Electronic Copy

STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
Northwest Region Office
PO Box 330316, Shoreline, WA 98133-9716 • 206-594-0000

March 9, 2023

London Kemp
Acorn Development Group, LLC
P.O. Box 81226
Seattle, WA 98108
(ldkemp@amazon.com)

RE: No Further Action opinion for the following contaminated Site

Site name: Block 18 Amazon Frontier
Site address: 2205 7th Avenue, Seattle, Washington 98121
Facility/Site ID: 55825
Cleanup Site ID: 16642
VCP Project No.: VCP NW3342

Dear London Kemp:

The Washington State Department of Ecology (Ecology) received your request on June 8, 2022 for an opinion regarding the sufficiency of your independent cleanup of the Block 18 Amazon Frontier facility (Site) under Voluntary Cleanup Program (VCP) [1]. This letter provides our opinion and analysis. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70A.305 RCW.[2]

Opinion

Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

Ecology bases this opinion on an analysis of whether the remedial action meets the substantive requirements of MTCA and its implementing regulations, which are specified in Chapter 70A.305 RCW and Chapter 173-340 WAC[3] (collectively called "MTCA").

Site Description

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release(s):

[1] https://ecology.wa.gov/Spills-Cleanup/Contamination-cleanup/Voluntary-Cleanup-Program
[2] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305
[3] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340

- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) in soil.

Enclosure A includes Site description, history, and diagrams.

Please note that releases from multiple sites can affect a parcel of real property. At this time, Ecology has no information that other sites affect the parcel(s) associated with this Site.

Basis for the Opinion

Ecology bases this opinion on information contained in the following documents:

- GeoEngineers, *Cleanup Action and UST Closure Report, Rufus 2.0 Development, Block 18, Seattle, Washington*, April 2, 2020.
- GeoEngineers, *Construction Contingency Plan, Soil and Groundwater Management, Rufus 2.0 Development, Block 18, Seattle, Washington 98101*, January 10, 2018.
- GeoEngineers, *Phase II Environmental Site Assessment, Rufus 2.0, Block 18, Seattle, Washington*, November 13, 2017.
- GeoEngineers, *Phase I Environmental Site Assessment, 2205 and 2229 7th Avenue (Block 18), Denny Triangle Neighborhood, Seattle, Washington*, December 22, 2015.
- GeoEngineers, *Phase I Environmental Site Assessment, Rufus 2.0, Denny Triangle, Blocks 14, 19, 20, 18 and 21, Seattle, Washington*, June 7, 2012.

You can request these documents by filing a records request.[4] For help making a request, contact the Public Records Officer at recordsofficer@ecy.wa.gov or call (360) 407-6040. Before making a request, check whether the documents are available on the Site webpage.[5]

This opinion is void if any of the information contained in the documents is materially false or misleading.

Analysis of the Cleanup

Ecology has concluded that no further remedial action is necessary to clean up contamination at the Site. Ecology bases its conclusion on the following analysis:

Characterizing the Site

Ecology has determined your completed Site characterization is sufficient for setting cleanup standards and selecting a cleanup action. **Enclosure A** describes the Site.

Site Investigations and remedial actions conducted at the Site in 2017 and 2018 discovered cPAH contamination in shallow soil less than 5 feet below the ground surface (bgs) in two areas on the

[4] https://ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests
[5] https://apps.ecology.wa.gov/cleanupsearch/site/16642

Property. The lateral and vertical extents of soil contamination were sufficiently defined, and the remedial actions removed all cPAH-contaminated soil from the Site.

Groundwater occurs at approximately 89 feet bgs. Groundwater sampling confirmed that Site groundwater did not contain any contaminants above the MTCA Method A cleanup levels.

Setting cleanup standards

Ecology has determined the cleanup levels and points of compliance you set for the Site meet the substantive requirements of MTCA.

