Construction Completion Report

Pike Motorworks Building

Seattle, Washington

Prepared for

Seattle Core Development
Site I, LLC

October 16, 2014
17859-05

HARTCROWSER

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Prepared by

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Contents

TABLES

FIGURES

APPENDIX A

Chemical Data Quality Review and Laboratory Reports

APPENDIX B

UST Decommissioning Documents

1.0 EXECUTIVE SUMMARY

The Pike Motorworks Building (Site) is located in the Capitol Hill neighborhood of Seattle, Washington, and occupies most of the block that is bounded by East Pike and East Pine Streets and Boylston and Harvard Avenues (Figure 1). The property is being redeveloped by Seattle Core Development Site I, LLC, with three levels of underground parking, street-level retail space, and six floors of residential units above the retail level.

Past uses of the Site included an automobile spring manufacturer from 1958 to 1985, followed by an auto repair facility and dealership until 2011 (Figure 2). Recognized environmental concerns were identified based on historical past use of the property and subsurface investigations, including: (1) total petroleum hydrocarbon (TPH)-impacted soil near a closed-in-place underground storage tank (UST) in the center of the property and near the north-central area of the property (Figure 3); and (2) metal-impacted soil in the center of the property (Figure 4).

As part of redevelopment, remedial options to address the TPH- and metal-impacted soil were evaluated through a Focused Feasibility Study (FFS) (Hart Crowser 2013b). Since property redevelopment plans involved subsurface excavation and grading, off-site disposal of the impacted soil was determined to be the most effective cleanup option. Proposed cleanup activities were detailed in the site-specific Cleanup Action Plan/Construction Contingency Plan (CAP/CCP) (Hart Crowser 2013c). The cleanup actions at the Site described in this report were completed in accordance with the CAP/CCP and all applicable MTCA requirements for remedial actions. Washington State Department of Ecology (Ecology) provided an Opinion Letter on November 13, 2013 (Ecology 2013), stating, "Ecology considers the selected alternative developed in the focused feasibility study report as a preferred remedy as well." Ecology also stated, "Prior to making a determination for No Further Action at this Site, Ecology needs to have confirmative analytical results that show completion of the impacted soil cleanup at concentrations exceeding the MTCA Method A cleanup level."

Compliance with cleanup objectives for each of the potential exposure pathways (direct contact, soil to groundwater, and soil vapor) have been met, including confirmative analytical results, and are discussed in Section 6.0, Compliance with MTCA Requirements. It is Hart Crowser's opinion that the Site no longer poses a threat to human health or the environment and no further remedial actions are necessary. Therefore, Seattle Core Development Site I, LLC, respectfully requests issuance of a No Further Action (NFA) determination for the Site and authorization to remove the existing restrictive covenant for the Site.

2.0 INTRODUCTION

On behalf of Seattle Core Development, Site I, LLC, Hart Crowser oversaw environmental cleanup activities at the Site located at 714 East Pike Street in Seattle, Washington (Figure 1). Our activities were completed during construction and redevelopment of the property. Remedial activities were completed as an independent cleanup per the Ecology Voluntary Cleanup Program (VCP) guidelines and in accordance with the Ecology Model Toxics Control Act (MTCA – Chapter 173-340 WAC) and a site-specific CAP/CCP dated September 20, 2013 (Hart Crowser 2013c).

Additional information about the environmental conditions on the Site is presented in the remedial investigation (RI) report dated January 31, 2013, (Hart Crowser 2013a) and focused feasibility study (FFS) dated September 20, 2013, (Hart Crowser 2013b). A site plan identifying pre-construction site features is presented on Figure 2. The areas of impacted soil by TPH from historical operations and former underground storage tanks (USTs) are identified on Figure 3. The area of metal impacts from historical operations is identified on Figure 4. Soil verification samples collected during construction oversight are identified on Figures 5 through 7 for depths of 0 to 10 feet, 10 to 20 feet, and 20+ feet.

3.0 PROPERTY DESCRIPTION AND BACKGROUND

The Site covers approximately 54,000 square feet (1.26 acres) in Seattle, Washington (Figure 1), in the Capitol Hill neighborhood. The Site occupies most of the block that is bounded by East Pike and East Pine Streets and Boylston and Harvard Avenues.

As shown on Figure 2, the Site previously included two buildings (one located at 714 East Pike and one at 715 East Pine Street) and three parking lots (west, east, and southwest). The property was the former BMW Seattle dealership and was used for various historical operations, including an automobile spring manufacturer and an auto repair facility.

Seattle Core Development Site I, LLC, is redeveloping the Site, with three levels of underground parking, street-level retail space, and six floors of residential units above the retail level.

Excavation for underground parking required removal and disposal of soil from a large portion of the Site. The footprint of the parking area is shown on Figure 2. The excavation for the parking structure extended vertically to 30 feet deep with select areas excavated to 35 feet for footings. Some areas of the Site were only minimally disturbed to approximately 4 feet below grade for footing excavation and grading. These minimally excavated areas will be covered by concrete pavement.

The redevelopment plans (as discussed in the FFS) included excavation of all known areas of impacted soil.

3.1 Geology and Hydrogeology

The geologic units at the Site consist of Fill, Till, and Advanced Outwash sand units. The Fill unit consists of silty, gravelly Sand with concrete or brick fragments with an approximate thickness of 5 to 10 feet. Underlying the Fill unit, is a Till unit that consists of dense, silty, gravelly Sand to sandy Silt.

The Advanced Outwash unit consists of sand and gravel with little silt and was observed in the deeper borings with depths ranging from 25 to 40 feet below ground surface.

Groundwater was not encountered during the excavation. Two monitoring wells were installed in 2013 during the site characterization phase of the project. Groundwater was encountered in monitoring wells MW-1 and MW-2 at 45 and 51 feet below ground surface, respectively, which is below the bottom of the planned excavation by at least 15 to 20 feet. Groundwater samples were collected from these monitoring wells. Groundwater was observed in the Advanced Outwash unit in both monitoring wells.

The surrounding area topography slopes down to the west and south toward Elliott Bay, located approximately 1 mile southwest of the Site. The property elevation is higher to the northeast along East Pine Street and Harvard Avenue (approximate elevation 294 feet). The ground floor of the former BMW dealership building is at street level on East Pike Street (approximate elevation 289 feet). Based on surrounding area topography, groundwater is likely to flow to the west/southwest, toward Elliott Bay.

3.2 Historical Background

Historical property features in the 715 East Pine Street building include an auto parts storage area; a 5,000-gallon diesel UST that was closed in place in 1998; a former hydraulic, bulk and used oil tank area; a former recessed waste oil tank area; and former aboveground hydraulic lifts. Historical site features of the 714 East Pike Street property include a heating oil UST that was closed in place in 1986.

The western parking lot along Boylston Avenue was occupied by a multifamily residence (St. Clair Apartments), which was torn down during the 1990s. The eastern parking lot along Harvard Avenue and the southwestern parking lot on the corner of Pike Street and Boylston Avenue were historically occupied by apartment buildings, which were torn down sometime after 1969. A 2,000-gallon diesel UST was removed from the southwestern paved parking lot in 1994.

Historical features are shown on Figure 2.

3.3 Regulatory Status Background

The former owner of the Site was granted a No Further Action (NFA) determination in 1999 based on prior site investigations and implementation of institutional controls (*i.e.*, a restrictive covenant). The RI includes a copy of the previously issued NFA determination and the applicable Restrictive Covenant.

In 2012, the current owner, Seattle Core Development Site I, LLC, re-entered the Site into the VCP. Hart Crowser, on behalf of Seattle Core Development Site I, LLC, previously submitted an RI report dated January 31, 2013, an FFS report dated September 20, 2013, and a CAP/CCP dated September 20, 2013. The RI summarizes results of past investigations and the FFS presents the remedial alternatives that were developed and evaluated and the most appropriate alternative selected for the Site based on present and future land use. The CAP/CCP describes the management of the remedial actions and

provides a basis for identifying potential environmental issues, guidance for materials handling, and worker health and safety requirements during site development.

Ecology provided an Opinion Letter in 2013 (Ecology 2013), stating, "Ecology considers the selected alternative developed in the focused feasibility study report as a preferred remedy as well." Ecology also stated, "Prior to making a determination for No Further Action at this Site, Ecology needs to have confirmative analytical results that show completion of the impacted soil cleanup at concentrations exceeding the MTCA Method A cleanup level." It is Hart Crowser's opinion that the cleanup actions completed and the confirmative analytical results demonstrate that the Site no longer poses a threat to human health or the environment, such that no further remedial actions are necessary and the restrictive covenant is no longer needed.

4.0 CONCEPTUAL SITE MODEL

This section provides a conceptual understanding of the Site that is based on the results of historical research, previous subsurface investigations, and final remedial actions performed at the Site. A discussion of the chemicals and media of concern, the fate and transport characteristics of the release of COCs, and the potential exposure pathways are included in this section.

4.1 Source and Release Background

Subsurface contamination at the Site appears to have been caused by: (1) releases from former USTs; (2) prior auto service operations associated with the former BMW dealership; and (3) former operations of the automobile spring manufacturer before 1989.

TPH-Impacted Soils. The TPH impacts appear to have been primarily located in the central area of the Site. Figure 3 shows the approximate distribution and depth of the TPH-impacted soil. Most of the impacted soil is within the upper 10 to 20 feet, with one anomalous historical sample location (TPH5922) where one soil sample at a depth of 40 feet exceeded MTCA Method A soil cleanup levels. TPH-impacted soil was also located in the north-central area in the upper 10 feet. A small isolated area of soil with a petroleum-like odor was identified during excavation activities at approximate depths of 10 to 15 feet in the north portion of the Site, near East Pine Street . Soil samples were collected and an elevated concentration of petroleum in the gasoline range was identified above MTCA Method A cleanup levels in two samples (J34-A7.5-11 and A7.5-10, Table 2 and Figure 6). All of the impacted soil in the north portion of the Site was over-excavated and removed.

Verification soil samples collected from sidewalls and from excavation base areas confirmed that all impacted material was removed. Verification soil sample results are discussed in Section 6.1.1, Soil Removal and Sample Results.

Metal-Impacted Soil. The metal impacts were also primarily located in the central area of the Site. Figure 4 shows the approximate distribution of the metal-impacted soil based on previous investigations. Metal-impacted soil was limited to the upper 10 feet. Toxicity characteristic leaching procedure (TCLP) results for lead exceeded the Dangerous Waste criteria in two samples (ThermoRetec 2001a and 2001b), which were noted as being from the center of the Site. In 2012, Hart

Crowser collected and analyzed additional soil samples and confirmed that previously detected metal impacts are contained in the upper 8 to 10 feet in a limited area (Figure 4). However, none of the 16 samples analyzed in 2012 for TCLP exceeded the Dangerous Waste levels for lead (5 mg/L) or cadmium (51 mg/L).

All metal-impacted soil was overexcavated and removed along with the TPH-impacted soil. Verification soil sample results are discussed in Section 6.1.1, Soil Removal and Sample Results.

Groundwater. Groundwater was encountered in the two deep monitoring wells between 45 and 51 feet below ground surface. Based on the groundwater sampling results from 2012 and 2014 (prior to construction), groundwater has not been impacted by any of the constituents of concern for the Site (TPH, VOCs, or metals).

Former USTs. Two known closed-in-place USTs were located in the central area of the Site and were removed during redevelopment. Additionally, two unknown USTs were encountered during the mass excavation. A small heating oil UST (estimated at 500 gallons) was encountered in the southwest corner of the western parking lot adjacent to Boylston Avenue, which was likely associated with the former St. Clair Apartment building. A larger heating oil UST (estimated at 2,000 gallons) was encountered in the southwest area of the excavation's southern wall, which was likely associated with the former main building on the Site. The unknown USTs were decommissioned and removed. Details on the conditions of the USTs and verification samples results are discussed in Section 6.1.1.4.

Verification soil samples confirmed the final vertical and lateral limits of the remedial excavations. Figures 5 through 7 show all of the verification soil sample locations and Section 6.0, Summary of Completed Remedial Action, provides details on verification samples by impacted area or USTs.

4.2 Environmental Constituents of Concern

Environmental constituents of concern (COCs) identified at the Site include:

- **Soil.** Diesel-range TPH (TPH-D), gasoline-range TPH (TPH-G), heavy oil-range TPH (TPH-O), lead, and cadmium.
- **Groundwater.** None

Overall, the extent of the TPH and metal releases to the soil were limited and isolated. The removal actions have been successful in removing impacted soil above MTCA Method A unrestricted cleanup levels throughout the Site, as shown by the verification soil sample analytical results.

4.3 Physical Characteristics of Former Impacted Areas

The former structures on the property had slab-on-grade elevation of 289 feet. Subsurface mass excavation extended to elevations of 259 to 254 feet (depths of 30 to 35 feet). Verification samples shown on Figures 5 through 7 confirm that the areas of impacted soil above MTCA unrestricted soil cleanup levels have been excavated and removed.

4.4 Fate and Transport Considerations

TPH occurrences were associated primarily with soil in the central area within the upper 10 to 30 feet. One soil sample that was collected in 1996 (ContraCon Northwest 1996) from a boring reported a soil sample at 40 feet with a TPH-D concentration above MTCA Method A cleanup level. Subsequent soil sampling and analysis (approximately 10 samples) at and near this location did not indicate any TPH impacts over MTCA at this depth of 40 feet. TPH occurrences were also identified in the north-central area in the upper 10 feet; and in the northern area adjacent to East Pine Street between depths of 10 to 15 feet. Total metal (lead and cadmium) concentrations in soil exceeded MTCA Method A soil cleanup levels within the upper 8 to 10 feet.

The identified TPH- and metal-impacted areas were excavated and removed from the Site during redevelopment. Field screening and verification soil samples collected from beneath the impacted materials confirmed that the impacted soil was removed and that applicable cleanup levels were met.

4.5 Potential Receptors and Pathways for Exposure

The potential receptor pathways for exposure to TPH- or metal-impacted soil on the Site have been eliminated. The soil at the property has been cleaned up to concentrations consistent with unrestricted land use. Groundwater was not encountered during the redevelopment, so there is no pathway to groundwater. Groundwater samples collected and analyzed in 2012 and prior to construction in 2014 was non-detect at laboratory reporting limits for the identified COCs.

5.0 EVALUATION OF REMEDIAL ALTERNATIVES

The remediation alternatives combine technologies that are applicable to impacted soil and potential soil vapor at the Site. Candidate remedial technologies were identified and screened to develop potential cleanup alternatives for further evaluation in the 2013 FFS. The remedial technologies considered in the screening process included excavation and off-site disposal, capping, and/or a passive soil vapor intrusion mitigation system (if needed). Since the Site was to be subject to significant excavation as part of the planned redevelopment and since all soil impacts were accessible, excavation and off-site disposal of the impacted soil to a Subtitle D landfill was determined to be cost-effective and protective of human health and the environment. The selected cleanup option (which Ecology concurred with in their 2013 Opinion Letter) to address TPH-and metal-impacted soil at this property was soil excavation and off-site disposal, for the following reasons:

- The planned redevelopment included subsurface excavation;
- Permanence of removing impacted soil; and
- Cost-effectiveness since cleanup could be conducted at the same time as development activities.

6.0 SUMMARY OF COMPLETED REMEDIAL ACTION

The remedial action of excavation and off-site disposal of the impacted soil was conducted at the Site from February to May 2014. This section summarizes the remedial action and provides a brief description of when the action occurred, what was performed, and the results.

6.1 Remedial Action Overview

Prior to the start of the mass excavation, groundwater was sampled from monitoring well MW-2 for TPH-D, TPH-O, TPH-G, VOCs, and total metals at the request of Ecology. Monitoring well MW-2 was selected for sampling since it was located near the deeper TPH-impacted soil (Figure 3). The groundwater sample results were non-detect at laboratory reporting limits for all COCs except for nickel, which had a low concentration of 0.02 mg/L (Table 1).

A monitoring well was discovered after the building was demolished. The discovered monitoring well was located near the former heating oil UST that was closed in place in 1986 in the Former Sales Building (Figure 2). Based on the well depth of 30 feet and review of historical reports, we believe this well was actually installed in 1995 and was not identified correctly on prior exploration figures (Hazcon 1995), which placed it in the Former Maintenance Building. The 1995 report stated that groundwater was not detected in the monitoring well. The two existing monitoring wells (MW-1 and MW-2) plus the discovered monitoring well were decommissioned in accordance with state regulations (Chapter 173-160-460 WAC) in January 2014.

Hart Crowser provided full-time or part-time environmental construction oversight activities from February through May 2014. Acting as a representative of the owner, Hart Crowser field representatives observed, screened, and characterized impacted soil, as appropriate, and assisted with the off-site disposal of impacted soil when encountered.

Field screening consisted of sampling soil vapors with a photoionization detector (PID), conducting sheen tests, and visually observing soil to identify and segregate potentially impacted soil. Soil sampling and laboratory analysis characterized impacted soil for appropriate disposal, and verified that the soil remaining in place did not exceed MTCA Method A unrestricted soil cleanup levels. Field reports were completed to document activities observed, conditions encountered, and samples collected.

A majority of the soil impacts were located in the central, northeast, and north areas of the Site. Most of the impacted soil did not contain COCs above the MTCA Method A cleanup levels. The actual soil impacts with COCs above MTCA Method A cleanup levels were small and isolated, and were fully removed during excavation.

