravel, gray, loose, moist, no odor, no staining.	SP			1,779	SVE1-6.3-051315	
	6.3-6.8': Sandy SILT (65% silt, 45% sand), gray, medium stiff, moist, strong hydrocarbon-like odor, no staining.	ML	53	5/3/4			
	6.8-7.5': No recovery	ML			2,125	SVE1-7.5-051315	X
	7.5-8.7': Sandy SILT (70% silt, 30% sand), medium sand, gray, moist, hydrocarbon-like odor, no staining.		80				
	8.7-9.0': No recovery	ML					
	9.0-9.2': Sandy SILT (70% silt, 30% sand), medium sand, gray, medium stiff, moist, strong hydrocarbon-like odor, no staining.	ML	73	2/4/4			
10	9.2-10.1': SILT with sand (85% silt, 15% sand), fine sand, gray, medium stiff, moist, very strong hydrocarbon-like odor, no staining.				1,549	SVE1-10.0-051315	
	10.1-10.5': No recovery.	ML			1,004		



Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand
Casing Diameter (inches):	2	**Surface Seal:**	Gravel
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"
Screened Interval (ft bgs):	5-17	**Boring Abandonment:**	NA

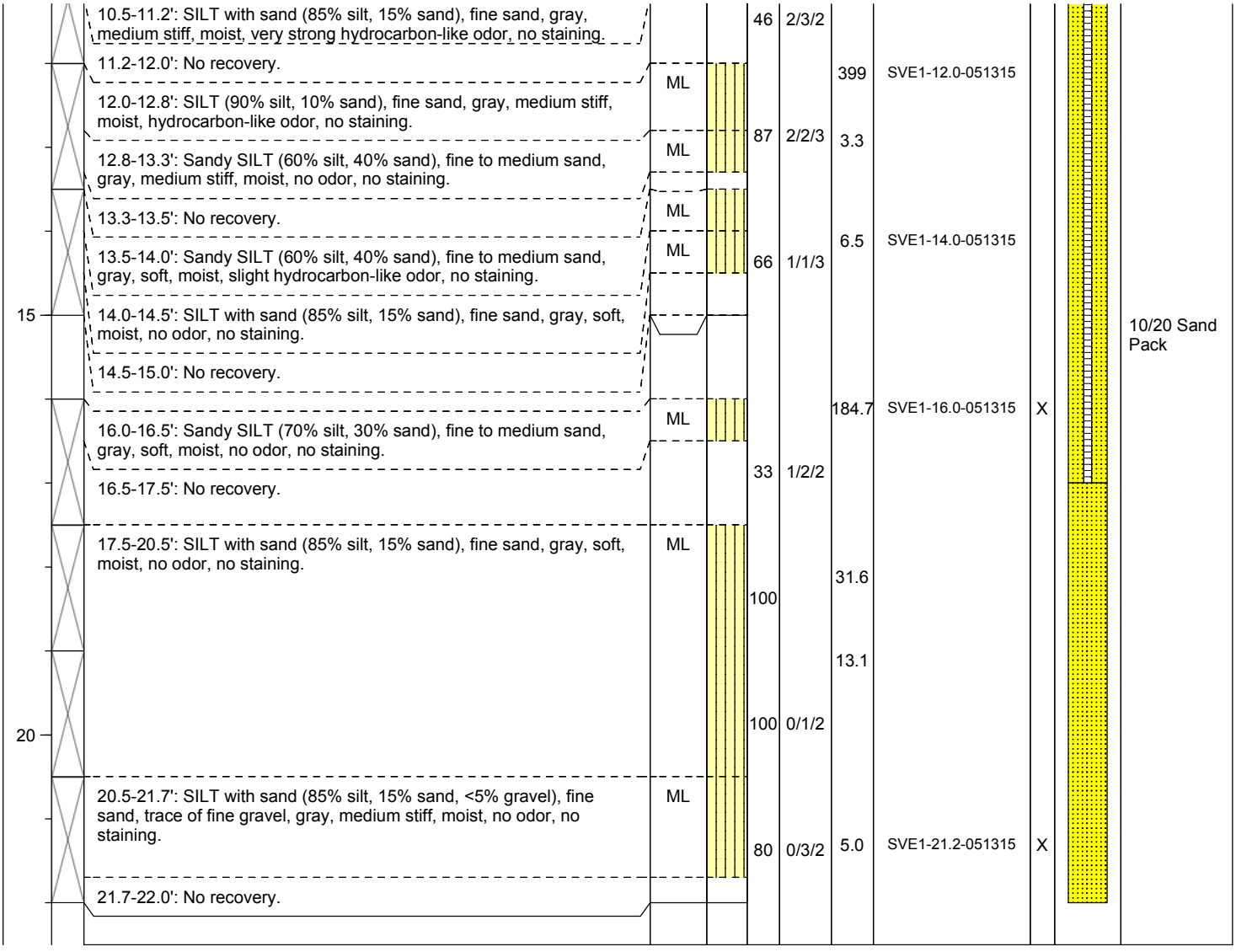
Ground Surface Elevation (ft):
Top of Casing Elevation (ft):
Surveyed Location: **X:** NA **Y:** NA

Log of Boring: SVE-1

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/13/15 0825	**Sampler Type:**	SPT
Date/Time Completed:	5/13/15 1040	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	22
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	17
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Lithologic Description	USCS	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed
	10.5-11.2': SILT with sand (85% silt, 15% sand), fine sand, gray, medium stiff, moist, very strong hydrocarbon-like odor, no staining.		46	2/3/2			
	11.2-12.0': No recovery.	ML			399	SVE1-12.0-051315	
	12.0-12.8': SILT (90% silt, 10% sand), fine sand, gray, medium stiff, moist, hydrocarbon-like odor, no staining.	ML	87	2/2/3	3.3		
	12.8-13.3': Sandy SILT (60% silt, 40% sand), fine to medium sand, gray, medium stiff, moist, no odor, no staining.	ML					
	13.3-13.5': No recovery.	ML			6.5	SVE1-14.0-051315	
	13.5-14.0': Sandy SILT (60% silt, 40% sand), fine to medium sand, gray, soft, moist, slight hydrocarbon-like odor, no staining.	ML	66	1/1/3			
15	14.0-14.5': SILT with sand (85% silt, 15% sand), fine sand, gray, soft, moist, no odor, no staining.						
	14.5-15.0': No recovery.						
	16.0-16.5': Sandy SILT (70% silt, 30% sand), fine to medium sand, gray, soft, moist, no odor, no staining.	ML			184.7	SVE1-16.0-051315	X
	16.5-17.5': No recovery.		33	1/2/2			
	17.5-20.5': SILT with sand (85% silt, 15% sand), fine sand, gray, soft, moist, no odor, no staining.	ML	100		31.6		
					13.1		
20			100	0/1/2			
	20.5-21.7': SILT with sand (85% silt, 15% sand, <5% gravel), fine sand, trace of fine gravel, gray, medium stiff, moist, no odor, no staining.	ML	80	0/3/2	5.0	SVE1-21.2-051315	X
	21.7-22.0': No recovery.						



Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	2	**Surface Seal:**	Gravel	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	5-17	**Boring Abandonment:**	NA		**Y:** NA

FARALLON CONSULTING

Log of Boring: SVE-2

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA

Farallon PN: 397-020

Logged By: Anna Sigel

Date/Time Started:	5/12/15 0730	**Sampler Type:**	SPT
Date/Time Completed:	5/12/15 0910	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	17.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	17
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
0		0.0-4.0': Air Knifed. Fill material.			100					Native soil backfill; Bentonite Seal; 2" Schedule 40 PVC
		4.0-4.7': SILT with sand (85% silt, 15% sand), fine sand, brown, medium stiff, moist, no odor, no staining.	ML				0.1			
5		4.7-5.5': No recovery.			47	2/3/3				
		5.5-6.5': Sandy SILT (70% silt, 15% silt, 5% gravel), fine sand, coarse gravel, brown, medium stiff, moist, no odor, no staining.	ML				0.1			
		6.5-7.0': No recovery.			66	1/3/3				
		7.0-8.2': Sandy SILT (70% silt, 30% sand, <5% gravel), fine sand, trace of coarse gravel, gray, medium stiff, moist, no odor, no staining.	ML				0.1	SVE2-7.0-051215	X	
		8.2-8.5': No recovery.			80	2/2/3				
		8.5-9.3': SILT with sand (80% silt, 20% sand), fine sand, gray, soft, moist, no odor, no staining.	ML				0.1			

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	2	**Surface Seal:**	Silt	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	5-17	**Boring Abandonment:**	NA		**Y:** NA

Log of Boring: SVE-2

Client: Vulcan, Inc.
Project: Block 43
Location: Seattle, WA
Farallon PN: 397-020
Logged By: Anna Sigel

Date/Time Started:	5/12/15 0730	**Sampler Type:**	SPT
Date/Time Completed:	5/12/15 0910	**Drive Hammer (lbs.):**	140
Equipment:	LAR L-10T	**Depth of Water ATD (ft bgs):**	NA
Drilling Company:	Holt Drilling	**Total Boring Depth (ft bgs):**	17.5
Drilling Foreman:	Abraham Causing	**Total Well Depth (ft bgs):**	17
Drilling Method:	Hollow Stem Auger		

Depth (feet bgs.)	Sample Interval	Lithologic Description	USCS	USGS Graphic	% Recovery	Blow Counts 8/8/8	PID (ppm)	Sample ID	Sample Analyzed	Boring/Well Construction Details
		9.3-10.0': No recovery.			53	2/2/1				
10		10.0-10.9': SILT with sand (80% silt, 20% sand), fine sand, gray, soft, moist, no odor, no staining.	ML				0.1			0.010" Slot Screen
		10.9-11.5': No recovery.			73	0/2/2				
		11.5-12.3': SILT with sand (80% silt, 20% sand), fine sand, gray, very soft, moist, no odor, no staining.	ML				0.1			
		12.3-13.0': No recovery.			53	1/1/1				
		13.0-14.3': SILT with sand (80% silt, 20% sand), fine sand, gray, medium stiff, moist, no odor, no staining.	ML				0.1	SVE2-13.0-051215	X	
		14.3-14.5': No recovery.			87	2/4/3				
15		14.5-15.7': SILT with sand (80% silt, 20% sand), fine sand, gray, soft, moist, no odor, no staining.	ML							10/20 Sand Pack
		15.7-16.0': No recovery.			80	0/2/2				
		16.0-17.5': SILT with sand (80% silt, 20% sand), fine sand, gray, medium stiff, moist, no odor, no staining.	ML				0.2	SVE2-16.0-051215	X	
					100	0/3/2				

Well Construction Information

Monument Type:	NA	**Filter Pack:**	#10/20 Sand	**Ground Surface Elevation (ft):**	
Casing Diameter (inches):	2	**Surface Seal:**	Silt	**Top of Casing Elevation (ft):**	
Screen Slot Size (inches):	0.010	**Annular Seal:**	Bentonite 3/8"	**Surveyed Location:**	**X:** NA
Screened Interval (ft bgs):	5-17	**Boring Abandonment:**	NA		**Y:** NA

APPENDIX B
SELECT OFF-PROPERTY WELL CONSTRUCTION DIAGRAMS AND BORING LOGS

GROUNDWATER CLEANUP REPORT
South Lake Union Block 43 Site
601 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-020

SoundEarth Strategies

DRAFT

Project: 700 Dexter
Project Number: 0797-001
Logged by: DMM
Date Started: 1/9/14
Surface Conditions: Concrete
Well Location N/S: 22 ft south of fire hydrant
Well Location E/W: 1 ft east of fire hydrant
Reviewed by: --
Date Completed: 1/9/14

BORING LOG | B128 MW128

Site Address: 700 Dexter
Seattle, Washington

Water Depth At Time of Drilling 15 feet bgs
Water Depth After Completion -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
0								**Boring air-knifed to 10 feet bgs prior to drilling.**	
10		2 3 4	100	52.8	B128-10	**SM**		**Damp, loose, silty fine SAND with trace gravel, gray, faint hydrocarbon odor (40, 55, 5).**	
15									

Drilling Co./Driller: Cascade/Dave
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 300 lbs
Total Boring Depth: 70.5 feet bgs
Total Well Depth: 70 feet bgs
State Well ID No.:

Well/Auger Diameter: 2/8.25 inches
Well Screened Interval: 60 to 70 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: 2/12 Silica Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

DRAFT

Project: 700 Dexter
Project Number: 0797-001
Logged by: DMM
Date Started: 1/9/14
Surface Conditions: Concrete
Well Location N/S: 22 ft south of fire hydrant
Well Location E/W: 1 ft east of fire hydrant
Reviewed by: --
Date Completed: 1/9/14

BORING LOG B128 MW128

Site Address: 700 Dexter
Seattle, Washington

Water Depth At Time of Drilling 15 feet bgs
Water Depth After Completion -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
15		5 5 3	50	2.6	B128-15	SM		**Wet, loose, wood debris with some soil - silty SAND with gravel, brown, no hydrocarbon odor (20, 70, 10).**	
20		4 7 8	33	1.3	B128-20	SM-GM		**Wet, medium dense, silty gravelly SAND, dark gray, no hydrocarbon odor (20, 40, 40).**	
25		5 9 11	100	0.6	B128-25	SM-ML		**Damp, medium dense, fine sandy SILT with trace gravel and wood debris, gray, no hydrocarbon odor (50, 45, 5).**	
30									

