associated
earth sciences
incorporated

Remedial Action Report

METRO LAKE UNION NORTH YARD PROPERTY (NORTH EDGE TECHNOLOGY CENTER)

Seattle, Washington

Prepared For:

TOUCHSTONE CORPORATION

Project No. KV030772B
March 20, 2015

Associated Earth Sciences, Inc.
911 5th Avenue
Kirkland, WA 98033
P (425) 827 7701
F (425) 827 5424

associated earth sciences incorporated

March 20, 2015
Project No. KV030772B

Touchstone Corporation
2025 First Avenue, Suite 1212
Seattle, Washington 98121

Attention: Mr. Paul Klansnic

Subject: Remedial Action Report
Metro Lake Union North Yard Property
(North Edge Technology Center)
Seattle, Washington

Dear Mr. Klansnic:

Associated Earth Sciences, Inc. (AESI) is pleased to provide this report documenting the remediation of petroleum hydrocarbon impacted soils at the above-referenced property. The soil remediation consisted of excavation and disposal of petroleum hydrocarbon containing soils by City Transfer (CTI), the project earthworks contractor. Lease Crutcher Lewis (LCL) was the general contractor for the project. The soil remediation earthwork activities occurred between September 18, 2014 and January 27, 2015.

This Remedial Action Report for the Metro Lake Union North Yard Property (Figure 1, "Vicinity Map") has been prepared to comply with the Prospective Purchaser Consent Decree (PPCD) No. 07-2-23870-1 dated July 23, 2007 issued by the Washington State Department of Ecology (Ecology) to Touchstone Corporation (Touchstone). In this report, "Property" refers only to the North Yard portion (owned by Touchstone) of the greater bulk storage cleanup Site defined by the PPCD. The Site includes the South Yard and other associated areas impacted by past bulk storage activities outside the Property. Cleanup of the Property was performed in general conformance with the Final Engineering Design Report (FEDR) dated July 8, 2014 which detailed specific tasks and construction elements that were used to remediate the soil at the property in accordance with the Ecology-approved Cleanup Action Plan (CAP) prepared by AESI dated January 18, 2007. The purpose of this report is to provide documentation that the Property has been remediated and the report will be submitted to Ecology for their review. The ultimate goal for the remediation is to receive a Certificate of Completion letter from Ecology for the

Property, based on Ecology verification of the completion of the remedial action requirements under the PPCD.

We appreciate the opportunity to be of service to Touchstone on this project. Should you have any questions regarding this report or other aspects of the remediation, please call us at your earliest convenience.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
Kirkland, Washington

Jon N. Sondergaard, L.G., L.E.G.
Senior Principal Engineering Geologist

JNS/ld
KV030772B10
Projects\20030772\KV\WP

REMEDIAL ACTION REPORT

METRO LAKE UNION NORTH YARD PROPERTY (NORTH EDGE TECHNOLOGY CENTER)

Seattle, Washington

Prepared for:
Touchstone Corporation
2025 First Avenue, Suite 1212
Seattle, Washington 98121

Prepared by:
Associated Earth Sciences, Inc.
911 5th Avenue
Kirkland, Washington 98033
425-827-7701
Fax: 425-827-5424

March 20, 2015
Project No. KV030772B

1.0 INTRODUCTION

1.1 Property and Project Description

The subject Property is located in Seattle, Washington as shown on Figure 1, ("Vicinity Map"). The Property is located in Section 18, Township 25 North, Range 4 East (King County Parcel Identification Number: 4083306985), comprising a total area of approximately 1.5 acres and is surrounded on all sides by public right-of-ways owned by the City of Seattle. The Property is legally described in the Prospective Purchaser Consent Decree (PPCD) as "Lots 1 through 12, inclusive, Block 74, Lake Union Addition to the City of Seattle, according to the plat recorded in volume 1, page 238, in King County, Washington." The Property is bounded on the north by North 34th Street beyond which is located a small parking area adjacent to an existing single-story commercial building containing a bakery and currently utilized as the general contractor's project office. The east side of the subject Property is bounded by Densmore Avenue North beyond which is an existing multistory apartment building. The west side of the subject Property is bounded by Woodlawn Avenue North beyond which is an existing multistory office building. The south side of the subject Property is bounded by North Northlake Place, North Northlake Street, and the Burke Gilman Trail.