In order to provide a conservative and fully MTCA-compliant remedial action, it was determined that any soil that exhibited any physical evidence of environmental impacts (e.g., odors, staining) or contained low concentrations of COCs would also be removed and disposed of off-site at Waste Management's and/or Republic Services' Subtitle D landfill. Approximately 20.6K tons of known and potentially impacted soil was removed from the site. A summary of off-site soil disposal tonnage is provided in Table 4.

6.1.1 Impacted Soil Removal and Sample Results

Within the footprint of the planned building and underground parking garage, the depth of the excavation was to a maximum depth of 35 feet. The remaining areas around the planned building and

underground parking structure were excavated to a depth of 4 feet. Excavation within the development area removed all of the known impacted soil at the Site.

The impacted areas are described in detail in the following sections. Characterization and verification soil sample analytical results are presented in Tables 2 and 3, respectively. Due to the large number of soil samples collected, the sample locations are illustrated by depth of 0 to 10 feet, 10 to 20 feet, and 20+ feet on Figures 5 through 7.

6.1.1.1 Central Area

TPH. As identified in previous environmental investigations, TPH concentrations in soil exceed MTCA Method A soil cleanup levels primarily within the upper 10 to 30 feet. Only one soil sample (TPH5922) that was collected in 1996 reported a soil sample at 40 feet deep with a TPH-D concentration above MTCA Method A cleanup level. Other previous investigations did not observe any TPH impacts above MTCA Method A cleanup levels below 27 feet deep. During mass excavation, TPH-impacted soil (including soil that was below MTCA cleanup levels, but had an odor or sheen) was more widespread in the central area in the upper 10 feet and reduced in size with depth. As the mass excavation continued, additional soil lifts were removed, areas were field screened, and additional soil verification samples were collected and analyzed from excavation sidewalls and beneath the impacted areas. All previous soil samples within 30 feet that indicated TPH exceedances above MTCA Method A cleanup levels were excavated and disposed, along with any soils with observed petroleum impacts within that depth. The soil verification sample analytical results show that soil remaining on the property is below MTCA Method A cleanup levels for TPH (Figures 5a, 6, and 7).

During excavation of soil below 30 feet at and near former soil sample TPH5922, there was no indication of any petroleum impacts. Excavation at and near this location went as deep at 35 feet for a footing for the crane pad. There were no field indications (odors, sheen, or PID readings) of any petroleum impacts. A soil sample (B24.5-E29-254, Table 3) was collected at a depth of 35 feet (Figure 7), which was non-detect at laboratory reporting limits for TPH-D and TPH-O. No deeper excavation could be conducted without damaging soil structural integrity for the crane pad. A hand-auger boring was advanced to a depth of 40 feet next to the crane pad footing and a soil sample (B24.5-F2-249, Table 3) was collected and analyzed for TPH-D and TPH-O, which was also non-detect at laboratory reporting limits.

Based on these verification samples collected at depths of 35 and 40 feet and field observations, there are no identified petroleum impacts near former soil sample TPH5922 and the surrounding area.

Two known, closed-in-place USTs (Figure 2) were removed from the central area. Soil surrounding the USTs was consistent with typical soil within the upper 10 feet in the central area and was observed to have a petroleum-like odor. Verification samples (F2-B23.5-272 and F2-B19-270) were collected from beneath the TPH-impacted soil at a depth of approximately 17 to 19 feet, and were below laboratory reporting limits for TPH-D and TPH-O.

Metals. Total metal (lead and cadmium) concentrations in soil exceed MTCA Method A soil cleanup levels within the upper 8 to 10 feet. ThermoRetec stated in 2001 that two samples in the central area

exceeded the Dangerous Waste Criteria. However, in 2012, 16 additional samples from the central area were submitted for TCLP analysis and were below the Dangerous Waste Criteria for lead and cadmium. The identified metal-impacted soil was excavated, removed, and disposed of off-site. Verification soil samples were collected from nine sidewall locations from depths of 2 to 6 feet (samples F3-B25.5-3, F3-4, F5-5, F7-5, F8.5-3, F4-B22-5, B22-E21-5, B24.5-6a, and F1-E21-2, Table 3) and from three bottom locations from depths of 9 to 11 feet (samples F4-B23-9, E23-B25-11, and B24-E13-9, Table 3). The verification samples confirmed the removal of all metals impacted soil (Figure 5b).

6.1.1.2 North-Central and North Areas

TPH was detected at levels exceeding MTCA cleanup levels in the upper 10 feet of boring HCE-6, which was located in the north-central area of the Site (Figure 3). During mass excavation, soil was encountered with petroleum-like odor in this area, and the excavated soils were disposed at a Subtitle D landfill. After excavation of TPH-impacted soil, sidewall verification samples (B14.5-7, B18-A16-5, B16.5-A7-7.5, I13-B18-5, B13-A16-7, B8-7) and bottom verification samples (B15-A21-9, B15A-26-10, and B16.5-A11-10) were collected and analyzed. Sample analytical results show that the remaining soil was below MTCA Method A soil cleanup levels for TPH.

Suspected impacted soil was identified by field screening (odor and PID detections) during mass excavation in the north area near East Pine Street at an approximate depth of 10 to 15 feet (elevation 279 to 274 feet). Suspected soil was stockpiled and soil characterization samples were collected and analyzed. Characterization sample analytical results (J34-A7.5-11 and A7.5-10, Table 2) contained TPH-G that exceeded MTCA Method A soil cleanup levels and also contained low concentrations of ethylbenzene and xylene that did not exceed MTCA Method A soil cleanup levels. Field screening was performed and soil that exhibited odors or PID detections was removed and disposed of at a Subtitle D landfill.

Impacted soil was excavated, removed, and disposed of off site. Sidewall verification samples (A3-J32-274, A7.5-10b, A18-276, A23.5-277, A27.5-277, B4-278, and B2.5-278, Table 3) and bottom verification samples (A10-B2-272 and A19-B2-272, Table 3) confirmed that the impacted material was removed. Additional soil was removed to reach project elevations, several feet below the removed impacted areas. No impacts were observed or noted below the verification soil samples.

6.1.1.3 Two Unknown USTs

Two previously unidentified USTs were encountered during construction activities. Kleen Environmental Tech conducted decommissioning services (Figure 5a).

Unknown UST #1 was encountered during soldier pile drilling in the southwest corner of the parking lot off Boylston Avenue. The UST was identified as a 500-gallon heating oil tank and was decommissioned on February 14, 2014. The UST was observed to contain sand and gravel with some petroleum residue. The vacuum truck could not remove the sand and gravel, and so the UST was broken into pieces for removal. The Marine Chemist and Fire Marshall were on site to observe the UST demolition and removal. The UST was observed to be in relatively good condition. Residual petroleum-impacted soil (remnants from breaking the UST into pieces per the Fire Marshall's

approval) was excavated and disposed of at a Subtitle D landfill. Verification sample results from the sidewalls and bottom (UST-SW-S, UST-SW-W, and UST-SW-B) were non-detect at the laboratory reporting limit for TPH-O and were below MTCA Method A cleanup levels for TPH-D.

Pipes from the unknown UST #2 were encountered during excavation of the south wall of the planned excavation. The UST was located outside the mass excavation area and was identified as a 2,000-gallon heating oil tank. Prior to the UST removal on February 20, 2014, the petroleum product was removed by a vacuum truck and the UST was rinsed five times. The UST was in relatively good condition. No indications of petroleum release from the UST were observed during the excavation. The Marine Chemist and Fire Marshall were on site to certify and observe the UST and removal from the Site. Verification sample results from the sidewalls and bottom (UST-SW-E-U2, UST-SW-S-U2, and UST-B-U2) were non-detect at laboratory reporting limits for TPH-D and TPH-O.

UST removal documentation including, the Marine Chemist Certificate and the Storage Tank Certificate of Destruction can be found in Appendix B.

7.0 COMPLIANCE WITH MTCA REQUIREMENTS

It is Hart Crowser's opinion that cleanup actions conducted on the Site comply with the requirements of MTCA and are fully protective of all potential exposure pathways. Compliance with cleanup objectives for each of the potential exposure pathways (direct contact, soil to groundwater, and soil vapor) have been met and are discussed below.

The Site has been characterized in a manner consistent with the requirements of MTCA and performance monitoring indicates compliance with MTCA Method A unrestricted soil cleanup levels throughout the Site.

Approximately 20.6K tons of TPH- and metal-impacted soil were removed and disposed of off-site. Based on verification soil sample analytical results collected following impacted soil removal, concentrations of COCs in soil remaining beneath the property are below MTCA Method A cleanup levels.

The remedial action conducted on the Site should be considered final under WAC 173-340-350 through -390. It is Hart Crowser's opinion that the Site no longer poses a threat to human health or the environment and no further remedial actions are necessary. This closure report demonstrates confirmative analytical results, which show removal of all impacted soils at concentrations exceeding the MTCA Method A cleanup level, as requested in Ecology's 2013 Opinion Letter (Ecology 2013).

7.1 Exposure Pathways

Direct Contact Pathway. TPH- and metal-impacted soil within the property boundary has been removed. The direct contact exposure pathway for the Site has been eliminated.

The verification soil samples collected and analyzed following impacted soil removal were below MTCA Method A unrestricted cleanup levels. In addition, the Site plans include construction of an

underground parking garage and building. These data results and construction site features indicate that direct contact is no longer a complete exposure pathway.

Soil to Groundwater Pathway. The identified TPH- and metal-impacted soil was removed and disposed of off-site. Soil sample analysis confirms that the TPH- and metal-impacted soil was successfully remediated, and that the remaining soil on the property no longer poses a risk to groundwater quality. The soil to groundwater exposure pathway for the Site has been eliminated.

Soil Vapor Pathway. Since the impacted soil has been successfully remediated at the Site, and the verification soil samples collected and analyzed following impacted soil removal were below MTCA Method A unrestricted cleanup levels for soil, the soil vapor pathway is not a potential exposure pathway.

Following the extensive removal and disposal of TPH- and metal-impacted soil during construction activities and based on field observations and verification soil sample analytical results, we believe current site conditions satisfy all MTCA Method A cleanup requirements for protectiveness of human health and the environment.

8.0 REQUEST FOR NO FURTHER ACTION DETERMINATION

Ecology provided an Opinion Letter in 2013 (Ecology 2013), stating, "Prior to making a determination for No Further Action at this Site, Ecology needs to have confirmative analytical results that show completion of the impacted soil cleanup at concentrations exceeding the MTCA Method A cleanup level." Based on the work conducted on the Site and the confirmative analytical results obtained following remedial actions, the Site is fully compliant with MTCA Method A cleanup standards and no longer poses a threat to human health and the environment. Therefore, Seattle Core Development Site I, LLC, respectfully requests issuance a No Further Action (NFA) determination for the Site and removal of the existing restrictive covenant.

9.0 REFERENCES

ContraCon Northwest 1996. Pre-Remediation Project Report, BMW Seattle, 714 East Pike Street, May 1, 1996.

Ecology 2013. Opinion Pursuant to WAC 173-340-515(c) on Remedial Actions, Boylston Property (Former BMW Seattle Property), 714 E. Pike/715 E. Pine, WA, November 13, 2013.

Hart Crowser, Inc. 2013a. Remedial Investigation (RI), Boylston Property (Former BMW Seattle Property), 714 East Pike/715 East Pine Street, Seattle, Washington, January 31, 2013. 17859-02.

Hart Crowser, Inc. 2013b. Focused Feasibility Study, Boylston Property (Former BMW Seattle Property), 714 East Pike/715 East Pine Street, Seattle, Washington, September, 2013. 17859-03.

Hart Crowser, Inc. 2013c. Cleanup Action Plan/Construction Contingency Plan, Boylston Property (Former BMW Seattle Property), 714 East Pike/715 East Pine Street, Seattle, Washington, September 20, 2013. 17859-03.

Hazcon, Inc. 1995. Interim Report Subsurface Investigation, BMW Seattle, August 1, 1995.

ThermoRetec 2001a. Phase 1 Environmental Assessment of the BMW – Seattle Property, 714 East Pike Street, September 18, 2001.

ThermoRetec 2001b. Environmental Cost for Alternative Redevelopment Scenarios Memorandum, BMW – Seattle, September 18, 2001.

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Table 1 - Analytical Results for Groundwater Sample

Sample ID	MTCA	MW-2	
Sampling Date	Method A Cleanup Level	1/17/2014	
NWTPH-Dx in mg/L			
Kerosene/Jet fuel	0.5	0.20	U
Diesel/Fuel oil	0.5	0.20	U
Heavy oil	0.5	0.50	U
NWTPH-Gx in mg/L			
Mineral spirits/Stoddard	0.8/1.0 (a)	0.10	U
Gasoline	0.8/1.0 (a)	0.10	U
Total Metals in mg/L			
Lead	0.015	0.002	U
Chromium	0.05	0.01	U
Cadmium	0.005	0.005	U
Arsenic	0.005	0.005	U
Mercury	0.002	0.0005	U
Copper		0.01	U
Nickel		0.02	
Zinc		0.01	U
Volatiles in µg/L			
MTBE	20	5.0	U
Chloromethane		0.2	U
Vinyl chloride	0.2	1.0	U
Bromomethane		1.0	U
Chloroethane		1.0	U
Trichlorofluoromethane		1.0	U
1,1-Dichloroethene		1.0	U
Methylene chloride	5	1.0	U
trans-1,2-Dichloroethene		1.0	U
1,1-Dichloroethane		1.0	U
2,2-Dichloropropane		1.0	U
cis-1,2-Dichloroethene		1.0	U
Chloroform		1.0	U
1,1,1-Trichloroethane	200	1.0	U
Carbon tetrachloride		1.0	U
1,1-Dichloropropene		1.0	U
Benzene	5	1.0	U
1,2-Dichloroethane (EDC)	5	1.0	U
Trichloroethene	5	1.0	U
1,2-Dichloropropane		1.0	U
Dibromomethane		1.0	U
Bromodichloromethane		1.0	U
cis-1,3-Dichloropropene		1.0	U
Toluene	1000	1.0	U
trans-1,3-Dichloropropene		1.0	U
1,1,2-Trichloroethane		1.0	U
Tetrachloroethene	5	1.0	U
1,3-Dichloropropane		1.0	U
Dibromochloromethane		1.0	U
1,2-Dibromoethane (EDB)	0.01	0.01	U
Chlorobenzene		1.0	U
1,1,1,2-Tetrachloroethane		1.0	U
Ethylbenzene	700	1.0	U

Table 1 - Analytical Results for Groundwater Sample

Sample ID	MTCA	MW-2	
Sampling Date	Method A Cleanup	1/17/2014	
Xylenes	1000	1.0	U
Styrene		1.0	U
Bromoform		1.0	U
Isopropylbenzene		1.0	U
1,2,3-Trichloropropane		1.0	U
Bromobenzene		1.0	U
1,1,2,2-Tetrachloroethane		1.0	U
n-Propylbenzene		1.0	U
2-Chlorotoluene		1.0	U
4-Chlorotoluene		1.0	U
1,3,5-Trimethylbenzene		1.0	U
tert-Butylbenzene		1.0	U
1,2,4-Trimethylbenzene		1.0	U
sec-Butylbenzene		1.0	U
1,3-Dichlorobenzene		1.0	U
Isopropyltoluene		1.0	U
1,4-Dichlorobenzene		1.0	U
1,2-Dichlorobenzene		1.0	U
n-Butylbenzene		1.0	U
1,2-Dibromo-3-Chloropropane		1.0	U
1,2,4-Trichlorobenzene		1.0	U
Hexachloro-1,3-butadiene		1.0	U
Naphthalene	160	1.0	U
1,2,3-Trichlorobenzene		1.0	U

U = Not detected at detection limit indicated.
(a) 0.8 mg/L for gasoline mixtures with benzene;
1.0 mg/L for gasoline mixtures without benzene.

Table 2 - Analytical Results for Characterization Soil Samples

Sample ID	Sampling Date	TPH-D in mg/kg	TPH-O in mg/kg	TPH-G in mg/kg	Lead in mg/kg	Cadmium in mg/kg	Benzene in µg/kg	Toluene in µg/kg	Ethylbenzene in µg/kg	Xylenes in µg/kg	VOCs in µg/kg
G-19	2/4/2014	20 U	50 U	5.0 U	23 J	1.0 UJ	20 U	50 U	50 U	50 U	
Rubble #1	2/14/2014				18	1.0 U					
B24.5-5	2/25/2014	20 U	50 U		360	1.3					
Stockpile A-N	3/7/2014	210	50 U								
Stockpile A-W	3/7/2014	220	50 U								
Stockpile A-S	3/7/2014	190	50 U								
J34-A7.5-11	3/10/2014	20 U	50 U	290			20 U	50 U	2800	7700	
F5.5-B25-9	3/10/2014	8500	50 U	5.0 U			20 U	50 U	260	660	
A7.5-10	3/10/2014			100			20 U	50 U	900	2600	
A26-B0.5-277	3/18/2014	20 U	50 U	82							Detected*
A23.5-B0.5-277	3/18/2014	20 U	50 U	5.0 U							Detected*
A18-B0.5-276	3/18/2014	20 U	50 U	5.0 U							
A13.5-J33-275	3/19/2014	20 U	50 U	5.0 U							
MTCA Method A Cleanup Level		**2000**	**2000**	**30/100 (a)**	**250**	**2**	**30**	**7000**	**6000**	**9000**	

Notes:
TPH-D = Diesel-range petroleum hydrocarbons
TPH-O = Heavy oil-range petroleum hydrocarbons
TPH-G = Gasoline-range petroleum hydrocarbons
VOCs = Volatile organic compounds
U = Not detected at reporting limit indicated
J = Estimated value
All soil for characterization and stockpile samples were overexcavated.
(a) 30 mg/kg when benzene present/100 mg/kg without benzene.
Values that exceed cleanup level are boxed.
* Some VOCs were detected, but were below respective MTCA Method A soil cleanup levels (see Table A-2).