Drilling Co./Driller:	Cascade/Dave		**Well/Auger Diameter:**	2/8.25	inches	**Notes/Comments:**
Drilling Equipment:	HSA		**Well Screened Interval:**	60 to 70	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	300	lbs	**Filter Pack Used:**	2/12 Silica Sand		
Total Boring Depth:	70.5	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	70	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:			**Monument Type:**	Flush mount		

SoundEarth Strategies

DRAFT

Project:	700 Dexter
Project Number:	0797-001
Logged by:	DMM
Date Started:	1/9/14
Surface Conditions:	Concrete
Well Location N/S:	22 ft south of fire hydrant
Well Location E/W:	1 ft east of fire hydrant
Reviewed by:	--
Date Completed:	1/9/14

BORING LOG | B128 MW128

Site Address: 700 Dexter
Seattle, Washington

Water Depth At Time of Drilling 15 feet bgs

Water Depth After Completion -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
30		6 10 15	100	0.0	B128-30	SM/SP		**Wet, medium dense, fine SAND with silt, dark gray, no hydrocarbon odor (10, 90, 0).**	
35		10 10 14	100	0.0	B128-35	ML		**Damp, medium dense, sandy SILT with trace gravel and wood debris, gray, no hydrocarbon odor (70, 25, 5).**	
40		12 14 15	100	0.0	B128-40	ML		**Damp, dense, SILT with fine sand, gray, no hydrocarbon odor (80, 20, 0).**	
45									

Drilling Co./Driller:	Cascade/Dave		**Well/Auger Diameter:**	2/8.25	inches	**Notes/Comments:**
Drilling Equipment:	HSA		**Well Screened Interval:**	60 to 70	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	300	lbs	**Filter Pack Used:**	2/12 Silica Sand		
Total Boring Depth:	70.5	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	70	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:			**Monument Type:**	Flush mount		

SoundEarth Strategies

DRAFT

Project: 700 Dexter
Project Number: 0797-001
Logged by: DMM
Date Started: 1/9/14
Surface Conditions: Concrete
Well Location N/S: 22 ft south of fire hydrant
Well Location E/W: 1 ft east of fire hydrant
Reviewed by: --
Date Completed: 1/9/14

BORING LOG B128 MW128

Site Address: 700 Dexter
Seattle, Washington

Water Depth At Time of Drilling 15 feet bgs
Water Depth After Completion -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
45		11 18 19	50	0.6	B128-45	ML		**Damp, dense, SILT/CLAY with fine sand, with small sand stringer, gray, no hydrocarbon odor (85, 15, 0).**	
50		12 13 15	100	0.6	B128-50	SM-ML		**Damp to moist, medium dense, silty fine SAND to sandy SILT, gray, no hydrocarbon odor (50, 50, 0).**	
55		12 12 16	75	0.0	B128-55	ML		**Damp, dense, fine sandy SILT, gray, no hydrocarbon odor (60, 40, 0).**	
60									

Drilling Co./Driller: Cascade/Dave
Drilling Equipment: HSA
Sampler Type: Split-spoon
Hammer Type/Weight: 300 lbs
Total Boring Depth: 70.5 feet bgs
Total Well Depth: 70 feet bgs
State Well ID No.:

Well/Auger Diameter: 2/8.25 inches
Well Screened Interval: 60 to 70 feet bgs
Screen Slot Size: 0.010 inches
Filter Pack Used: 2/12 Silica Sand
Surface Seal: Concrete
Annular Seal: Bentonite
Monument Type: Flush mount

Notes/Comments:

SoundEarth Strategies

DRAFT

Project: 700 Dexter
Project Number: 0797-001
Logged by: DMM
Date Started: 1/9/14
Surface Conditions: Concrete
Well Location N/S: 22 ft south of fire hydrant
Well Location E/W: 1 ft east of fire hydrant
Reviewed by: --
Date Completed: 1/9/14

BORING LOG | B128 MW128

Site Address: 700 Dexter
Seattle, Washington

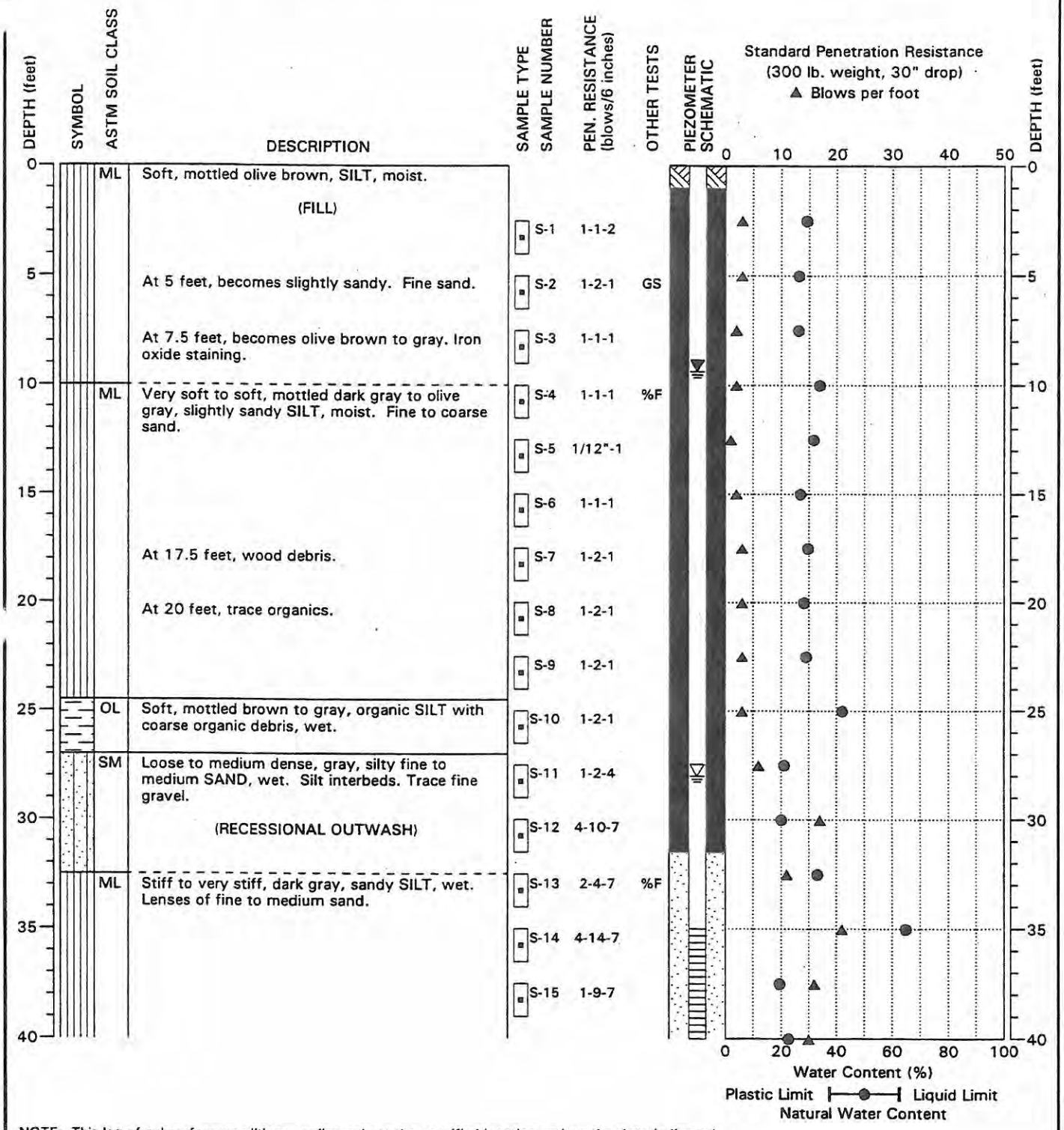
Water Depth At Time of Drilling 15 feet bgs
Water Depth After Completion -- feet bgs