The subject Property was previously developed in the mid-1920s as a petroleum-based bulk fuel storage and distribution facility owned by Chevron. The subject Property comprises approximately one-half (North Yard) of the previous Chevron facility. Responsibility for remediation of soil on the South Yard and ground water throughout the Site (including the Touchstone Corporation [Touchstone] Property) remains with Chevron and King County. Associated aboveground fuel storage tanks (ASTs) on the Property had been removed prior to the start of remediation earthwork activities in the late 1990s. Figure 2 shows the pre-construction development layout of the approximately 1.5-acre Property. The Property slopes fairly steeply down to the south with elevations ranging between approximately 71 feet at the northeastern property corner to 33 feet along the south property limits. Past development of the Property had created flat benches on the north side, middle, and south end of the Property separated by retaining walls and slopes.

The remediation was performed by Touchstone as part of redevelopment of the property. The redevelopment plans include construction of the North Edge Technology Center (North Edge) consisting of a four-story building constructed property line to property line with two levels of below-grade parking.

1.2 Previous Reports

The primary applicable reports pertaining to the Property characterization and cleanup action details of the Property are presented below.

1) Associated Earth Sciences, Inc. (AESI), *Final Engineering Design Report, Metro Lake Union North Yard Property (North Edge Technology Center) Cleanup Site, Seattle, Washington*, July 8, 2014.

2) AESI, *Cleanup Action Plan, Metro Lake Union North Yard Property Cleanup Site, Seattle, Washington*, January 18, 2007.

3) AESI, *Final Subsurface Exploration, Geologic Hazard, and Geotechnical Engineering Report, North Edge Technology Center, Seattle, Washington, December 13, 2013.*

4) Richard Martin Groundwater, LLC, *Groundwater Control Plan, North Edge Technology Center, Seattle, Washington*, June 13, 2014.

5) Washington State Department of Ecology (Ecology) vs. Touchstone Corporation, *Prospective Purchaser Consent Decree*, July 23, 2007.

6) Ecology, *Model Toxics Control Act Stature and Regulation; Model Toxics Control Act Chapter 70.105D RCW, Uniform Environmental Covenants Act Chapter 64.70 RCW and MTCA Cleanup Regulation Chapter 173-340 WAC*, November 2007.

2.0 DESCRIPTION OF THE REMEDIAL ACTION ACTIVITIES

2.1 Construction Phase Activities

Previous Property characterization exploration activities identified an area of hydrocarbon contamination generally extending from the south property line throughout the southern two-thirds of the Property. The anticipated sequencing of the remedial action was outlined in the Final Engineering Design Report (FEDR) for the project.

Mass excavation of the Property occurred generally between September 18, 2014 and January 27, 2015. Installation of dewatering wells around the southern perimeter of the site occurred in October 2014, and soil nail wall construction (including installation of vertical elements) around the perimeter and interior of the Property occurred between October 6, 2014 and January 15, 2015. AESI observed these construction activities and documented our observations in field reports that were subsequently distributed to the general contractor, project design team, and reviewing agencies such as the Seattle Department of Planning and Development (DPD) and Ecology over the construction period.

All mass excavation for the project was performed following demolition and removal of a substantial majority of pre-existing structures. Prior to mass excavation of the Property, five "free phase hydrocarbon recovery wells" (recovery wells) were installed near the locations of