Table 2 - Analytical Results for Characterization Soil Samples

Sample ID	Comments
G-19	From soil cuttings at soldier pile G19 from a adepth of 5 to 6 feet.
Rubble #1	From soil with construction debris near sample F8.5-3 at a depth of 1 foot.
B24.5-5	Near eastern wall of central area at a depth of 5 feet. Sample used for verification of TPH constituents.
Stockpile A-N	Stockpile sample.
Stockpile A-W	Stockpile sample.
Stockpile A-S	Stockpile sample.
J34-A7.5-11	Near northern wall at E Pine Street at a depth of 11 feet.
F5.5-B25-9	Near slanted wall in central area at a depth of 9 feet.
A7.5-10	Near northern wall at E Pine Street at a depth of 10 feet.
A26-B0.5-277	Near northern wall at E Pine Street at a depth of 12 feet.
A23.5-B0.5-277	Near northern wall at E Pine Street at a depth of 12 feet.
A18-B0.5-276	Near northern wall at E Pine Street at a depth of 13 feet.
A13.5-J33-275	Near northern wall at E Pine Street at a depth of 14 feet.

Table 3 - Analytical Results for Verification Soil Samples

Sample ID	Sampling Date	TPH-D in mg/kg	TPH-O in mg/kg	TPH-G in mg/kg	Lead in mg/kg	Cadmium in mg/kg	Benzene in µg/kg	Toluene in µg/kg	Ethylbenzene in µg/kg	Xylenes in µg/kg	VOCs in µg/kg
UST-SW-S	2/10/2014	810	50 U								
UST-SW-W	2/10/2014	150	50 U								
UST-SW-B	2/11/2014	220	50 U								
F1-E21-2	2/12/2014	20 U	50 U		31 J	1.0 U					
VEF7-E20-2 (c)	2/12/2014	20 U	50 U								
F3-B25.5-3	2/13/2014				50	1.0 U					
E23-B25-11	2/13/2014	20 U	50 U		130 J	1.0 U					
F3-4	2/14/2014	20 U	50 U	5.0 U	7.2	1.0 U	20 U	50 U	50 U	50 U	
F5-5	2/14/2014	20 U	50 U	5.0 U	1.6	1.0 U	20 U	50 U	50 U	50 U	
F7-5	2/14/2014	20 U	50 U	5.0 U	3.4	1.0 U	20 U	50 U	50 U	50 U	
F8.5-3	2/14/2014	20 U	50 U	5.0 U	2.8	1.0 U	20 U	50 U	50 U	50 U	
F4-B22-5	2/18/2014	20 U	50 U	5.0 U	1.0 U	1.0 U	20 U	50 U	50 U	50 U	
UST-B-U2	2/20/2014	20 U	50 U								
UST-SW-E-U2	2/20/2014	20 U	50 U								
UST-SW-S-U2	2/20/2014	20 U	50 U								
B14.5-7	2/19/2014	20 U	50 U	5.0 U			20 U	50 U	50 U	50 U	
B15-A26-10	2/19/2014	830	50 U	5.0 U			20 U	50 U	50 U	50 U	
B18-A16-5	2/19/2014	20 U	50 U								
B16.5-A7-7.5	2/19/2014	20 U	50 U								
B16.5-A11-10	2/19/2014	200	50 U								
B8-7 (c)	2/25/2014	20 U	50 U	5.0 U			20 U	50 U	50 U	50 U	
B22-E21-5	2/25/2014	20 U	50 U		1.0 U	1.0 U					
I13-B18-5	2/25/2014	20 U	50 U								
B24.5-5 (d)	2/25/2014	20 U	50 U			1.3					
B24.5-6a	3/6/2014				25	1.0 U					
B13-A16-7 (c)	3/6/2014	20 U	50 U								
B15-A21-9	3/7/2014	20 U	50 U								
B24-E13-9	3/7/2014				1.6	1.0 U					
F4-B23-9	3/10/2014				1.0 U	1.0 U					
TB1-F3-30	3/13/2014	110	50 U	5.0 U			20 U	50 U	50 U	50 U	
F6-12	3/13/2014	20 U	50 U	5.0 U			20 U	50 U	50 U	50 U	
E27-B27-15	3/14/2014	20 U	50 U	5.0 U			20 U	50 U	50 U	50 U	
B23.5-E23-15	3/14/2014	20 U	50 U								
F4-B22.5-15	3/14/2014	20 U	50 U	5.0 U			20 U	50 U	50 U	50 U	
F1-B19-12 (c)	3/14/2014	1100	50 U								
A3-J32-274	3/18/2014	20 U	50 U	5.0 U							

Table 3 - Analytical Results for Verification Soil Samples

Sample ID	Sampling Date	TPH-D in mg/kg	TPH-O in mg/kg	TPH-G in mg/kg	Lead in mg/kg	Cadmium in mg/kg	Benzene in µg/kg	Toluene in µg/kg	Ethylbenzene in µg/kg	Xylenes in µg/kg	VOCs in µg/kg
A7.5-10b	3/19/2014	20 U	50 U	5.0 U							
B2.5-278	3/19/2014	20 U	50 U	5.0 U							
B4-278	3/19/2014	20 U	50 U	57							
A27.5-277	3/18/2014	20 U	50 U	5.0 U							Detected (b)
A23.5-277	3/18/2014	20 U	50 U	5.0 U							Detected (b)
A18-276	3/18/2014	20 U	50 U	11							
A10-B2-272	3/20/2014	20 U	50 U	5.0 U							
A19-B2-272	3/20/2014	20 U	50 U	5.0 U							
E29-B26-268	3/26/2014	160	50 U	5.0 U							
F5.5-B24-268	3/26/2014	140	50 U	5.0 U							
E17-B18-270 (c)	3/26/2014	20 U	50 U								
E17-B21.5-269	3/26/2014	20 U	50 U								
F2-B19-270 (e)	3/28/2014	20 U	50 U								
F6.5-B19-272	3/28/2014	20 U	50 U								
F2-B23.5-272	3/28/2014	20 U	50 U	5.0 U							
B15-A21-263	4/1/2014	20 U	50 U								
A27.5-B1-264	4/3/2014	20 U	50 U	5.0 U							
F2.5-B22.5-262	4/4/2014	20 U	50 U	5.0 U							
B26-E25-262	4/4/2014	20 U	50 U	5.0 U							
F2-B24-264	4/4/2014	20 U	50 U	5.0 U							
E28-B26.5-264	4/7/2014	20 U	50 U	5.0 U							
F5-B25-264	4/7/2014	560	430	51							
F3-B25.5-260	4/7/2014	20 U	50 U	5.0 U							
F3.5-264a	4/8/2014	1300	740	11							
F6.5-B24.5-264	4/7/2014	20 U	50 U	5.0 U							

Table 3 - Analytical Results for Verification Soil Samples

Sample ID	Sampling Date	TPH-D in mg/kg	TPH-O in mg/kg	TPH-G in mg/kg	Lead in mg/kg	Cadmium in mg/kg	Benzene in µg/kg	Toluene in µg/kg	Ethylbenzene in µg/kg	Xylenes in µg/kg	VOCs in µg/kg
B24.5-E29-254	4/9/2014	20 U	50 U								
B24.5-F2-249	4/18/2014	20 U	50 U								
MTCA Method A Cleanup Level		**2000**	**2000**	**30/100 (a)**	**250**	**2**	**30**	**7000**	**6000**	**9000**	

Notes:
TPH-D = Diesel-range petroleum hydrocarbons
TPH-O = Heavy oil-range petroleum hydrocarbons
TPH-G = Gasoline-range petroleum hydrocarbons
VOCs = Volatile organic compounds
U = Not detected at reporting limit indicated
J = Estimated value
(a) 30 mg/kg when benzene present/100 mg/kg without benzene.
(b) Some VOCs were detected, but were below respective MTCA Method A soil cleanup levels (see Table A-2).
(c) Verification sample collected when soils exhibited petroleum-like odors during mass excavation.
(d) Verification sample for TPH and cadmium only. Lead was detected exceeding MTCA Method A cleanup levels (see Table 2).
Lead-impacted soil was overexcavated with sample B25.5-6a as the verfication sample.
(e) Verification sample collected as a bottom sample for the 5,000-gallon diesel UST removal effort.

Table 4 - Summary of Soil Disposal Tonnage to Subtitle D Landfill

Disposal Date	Tonnage	Disposal Facility
2/10/2014	35.60	Waste Management
2/10/2014	27.03	Waste Management
2/11/2014	31.66	Waste Management
2/11/2014	32.82	Waste Management
2/11/2014	34.17	Waste Management
2/11/2014	30.81	Waste Management
2/11/2014	31.54	Waste Management
2/11/2014	32.94	Waste Management
2/12/2014	33.02	Waste Management
2/12/2014	32.21	Waste Management
2/12/2014	33.57	Waste Management
2/12/2014	31.71	Waste Management
2/12/2014	34.18	Waste Management
2/13/2014	33.73	Waste Management
2/13/2014	32.83	Waste Management
2/13/2014	33.49	Waste Management
2/13/2014	32.23	Waste Management
2/13/2014	32.48	Waste Management
2/13/2014	36.72	Waste Management
2/14/2014	34.96	Waste Management
2/14/2014	35.54	Waste Management
2/14/2014	34.92	Waste Management
2/14/2014	34.64	Waste Management
2/14/2014	30.15	Waste Management
2/14/2014	28.82	Waste Management
2/14/2014	32.68	Waste Management
2/14/2014	30.77	Waste Management
2/14/2014	29.39	Waste Management
2/14/2014	28.84	Waste Management
2/14/2014	29.57	Waste Management
2/14/2014	30.96	Waste Management
2/14/2014	31.31	Waste Management
2/18/2014	30.95	Waste Management
2/18/2014	31.92	Waste Management
2/18/2014	32.46	Waste Management
2/18/2014	31.83	Waste Management
2/18/2014	31.85	Waste Management
2/18/2014	30.10	Waste Management
2/19/2014	32.84	Waste Management
2/19/2014	30.78	Waste Management
2/19/2014	32.79	Waste Management
2/19/2014	33.46	Waste Management
2/19/2014	32.90	Waste Management
2/19/2014	33.76	Waste Management
2/19/2014	29.77	Waste Management
2/19/2014	31.11	Waste Management
2/19/2014	30.41	Waste Management
2/19/2014	31.07	Waste Management
2/26/2014	31.77	Waste Management
2/26/2014	31.29	Waste Management
2/26/2014	30.46	Waste Management
2/26/2014	31.44	Waste Management
2/26/2014	31.10	Waste Management
2/26/2014	31.51	Waste Management
2/19/2014	29.25	Waste Management
2/19/2014	28.89	Waste Management
2/20/2014	35.72	Waste Management
2/20/2014	33.03	Waste Management
2/20/2014	37.39	Waste Management
2/20/2014	31.29	Waste Management
2/20/2014	33.54	Waste Management
2/20/2014	32.32	Waste Management
2/20/2014	33.16	Waste Management
2/20/2014	35.40	Waste Management
2/20/2014	35.83	Waste Management
2/20/2014	32.77	Waste Management
2/20/2014	34.29	Waste Management
2/20/2014	33.89	Waste Management
2/20/2014	34.13	Waste Management
2/20/2014	34.66	Waste Management
2/21/2014	31.14	Waste Management
2/21/2014	32.13	Waste Management
2/21/2014	33.45	Waste Management
2/24/2014	30.80	Waste Management
2/24/2014	30.63	Waste Management
2/24/2014	32.03	Waste Management
2/24/2014	34.17	Waste Management
2/24/2014	33.33	Waste Management
2/24/2014	34.34	Waste Management
2/24/2014	34.16	Waste Management
2/24/2014	31.91	Waste Management
2/24/2014	34.06	Waste Management
2/24/2014	32.31	Waste Management
2/24/2014	31.02	Waste Management
2/24/2014	32.97	Waste Management
2/25/2014	30.32	Waste Management
2/25/2014	33.49	Waste Management
2/25/2014	34.22	Waste Management
2/25/2014	31.36	Waste Management
2/25/2014	33.63	Waste Management
2/25/2014	31.99	Waste Management
2/25/2014	34.56	Waste Management
2/25/2014	33.45	Waste Management
2/26/2014	36.64	Waste Management
2/26/2014	32.52	Waste Management
2/26/2014	38.57	Waste Management
2/26/2014	35.23	Waste Management
2/26/2014	35.63	Waste Management
2/26/2014	34.28	Waste Management
2/26/2014	34.78	Waste Management
2/26/2014	35.20	Waste Management
2/26/2014	32.08	Waste Management
3/6/2014	32.61	Republic Services
3/6/2014	31.17	Republic Services
3/6/2014	31.25	Waste Management
3/6/2014	32.90	Waste Management
3/6/2014	30.91	Waste Management
3/6/2014	31.98	Waste Management

Table 4 - Summary of Soil Disposal Tonnage to Subtitle D Landfill

Disposal Date	Tonnage	Disposal Facility
3/4/2014	31.27	Republic Services
3/4/2014	32.24	Republic Services
3/4/2014	33.16	Republic Services
3/4/2014	29.42	Republic Services
3/4/2014	32.78	Republic Services
3/4/2014	29.00	Republic Services
3/4/2014	30.87	Republic Services
3/4/2014	29.52	Republic Services
3/4/2014	31.46	Republic Services
3/4/2014	30.19	Republic Services
3/4/2014	32.69	Republic Services
3/4/2014	34.23	Republic Services
3/4/2014	32.46	Republic Services
3/4/2014	31.17	Waste Management
3/4/2014	33.91	Waste Management
3/4/2014	31.98	Waste Management
3/4/2014	31.29	Waste Management
3/4/2014	30.93	Waste Management
3/4/2014	31.08	Waste Management
3/4/2014	31.78	Waste Management
3/4/2014	32.14	Waste Management
3/4/2014	31.43	Waste Management
3/4/2014	32.03	Waste Management
3/4/2014	31.06	Waste Management
3/4/2014	32.01	Waste Management
3/4/2014	33.59	Waste Management
3/4/2014	32.60	Waste Management
3/4/2014	33.72	Waste Management
3/4/2014	32.12	Waste Management
3/4/2014	33.73	Waste Management
3/6/2014	31.08	Republic Services
3/6/2014	30.38	Republic Services
3/6/2014	30.84	Republic Services
3/6/2014	32.98	Republic Services
3/6/2014	27.23	Republic Services
3/6/2014	31.52	Republic Services
3/6/2014	32.32	Republic Services
3/6/2014	37.47	Republic Services
3/6/2014	34.05	Republic Services
3/6/2014	32.90	Republic Services
3/6/2014	32.35	Republic Services
3/6/2014	32.68	Republic Services
3/7/2014	32.00	Republic Services
3/7/2014	33.79	Republic Services
3/6/2014	29.47	Waste Management
3/6/2014	31.94	Waste Management
3/6/2014	31.11	Waste Management
3/6/2014	32.95	Waste Management
3/6/2014	31.16	Waste Management
3/6/2014	31.27	Waste Management
3/6/2014	31.49	Waste Management
3/6/2014	33.05	Waste Management
3/6/2014	32.58	Waste Management
3/6/2014	32.39	Waste Management
3/6/2014	33.80	Waste Management
3/6/2014	32.09	Waste Management
3/6/2014	32.27	Waste Management
3/6/2014	32.72	Waste Management
3/6/2014	32.66	Waste Management
3/6/2014	33.42	Waste Management
3/6/2014	31.40	Waste Management
3/6/2014	33.89	Waste Management
3/6/2014	33.22	Waste Management
3/6/2014	33.89	Waste Management
3/6/2014	34.63	Waste Management
3/6/2014	33.92	Waste Management
3/6/2014	34.40	Waste Management
3/6/2014	32.52	Waste Management
3/6/2014	31.71	Waste Management
3/6/2014	32.93	Waste Management
3/6/2014	32.05	Waste Management
3/6/2014	33.00	Waste Management
3/6/2014	30.42	Waste Management
3/6/2014	34.38	Waste Management
3/6/2014	34.04	Waste Management
3/7/2014	32.64	Republic Services
3/7/2014	31.43	Republic Services
3/7/2014	29.44	Republic Services
3/7/2014	32.02	Republic Services
3/7/2014	33.93	Republic Services
3/7/2014	31.69	Republic Services
3/7/2014	31.53	Republic Services
3/7/2014	35.88	Republic Services
3/7/2014	31.21	Republic Services
3/7/2014	31.01	Republic Services
3/7/2014	30.68	Republic Services
3/10/2014	30.08	Republic Services
3/10/2014	31.77	Republic Services