Depth (feet bgs)	Interval	Blow Count	% Recovery	PID (ppmv)	Sample ID	USCS Class	Graphic	Lithologic Description	Well Construction Detail
60		16 16 19	100	0.6	B128-60	SM/SP		**Moist, dense, fine SAND with silt, gray, no hydrocarbon odor (10, 90, 0).**	
65		11 12 14	100	0.0	B128-65	SM/SP		**Moist, dense, fine SAND with silt, gray, no hydrocarbon odor (10, 90, 0).**	
70		50/6	250	0.0	B128-70	SM/SP		**Wet, very dense, fine SAND with silt, gray, no hydrocarbon odor (10, 90, 0).**	
								End of boring at 70.5. Install MW128.	
75									

Drilling Co./Driller:	Cascade/Dave		**Well/Auger Diameter:**	2/8.25	inches	**Notes/Comments:**
Drilling Equipment:	HSA		**Well Screened Interval:**	60 to 70	feet bgs	
Sampler Type:	Split-spoon		**Screen Slot Size:**	0.010	inches	
Hammer Type/Weight:	300	lbs	**Filter Pack Used:**	2/12 Silica Sand		
Total Boring Depth:	70.5	feet bgs	**Surface Seal:**	Concrete		
Total Well Depth:	70	feet bgs	**Annular Seal:**	Bentonite		
State Well ID No.:			**Monument Type:**	Flush mount		

DRILLING COMPANY: Cherokee
DRILLING METHOD: B-59 Mobile, 4.5" ID HSA
SURFACE ELEVATION: 124.5 ± Feet

LOCATION:
DATE COMPLETED: 3/19/98
LOGGED BY: GWE



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Denny Way / Lake Union CSO
South Lake Union Pipelines

BORING: BB-13

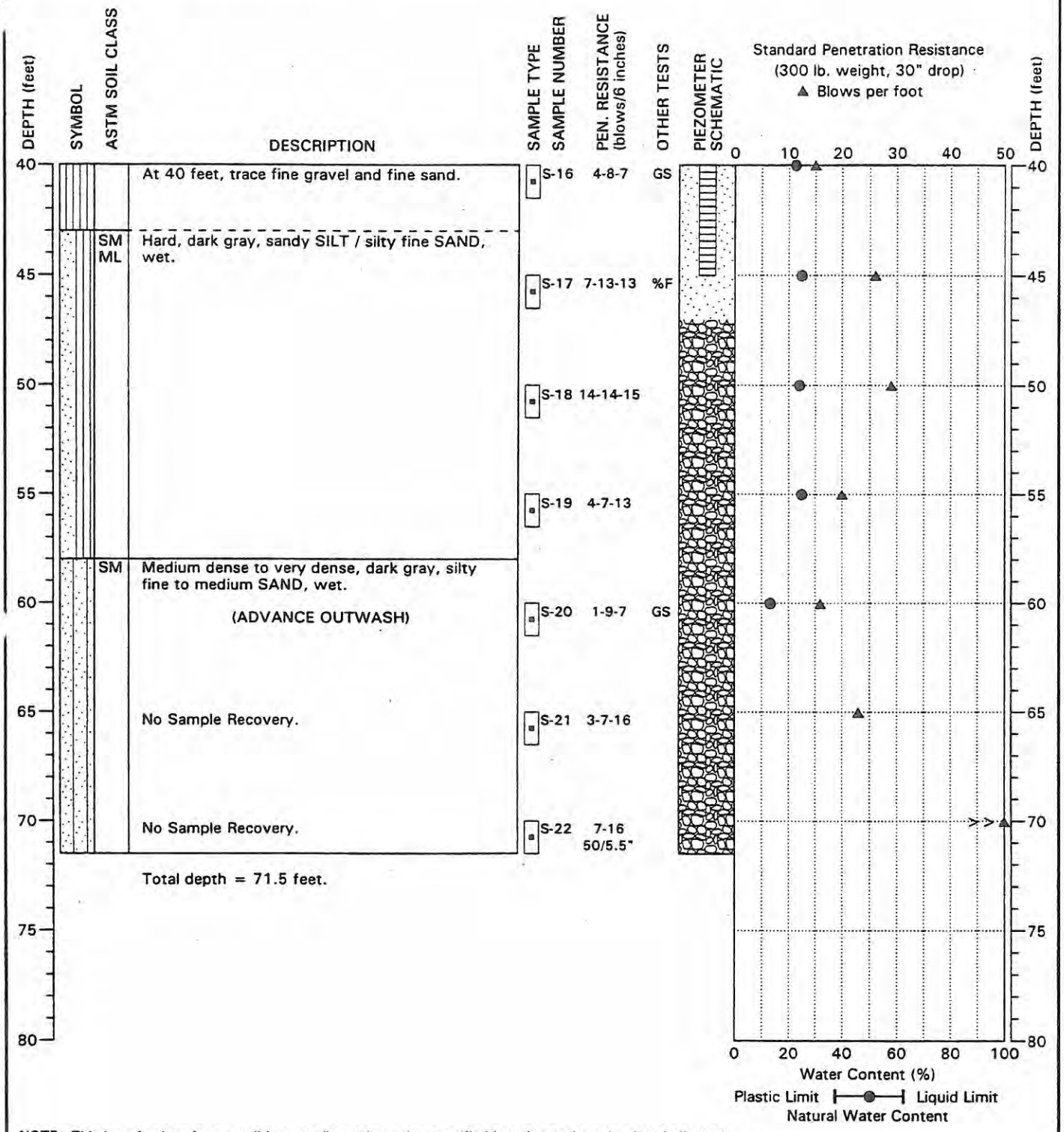
PROJECT NO.: 97061

FIGURE: A-14

PZO300 DWB 11/19/98

DRILLING COMPANY: Cherokee
DRILLING METHOD: B-59 Mobile, 4.5" ID HSA
SURFACE ELEVATION: 124.5 ± Feet

LOCATION:
DATE COMPLETED: 3/19/98
LOGGED BY: GWE



NOTE: This log of subsurface conditions applies only at the specified location and on the date indicated and therefore may not necessarily be indicative of other times and/or locations.