"hot spot" monitoring wells MW-3, MW-10, MW-12, MW-27, and MW-28. The recovery wells were utilized to extract free phase hydrocarbon product and water from the subsurface and help reduce the presence of hydrocarbon product in the southern half of the Property (Figure 2). Installation of the recovery wells generally involved excavation adjacent to the location of each hot spot monitoring well to a depth overlapping the existing ground water table as determined from water levels collected from each adjacent hot spot monitoring well. A section of large-diameter (36-inch), corrugated PVC pipe (wells) was then lowered into the excavation. The bottom 5 feet of the pipe was perforated prior to installation. Drain rock was then placed around the outside of the pipe to the surface. A Washington State Licensed Professional Engineer (P.E.) from AESI was present to document and oversee the installation of the wells as required by Ecology. AESI used petroleum and water reactive paste to measure the amount of hydrocarbon product floating on the water in both the monitoring wells and recovery wells on a weekly basis. A vactor truck was utilized to remove fluids from both the existing monitoring wells and each adjacent recovery well on a weekly basis. A total of approximately 17,273 gallons of fluid (water and free phase hydrocarbon product) was removed from the monitoring wells and recovery wells. The fluids were transported to Ventilation Power Cleaning, Inc. in Seattle, Washington for disposal.

Prior to mass excavation, pre-characterization (PC) sampling and laboratory analysis of the soils was performed within selected zones to classify the soils for disposal to the approved facilities. The zones generally correspond with those presented in the FEDR. The process of PC sampling is described in more detail below in Section 2.2. The locations where PC sampling was performed over the duration of mass excavation are presented in Figure 2. Once laboratory results were available, the soils were classified as clean, Class II, or Class III as described below. AESI provided the soil class, zone location, and elevation range to the general contractor. The earthwork contractor then used this information during mass excavation within the vertical limits of the PC laboratory characterization and segregated the soils into their respective stockpiles for export. The vertical and horizontal limits of these classified soils were occasionally re-adjusted at the time of mass excavation based on observed field conditions. During export, the soils were loaded into dump trucks from load-out areas located on Woodlawn Avenue North and/or North Northlake Place. Tracking of the exported soils was performed by Lease Crutcher Lewis (LCL; General Contractor) personnel. Soils classified as "clean" were transported to disposal facilities designated by the project earthworks contractor (City Transfer [CTI]). Soils classified as "Class II" were transported to CEMEX in Everett, Washington. Soils classified as "Class III" were transported to Waste Management in Seattle, Washington or Regional Disposal Intermodal (RDI) in Seattle, Washington.

The contractor periodically demolished remaining concrete structures (retaining walls, floor slabs, and foundations) related to the pre-existing development over the course of mass excavation. Some of the concrete for these structures was observed to be in direct contact with hydrocarbon impacted soils creating a light hydrocarbon staining on the surface of the

concrete. This hydrocarbon-stained concrete debris, and any non-Class III soils containing this concrete debris, were treated as Class II and transported to CEMEX.

In mid-December 2014, AESI was informed by CTI that their clean soil disposal facilities had occasionally detected a hydrocarbon odor in some of the soils exported from the Property. These loaded dump trucks were re-classified as Class II and re-directed to CEMEX for disposal. Subsequent to this event, CTI transported all soils excavated from the Property to CEMEX for disposal as Class II.

Soil nail walls were constructed concurrent with mass excavation. Excavation for each row of soil nails was performed in vertical lifts of up to 6 feet. AESI observed the excavation for indications of hydrocarbon contamination. A determination of soil classification was made at the time of excavation using the laboratory results of the nearest adjacent PC sampling and sidewall (SW) sampling (when available), and qualitative observations of indicators of the presence of hydrocarbons (PID measurements, odor, staining). The map locations where SW sampling was performed over the soil nail wall construction are presented on Figure 3.