Table 4 - Summary of Soil Disposal Tonnage to Subtitle D Landfill

Disposal Date	Tonnage	Disposal Facility
3/7/2014	34.76	Republic Services
3/7/2014	32.99	Republic Services
3/7/2014	34.14	Waste Management
3/7/2014	33.81	Waste Management
3/7/2014	31.49	Waste Management
3/7/2014	33.30	Waste Management
3/7/2014	32.59	Waste Management
3/7/2014	33.08	Waste Management
3/7/2014	31.30	Waste Management
3/7/2014	30.46	Waste Management
3/7/2014	29.73	Waste Management
3/7/2014	30.87	Waste Management
3/7/2014	30.14	Waste Management
3/7/2014	31.90	Waste Management
3/7/2014	31.38	Waste Management
3/7/2014	31.10	Waste Management
3/7/2014	31.22	Waste Management
3/7/2014	32.69	Waste Management
3/7/2014	33.51	Waste Management
3/7/2014	31.40	Waste Management
3/7/2014	34.07	Waste Management
3/7/2014	30.23	Waste Management
3/7/2014	34.14	Waste Management
3/7/2014	32.27	Waste Management
3/7/2014	31.54	Waste Management
3/7/2014	30.81	Waste Management
3/7/2014	31.29	Waste Management
3/7/2014	32.94	Waste Management
3/7/2014	32.01	Waste Management
3/7/2014	32.92	Waste Management
3/7/2014	33.39	Waste Management
3/7/2014	34.29	Waste Management
3/7/2014	33.79	Waste Management
3/7/2014	32.75	Waste Management
3/7/2014	32.11	Waste Management
3/7/2014	33.21	Waste Management
3/10/2014	35.20	Republic Services
3/10/2014	31.76	Republic Services
3/10/2014	32.87	Republic Services
3/10/2014	27.68	Republic Services
3/10/2014	29.87	Republic Services
3/10/2014	29.74	Republic Services
3/10/2014	30.80	Republic Services
3/10/2014	31.85	Republic Services
3/10/2014	29.22	Republic Services
3/10/2014	28.38	Republic Services
3/13/2014	32.65	Republic Services
3/13/2014	32.84	Republic Services
3/13/2014	32.41	Republic Services
3/10/2014	34.34	Republic Services
3/10/2014	28.98	Republic Services
3/10/2014	32.79	Republic Services
3/10/2014	32.61	Republic Services
3/10/2014	30.19	Republic Services
3/10/2014	32.26	Republic Services
3/10/2014	32.74	Republic Services
3/10/2014	36.25	Republic Services
3/10/2014	35.96	Republic Services
3/10/2014	34.58	Republic Services
3/10/2014	29.83	Republic Services
3/10/2014	32.51	Republic Services
3/10/2014	32.59	Republic Services
3/10/2014	30.19	Republic Services
3/10/2014	36.03	Waste Management
3/10/2014	33.67	Waste Management
3/10/2014	33.38	Waste Management
3/10/2014	34.24	Waste Management
3/10/2014	29.95	Waste Management
3/10/2014	29.94	Waste Management
3/10/2014	28.78	Waste Management
3/10/2014	31.96	Waste Management
3/10/2014	32.88	Waste Management
3/10/2014	32.40	Waste Management
3/10/2014	32.98	Waste Management
3/10/2014	32.95	Waste Management
3/10/2014	32.03	Waste Management
3/10/2014	35.78	Waste Management
3/10/2014	32.03	Waste Management
3/10/2014	33.83	Waste Management
3/10/2014	33.18	Waste Management
3/10/2014	32.76	Waste Management
3/10/2014	32.20	Waste Management
3/10/2014	32.42	Waste Management
3/10/2014	31.10	Waste Management
3/10/2014	33.36	Waste Management
3/10/2014	33.29	Waste Management
3/10/2014	34.35	Waste Management
3/10/2014	35.36	Waste Management
3/10/2014	39.11	Waste Management
3/10/2014	37.82	Waste Management
3/10/2014	33.59	Waste Management
3/10/2014	32.11	Waste Management
3/10/2014	35.73	Waste Management
3/13/2014	33.58	Republic Services
3/13/2014	33.67	Republic Services
3/14/2014	28.99	Waste Management
3/14/2014	26.53	Waste Management
3/14/2014	32.25	Waste Management

Table 4 - Summary of Soil Disposal Tonnage to Subtitle D Landfill

Disposal Date	Tonnage	Disposal Facility
3/13/2014	33.90	Republic Services
3/13/2014	31.24	Republic Services
3/13/2014	31.09	Republic Services
3/13/2014	32.44	Republic Services
3/13/2014	33.81	Republic Services
3/13/2014	32.25	Republic Services
3/13/2014	32.07	Republic Services
3/13/2014	32.58	Republic Services
3/13/2014	33.01	Republic Services
3/13/2014	32.65	Republic Services
3/13/2014	33.37	Waste Management
3/13/2014	34.80	Waste Management
3/13/2014	34.57	Waste Management
3/13/2014	32.69	Waste Management
3/13/2014	35.91	Waste Management
3/13/2014	31.48	Waste Management
3/13/2014	31.99	Waste Management
3/13/2014	33.74	Waste Management
3/13/2014	33.97	Waste Management
3/13/2014	32.63	Waste Management
3/13/2014	34.92	Waste Management
3/13/2014	35.07	Waste Management
3/13/2014	35.60	Waste Management
3/13/2014	36.38	Waste Management
3/13/2014	33.83	Waste Management
3/13/2014	34.07	Waste Management
3/14/2014	33.76	Republic Services
3/14/2014	34.93	Republic Services
3/14/2014	33.90	Republic Services
3/14/2014	29.45	Republic Services
3/14/2014	28.27	Republic Services
3/14/2014	27.90	Republic Services
3/14/2014	29.42	Republic Services
3/14/2014	28.90	Republic Services
3/14/2014	31.31	Republic Services
3/14/2014	32.13	Republic Services
3/14/2014	30.58	Republic Services
3/14/2014	29.63	Republic Services
3/14/2014	35.43	Waste Management
3/14/2014	35.26	Waste Management
3/14/2014	35.16	Waste Management
3/14/2014	34.69	Waste Management
3/14/2014	30.75	Waste Management
3/14/2014	27.80	Waste Management
3/14/2014	28.60	Waste Management
3/24/2014	32.26	Waste Management
3/24/2014	30.64	Waste Management
3/24/2014	33.01	Waste Management
3/24/2014	32.84	Waste Management
3/14/2014	31.00	Waste Management
3/14/2014	30.78	Waste Management
3/14/2014	30.82	Waste Management
3/17/2014	34.91	Waste Management
3/17/2014	34.54	Waste Management
3/17/2014	37.28	Waste Management
3/17/2014	32.59	Waste Management
3/17/2014	32.38	Waste Management
3/17/2014	34.16	Waste Management
3/17/2014	33.87	Waste Management
3/17/2014	32.30	Waste Management
3/17/2014	35.93	Waste Management
3/17/2014	37.26	Waste Management
3/17/2014	36.74	Waste Management
3/17/2014	36.94	Waste Management
3/17/2014	37.33	Waste Management
3/17/2014	34.49	Waste Management
3/17/2014	35.18	Waste Management
3/17/2014	36.83	Waste Management
3/21/2014	29.89	Waste Management
3/21/2014	33.70	Waste Management
3/21/2014	31.88	Waste Management
3/21/2014	33.34	Waste Management
3/21/2014	30.77	Waste Management
3/21/2014	33.31	Waste Management
3/21/2014	32.62	Waste Management
3/21/2014	31.84	Waste Management
3/21/2014	31.89	Waste Management
3/21/2014	32.72	Waste Management
3/21/2014	34.41	Waste Management
3/21/2014	30.53	Waste Management
3/21/2014	31.26	Waste Management
3/21/2014	31.20	Waste Management
3/24/2014	31.18	Republic Services
3/24/2014	30.82	Republic Services
3/24/2014	33.24	Republic Services
3/24/2014	31.51	Republic Services
3/24/2014	30.69	Republic Services
3/24/2014	32.22	Republic Services
3/24/2014	32.17	Republic Services
3/24/2014	30.97	Republic Services
3/24/2014	33.96	Republic Services
3/24/2014	32.65	Republic Services
3/24/2014	31.65	Republic Services
3/24/2014	32.70	Republic Services
3/25/2014	33.12	Waste Management
3/25/2014	33.15	Waste Management
3/25/2014	30.92	Waste Management
3/25/2014	32.26	Waste Management

Table 4 - Summary of Soil Disposal Tonnage to Subtitle D Landfill

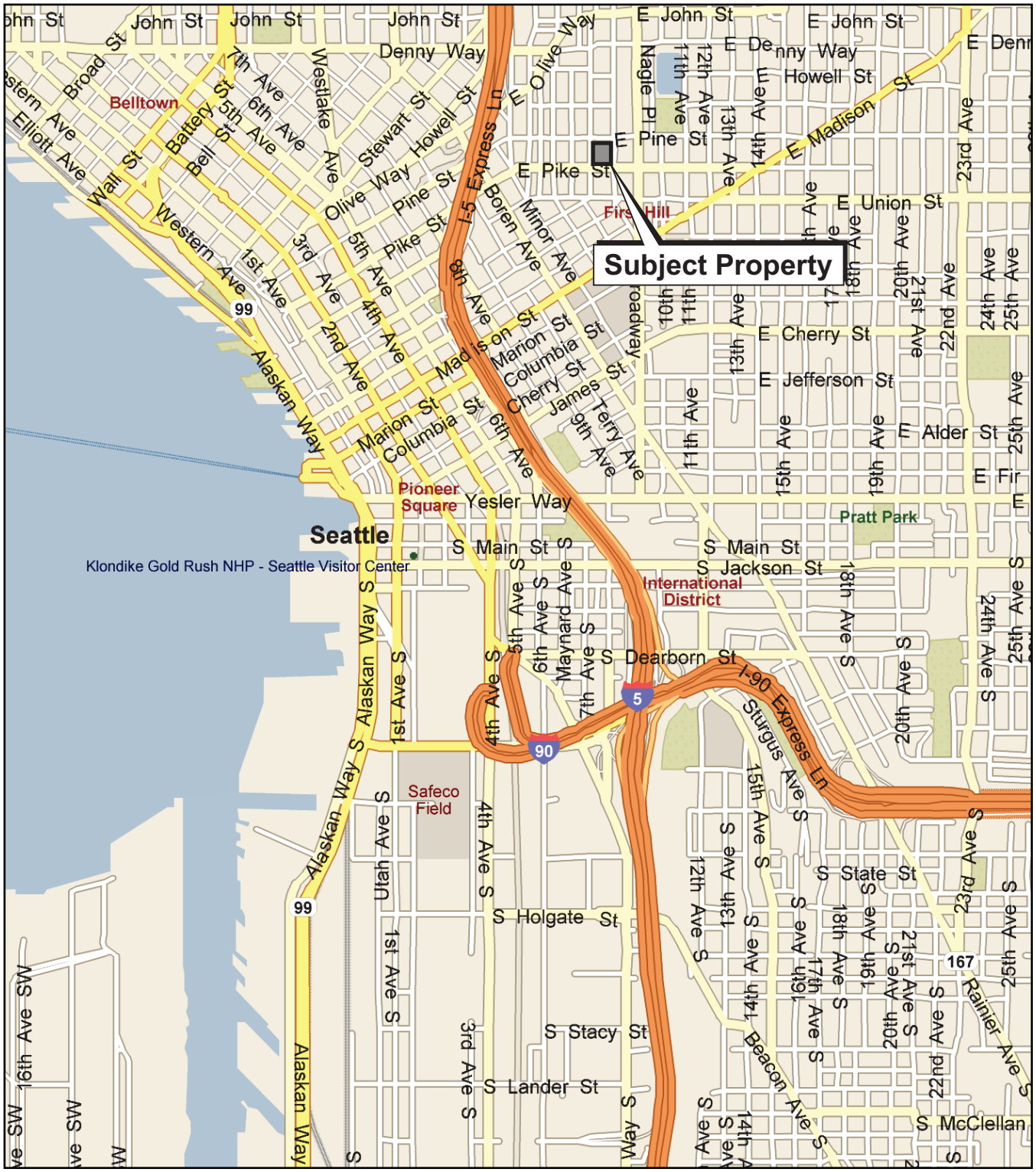
Disposal Date	Tonnage	Disposal Facility
3/24/2014	32.37	Waste Management
3/24/2014	31.48	Waste Management
3/24/2014	30.60	Waste Management
3/24/2014	31.76	Waste Management
3/24/2014	31.80	Waste Management
3/24/2014	33.07	Waste Management
3/24/2014	30.76	Waste Management
3/24/2014	31.14	Waste Management
3/24/2014	32.12	Waste Management
3/24/2014	33.97	Waste Management
3/24/2014	30.32	Waste Management
3/24/2014	30.48	Waste Management
3/24/2014	31.19	Waste Management
3/24/2014	29.72	Waste Management
3/24/2014	32.36	Waste Management
3/25/2014	30.82	Republic Services
3/25/2014	33.30	Republic Services
3/25/2014	32.21	Republic Services
3/25/2014	29.45	Republic Services
3/25/2014	32.49	Republic Services
3/25/2014	30.13	Republic Services
3/25/2014	31.64	Republic Services
3/25/2014	29.72	Republic Services
3/25/2014	32.94	Republic Services
3/25/2014	33.00	Waste Management
3/25/2014	33.29	Waste Management
3/25/2014	31.47	Waste Management
3/25/2014	31.60	Waste Management
3/25/2014	32.39	Waste Management
3/25/2014	30.98	Waste Management
3/25/2014	31.97	Waste Management
3/25/2014	32.51	Waste Management
3/25/2014	32.45	Waste Management
3/25/2014	32.92	Waste Management
3/25/2014	32.40	Waste Management
3/25/2014	30.74	Waste Management
3/25/2014	31.89	Waste Management
3/25/2014	31.60	Waste Management
3/25/2014	30.84	Waste Management
3/25/2014	31.15	Waste Management
3/25/2014	32.68	Waste Management
3/25/2014	32.99	Waste Management
3/25/2014	31.29	Waste Management
3/25/2014	31.86	Waste Management
4/1/2014	33.46	Waste Management
4/1/2014	33.53	Waste Management
4/1/2014	31.55	Waste Management
4/1/2014	32.79	Waste Management
4/1/2014	31.62	Waste Management
3/25/2014	31.79	Waste Management
3/25/2014	33.69	Waste Management
3/26/2014	30.79	Republic Services
3/26/2014	32.84	Republic Services
3/26/2014	32.59	Republic Services
3/26/2014	32.55	Republic Services
3/26/2014	32.03	Republic Services
3/26/2014	30.81	Republic Services
3/26/2014	32.94	Republic Services
3/26/2014	29.96	Republic Services
3/26/2014	34.28	Republic Services
3/26/2014	33.61	Republic Services
3/26/2014	32.90	Republic Services
3/26/2014	32.08	Republic Services
3/26/2014	34.60	Republic Services
3/26/2014	34.85	Waste Management
3/26/2014	33.70	Waste Management
3/26/2014	33.26	Waste Management
3/26/2014	32.55	Waste Management
3/26/2014	32.77	Waste Management
3/26/2014	33.89	Waste Management
3/26/2014	33.98	Waste Management
3/26/2014	34.10	Waste Management
3/26/2014	34.34	Waste Management
3/26/2014	33.83	Waste Management
3/26/2014	34.38	Waste Management
3/26/2014	33.58	Waste Management
3/26/2014	34.09	Waste Management
3/26/2014	34.78	Waste Management
3/26/2014	32.35	Waste Management
3/26/2014	31.56	Waste Management
3/26/2014	33.70	Waste Management
3/26/2014	33.74	Waste Management
3/26/2014	33.08	Waste Management
3/26/2014	30.84	Waste Management
3/26/2014	32.74	Waste Management
3/26/2014	32.88	Waste Management
3/26/2014	34.26	Waste Management
3/26/2014	34.18	Waste Management
3/26/2014	34.23	Waste Management
4/1/2014	31.97	Waste Management
4/1/2014	31.82	Waste Management
4/1/2014	30.91	Waste Management
4/1/2014	31.58	Waste Management
4/1/2014	33.65	Republic Services
4/1/2014	31.34	Republic Services
4/1/2014	33.33	Republic Services
4/1/2014	31.39	Republic Services
4/1/2014	31.51	Republic Services