HWA GEOSCIENCES INC.

Denny Way / Lake Union CSO
South Lake Union Pipelines

BORING: BB-13

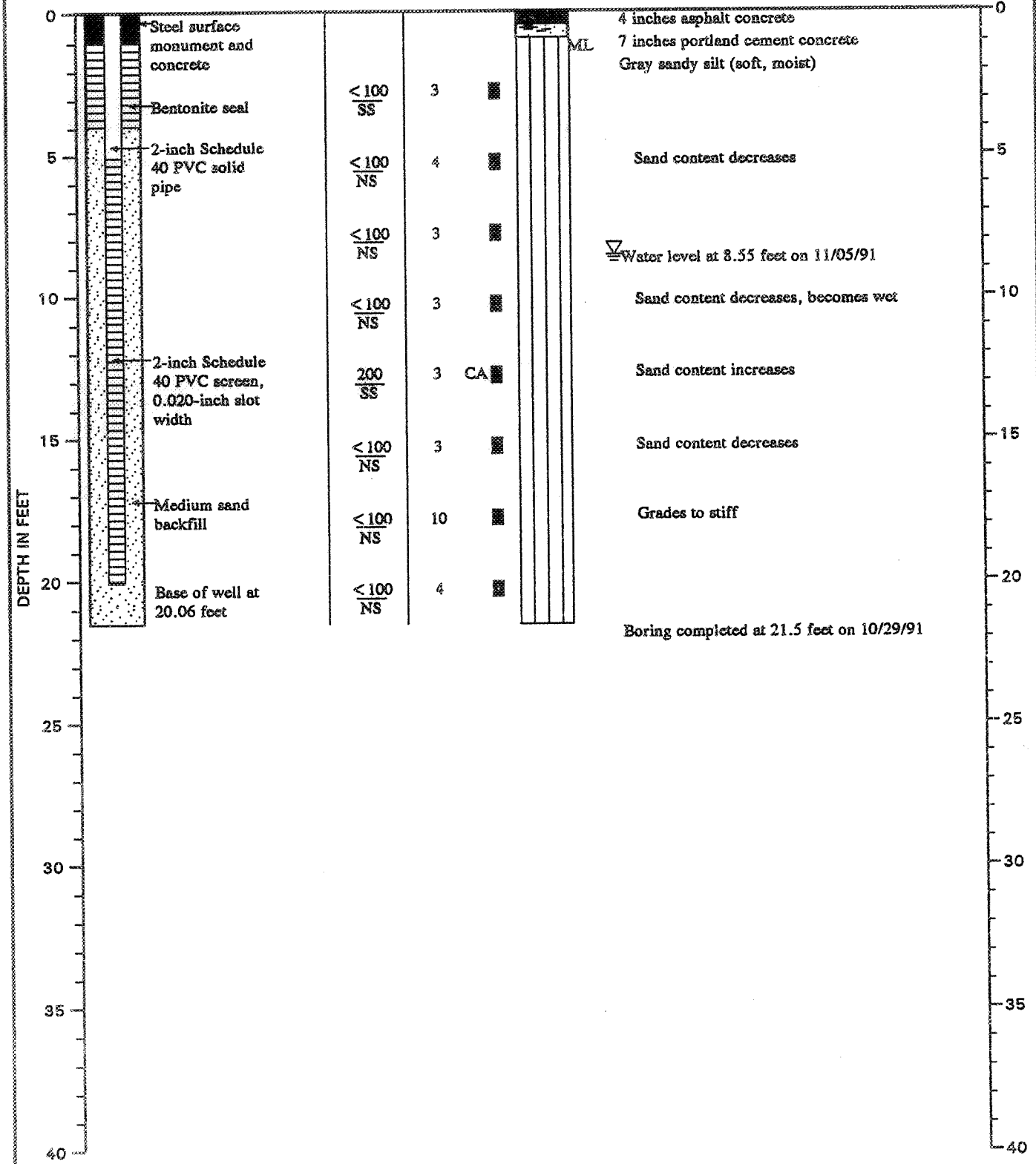
PAGE: 2 of 2

PROJECT NO.: 97061

FIGURE: A-14

PZO300 DWB 11/19/98

MONITORING WELL NO. MW-44



Note: See Figure A-2 for explanation of symbols

Geo Engineers

LOG OF MONITORING WELL

FIGURE A-15

:WAP:LJB:DAC:CBK:CMS 6/24/92

0181-013-R69

APPENDIX C
CONSTRUCTION DEWATERING SYSTEM PUMPING RECORDS AND ANALYTICAL DATA SUMMARY TABLE

GROUNDWATER CLEANUP REPORT
South Lake Union Block 43 Site
601 Westlake Avenue North
Seattle, Washington

Farallon PN: 397-020

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
11/8/13	86,981	86,981		
11/9/13	140,211	227,192		
11/10/13	134,033	274,245		
11/11/13	134,684	408,928		
11/12/13	128,529	537,457		
11/13/13	115,900	653,357		
11/14/13	160,096	813,453		
11/15/13	177,927	991,380		
11/16/13	140,843	1,132,223		
11/17/13	118,575	1,250,799		
11/18/13	157,120	1,407,919		
11/19/13	185,734	1,593,653		
11/20/13	166,553	1,760,206		
11/21/13	94,924	1,855,130		
11/22/13	164,865	2,019,994		
11/23/13	171,332	2,191,327		
11/24/13	-	2,191,327		
11/25/13	94,725	2,286,051		
11/26/13	45,667	2,331,718		
11/27/13	104,934	2,436,652		
11/28/13	157,823	2,594,475		
11/29/13	166,468	2,760,943		
11/30/13	105,341	2,866,284		
12/1/13	-	2,866,284		
12/2/13	148,272	3,014,557		
12/3/13	169,409	3,183,965		
12/4/13	134,101	3,318,066		
12/5/13	136,862	3,454,928		
12/6/13	153,484	3,608,412		
12/7/13	21,103	3,629,515		
12/8/13	-	3,629,515		
12/9/13	112,039	3,741,554		
12/10/13	177,951	3,919,505		
12/11/13	189,333	4,108,838		
12/12/13	183,455	4,292,294		
12/13/13	175,767	4,468,060		
12/14/13	187,981	4,656,041		
12/15/13	160,560	4,816,601		
12/16/13	158,097	4,974,698		
12/17/13	91,736	5,066,433		
12/18/13	113,499	5,179,932		
12/19/13	139,965	5,319,898		
12/20/13	154,211	5,474,109		
12/21/13	157,832	5,631,940		
12/22/13	152,818	5,784,758		
12/23/13	160,917	5,945,675		
12/24/13	151,654	6,097,329		
12/25/13	154,122	6,251,451		
MTCA Method A Cleanup Levels for Groundwater[2]			**5**	