AESI also observed installation of nine deep dewatering wells and one shallow dewatering well around the southern perimeter of the Property in October 2014 at the general locations presented in the FEDR as recommended by the contractor's dewatering consultant (Middour Consulting, LLC [Middour]). Six of the dewatering wells were installed around the southernmost Property boundary. These six dewatering wells are located within close proximity and downgradient of areas of known contaminated ground water as determined by past water sampling and analysis from hot spot monitoring wells located within the southern third of the Property (discussed above), and based on on-going ground water sampling and analysis of off-Property monitoring wells by Chevron, particularly adjacent to the southwestern corner of the Property. The shallow dewatering well was installed at the discretion of the contractor. The purpose of the deep dewatering wells was to depressurize the lower ground water aquifer prior to completion of mass excavation to the final elevation for the structure. Each dewatering well was installed to a final bottom elevation of approximately 10 feet below sea level. The well string for the deep dewatering wells consisted of 12-inch-diameter, Schedule 40, solid PVC casing and 20 feet of 0.030-inch machine-slotted well screen with a bottom plug and threaded joints with O-rings. The screen pack consisted of 4X8 sand and extended to a couple feet above the top slot of the screen. The remainder of the well annulus above the screen pack was backfilled (sealed) with bentonite chips. Dewatering well installation was performed in general conformance with the approved project plans and applicable Ecology well regulations under a licensed well driller from Malcolm Drilling. The dewatering wells were fully operational on November 20, 2014. Water was pumped continuously from the dewatering wells to holding tanks for treatment by Clear Water Services (Clear Water) prior to being released to the approved discharge (storm or sanitary sewer). Clear Water's water treatment records have been periodically forwarded to Ecology as required. AESI has recorded water levels from each dewatering well weekly and reviewed the general performance using the discharge records

provided by Clear Water since fully activating the dewatering system. All the information has been periodically provided to Middour for review as required by Seattle DPD. The average static water levels in the nine deep dewatering wells prior to activating the pumps ranged from approximately 21 feet to 27 feet (NAVD 88). After fully activating the dewatering well system, the average static water level elevations have ranged from 0 feet (sea level) to approximately -7 feet at an average cumulative flow rate (all dewatering wells) of approximately 28 gallons per minute (gpm). AESI will continue to monitor the dewatering system and provide our records to Middour until the system is shut down following construction of the concrete mat foundation and once the building construction has achieved its full construction height per the approved construction documents.

Once the excavation achieved final design subgrade elevation for the structure, AESI observed the exposed finished subgrade soils for visual and olfactory indications of petroleum hydrocarbons in the soil. Following qualitative field screening indicating petroleum hydrocarbons did not remain, soil samples were collected from the bottom of the excavation at the minimum spacing outlined in the FEDR. The locations of confirmatory samples are presented on Figure 3. The samples were submitted under chain of custody to Friedman & Bruya, Inc. (Friedman & Bruya) of Seattle, Washington for confirmatory analyses. Once analytical results of the confirmation samples were received indicating that residual petroleum hydrocarbon concentrations in the soils were below Model Toxics Control Act (MTCA) Method A cleanup criteria, the contractor placed the protective concrete rat slab over the approved subgrade for the foundation.

2.2 Soil Sampling

AESI collected the following types of soil samples over the course of earthworks construction activities:

- Pre-Characterization (PC) samples were collected prior to and during mass excavation,
- Sidewall (SW) samples were collected from in-place soils following excavation related to the soil nail walls around the perimeter (property limits) of the Property, and
- Confirmation (COM) samples were collected from the completed bottom of the excavation for the structure.

As noted previously, the PC sampling locations are shown on Figure 2. The aerial spacing of the SW and COM samples are presented on Figure 3. Additionally, the horizontal and vertical spacing of the SW samples along the face of the soil nail walls is presented on Figure 4.

All samples were collected in general conformance with the FEDR. Soil samples were collected using clean sampling equipment and placed into laboratory-clean glass containers provided by

Freidman and Bruya. The samples were labeled with the sample number, date, time, and a project-specific identification number. The samples were immediately placed in a cooler on ice and transported to the laboratory under strict chain of custody. The chain-of-custody forms and laboratory certificates for each sample are located in Appendix A. Laboratory analyses consisted of Total Petroleum Hydrocarbons (TPH) as gasoline, and benzene, toluene, ethylbenzene, and xylenes (BTEX) using NWTPH-Gx and EPA Method 8021B; TPH as diesel and motor oil using NWTPH-Dx on all samples; and a limited number of representative polycyclic aromatic hydrocarbons (PAHs) using EPA Method 8270D SIM.