Table 4 - Summary of Soil Disposal Tonnage to Subtitle D Landfill

Disposal Date	Tonnage	Disposal Facility
4/1/2014	34.08	Waste Management
4/1/2014	33.59	Waste Management
4/1/2014	34.59	Waste Management
4/1/2014	32.56	Waste Management
4/1/2014	31.63	Waste Management
4/1/2014	31.75	Waste Management
4/1/2014	33.20	Waste Management
4/1/2014	33.15	Waste Management
4/1/2014	32.97	Waste Management
4/1/2014	31.09	Waste Management
4/1/2014	30.74	Waste Management
4/1/2014	32.63	Waste Management
4/1/2014	32.58	Waste Management
4/1/2014	31.64	Waste Management
4/1/2014	31.99	Waste Management
4/1/2014	33.22	Waste Management
4/1/2014	31.87	Waste Management
4/1/2014	33.20	Waste Management
4/1/2014	32.47	Waste Management
4/1/2014	33.59	Waste Management
4/1/2014	33.16	Waste Management
4/1/2014	33.66	Waste Management
4/1/2014	30.47	Waste Management
4/1/2014	34.04	Waste Management
4/1/2014	33.36	Waste Management
4/1/2014	32.57	Waste Management
4/1/2014	33.01	Waste Management
4/1/2014	32.85	Waste Management
4/1/2014	31.90	Waste Management
4/1/2014	31.94	Republic Services
4/1/2014	33.16	Republic Services
4/1/2014	33.55	Republic Services
4/1/2014	33.32	Republic Services
4/1/2014	30.80	Republic Services
4/1/2014	33.00	Republic Services
4/1/2014	31.74	Republic Services
4/1/2014	33.84	Republic Services
4/1/2014	34.82	Republic Services
4/1/2014	32.20	Republic Services
4/1/2014	32.17	Republic Services
4/1/2014	32.87	Republic Services
4/1/2014	32.63	Republic Services
4/1/2014	32.08	Republic Services
4/7/2014	32.62	Waste Management
4/7/2014	33.80	Waste Management
4/7/2014	32.36	Waste Management
4/7/2014	33.86	Waste Management
4/7/2014	34.45	Republic Services
4/7/2014	32.96	Republic Services
4/1/2014	32.04	Republic Services
4/1/2014	32.58	Republic Services
4/1/2014	32.73	Republic Services
4/1/2014	33.58	Republic Services
4/1/2014	33.70	Republic Services
4/1/2014	32.92	Republic Services
4/1/2014	33.89	Republic Services
4/1/2014	33.94	Republic Services
4/1/2014	36.59	Republic Services
4/7/2014	34.41	Waste Management
4/7/2014	33.32	Waste Management
4/7/2014	34.44	Waste Management
4/7/2014	34.12	Waste Management
4/7/2014	31.84	Waste Management
4/7/2014	31.93	Waste Management
4/7/2014	30.71	Waste Management
4/7/2014	31.22	Waste Management
4/7/2014	30.96	Waste Management
4/7/2014	31.14	Waste Management
4/7/2014	31.45	Waste Management
4/7/2014	32.04	Waste Management
4/7/2014	30.73	Waste Management
4/7/2014	30.97	Waste Management
4/7/2014	32.24	Waste Management
4/7/2014	31.33	Waste Management
4/7/2014	33.46	Waste Management
4/7/2014	32.23	Waste Management
4/7/2014	31.63	Waste Management
4/7/2014	32.25	Waste Management
4/7/2014	33.38	Waste Management
4/7/2014	33.03	Waste Management
4/7/2014	34.04	Waste Management
4/7/2014	33.16	Waste Management
4/7/2014	33.07	Waste Management
4/7/2014	31.75	Waste Management
4/7/2014	33.89	Waste Management
4/7/2014	30.50	Waste Management
4/7/2014	32.83	Waste Management
4/7/2014	32.67	Waste Management
4/7/2014	33.36	Waste Management
4/7/2014	33.34	Waste Management
4/7/2014	33.03	Waste Management
4/7/2014	32.77	Waste Management
5/2/2014	33.51	Waste Management
5/2/2014	32.77	Waste Management
5/2/2014	32.70	Waste Management
5/2/2014	33.09	Waste Management
5/2/2014	32.45	Waste Management
5/2/2014	33.82	Waste Management

Table 4 - Summary of Soil Disposal Tonnage to Subtitle D Landfill

Disposal Date	Tonnage	Disposal Facility
4/7/2014	31.27	Republic Services
4/7/2014	33.45	Republic Services
4/7/2014	30.08	Republic Services
4/7/2014	32.41	Republic Services
4/7/2014	33.27	Republic Services
4/7/2014	32.68	Republic Services
4/7/2014	33.85	Republic Services
4/7/2014	32.29	Republic Services
4/7/2014	33.16	Republic Services
4/7/2014	34.04	Republic Services
4/7/2014	34.75	Republic Services
4/7/2014	35.75	Republic Services
4/14/2014	32.20	Republic Services
4/14/2014	32.53	Republic Services
4/14/2014	31.92	Republic Services
4/14/2014	32.72	Republic Services
4/14/2014	32.16	Republic Services
4/14/2014	32.37	Republic Services
4/14/2014	33.02	Republic Services
4/14/2014	31.39	Republic Services
4/14/2014	32.58	Republic Services
4/14/2014	31.36	Republic Services
4/14/2014	33.97	Waste Management
4/14/2014	33.13	Waste Management
4/14/2014	30.57	Waste Management
4/14/2014	31.55	Waste Management
4/14/2014	33.73	Waste Management
4/14/2014	31.51	Waste Management
4/14/2014	31.94	Waste Management
4/14/2014	31.59	Waste Management
4/14/2014	33.69	Waste Management
4/14/2014	31.83	Waste Management
4/14/2014	32.46	Waste Management
4/14/2014	30.76	Waste Management
4/14/2014	32.80	Waste Management
4/14/2014	31.05	Waste Management
4/14/2014	32.32	Waste Management
4/14/2014	29.63	Waste Management
4/14/2014	32.44	Waste Management
4/14/2014	30.45	Waste Management
4/14/2014	30.03	Waste Management
5/2/2014	33.73	Waste Management
5/2/2014	33.94	Waste Management
5/2/2014	32.50	Waste Management
5/2/2014	34.59	Waste Management
Total	**20,589**	**Tons**



Note: Base map prepared from Microsoft Streets and Trips 2002.

Pike Motorworks Building
Seattle, Washington

Vicinity Map

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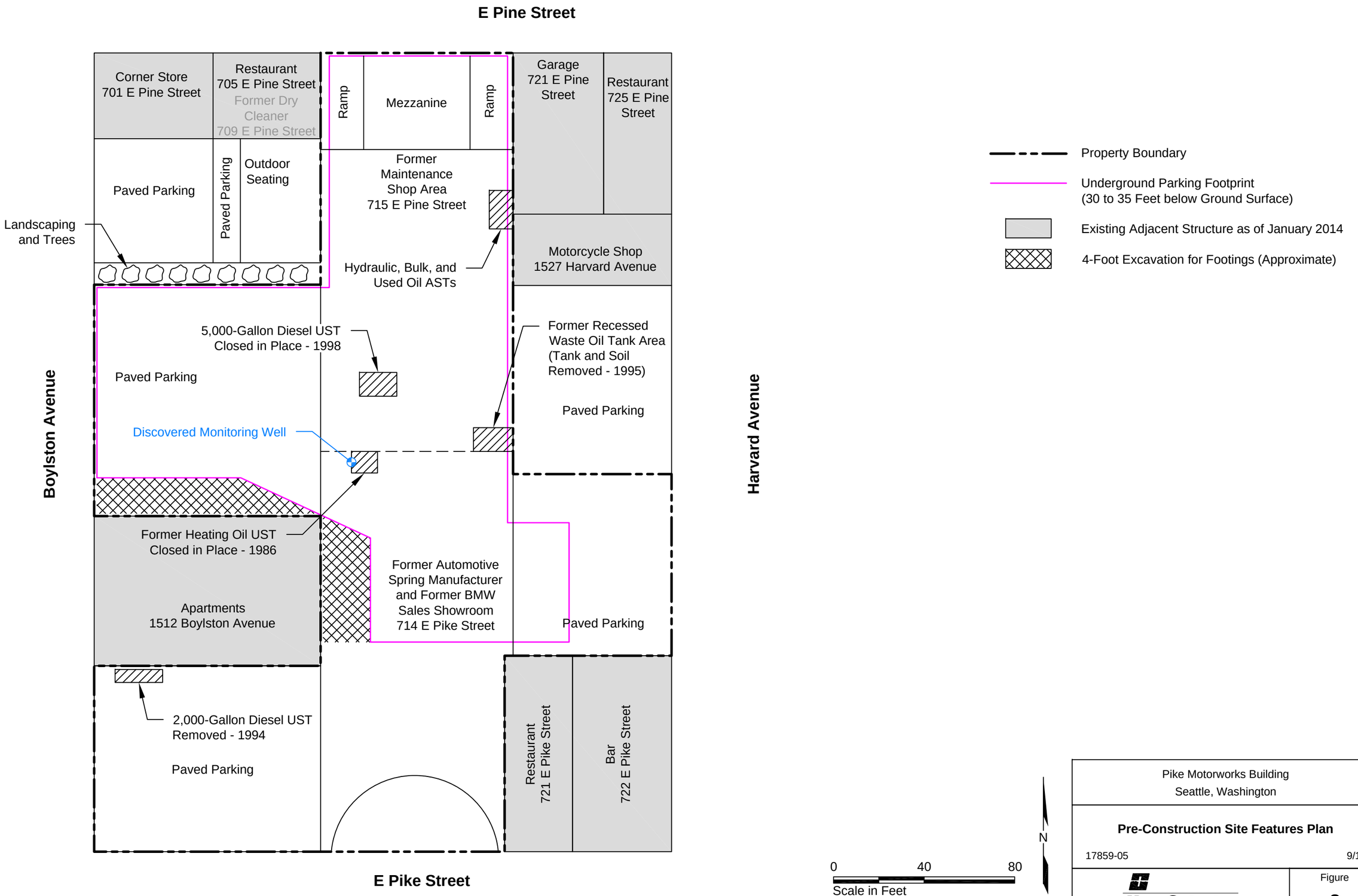
Figure
1

EAL 09/19/14 1785905-AA.cdr



Pike Motorworks Building
Seattle, Washington

Pre-Construction Site Features Plan

17859-05 9/14

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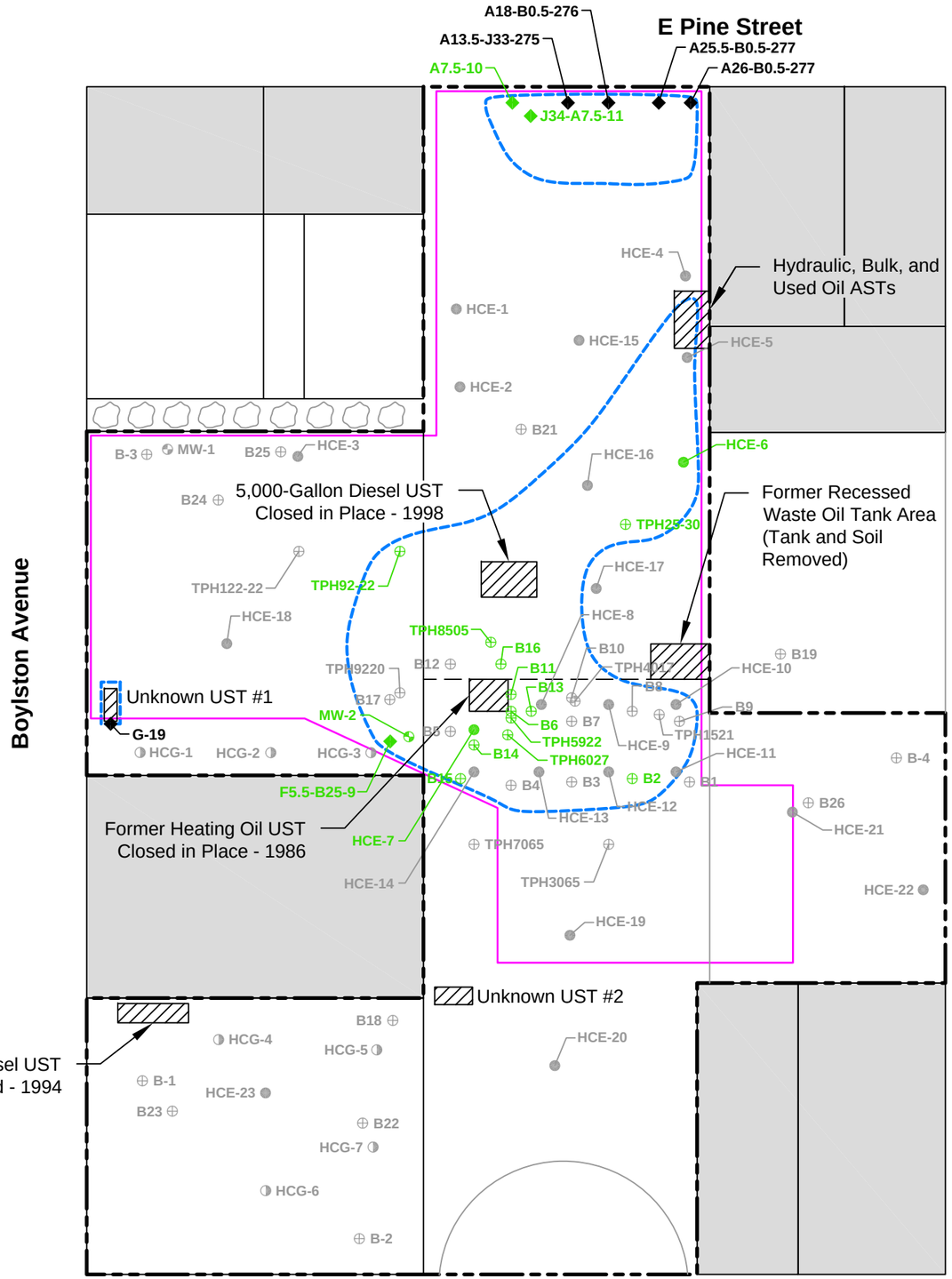
Figure
2

EAL 09/19/14 1785905-008.dwg



Exploration or Sample Location and Number

- A7.5-10 ◆ Construction Characterization Sample (2014)
- HCE-1 ● Environmental Boring (2012)
- MW-1 Monitoring Well (2012)
- HCG-4 Geotechnical Push Probes (2012)
- B23 ⊕ Historical Boring (Approximate Location)
- GREEN Sample Location with TPH Concentrations Exceeding MTCA Method A Cleanup Levels

- Property Boundary
- Underground Parking Footprint (30 to 35 Feet below Ground Surface)
- Existing Adjacent Structure as of January 2014
- Approximate Limits of Excavation with TPH-Impacted Soils Removed

Note: **TPH impacts include soil with TPH concentrations above MTCA Method A cleanup levels, low detections of TPH, and field indicators.**

0 40 80
Scale in Feet

N

Pike Motorworks Building
Seattle, Washington

TPH Characterization Sample Location Plan

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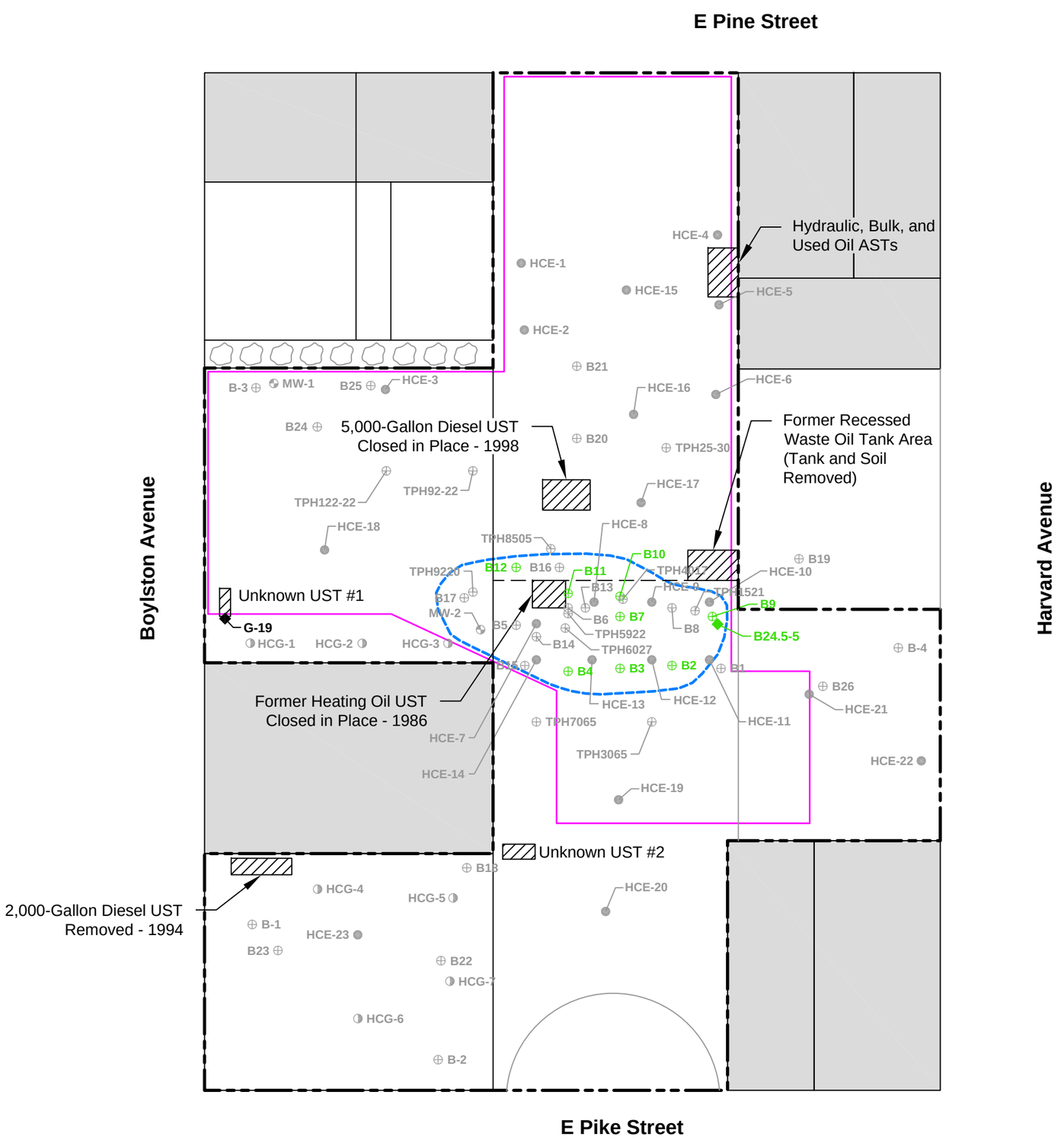
Figure **3**