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
12/26/13	157,081	6,408,532		
12/27/13	152,750	6,561,282		
12/28/13	136,077	6,697,358		
12/29/13	132,597	6,829,955		
12/30/13	132,927	6,962,882		
12/31/13	127,757	7,090,639		
1/1/14	132,989	7,223,628		
1/2/14	128,652	7,352,279		
1/3/14	120,014	7,472,293		
1/4/14	145,874	7,618,167		
1/5/14	140,714	7,758,881		
1/6/14	144,638	7,903,518		
1/7/14	163,021	8,066,539		
1/8/14	187,690	8,254,228		
1/9/14	210,742	8,464,970		
1/10/14	203,921	8,668,891		
1/11/14	214,718	8,883,608		
1/12/14	200,188	9,083,796		
1/13/14	233,213	9,317,009		
1/14/14	260,137	9,577,146		
1/15/14	242,782	9,819,927		
1/16/14	237,666	10,057,593		
1/17/14	227,384	10,284,976		
1/18/2014	222,095	10,507,071		
1/19/2014	213,182	10,720,253		
1/20/14	189,733	10,909,986		
1/21/14	186,328	11,096,314		
1/22/14	201,565	11,297,879		
1/23/14	195,722	11,493,601		
1/24/14	188,099	11,681,700		
1/25/14	187,243	11,868,943		
1/26/14	194,660	12,063,603		
1/27/14	175,554	12,239,157		
1/28/14	170,113	12,409,270		
1/29/14	224,997	12,634,267		
1/30/14	173,808	12,808,075		
1/31/14	165,369	12,973,444		
2/1/14	155,141	13,128,585		
2/2/14	162,555	13,291,140		
2/3/14	182,143	13,473,283		
2/4/14	115,849	13,589,132	-	
2/5/14	190,364	13,779,496	ND	
2/6/14	213,986	13,993,482	-	
2/7/14	247,904	14,241,387		
2/8/14	230,858	14,472,244		
2/9/14	214,442	14,686,686		
2/10/14	136,545	14,823,231		
2/11/14	86,013	14,909,244	**7.40**	**8.59**
MTCA Method A Cleanup Levels for Groundwater[2]			**5**	

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
2/12/14	177,000	15,086,244	-	
2/13/14	356,221	15,442,464	**6.77**	
2/14/14	304,436	15,746,900	**7.42**	
2/15/14	247,188	15,994,088		
2/16/14	253,537	16,247,624		
2/17/14	336,442	16,584,066	ND	-
2/18/14	135,543	16,719,610	**8.20**	
2/19/14	277,907	16,997,517	**10.40**	
2/20/14	276,769	17,274,286	**12.30**	
2/21/14	264,392	17,538,678	**10.40**	
2/22/14	273,071	17,811,749		
2/23/14	253,712	18,065,461		
2/24/14	307,668	18,373,129	**7.77**	
2/25/14	276,061	18,649,190	**31.10**	
2/26/14	308,748	18,957,938	**22.70**	
2/27/14	326,701	19,284,638	**22.40**	
2/28/14	320,351	19,604,989	**28.30**	**29.40**
3/1/14	299,616	19,904,605		
3/2/14	291,790	20,196,395		
3/3/14	70,335	20,266,730		
3/4/14	8,242	20,274,972	**14.00**	
3/5/14	102,137	20,377,109	**25.10**	**25.10**
3/6/14	470,031	20,847,140	**10.70**	**7.98**
3/7/14	515,825	21,362,965	**13.90**	**11.40**
3/8/14	500,929	21,863,894		
3/9/14	473,334	22,337,228		
3/10/14	486,005	22,823,233	**16.00**	**13.60**
3/11/14	503,337	23,326,569	**16.50**	
3/12/14	480,457	23,807,026	**14.00**	**15.10**
3/13/14	523,960	24,330,986	**18.80**	**18.30**
3/14/14	506,922	24,837,908	**15.00**	**14.60**
3/15/14	497,823	25,335,731		
3/16/14	475,841	25,811,572		
3/17/14	512,002	26,323,574	**15.40**	**17.00**
3/18/14	502,887	26,826,460	**16.40**	**17.00**
3/19/14	486,081	27,312,541	**16.30**	**17.30**
3/20/14	470,644	27,783,185	**19.40**	**18.10**
3/21/14	458,754	28,241,939	**16.70**	**17.40**
3/22/14	459,232	28,701,170		
3/23/14	454,357	29,155,527		
3/24/14	434,931	29,590,457	**16.50**	**17.00**
3/25/14	478,858	30,069,315	**18.30**	**16.90**
3/26/14	460,021	30,529,336	**17.50**	**17.80**
3/27/14	483,518	31,012,853	**17.30**	**17.70**
3/28/14	475,992	31,488,845	**18.30**	**19.90**
3/29/14	468,215	31,957,060		
3/30/14	465,157	32,422,217		
3/31/14	458,304	32,880,521	**15.40**	**17.60**
MTCA Method A Cleanup Levels for Groundwater[2]			**5**	

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
4/1/14	456,532	33,337,052	**17.90**	**18.40**
4/2/14	457,367	33,794,419	**18.10**	**16.90**
4/3/14	466,593	34,261,012	**21.10**	**20.90**
4/4/14	466,245	34,727,256	**17.40**	**18.20**
4/5/14	464,210	35,191,466		
4/6/14	458,808	35,650,274		
4/7/14	199,362	35,849,635	**17.70**	**17.10**
4/8/14	399,107	36,248,742	**16.80**	**16.90**
4/9/14	439,643	36,688,385	**16.80**	**17.10**
4/10/14	477,271	37,165,655	**17.80**	**18.20**
4/11/14	177,040	37,342,695	**15.90**	**17.10**
4/12/14	483,288	37,825,983		
4/13/14	480,119	38,306,102		
4/14/14	463,301	38,769,403	**14.90**	**17.10**
4/15/14	465,010	39,234,413	**18.00**	**18.10**
4/16/14	469,362	39,703,775	**15.40**	**15.90**
4/17/14	478,016	40,181,791	**14.20**	**16.90**
4/18/14	483,286	40,665,077	**15.60**	**15.80**
4/19/14	481,215	41,146,292		
4/20/14	480,490	41,626,782		
4/21/14	476,032	42,102,814	**16.30**	**16.00**
4/22/14	480,427	42,583,241	**15.80**	**16.00**
4/23/14	470,200	43,053,441	**16.80**	**16.50**
4/24/14	464,300	43,517,741	**16.30**	**15.50**
4/25/14	474,174	43,991,915	**17.30**	**15.80**
4/26/14	490,435	44,482,350		
4/27/14	491,279	44,973,629		
4/28/14	488,537	45,462,166	**17.80**	**17.60**
4/29/14	479,547	45,941,713	**15.20**	**15.70**
4/30/14	481,111	46,422,824	**17.40**	**18.00**
5/1/14	490,497	46,913,321	**15.70**	**16.00**
5/2/14	181,841	47,095,162	**17.30**	ND
5/3/14	389,187	47,484,349		
5/4/14	401,415	47,885,764		
5/5/14	436,633	48,322,397	**15.60**	**14.90**
5/6/14	398,616	48,721,013	**13.60**	**12.90**
5/7/14	499,540	49,220,553	**16.50**	**16.00**
5/8/14	496,974	49,717,527	**14.00**	**16.10**
5/9/14	432,455	50,149,982	**15.30**	**16.60**
5/10/14	498,026	50,648,009		
5/11/14	500,322	51,148,330		
5/12/14	496,263	51,644,594	**15.40**	**15.80**
5/13/14	500,430	52,145,024	**15.20**	**16.00**
5/14/14	498,251	52,643,274	**15.20**	**15.50**
5/15/14	495,036	53,138,310	**13.60**	**13.80**
5/16/14	487,952	53,626,263	**14.00**	**13.90**
5/17/14	489,180	54,115,443		
5/18/14	483,931	54,599,373		
MTCA Method A Cleanup Levels for Groundwater[2]			**5**	