As noted above, PC sampling and laboratory analysis of the soils was performed at specific locations across the Property prior to and during mass excavation in order to determine the level of hydrocarbon concentrations present in the soils. Excavations related to the five recovery wells noted previously near the locations of "hot spot" monitoring wells MW-3, MW-10, MW-12, MW-27, and MW-28 were also utilized for soil PC sampling and analysis of the most contaminated soil in these limited areas prior to mass excavation. All PC laboratory results were used to classify the soils for disposal to the appropriate facilities noted above. PC sampling consisted of excavation of exploration pits within zones pre-determined by the general contractor (LCL). The depth of the each PC exploration pit was typically 8 feet below the existing grade. AESI described the subsurface conditions and collected one representative composite sample from the upper 4 feet and one representative composite sample from the lower 4 feet from each PC exploration pit. The elevation of the existing ground surface at each PC exploration location at the time of sampling was recorded in order to track the soils on the basis of elevation. This procedure was repeated for each lift of soil nail excavation. The samples were submitted to Friedman & Bruya daily under chain of custody for laboratory analysis. Using the laboratory results and any qualitative evidence (PID measurements, hydrocarbon stain and/or odor) observed by AESI during excavation at each PC exploration, the soils were classified as "clean," "Class II" or "Class III." Soils determined to be "clean" contained no qualitative field evidence and/or non-detectable laboratory concentrations of hydrocarbons. Soils which contained hydrocarbon concentrations of less than 100 parts per million (ppm) gasoline TPH, less than 200 ppm diesel TPH or motor oil, less than 0.5 ppm benzene, or other qualitative field evidence of hydrocarbons were classified as "Class II." Soils with hydrocarbon concentrations of greater than 100 ppm gasoline TPH, greater than 200 ppm diesel TPH or motor oil, or greater than 0.5 ppm benzene were classified as "Class III." The PC sample number, depth below the original ground surface, sample elevation range, and soil classification are summarized in Table 1.

AESI collected SW samples at selected locations around the perimeter of the Property during excavation for the north, east, south, and west soil nail walls. The vertical and horizontal spacing of the SW samples is in general conformance with the FEDR. COM samples were collected from the finished excavation within the interior of the Property. This included the bottom of the excavation and the interior soil nail wall within the northern portion of the Property.

2.3 Petroleum Hydrocarbon Contaminated Soil Volumes

According to the contractor's records, the soil remediation activities resulted in the excavation and removal of approximately 42,166 tons of clean soils, and approximately 50,094 tons of Class II and 59,814 tons of Class III contaminated soils, which were hauled to the approved facilities noted previously. Weigh tickets for these contaminated soils are kept on file in our Kirkland office.

Using an average of 32.11 tons per truck and trailer, a total of approximately 1,560 truck and trailer loads of Class II and approximately 1,863 truck and trailer loads of Class III petroleum contaminated soils were hauled from the Property over the time period noted previously. Based on an assumed average truck and trailer volume of 24 cubic yards, this equates to a total excavated ("fluffed") volume of approximately 82,152 cubic yards of Class II and Class III soils.

2.4 Monitoring Well and Free Phase Hydrocarbon Recovery Well Decommissioning

During soil remediation activities, prior to substantial mass excavation, all existing ground water monitoring wells within the limits of the excavation were decommissioned in accordance with Ecology well regulations by backfilling the wells with bentonite chips and/or removal by excavation. A Notice of Intent to Decommission was filed with Ecology for the wells listed below. Several of the decommissioned wells were subsequently completely removed as the elevations of the bottom of the wells were above the elevation of the bottom of the completed excavation for the structure. The decommissioned wells were: EB-3, EB-5B, EB-7A, EB-7B, EB-8B, EB-10, EB-11, EB-12, EB-103, MW-3, MW-10, MW-12, MW-27, MW-28, SMPN-1, SMPN-2, and SMPN-3. AESI also observed patches at the locations of monitoring wells MW-1, MW-2, MW-5, and WM-6 indicating these wells had been previously decommissioned. Recovery wells RW MW-3, RW MW-10, RW MW-12, RW MW-27, RW MW-28, and hot spot monitoring wells MW-3, MW-10, MW-12, MW-27, and MW-28 were decommissioned last in order to take full advantage of their use during free phase hydrocarbon extraction as described above. The recovery wells were decommissioned by initially removing as much of the corrugated PVC casing and screen as possible and temporarily backfilling each hole with clean silty Property-derived soils. Any remaining casing, screen, and drain rock were then fully removed during mass excavation of the Property. A Washington State Licensed Professional Engineer (P.E.) from AESI was present to document and oversee the decommissioning of the wells as required by Ecology.