EAL 09/19/14 1785905-009.dwg



Exploration or Sample Location and Number

- G-19 ◆ Construction Characterization Sample (2014)
- HCE-1 ● Environmental Boring (2012)
- MW-1 ◍ Monitoring Well (2012)
- HCG-4 ◑ Geotechnical Push Probes (2012)
- B23 ⊕ Historical Boring (Approximate Location)
- GREEN Sample Location with TPH Concentrations Exceeding MTCA Method A Cleanup Levels

- Property Boundary
- Underground Parking Footprint (30 to 35 Feet below Ground Surface)
- Existing Adjacent Structure as of January 2014
- Approximate Limits of Excavation with Metal-Impacted Soils Removed

Note: **Metal impacts include soil with lead and/or cadmium concentrations exceeding MTCA Method A cleanup levels and Dangerous Waste Criteria exceedances for Lead.**

0 40 80
Scale in Feet

N

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Seattle, Washington

Metal Characterization Sample Location Plan

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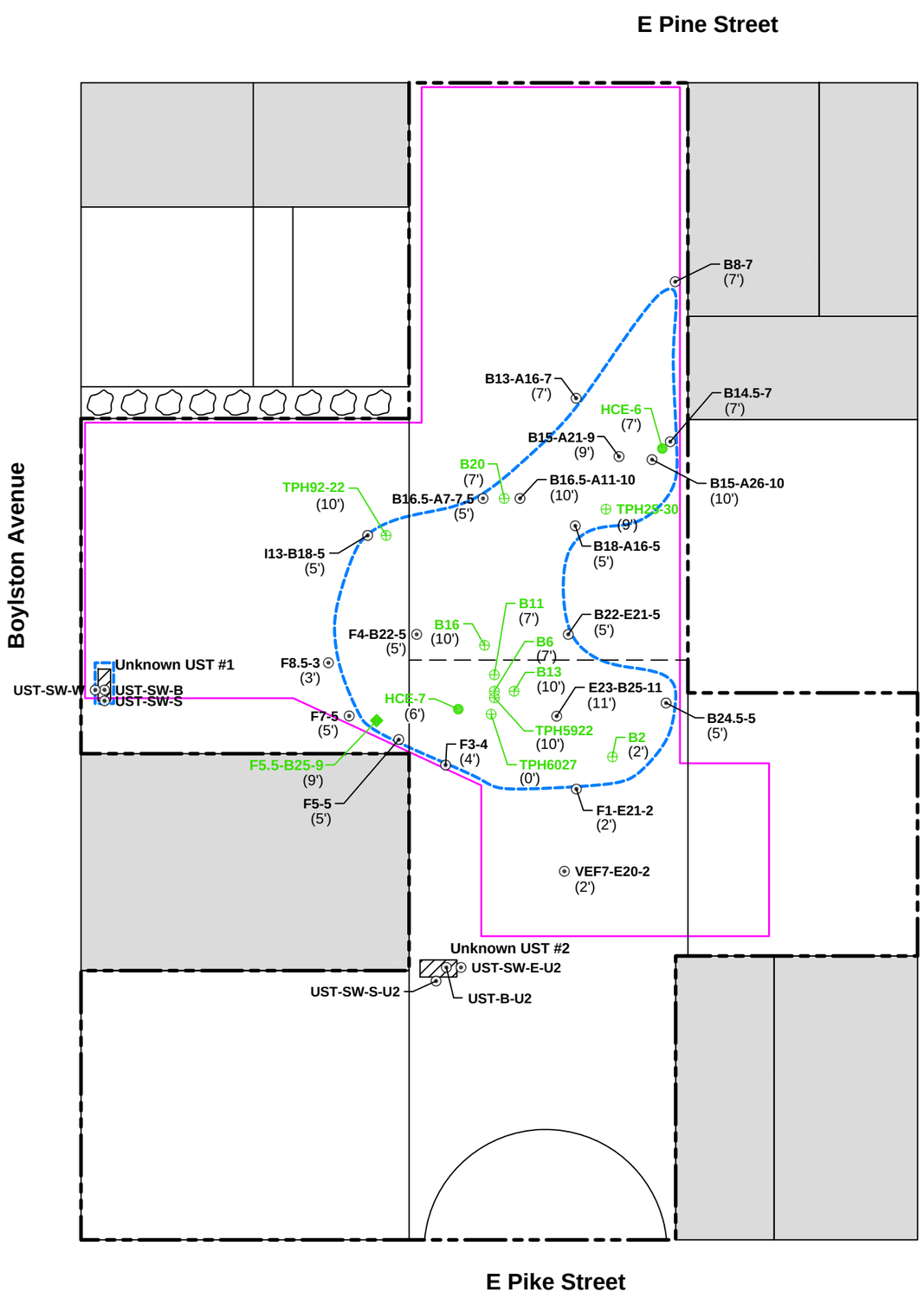
Figure 4

EAL 09/19/14 1785905-010.dwg



Exploration or Sample Location and Number

- B24.5-5 (5') — Verification Sample Location and Number, Sample Depth
- F5.5-B25-9 (9') — Construction Characterization Sample (2014), TPH Exceedance Depth
- HCE-7 (6') — Environmental Boring (2012), TPH Exceedance Depth
- B11 (7') — Historical Boring (Approximate Location), TPH Exceedance Depth

- Property Boundary
- Underground Parking Footprint (30 to 35 Feet below Ground Surface)
- Existing Adjacent Structure as of January 2014
- Approximate Limits of Excavation with TPH-Impacted Soils Removed

Note: **TPH impacts include soil with TPH concentrations exceeding MTCA Method A cleanup levels, low detections of TPH, and field indicators.**

0 40 80
Scale in Feet

N

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TPH Verification Sample Location Plan From 0 to 10 Feet

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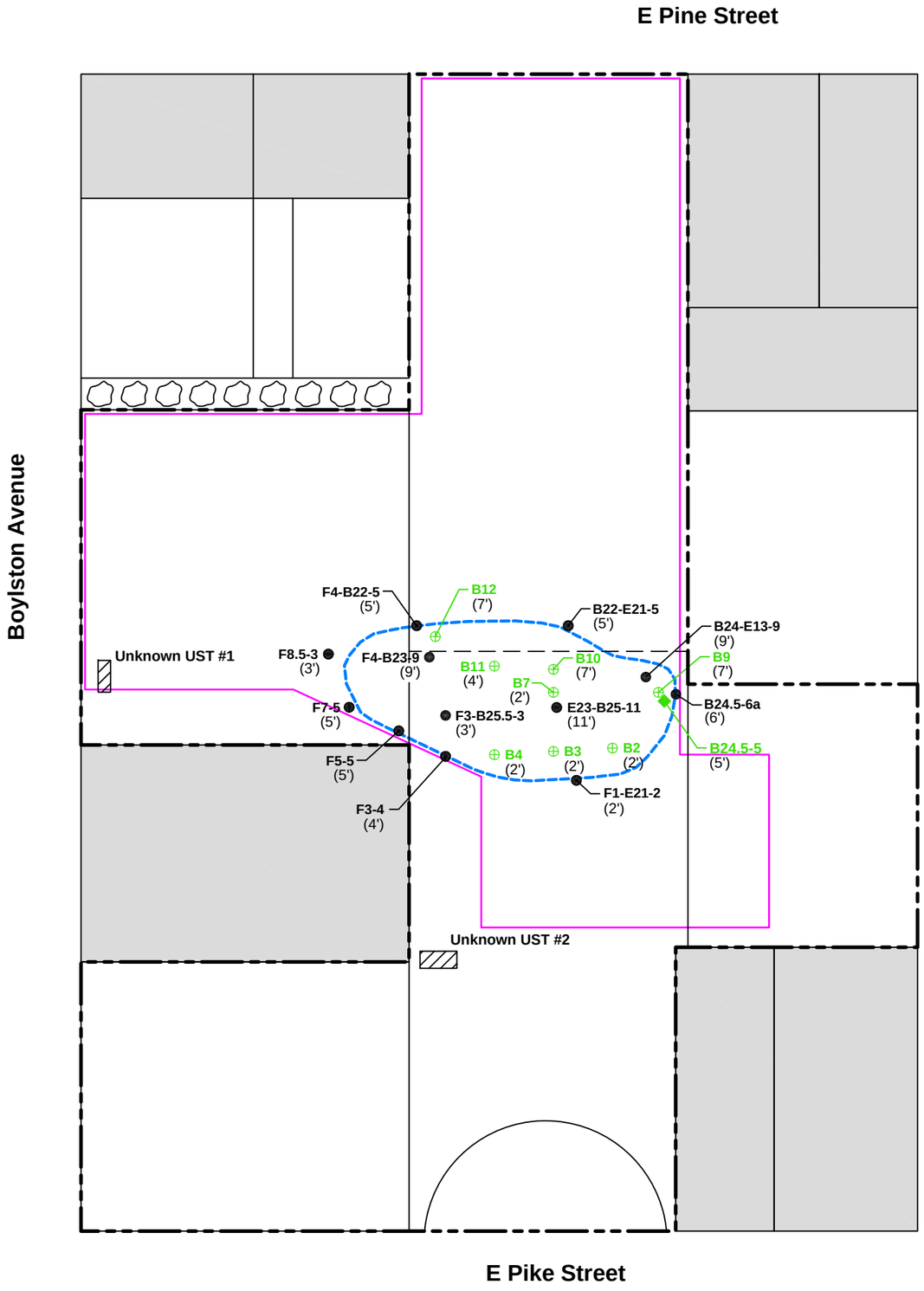
Figure **5a**

EAL 09/19/14 1785905-005.dwg



Exploration or Sample Location and Number

F4-B22-5 ● Verification Sample Location and Number
(5') Sample Depth

B24.5-5 ◆ Construction Characterization Sample (2014)
(5') Metal Exceedance Depth

B4 ⊕ Historical Boring (Approximate Location)
(2') Metal Exceedance Depth

Property Boundary

Underground Parking Footprint
(30 to 35 Feet below Ground Surface)

Existing Adjacent Structure as of January 2014

Approximate Limits of Excavation with
Metal-Impacted Soils Removed

Note: **Metal impacts include soil with lead and cadmium concentrations exceeding MTCA Method A cleanup levels and Dangerous Waste Criteria exceedances for Lead.**

0 40 80
Scale in Feet

N

Pike Motorworks Building
Seattle, Washington

Metal Verification Sample Location Plan
From 0 to 10 Feet

17859-05 9/14

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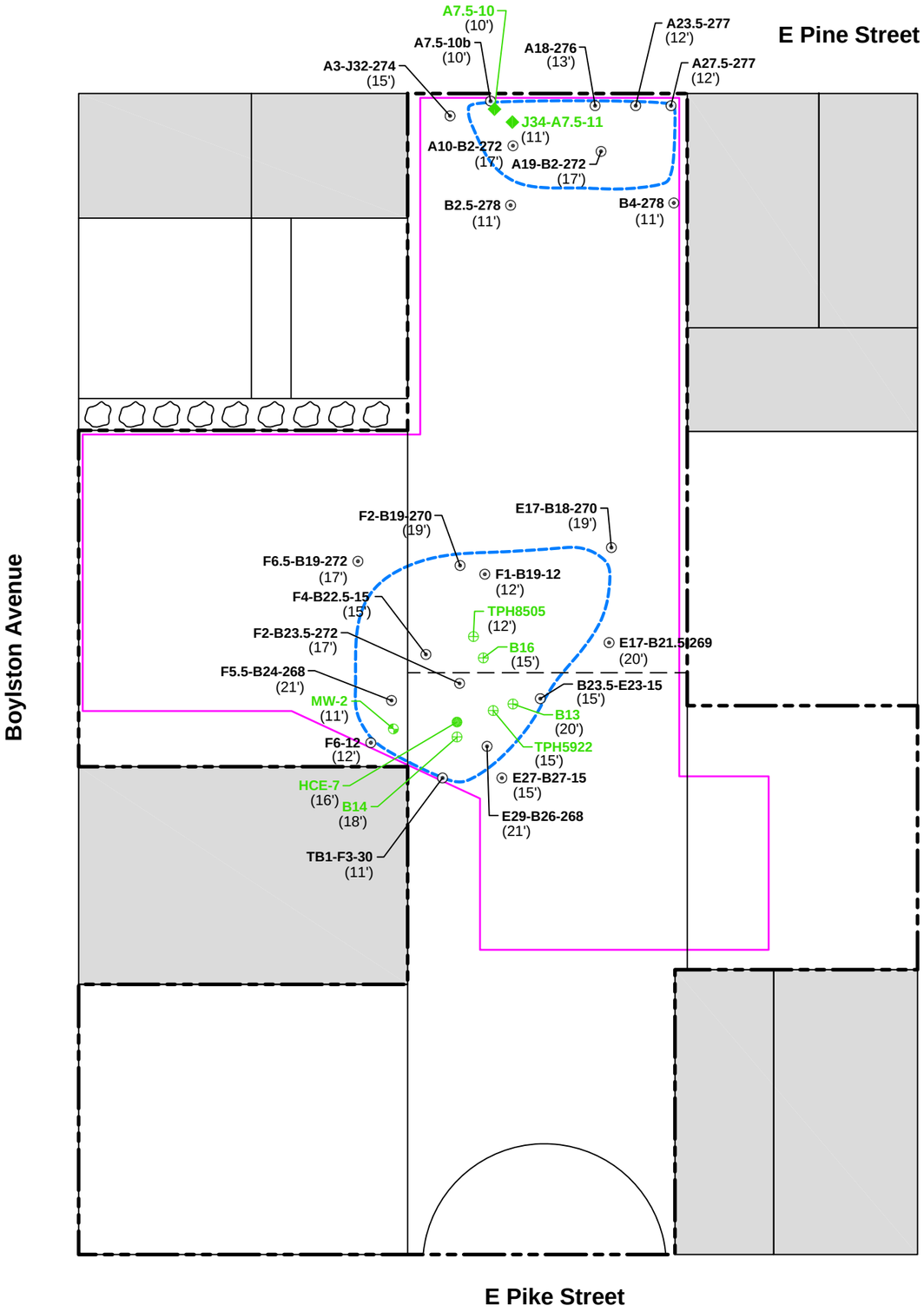
Figure
5b

EAL 09/19/14 1785905-011.dwg



Exploration or Sample Location and Number

B2.5-278 (11') — Verification Sample Location and Number, Sample Depth

A7.5-10 (10') — Construction Characterization Sample (2014), TPH Exceedance Depth

HCE-7 (16') — Environmental Boring (2012), TPH Exceedance Depth

MW-2 (11') — Monitoring Well (2012), TPH Exceedance Depth

B16 (15') — Historical Boring (Approximate Location), TPH Exceedance Depth

Property Boundary

Underground Parking Footprint (30 to 35 Feet below Ground Surface)

Existing Adjacent Structure as of January 2014

Approximate Limits of Excavation with TPH-Impacted Soils Removed

Note: **TPH impacts include soil with TPH concentrations above MTCA Method A cleanup levels, low detections of TPH, and field indicators.**

0 40 80

Scale in Feet

N

Pike Motorworks Building
Seattle, Washington

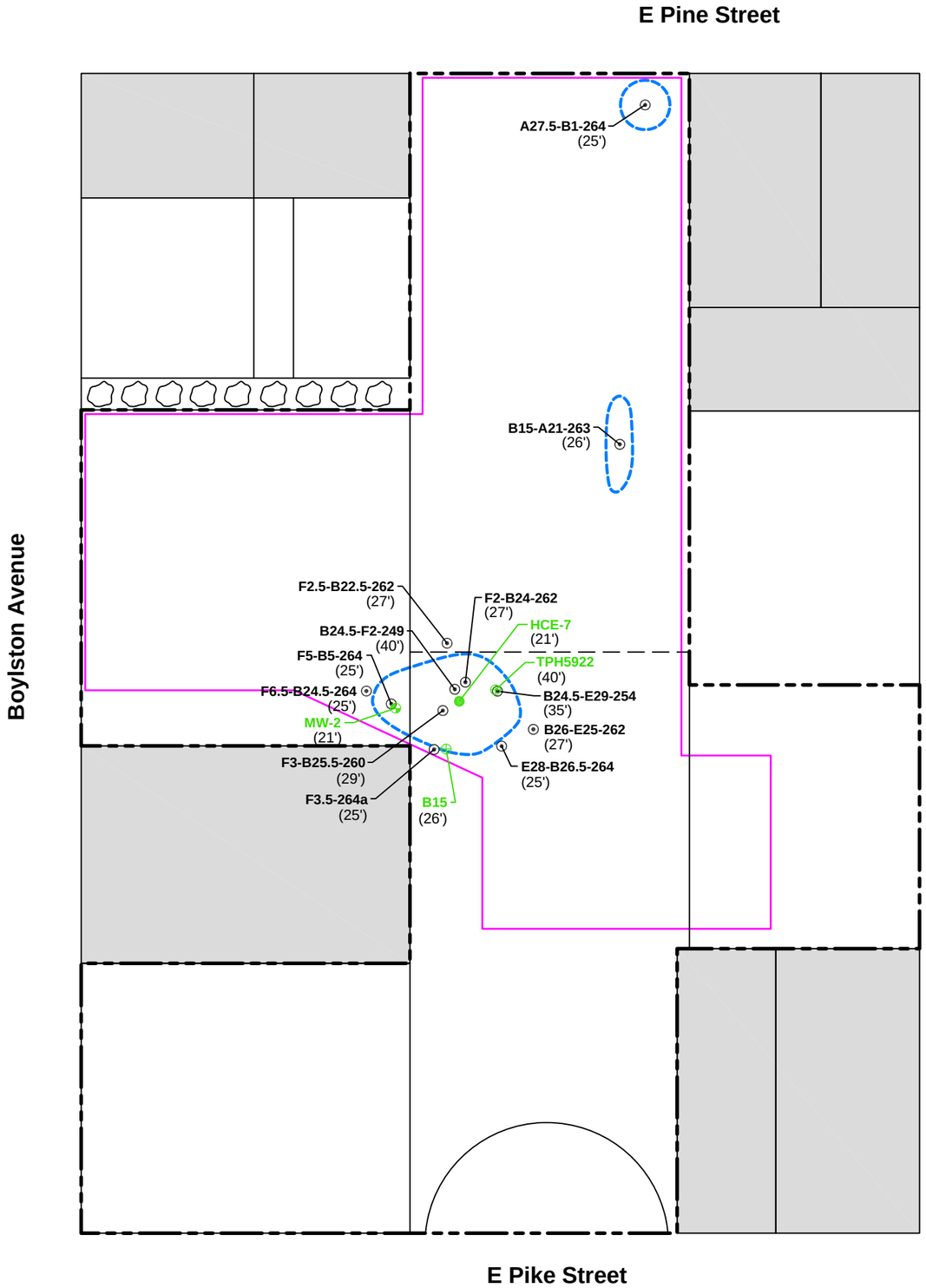
TPH Verification Sample Location Plan From 10 to 20 Feet