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
5/19/14	487,324	55,086,697	**13.60**	**13.80**
5/20/14	490,419	55,577,117	**18.00**	**18.10**
5/21/14	482,898	56,060,015	**16.00**	**16.20**
5/22/14	489,708	56,549,723	**19.10**	**19.60**
5/23/14	524,105	57,073,827	**15.60**	**15.60**
5/24/14	482,011	57,555,838		
5/25/14	460,528	58,016,366		
5/26/14	501,453	58,517,819		
5/27/14	495,693	59,013,511	**14.30**	**14.20**
5/28/14	499,702	59,513,213	**13.90**	**14.30**
5/29/14	490,274	60,003,487	**18.60**	**18.50**
5/30/14	455,001	60,458,488	**14.60**	**16.20**
5/31/14	507,509	60,965,997		
6/1/14	499,924	61,465,920		
6/2/14	509,175	61,975,095	**14.60**	**14.90**
6/3/14	504,998	62,480,093	**15.00**	**14.90**
6/4/14	486,510	62,966,603	**12.40**	**12.50**
6/5/14	487,456	63,454,059	**15.20**	**15.60**
6/6/14	475,580	63,929,639	**15.40**	**15.50**
6/7/14	504,132	64,433,770		
6/8/14	500,670	64,934,440		
6/9/14	522,817	65,457,256	**14.90**	**15.20**
6/10/14	541,654	65,998,910	**15.70**	**15.80**
6/11/14	549,306	66,548,216	**14.80**	**15.70**
6/12/14	540,535	67,088,750	**14.60**	**14.70**
6/13/14	525,360	67,614,110	**15.00**	**15.70**
6/14/14	488,802	68,102,912		
6/15/14	84,990	68,187,902		
6/16/14	250,943	68,438,845	**26.50**	
6/17/14	489,017	68,927,862	**15.60**	**16.00**
6/18/14	324,648	69,252,510	**22.90**	
6/19/14	491,373	69,743,883	**13.30**	**13.50**
6/20/14	486,675	70,230,558	**17.70**	**17.60**
6/21/14	481,845	70,712,403		
6/22/14	476,297	71,188,701		
6/23/14	474,580	71,663,280	**13.80**	**14.00**
6/24/14	455,452	72,118,733	**13.40**	**13.50**
6/25/14	470,600	72,589,333	**14.50**	**15.30**
6/26/14	447,393	73,036,726	**12.90**	**12.40**
6/27/14	472,441	73,509,166	**9.14**	**9.03**
6/28/14	465,195	73,974,362		
6/29/14	467,904	74,442,266		
6/30/14	465,622	74,907,888	**13.10**	**13.40**
7/1/14	466,650	75,374,538	**16.80**	**16.80**
7/2/14	465,874	75,840,411	**17.10**	**16.60**
7/3/14	462,568	76,302,979	**15.20**	**14.00**
7/4/14	463,008	76,765,987		
7/5/14	462,022	77,228,009		
MTCA Method A Cleanup Levels for Groundwater[2]			**5**	

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
7/6/14	486,057	77,714,066		
7/7/14	508,740	78,222,806	**10.90**	**11.40**
7/8/14	514,183	78,736,989	**11.50**	**11.50**
7/9/14	517,964	79,254,953	**10.90**	**10.90**
7/10/14	512,142	79,767,094	**13.90**	**13.50**
7/11/14	514,756	80,281,850	**14.00**	**13.50**
7/12/14	513,903	80,795,753		
7/13/14	518,803	81,314,556		
7/14/14	519,767	81,834,323	**12.60**	**12.40**
7/15/14	516,132	82,350,454	**14.10**	**14.40**
7/16/14	520,101	82,870,555	**15.10**	**14.40**
7/17/14	524,903	83,395,458	**10.60**	**11.50**
7/18/14	510,628	83,906,086	**12.10**	**11.80**
7/19/14	454,592	84,360,678		
7/20/14	418,478	84,779,155		
7/21/14	410,997	85,190,152	**11.40**	**12.30**
7/22/14	458,431	85,648,583	**11.70**	**12.10**
7/23/14	470,734	86,119,317	**11.80**	**13.50**
7/24/14	524,674	86,643,990	**10.90**	**10.70**
7/25/14	535,564	87,179,554	**19.60**	**18.30**
7/26/14	543,455	87,723,009		
7/27/14	497,793	88,220,802		
7/28/14	494,665	88,715,467	**12.00**	**11.40**
7/29/14	473,726	89,189,193	**13.70**	**13.70**
7/30/14	472,584	89,661,777	**10.20**	**10.20**
7/31/14	461,002	90,122,779	**10.40**	**10.40**
8/1/14	461,515	90,584,294	**10.50**	**11.70**
8/2/14	450,286	91,034,580		
8/3/14	420,389	91,454,969		
8/4/14	415,244	91,870,213	**12.50**	**12.30**
8/5/14	380,032	92,250,245	**13.50**	**13.50**
8/6/14	367,699	92,617,944	**11.70**	**11.40**
8/7/14	350,725	92,968,669	**12.80**	**12.40**
8/8/14	364,707	93,333,376	**18.00**	**16.20**
8/9/14	366,795	93,700,171		
8/10/14	352,873	94,053,044		
8/11/14	333,112	94,386,156	**11.70**	**11.20**
8/12/14	319,934	94,706,090	**11.30**	**11.00**
8/13/14	294,915	95,001,005	**13.10**	**12.30**
8/14/14	436,011	95,437,016	**12.60**	
8/15/14	370,174	95,807,190	**10.90**	
8/16/14	309,883	96,117,073		
8/17/14	304,369	96,421,442		
8/18/14	283,283	96,704,725	**5.08**	
8/19/14	382,325	97,087,050	**5.18**	
8/20/14	371,865	97,458,915	**-**	
8/21/14	379,050	97,837,965	**9.60**	
8/22/14	356,451	98,194,416	**8.17**	
MTCA Method A Cleanup Levels for Groundwater[2]			**5**	