Monitoring well MW-24 is located near the northeast corner of the Property within the limits of the Property but outside the area of excavation. This monitoring well was not decommissioned at the request of Ecology.

3.0 ANALYTICAL RESULTS

The PC sample information collected during mass excavation of the Property is summarized in Table 1. The analytical results for the SW samples collected around the perimeter of the Property are summarized in Table 2. The PC and SW analytical results are discussed in Section 3.1 below. Analytical results for confirmation (COM) samples collected during cleanup activities are summarized in Table 3. The COM analytical results are discussed in Section 3.2 below.

Laboratory test certificates for all samples are located in Appendix A.

3.1 Discussion of Pre-Characterization (PC) and Sidewall (SW) Analytical Results

Hydrocarbon impacted soils were observed in excavation cuts related to construction of the soil nail walls around the perimeter of the Property. A summary of laboratory analyses for the PC samples is presented in Table 1 and a summary of laboratory analyses for SW samples is shown in Table 2. Figure 4 presents the approximate limits of hydrocarbon impacted soils remaining along the Property boundaries behind the north, east, south, and west soil nail walls. The estimated limits shown are based on analytical results from PC and SW samples and based on AESI's environmental field mapping during mass excavation. Some extrapolation was required in development of portions of these sections so the boundaries between the above/below MTCA and clean units should be considered approximate. Analytical results indicate above MTCA Method A soils are present along portions of the east, west, and south excavation sidewalls. Laboratory analytical results for sample SW-7 at 13 feet located on the east sidewall adjacent to the east side of the old Chevron tank farm area indicate gasoline concentrations of 630 milligrams per kilogram (mg/kg). Laboratory analytical results from samples SW-9 at 10 feet and SW-10 at 10 feet located within the southern half of the west sidewall indicate gasoline concentrations of 680 mg/kg and 200 mg/kg, respectively. Laboratory analytical results from samples SW-14 at 10 feet and SW-15 at 10 feet located within the central and western portions of the sidewall indicate gasoline concentrations of 2,700 mg/kg and 780 mg/kg, respectively, and diesel concentrations of 9,900 mg/kg and 6,900 mg/kg, respectively. These laboratory analytical results are above the MTCA Method A cleanup levels of 100 mg/kg for gasoline and 2,000 mg/kg for diesel. The analytical results from SW-14 at 10 feet and SW-15 at 10 feet for diesel (noted above) also exceed the Site-specific cleanup levels of 5,140 mg/kg as determined in the King County/Metro and Chevron consent decree. In other areas where samples were not collected, the limits of the hydrocarbon impacted soils are based on observed staining and/or hydrocarbon odor.

The approximate extent of the main body of hydrocarbon impacted soils encountered during mass excavation within the interior of the Property is shown in Property Cross Sections A-A', B-B', C-C', and D-D' (Figures 5 and 6). The sections were developed based on analytical results from PC and SW samples and based on AESI's environmental field mapping during mass excavation. Above MTCA soils are shown in red while soils with below MTCA hydrocarbon

concentrations, or soils where other qualitative indicators of hydrocarbons are shown in yellow. Some extrapolation was required in development of some portions of these sections so the boundaries between the above/below MTCA units should be considered approximate.

3.2 Confirmatory (COM) Sampling

Immediately following completion of mass excavation for the structure, soil samples were collected from the bottom and interior soil nail wall to confirm that residual concentrations of petroleum hydrocarbons were below the MTCA cleanup criteria. The approximate locations of the COM samples are shown on Figure 3 and a summary of the laboratory analyses for the COM samples is presented in Table 3.