17859-05 9/14

HARTCROWSER

Figure 6

EAL 09/19/14 1785905-006.dwg



Exploration or Sample Location and Number

A27.5-B1-264 (25') — Verification Sample Location and Number, Sample Depth

HCE-7 (21') — Environmental Boring (2012), TPH Exceedance Depth

MW-2 (21') — Monitoring Well (2012), TPH Exceedance Depth

B15 (26') — Historical Boring (Approximate Location), TPH Exceedance Depth

Property Boundary

Underground Parking Footprint (30 to 35 Feet below Ground Surface)

Existing Adjacent Structure as of January 2014

Approximate Limits of Excavation with TPH-Impacted Soils Removed

Note: **TPH impacts include soil with TPH concentrations above MTCA Method A cleanup levels, low detections of TPH, and field indicators.**

0 40 80

Scale in Feet

N

Pike Motorworks Building
Seattle, Washington

TPH Verification Sample Location Plan From 20 to 40 Feet

17859-05 9/14

HARTCROWSER

Figure 7

EAL 09/19/14 1785905-007.dwg

APPENDIX A
Chemical Data Quality Review and Laboratory Reports
Advanced Analytical Laboratory, Inc.

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for double-sided printing.

APPENDIX A
CHEMICAL DATA QUALITY REVIEW AND LABORATORY REPORTS

Chemical Data Quality Review

Between January 17, 2014, and April 18, 2014, 105 soil samples and one water sample were collected. The samples were submitted to Advanced Analytical Laboratory (AAL) of Redmond, Washington for chemical analysis. The sample results were reported as Laboratory Job Nos. B40117-3, B40204-2, B40210-1, B40211-4, B40213-5, B40214-6, B40217-1, B40219-1, B40220-2, B40225-1, B40307-7, B40309-1, B40310-3, B40315-1, B40318-4, B40319-2, B40319-2a, B40324-2, B40329-1, B40407-5, B40408-1, and B40422-1.

Selected soil samples were analyzed for one or more of the following:

- Diesel- and lube oil-range petroleum hydrocarbons by Washington State Department of Ecology (Ecology) method NWTPH-Dx;
- Gasoline by Ecology method NWTPH-Gx;
- Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8021B;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Total metals (arsenic, cadmium, chromium, and lead) by EPA Method 7010;
- Total mercury by EPA Method 7471; and
- Percent moisture by Standard Method 2540B.

The water sample was analyzed for the following:

- Diesel- and lube oil-range petroleum hydrocarbons by Ecology Method NWTPH-Dx;
- Gasoline by Ecology method NWTPH-Gx;
- Volatile organic compounds (VOCs) by EPA Method 8260B;
- Total metals (arsenic, cadmium, chromium, copper, lead, nickel and zinc) by EPA Method 7010; and
- Total mercury by EPA Method 7470.

Quality assurance/quality control (QA/QC) reviews of laboratory procedures were performed on an ongoing basis by the laboratory. Hart Crowser performed the data review using laboratory quality control results summary sheets to determine if they met data quality objectives for the project. The following criteria were evaluated in the standard data quality review process:

- Holding times;
- Method blanks;
- Surrogate recoveries;
- Matrix spike/matrix spike duplicate (MS/MSD) recoveries;
- Laboratory control sample (LCS) recoveries;

- Laboratory duplicate relative percent differences (RPD); and
- Reporting limits (RL).

The data were determined to be acceptable for use with minor qualification (Tables A-1 and A-2). Full laboratory results are presented at the end of this appendix. Results of the data review follows.

Sample Receiving Notes

B40214-6: Sample F1-B25-9 was placed on hold and not analyzed. On February 19, 2014, analysis for NWTPH-Dx was requested on sample E23-B25-11.

B40217-1: On February 17, 2014, the requested analysis for TCLP lead on sample Rubble #1 was cancelled.

B40219-1: Sample F4-B22-2.5 was placed on hold and not analyzed.

B40307-7: Samples B22.5-7, B23.5-6, B8.5-A16-7, B12.5-A16-10, B25.5-6, B25.5-E14-10, and B24.5-6b were placed on hold and not analyzed.

B40310-3: Sample A7.5-10 was placed on hold. On March 13, 2014, analysis for NWTPH-Gx/BTEX was requested on samples J34-A7.5-11 and A7.5-10.

B40315-1: Sample F2-B21.5-14 was placed on hold and not analyzed.

B40319-2/B40319-2a: Samples J30-12, A27.5-12, J34-274, A2-274, A7.5-276, A7.5-J32.5-276, A13.5-275, A13.5-J33-275, SNA13-R3, B4-A25.5-271, and B4-A23.5-276 were placed on hold. On April 1, 2014, analyses for NWTPH-Dx and NWTPH-Gx were requested on sample A13.5-J33-275. The sample results were reported as B40319-2a.

B40324-2: Sample A7.5-B3-272 was placed on hold and not analyzed.

B40329-1: Samples F5.5-274a, F7.5-274, F5.5-274b, F2.5-268, E26-B1-268, and E25-B24.5-270 were placed on hold and not analyzed.

B40407-5: The Chain of Custody was not relinquished by the sampler.

B40408-1: Samples F6.5-B24.5-264, F1-B26-260, and F3.5-264b were placed on hold. On April 9, 2014, analyses for NWTPH-Dx and NWTPH-Gx were requested on sample F6.5-B24.5-264. A second Chain of Custody was added to the report on April 10, 2014.

B40422-1: Sample F4.5-256 was placed on hold and not analyzed.

Soil Samples

Diesel and Lube Oil by NWTPH-Dx

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. Laboratory duplicate RPDs were within control limits or not applicable when the results for the sample and duplicate were less than five times the reporting limit.

Surrogate recoveries were within laboratory control limits with the following exceptions:

- Samples F5.5-B25-9 and F5.5-B25-9 Dup: The recoveries of the surrogates were not reported due to coelution with sample peaks. High levels of diesel were present in the samples, and no results were qualified.

- Samples F1-B19-12 and F1-B19-12 Dup: The recoveries of the surrogate o-Terphenyl were not reported due to coelution with sample peaks. The recoveries of the surrogate Fluorobiphenyl were within control limits. High levels of diesel were present in the samples, and no results were qualified.

- Samples F5-B25-264, F3.5-264a, and F3.5-264a Dup: The recoveries of the surrogate o-Terphenyl were not reported due to coelution with sample peaks. The recoveries of the surrogate Fluorobiphenyl were within control limits. Diesel was present in the samples, and no results were qualified.

Gasoline by NWTPH-Gx

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. Laboratory duplicate RPDs were not applicable as the results for the sample and duplicate were less than five times the reporting limit.

Surrogate recoveries were within laboratory control limits with the following exceptions:

- Sample A23.5-B0.5-277: The recovery of the surrogate Trifluorotoluene was not reported due to coelution with sample peaks. The recovery of the surrogate Bromofluorobenzene was within control limits. As one surrogate recovery was within control, sample results were not qualified.

Method discrepancy: No batch quality control samples were provided for the samples analyzed on April 9, 2014. The method blank and sample surrogate recoveries were within control, and the associated sample results were not qualified.

BTEX by EPA 8021B

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. Surrogate, LCS, and MS recoveries were within laboratory control limits. Laboratory duplicate RPDs were not applicable as the results for the sample and duplicate were less than five times the reporting limit.

VOCs by EPA 8260B

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. Surrogate, LCS, and MS recoveries were within laboratory control limits.

Total Metals by EPA 7010

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected.

LCS recoveries were within method and laboratory control limits with the following exceptions:

- LCS-020514: The recoveries for arsenic, cadmium, and lead were within laboratory control limits, but fell below method control limits. The results for those elements were qualified as estimated (J) in sample G-19.
- LCS-021414: The recoveries for arsenic and lead fell within laboratory control limits, but fell below method control limits. The results for those elements were qualified as estimated (J) in sample F1-E21-2.
- LCS-021714: The recovery for chromium fell within laboratory control limits, but exceeded method control limits. The samples F3-4, F5-5, F7-5, F8.5-3, Rubble #1, F3-B25.5-3 and E23-B25-11, were evaluated and qualified as follows:
    - Samples F3-4, F5-5, F7-5, F8.5-3, F3-B25.5-3 and E23-B25-11: The results for chromium fell below the reporting limit, and were not qualified.
    - Sample Rubble #1: The result for chromium was qualified as estimated (J).

MS recoveries were within method and laboratory control limits with the following exceptions:

- G-19 MS: The recovery for lead was not reported due to matrix interferences. The result for lead in sample G-19 was qualified as estimated (J).
- F1-E21-2 MS: The recovery for lead fell within the laboratory control limits, but exceeded the method control limits. The result for lead in sample F1-E21-2 was qualified as estimated (J).

Laboratory duplicate RPDs were within method and laboratory control limits or not applicable when the results for the sample and duplicate were less than five times the reporting limit, with the following exceptions:

- E23-B25-11 Dup: The RPD for lead fell within the laboratory control limits, but exceeded the method control limits. The result for lead in sample E23-B25-11 was qualified as estimated (J).
- Rubble #1 Dup: The RPD for chromium fell within the laboratory control limits, but exceeded the method control limits. The result for chromium in sample Rubble #1 was qualified as estimated (J).

Total Mercury by EPA 7471

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. LCS recoveries were within method and laboratory control limits. Laboratory duplicate RPDs were not applicable, as the sample and duplicate results fell below the reporting limit.

MS recoveries were within method and laboratory control limits with the following exceptions:

- E23-B25-11 MS: The recovery for mercury fell within the laboratory control limits, but fell below the method control limits. The result for mercury in sample E23-B25-11 was qualified as estimated (J).

- Rubble #1 MS: The recovery for mercury fell within the laboratory control limits, but fell below the method control limits. The result for mercury in sample Rubble #1 was qualified as estimated (J).

Percent Moisture

The required holding times were met. Reporting limits were acceptable.

Water Sample

Diesel and Lube Oil by NWTPH-Dx

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. Surrogate recoveries were within laboratory control limits. Laboratory duplicate RPDs were not applicable as the results for the sample and duplicate were below the reporting limit.

Gasoline by NWTPH-Gx

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. Surrogate recoveries were within laboratory control limits. Laboratory duplicate RPDs were not applicable as the results for the sample and duplicate were below the reporting limit.

VOCs by EPA 8260B

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. Surrogate, LCS, and MS recoveries were within laboratory control limits.

Total Metals by EPA 7010

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. LCS recoveries were within method and laboratory control limits. Laboratory duplicate RPDs were not applicable as the results for the sample and duplicate were below the reporting limit.

MS recoveries were within laboratory and method control limits with the following exception:

- MW-2 MS: The MS recovery for arsenic fell within the laboratory control limits, but exceeded the method control limits. The associated samples were below the reporting limit for arsenic, and no results were qualified.

Total Mercury by EPA 7470

The required holding times were met. Reporting limits were acceptable. No method blank contamination was detected. LCS and MS recoveries were within method and laboratory control limits. Laboratory duplicate RPDs were not applicable, as the sample and duplicate results fell below the reporting limit.

Laboratory Reports
Advanced Analytical Laboratory, Inc.

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APPENDIX B
UST Decommissioning Documents

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for double-sided printing.

Your
Seattle
Fire Department

Monday 2/10/14
10:00 AM

RECEIVED
FEB 06 2014
PERMIT SECTION

APPLICATION FOR TEMPORARY PERMIT

Code 7908 — **Commercial Tank Removal/Decommissioning**

Permit Fee: $208.00

Date Issued: 2/10/14

Tank(s) must be removed from site same day as permit issued!

TO BE COMPLETED BY PERMIT APPLICANT (PLEASE PRINT)

FIRM NAME Kleen Environmental

MAILING ADDRESS 5955 W. Marginal Way SW SUITE

CITY Seattle STATE WA ZIP 98106

OPERATION ADDRESS 715 East Pine St

CONTACT PERSON Peter Hogan PHONE NUMBER (206) 910-8559

Number of Tank(s): 1 Tank Size(s): ? ☐ Aboveground tank

Product(s) Previously Contained: Diesel / Heating Oil ☑ Underground tank

☑ Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents)

☐ Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and unknowns)

Hot work being conducted?: ☑ No ☐ Yes (If yes, a separate hot work permit is required)

Please include a check made payable to the CITY OF SEATTLE with this application.

Permit applications may be submitted in person weekdays from 8:00 a.m. to 4:30 p.m., or mailed to:

Seattle Fire Department
Fire Marshal's Office—Permits
220 Third Avenue South, Second Floor
Seattle, WA 98104-2608

Permits@Seattle.Gov
Permit processing: (206) 386-1450
www.seattle.gov/fire

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.

TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION

No hot work is allowed on a tank system prior to issuance of this Fire Department permit!

Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. **THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED**

Special permit conditions: NO TRIPLE RINSE CERT TO FOLLOW. ~~THE~~ TW TANK IS DESTROYED AND FILLED W/WATER AND GRAVEL.
My ICC Certification # 807356

FMO USE	*APPROVED BY*	
Receipt No.: 5-227176	Inspector: T. Williams	SFD ID#: 1481
Check No.: 0000315020614	Name of Marine Chemist: Craig T.	Certificate #: 688-46248
Application ID#: 95912	Date: 2/10/14	

(01/11)

SOUND TESTING, INC
P.O. BOX 16204 SEATTLE, WA 98116
(206) 932-0206 FAX (206) 937-3848

MARINE CHEMIST CERTIFICATE

SERIAL № 46248

Survey Requested by: KLEEN ENVIRONMENTAL	Vessel Owner or Agent: KLEEN		Date: 10 FEB 14
Vessel: UST	Type of Vessel: UST	Specific Location of Vessel: EAST SIDE OF BOYLSTON BETWEEN PIKE & PINE	
Last Three (3) Loadings: PETROLEUM PRODUCTS X3	Tests Performed: VISUAL, O_2, LEL	Time Survey Completed: 1030 HRS	

UST

SAFE TO RIP THE TANK WITH THE EXCAVATOR

SAFE TO EXCAVATE

SAFE TO TRANSPORT

[O_2 = 20.9 ± 0.1%, LEL = 0 ± 1%, THC = 0 ± 10 ppm]

[METER: BW S/N SKIO7-005146 / CAL: 0600 - 10 FEB 14]

In the event of any physical or atmospheric changes adversely affecting the gas-free condition of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

QUALIFICATIONS: Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

STANDARD SAFETY DESIGNATIONS

SAFE FOR WORKERS Means that in the compartment or space so designated (a) the oxygen content of the atmosphere is at least 19.5 percent by volume, and that, (b) toxic materials in the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate

NOT SAFE FOR WORKERS Means that in the compartment or space so designated, the requirements of Safe for Workers has not been met.

SAFE FOR HOT WORK: Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks, or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

NOT SAFE FOR HOT WORK Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met

CHEMIST'S ENDORSEMENT This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-6 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed _____ (Name) KLEEN (Company) 10 Feb 14 (Date) Signed Craig Hutton (Marine Chemist) 4688 (Certificate No.)

CRAIG 206-313-6933

VESSEL POSTING

This Memorandum is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. U15136

Carrier No:

MARINE VACUUM SERVICE INC.

Page _____ of _____

(Name of carrier) (SCAC)

Date 2-10-14

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee MARINE VACUUM SERVICE INC.
Street 1516 S. GRAHAM ST.
City SEATTLE State WA Zip Code 98108

FROM:
Shipper KLEEN ENVIRO
Street 715 Pine St.
City SEATTLE State WA Zip Code
24 hr. Emergency Contact Tel. No. 800-540-7491

Route

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
HT		NON-REGULATED ONLY WASTE WATER	<750	Gallon		

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of Item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO:
ADDRESS

COD Amt: $

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER
PER
DATE

CARRIER MARINE VACUUM SERVICE INC.
PER
DATE

3

Permanent post-office address of shipper.