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
8/23/14	348,165	98,542,581		
8/24/14	347,417	98,889,998		
8/25/14	350,392	99,240,390	**8.60**	
8/26/14	289,168	99,529,558	**7.23**	
8/27/14	263,419	99,792,977	**7.77**	
8/28/14	266,391	100,059,368	**9.05**	
8/29/14	269,471	100,328,839	**8.29**	
8/30/14	265,815	100,594,654		
8/31/14	265,099	100,859,753		
9/1/14	268,682	101,128,435		
9/2/14	264,997	101,393,432	**9.45**	
9/3/14	265,025	101,658,457	**9.38**	
9/4/14	189,167	101,847,624	**8.68**	
9/5/14	411,856	102,259,480	3.49	
9/6/14	265,775	102,525,255		
9/7/14	268,663	102,793,918		
9/8/14	183,882	102,977,800	**7.60**	
9/9/14	140,147	103,117,947	4.09	
9/10/14	141,072	103,259,019	3.66	
9/11/14	143,117	103,402,136	4.36	
9/12/14	140,245	103,542,381	3.54	
9/13/14	138,086	103,680,467		
9/14/14	140,492	103,820,959		
9/15/14	139,544	103,960,503	3.05	
9/16/14	136,459	104,096,962	3.57	
9/17/14	135,329	104,232,291	4.22	
9/18/14	135,797	104,368,088	4.43	
9/19/14	136,585	104,504,673	4.06	
9/20/14	134,026	104,638,699		
9/21/14	134,118	104,772,817		
9/22/14	130,768	104,903,585	3.68	
9/23/14	127,993	105,031,578	4.05	
9/24/14	124,216	105,155,794	3.53	
9/25/14	120,920	105,276,714	3.70	
9/26/14	123,798	105,400,512	3.62	
9/27/14	109,314	105,509,826		
9/28/14	93,046	105,602,872		
9/29/14	93,846	105,696,718	3.43	
9/30/14	94,138	105,790,856	3.76	
10/1/14	95,266	105,886,122	3.02	
10/2/14	98,269	105,984,391	4.25	
10/3/14	101,911	106,086,302	4.02	
10/4/14	102,875	106,189,177		
10/5/14	105,398	106,294,575		
10/6/14	107,371	106,401,946	**5.62**	
10/7/14	111,873	106,513,819	**5.90**	
10/8/14	115,940	106,629,759	3.44	
10/9/14	115,288	106,745,047	3.71	
MTCA Method A Cleanup Levels for Groundwater[2]			**5**	

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
10/10/14	109,313	106,854,360	3.62	
10/11/14	112,895	106,967,255		
10/12/14	113,278	107,080,533		
10/13/14	124,563	107,205,096	3.83	
10/14/14	126,956	107,332,052	**6.40**	
10/15/14	156,737	107,488,789	**5.44**	
10/16/14	191,299	107,680,088	**11.30**	
10/17/14	178,323	107,858,411	**11.00**	
10/18/14	164,071	108,022,482		
10/19/14	163,561	108,186,043		
10/20/14	158,835	108,344,878	4.86	
10/21/14	82,766	108,427,644	4.47	
10/22/14	140,895	108,568,539	4.42	
10/23/14	158,021	108,726,560	**12.0**	
10/24/14	116,392	108,842,952	4.92	
10/25/14	105,145	108,948,097		
10/26/14	98,895	109,046,992		
10/27/14	107,236	109,154,228	3.69	
10/28/14	165,516	109,319,744	3.11	
10/29/14	154,572	109,474,316	3.56	
10/30/14	183,644	109,657,960	3.22	
10/31/14	-	109,657,960	**10.4**	
11/1/14	173,270	109,831,230		
11/2/14	185,638	110,016,868		
11/3/14	107,591	110,124,459	3.18	
11/4/14	59,013	110,183,472	2.87	
11/5/14	61,346	110,244,818	2.93	
11/6/14	56,797	110,301,615	2.47	
11/7/14	52,639	110,354,254	2.44	
11/8/14	57,087	110,411,341		
11/9/14	56,770	110,468,111		
11/10/14	103,602	110,571,713	2.77	
11/11/14	158,142	110,729,855	2.91	
11/12/14	128,982	110,858,837	2.61	
11/13/14	60,370	110,919,207	3.39	
11/14/14	22,788	110,941,995	2.54	
11/15/14	17,830	110,959,825		
11/16/14	16,216	110,976,041		
11/17/14	44,579	111,020,620	2.59	
11/18/14	58,070	111,078,690	3.35	
11/19/14	62,051	111,140,741	3.54	
11/20/14	60,586	111,201,327	2.75	
11/21/14	51,275	111,252,602	2.20	
11/22/14	45,112	111,297,714		
11/23/14	45,954	111,343,668		
11/24/14	36,907	111,380,575	ND	
11/25/14	21,820	111,402,395	ND	
MTCA Method A Cleanup Levels for Groundwater[2]			**5**	

Table C-1
Dewatering Summary Information
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020

Date	Gallons Per Day	Cumulative Gallons	Analytical Results (micrograms per liter)	
			Benzene (1)[1]	Benzene (2)[1]
11/26/14	20,479	111,422,874	3.11	
11/27/14	8,476	111,431,350		
11/28/14	9,938	111,441,288		
11/29/14	5,602	111,446,890		
11/30/14	42,148	111,489,038		
12/1/14	122,366	111,611,404	ND	
12/2/14	122,020	111,733,424	ND	
12/3/14	129,156	111,862,580	ND	
12/4/14	119,924	111,982,504	ND	
12/5/14	123,848	112,106,352	ND	
12/6/14	125,722	112,232,074		
12/7/14	123,478	112,355,552		
12/8/14	129,606	112,485,158	ND	
12/9/14	67,922	112,553,080		
12/10/14	45,571	112,598,651		
12/11/14	-	112,598,651		
12/12/14	10,043	112,608,694		
12/13/14	-	112,608,694		
12/14/14	-	112,608,694		
12/15/14	6,067	112,614,761		
MTCA Method A Cleanup Levels for Groundwater[1]			**5**	

NOTES:

Results in **bold** denote concentration exceeds applicable cleanup level. ND = not detected

[1]The treatment system consisted of two parallel treatment trains. Benzene(1) represents analytical results from samples collected from the first treatment train and Benzene(2) represents results from samples collected from the other treatment train. The associated chart only plots the Benzene(1) results.

[2]Washington State Model Toxics Control Act Cleanup Regulation Method A Cleanup Levels for Groundwater, Table 720-1 of Section 900 of Chapter 173-340 of the Washington Administrative Code, as revised November 2013.

Chart C-1
Concentrations of Benzene at Influent for Construction Dewatering System
South Lake Union Block 43 Site
Seattle, Washington
Farallon PN: 397-020