None of the cleanup confirmation analytical results for soil samples collected from the remedial excavation exhibited concentrations above the MTCA cleanup levels for gasoline or diesel-range petroleum hydrocarbons. Portions of the finished bottom of the excavation at the south end of the Property generally between A.5, E, 7, and 8.2 lines contained a faint possible petroleum odor. However, analytical results from confirmation samples COM 15, COM 16, COM 17, and COM 25 were below laboratory detection limits. Additionally, analytical results from sidewall samples SW-14 at 19 feet and SW-15 at 19 feet collected at the very bottom of the south soil nail wall also indicated concentrations below MTCA Method A cleanup levels.

4.0 CONCLUSIONS

In AESI's opinion, the Property has been remediated in conformance with the Project-specific Ecology remedial action requirements referenced under the following sections of the PPCD:

Section VI (Work to be Performed) – Remediation of the Property involved excavation of hydrocarbon impacted soils as described in this report. The remediation work was performed in general conformance with the "Cleanup Action Plan for the Metro Lake Union North Yard Property Cleanup Site" dated January 18, 2007 as contained in the PPCD. Soil remediation activities at the property have resulted in the removal of 59,814 tons of contaminated soil with petroleum hydrocarbon concentrations above MTCA Method A levels (Class III) for treatment and disposal. AESI conducted monitoring of the bottom of the excavation and internal sidewalls to confirm that soil cleanup standards for the project have been met within the Property boundaries. Confirmatory sampling indicates that residual concentrations of petroleum hydrocarbons in soil at the design bottom elevation of the building excavation are below the MTCA Method A cleanup criteria for unrestricted site use.

Section VIII (Performance) – All geologic, hydrogeologic, engineering, and construction oversight work was performed under the direct supervision of Washington State Licensed geologists and engineers employed by AESI as required in the PPCD.

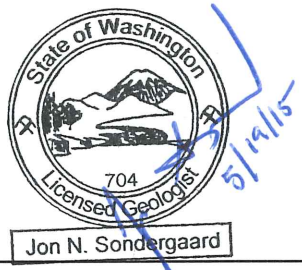
Sections XI (Sampling, Data Submittal, and Availability) and XII (Progress Reports) – All hazardous substance analyses were conducted by a laboratory accredited under Chapter 183-50 WAC (*Washington Administrative Code*). AESI recorded remediation activities in daily field reports and provided these reports to Ecology weekly. AESI provided information pertaining to confirmatory sampling of the bottom of the excavation to Ecology when requested. All pertinent information pertaining to the above-referenced sections of the PPCD, including laboratory analytical data, are summarized in this Remedial Action Report.

Soil at the subject Property has been remediated to the cleanup levels specified in MTCA under Method A for unrestricted site use.

We appreciate the opportunity to be of service to you on this project. Should you have any questions regarding this report, please contact us at your earliest convenience.

Sincerely,
ASSOCIATED EARTH SCIENCES, INC.
Kirkland, Washington

Frank S. Mocker, L.G., L.E.G.
Project Geologist



Jon N. Sondergaard, L.G., L.E.G.
Senior Principal Engineering Geologist

Attachments:

	Table 1:	Pre-Characterization Sample Tracking Summary Table
	Table 2:	Summary of Analytical Results for Sidewall Samples
	Table 3:	Summary of Analytical Results for Confirmation Samples
	Figure 1:	Vicinity Map
	Figure 2:	Property Plan and Pre-Characterization Sample Location Map
	Figure 3:	Confirmation and Sidewall Sample Location Map
	Figure 4:	Soil Nail Wall Sections
	Figure 5:	Property Cross Sections A-A' and B-B'
	Figure 6:	Property Cross Sections C-C' and D-D'
	Appendix A:	Laboratory Test Certificates

cc: Washington State Department of Ecology, Northwest Regional Office
3190 160th Avenue SE, Bellevue, Washington 98008-5452
Attn: Maura S. O'Brien