Marine Vacuum Service, _Inc._

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

TANK DISPOSAL CERTIFICATE

DATE: February 21, 2014

CUSTOMER: KLEEN Environmental

OWNER: Pike Motor works Apartments
715 East Pike
Seattle WA 98109

Tank Size: Approximately 500 gallons

Last product: Petroleum (Bunker oil)

DATE DESTRUCTED: 2/10/14

Marine Vacuum Service Inc. certifies that the above mentioned Tank have been cleaned and disposed metal reclaiming in accordance with federal, state and local regulations by Marine Vacuum Service Inc.

Tom Myler

Marine Vacuum Service Inc. Representative

Request Monday 2/17 FRI. - 2/14/14 - 9:00

Your Seattle Fire Department

APPLICATION FOR TEMPORARY PERMIT

Code 7908 **Commercial Tank Removal/Decommissioning**

Permit Fee: $208.00

Date Issued: 2/14/14

Tank(s) must be removed from site on the same day as permit is issued!

TO BE COMPLETED BY PERMIT APPLICANT

FIRM NAME	KLEEN ENVIRONMENTAL		
MAILING ADDRESS	5955 W MARGINAL WAY	SUITE	
CITY	SEATTLE	STATE WA	ZIP 98106
JOBSITE ADDRESS	715 E. PINE ST		
CONTACT PERSON	PETER HOGAN	PHONE NUMBER	(206) 910-8559

Number of Tank(s): 1 Tank Size(s): 400 GAL ☐ Aboveground tank

Product(s) Previously Contained: HEATING OIL / NOW FULL OF SAND ☑ Underground tank

☑ Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents)

☐ Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and/or unknowns)

Hot work being conducted: ☑ No ☐ Yes (If yes, a separate hot work permit is required)

Permit applications may be submitted in person weekdays from 8:00 a.m. to 5:00 p.m., or mailed to:

Seattle Fire Department
Fire Marshal's Office – Permits
220 Third Ave S, 2nd Floor
Seattle, WA 98104-2608

To pay with a Visa or Master Card: Fax or email this application
THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT
Tel: (206) 386-1450 / Fax: (206) 386-1348
E-mail: permits@seattle.gov

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.
TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION
NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMIT!

Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. **THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED**

Special permit conditions: *Tank removal/decommissioning must be performed, or directly supervised, by an ICC certified individual (WAC 173-360-600)*

FMO USE:
Check No.: 00000355021314
Receipt No.: 5-227399
Application ID#: 95987

APPROVED BY:
Inspector: T. WILLIAMS SFD ID# 1481
Name of Marine Chemist CRAIG T. # 688 Certificate # 46250
Date: 2/14/14

(01/13)

SOUND TESTING, INC
P.O. BOX 16204 SEATTLE, WA 98116
(206) 932-0206 FAX (206) 937-3848

MARINE CHEMIST CERTIFICATE

SERIAL № 46250

KLEEN ENVIRONMENTAL (KE)	KE	14 FEB 14
Survey Requested by	Vessel Owner or Agent	Date
UST	UST	715 E PINE ST. SEATTLE, WA
Vessel	Type of Vessel	Specific Location of Vessel
(FUEL OIL) X 3	VISUAL, O_2, LEL, CO, H_2S, THC	0830 HRS
Last Three (3) Loadings	Tests Performed	Time Survey Completed

~ 500 gal UST

SAFE FOR EXCAVATION

SAFE FOR TRANSPORT

[O_2 = 20.9% ± 0.1%, LEL = 0% ± 1%
CO = THC = H_2S = 0 ppm ± 1 ppm]

[METER: BW S/N SK107-005146 / CAL: 0530 14 FEB 14

In the event of any physical or atmospheric changes adversely affecting the gas-free condition of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

QUALIFICATIONS: Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

STANDARD SAFETY DESIGNATIONS

SAFE FOR WORKERS Means that in the compartment or space so designated (a) the oxygen content of the atmosphere is at least 19.5 percent by volume, and that, (b) toxic materials in the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate

NOT SAFE FOR WORKERS Means that in the compartment or space so designated, the requirements of Safe for Workers has not been met.

SAFE FOR HOT WORK: Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintain- directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily in- case of fuel tanks, or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

NOT SAFE FOR HOT WORK Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met

CHEMIST'S ENDORSEMENT This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFI Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-6 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the and is issued subject to compliance with all qualifications and

Signed _____ (KE) KE 14 FEB 14 Signed Craig K.
Name Company Date Marine Chemist

CRAIG - (206) 313-6933

VESSEL POSTING

This Shipping Order

must be legibly filled in, in ink indelible pencil, or in Carbon, and retained by the agent

Shipper No. 013102

Carrier No. _____

MARINE VACUUM SERVICE INC.

Page _____ of _____

(Name of carrier) (SCAC)

Date 2-14-14

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:
Consignee MARINE VACUUM SERVICE INC.

Street 1516 S. GRAHAM ST.

City SEATTLE State WA Zip Code 98108

FROM:
Shipper Kleen Environmental

Street 915 E PINE ST.

City SEATTLE State WA Zip Code

24 hr. Emergency Contact Tel. No. 800-540-7491

Route

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 TT		NON-REGULATED WASTE WATER	20	Gallons		

PLACARDS TENDERED: YES ☐ NO ☐

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO:
ADDRESS

COD Amt: $

C.O.D. FEE:
PREPAID ☐
COLLECT ☐ $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER _____

PER _____

CARRIER MARINE VACUUM SERVICE INC.

PER _____

DATE _____

2

Permanent post-office address of shipper.

Marine Vacuum Service, _Inc._

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

TANK DISPOSAL CERTIFICATE

DATE: February 21, 2014

CUSTOMER: KLEEN Environmental

OWNER: Pike Motor works Apartments
715 East Pike
Seattle WA 98109

Tank Size: Approximately 5000 gallons

Last product: Petroleum (Gasoline)

DATE DESTRUCTED: 2/14/14

Marine Vacuum Service Inc. certifies that the above mentioned Tank have been cleaned and disposed metal reclaiming in accordance with federal, state and local regulations by Marine Vacuum Service Inc.

Tom Myler

Marine Vacuum Service Inc. Representative

Marine Vacuum Service, _Inc._

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

P0. Box 24263 Seattle, Washington 98124

Telephone (206) 762-0240

FAX (206) 763-8084

1-800-540-7491

TANK DISPOSAL CERTIFICATE

DATE: February 21, 2014

CUSTOMER: KLEEN Environmental

OWNER: Pike Motor works Apartments
715 East Pike
Seattle WA 98109

Tank Size: Approximately 400 gallons

Last product: Petroleum (Fuel oil)

DATE DESTRUCTED: 2/14/14

Marine Vacuum Service Inc. certifies that the above mentioned Tank have been cleaned and disposed metal reclaiming in accordance with federal, state and local regulations by Marine Vacuum Service Inc.

Tom Myler

Marine Vacuum Service Inc. Representative

THUR. 2/20/14 - 12:30

Your Seattle Fire Department

APPLICATION FOR TEMPORARY PERMIT

Code 7908 — **Commercial Tank Removal/Decommissioning**

Permit Fee: $[redacted].00

Date Issued: 2/20/14

Tank(s) must be removed from site on the same day as permit is issued!

TO BE COMPLETED BY PERMIT APPLICANT

FIRM NAME	Kleen Environmental
MAILING ADDRESS	5955 W. Marginal Way SW SUITE
CITY	Seattle STATE WA ZIP 98106
JOBSITE ADDRESS	715 E. Pine ST
CONTACT PERSON	Peter Hogan PHONE NUMBER (206) 910-9554

Number of Tank(s): 1 Tank Size(s): ~~500 Gal~~ 2,000 Gal ☐ Aboveground tank

Product(s) Previously Contained: Heating Oil ☑ Underground tank

☒ Removal (Marine Chemist inspection and certificate required for all tanks regardless of size or contents)

☐ Abandonment-in-Place (Marine Chemist certificate required for tanks previously containing Class I flammable liquids and/or unknowns)

Hot work being conducted: ☒ No ☐ Yes (If yes, a separate hot work permit is required)

Permit applications may be submitted in person weekdays from 8:00 a.m. to 5:00 p.m., or mailed to:

Seattle Fire Department
Fire Marshal's Office – Permits
220 Third Ave S, 2nd Floor
Seattle, WA 98104-2608

To pay with a Visa or Master Card: Fax or email this application
THEN CALL US TO CONFIRM RECEIPT AND MAKE PAYMENT
Tel: (206) 386-1450 / Fax: (206) 386-1348
E-mail: permits@seattle.gov

Call 386-1450, at least 24 hours prior to needed inspection time to arrange for an appointment.
TANKS MAY BE REMOVED/DECOMMISSIONED ONLY AFTER FIRE DEPARTMENT INSPECTION
NO HOT WORK IS ALLOWED ON A TANK SYSTEM PRIOR TO ISSUANCE OF THIS FIRE DEPARTMENT PERMIT!

Permission is hereby granted to remove or decommission the tank(s) identified in this permit in accordance with the attached conditions, all noted special conditions, and all applicable provisions of the Seattle Fire Code, federal, state and local regulations. **THIS PERMIT IS NULL AND VOID IF PERMIT CONDITIONS ARE NOT ATTACHED**

Special permit conditions: *Tank removal/decommissioning must be performed, or directly supervised, by an ICC certified individual (WAC 173-360-600)*

TODAY 2/20/14 @ 12:30 ~~1600~~ - 1pm

FMO USE:
Check No.: 00003910722014
Receipt No.: 5-227655
Application ID#: 96039

APPROVED BY:
Inspector: J. WILLIAMS SFD ID# 1481
Name of Marine Chemist CRAIG T.-688 Certificate # 46278
Date: 2/20/14

(01/13)

SOUND TESTING, INC
P.O. BOX 16204 SEATTLE, WA 98116
(206) 932-0206 FAX (206) 937-3848

MARINE CHEMIST CERTIFICATE

SERIAL № 46278

KLEEN ENVIRONMENTAL — Survey Requested by
KLEEN ENVIRONMENTAL — Vessel Owner or Agent
20 FEB 14 — Date

UST — Vessel
UST — Type of Vessel
715 E PINE ST. SEATTLE, WA — Specific Location of Vessel

PETROLEUM PRODUCT X3 — Last Three (3) Loadings
VISUAL, O_2, LEL, THC — Tests Performed
1220 HRS — Time Survey Completed

~~500 gal~~ ok out — SAFE FOR EXCAVATION

~2000 gal UST — SAFE FOR TRANSPORT

[O_2 = 20.9% ± 0.1%, LEL = 0% ± 1%
THC = 28 ppm ± 1ppm]

In the event of any physical or atmospheric changes adversely affecting the gas-free condition of the above spaces, or if in any doubt, immediately stop all work and contact the undersigned Marine Chemist.

QUALIFICATIONS: Transfer of ballast or manipulation of valves or closure equipment tending to alter conditions in pipe lines, tanks or compartments subject to gas accumulation, unless specifically approved in this Certificate, requires inspection and endorsement or reissue of Certificate for the spaces so affected. All lines, vents, heating coils, valves, and similarly enclosed appurtenances shall be considered "not safe" unless otherwise specifically designated.

STANDARD SAFETY DESIGNATIONS

SAFE FOR WORKERS Means that in the compartment or space so designated (a) the oxygen content of the atmosphere is at least 19.5 percent by volume, and that, (b) toxic materials in the atmosphere are within permissible concentrations, and that, (c) the residues are not capable of producing toxic materials under existing atmospheric conditions while maintained as directed on the Marine Chemist's Certificate

NOT SAFE FOR WORKERS Means that in the compartment or space so designated, the requirements of Safe for Workers has not been met.

SAFE FOR HOT WORK: Means that in the compartment so designated: (a) oxygen content of the atmosphere is at least 19.5 percent by volume, with the exception of inerted spaces or where external hot work is to be performed; and that, (b) the concentration of flammable materials in the atmosphere is below 10 percent of the lower flammable limit; and that, (c) the residues are not capable of producing a higher concentration than permitted by (b) above under existing atmospheric conditions in the presence of fire, and while maintained as directed on the Marine Chemist's Certificate; and further, that, (d) all adjacent spaces have been cleaned sufficiently to prevent the spread of fire, or are satisfactorily inerted, or, in the case of fuel tanks, or lube oil tanks, or engine room or fire room bilges, have been treated in accordance with the Marine Chemist's requirements.

NOT SAFE FOR HOT WORK Means that in the compartment so designated, the requirements of Safe for Hot Work have not been met

CHEMIST'S ENDORSEMENT This is to certify that I have personally determined that all spaces in the foregoing list are in accordance with NFPA 306 Control of Gas Hazards on Vessels and have found the condition of each to be in accordance with its assigned designation.

"The undersigned acknowledges receipt of this Certificate under Section 2-6 of NFPA 306 and understands conditions and limitations under which it was issued."

This Certificate is based on conditions existing at the time the inspection herein set forth was completed and is issued subject to compliance with all qualifications and instructions.

Signed [signature] — Name
KLEEN ENVIRONMENTAL — Company
20 FEB 14 — Date

Signed [signature] — Marine Chemist
#688 — Certificate No.

CRAIG 206-313-6933

VESSEL POSTING

This Memorandum

is an acknowledgment that a Bill of Lading has been issued and is not Original Bill of Lading, nor a copy or duplicate, covering the property named herein, and is intended solely for filing or record.

Shipper No. U140LU 35

Carrier No. 126

Page 1 of 1

MARINE VACUUM SERVICE INC.

(Name of carrier) (SCAC)

Date 2-20-14

On Collect on Delivery shipments, the letters "COD" must appear before consignee's name or as otherwise provided in Item 430, Sec.1.

TO:

Consignee MARINE VACUUM SERVICE INC.

Street 1516 S. GRAHAM ST.

City SEATTLE State WA Zip Code 98108

FROM:

Shipper Kleen Environmental

Street 715 E Pine St

City Seattle State WA Zip Code

24 hr. Emergency Contact Tel. No. 800-540-7491

Route

Vehicle Number

No. of Units & Container Type	HM	BASIC DESCRIPTION UN or NA Number, Proper Shipping Name, Hazard Class, Packing Group	TOTAL QUANTITY (Weight, Volume, Gallons, etc.)	WEIGHT (Subject to Correction)	RATE	CHARGES (For Carrier Use Only)
1 T		Non regulated by DOT				
		oily water	500	Gallons		

PLACARDS TENDERED: YES ☐ NO ☒

Note — (1) Where the rate is dependent on value, shippers are required to state specifically in writing the agreed or declared value of the property, as follows: "The agreed or declared value of the property is hereby specifically stated by the shipper to be not exceeding _____ per _____."
(2) Where the applicable tariff provisions specify a limitation of the carrier's liability absent a release or a value declaration by the shipper and the shipper does not release the carrier's liability or declare a value, the carrier's liability shall be limited to the extent provided by such provisions. See NMFC Item 172.
(3) Commodities requiring special or additional care or attention in handling or stowing must be so marked and packaged as to ensure safe transportation. See Section 2(e) of item 360, Bills of Lading, Freight Bills and Statements of Charges and Section 1(a) of the Contract Terms and Conditions for a list of such articles.

I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations.

_____ Signature

REMIT C.O.D. TO: ADDRESS

COD Amt: $

Subject to Section 7 of the conditions, if this shipment is to be delivered to the consignee without recourse on the consignor, the consignor shall sign the following statement:
The carrier shall not make delivery of this shipment without payment of freight and all other lawful charges.

_____ (Signature of Consignor)

C.O.D. FEE: PREPAID ☐ COLLECT ☐ $

TOTAL CHARGES $

FREIGHT CHARGES
FREIGHT PREPAID except when box at right is checked ☐ Check box if charges are to be collect

RECEIVED, subject to the classifications and tariffs in effect on the date of the issue of this Bill of Lading, the property described above in apparent good order, except as noted (contents and condition of contents of packages unknown), marked, consigned, and destined as indicated above which said carrier (the word carrier being understood throughout this contract as meaning any person or corporation in possession of the property under the contract) agrees to carry to its usual place of delivery at said destination, if on its route, otherwise to deliver to another carrier on the route to said destination. It is mutually agreed as to each carrier of all or any of, said property over all or any portion of said route to destination and as to each party at any time interested in all or any said property, that every service to be performed hereunder shall be subject to all the bill of lading terms and conditions in the governing classification on the date of shipment.

Shipper hereby certifies that he is familiar with all the lading terms and conditions in the governing classification and the said terms and conditions are hereby agreed to by the shipper and accepted for himself and his assigns.

SHIPPER

PER

CARRIER MARINE VACUUM SERVICE INC.

PER

DATE 2-20-14

4

Permanent post-office address of shipper.

Marine Vacuum Service, _Inc._

GENERAL CONTRACTOR

CONTRACTORS LICENSE # MARINVS097JA

PO Box 24263 Seattle, Washington 98124

Telephone (206) 762-6246

FAX (206) 763-8084

(800)-540-7491

TANK DISPOSAL CERTIFICATE

DATE: February 21, 2014

CUSTOMER: KLEEN Environmental

OWNER: Pike Motor works Apartments
715 East Pike
Seattle WA 98109

Tank Size: Approximately 2,000 gallons

Last product: Petroleum (Heating oil)

DATE DESTRUCTED: 2/20/14

Marine Vacuum Service Inc. certifies that the above mentioned Tank have been cleaned and disposed metal reclaiming in accordance with federal, state and local regulations by Marine Vacuum Service Inc.

Tom Myler

Marine Vacuum Service Inc. Representative

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for double-sided printing.