Cleanup Levels

Soil

The Site is in an area with limited terrestrial habitat and qualified for a Terrestrial Ecological Evaluation (TEE) exclusion, based on WAC 173-340-7491(1)(c)(i). There are less than 1.5 acres of contiguous undeveloped land on the Site or within 500 feet of any area of the Site. Land use at the Site and surrounding area makes substantial wildlife exposure unlikely. Therefore, cleanup levels protective of terrestrial species are not needed at this Site.

The Site is in the central business district of downtown Seattle and is zoned Downtown Mixed Commercial (DMC). MTCA Method A soil cleanup levels for unrestricted land uses were selected for the Site. These MTCA Method A soil cleanup levels are based on protection of groundwater.

Groundwater

The highest beneficial use for groundwater under MTCA is considered to be as a drinking water source, unless it can be demonstrated that the groundwater is not potable. MTCA Method A groundwater cleanup levels are protective of potable use and are therefore appropriate.

Points of Compliance

Soil

The point of compliance for soil at the Site for the protection of groundwater is soils throughout the Site.

Groundwater

The point of compliance for groundwater is throughout the Site, from the uppermost level of the saturated zone extending vertically, and horizontally to the lowest depth, which could potentially be affected.

Selecting the cleanup action

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

The cleanup action selected for the Property consisted of the following:

- Excavation and off-Site disposal of contaminated soil; and
- Confirmational sampling of soil to document compliance with cleanup levels.

Implementing the cleanup action

Ecology has determined your cleanup meets the standards set for the Site. The cleanup consisted of the following activities:

- A total of 904 tons of soil contaminated with cPAHs were removed from two shallow remedial excavations where cPAH-contaminated soil was found to be present.
- Confirmation soil sample results confirmed compliance with Method A soil cleanup levels at the Property and that contamination did not extend off the Property.
- Site data has been uploaded to the Ecology Environmental Management (EIM) database.

Listing of the Site

Based on this opinion, Ecology will update the Site status on the Confirmed and Suspected Contaminated Sites List.

Limitations of the Opinion

Opinion does not settle liability with the state

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70A.305.040(4).[6]

Opinion does not constitute a determination of substantial equivalence

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you performed is substantially equivalent. Courts make that determination. See RCW 70A.305.080[7] and WAC 173-340-545.[8]

[6] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.040
[7] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.080
[8] https://apps.leg.wa.gov/WAC/default.aspx?cite=173-340-545

State is immune from liability

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. See RCW 70A.305.170(6).[9]

Termination of Agreement

Thank you for cleaning up the Site under the VCP. This opinion terminates the VCP Agreement governing VCP Project No. NW3342.

Questions

If you have any questions about this opinion or the termination of the Agreement, please contact me by phone at (206) 556-5258 or email at kim.vik@ecy.wa.gov .

Sincerely,

Kim Vik
VCP Site Manager
Toxics Cleanup Program, NWRO

Enclosures (2):

A – Site Description, History, and Diagrams
B – Basis for the Opinion: List of Documents

cc:

London Kemp, Acorn Development Group (ldkemp@amazon.com)
Kristin Rincon, Acorn Development Group (krisrinc@amazon.com)
Chris Brown, GeoEngineers (cbrown@geoengineers.com)
Kelli Barker, VCP Fiscal Analyst (w/o encl) (ecyrevcp@ecy.wa.gov)
Sonia Fernandez, VCP Coordinator (sonia.fernandez@ecy.wa.gov)

[9] https://app.leg.wa.gov/RCW/default.aspx?cite=70A.305.170

Enclosure A

Site Description, History, and Diagrams

Site Description

This section provides Ecology's understanding and interpretation of Property conditions and is the basis for the opinion expressed in the body of the letter.

Site: The Site encompasses a full city block (Block 18) bound by 7th Avenue to the northeast, Bell Street to the northwest, Blanchard Street to the southeast, and an alley to the southwest in the Denny Triangle neighborhood of Seattle, Washington (**Figure 1**). Block 18 includes two King County Parcels covering a total of 38,880 square feet (0.9 acres):

- Parcel 066000-0130 (12,960 square feet)
- Parcel 066000-0150 (25,920 square feet)

The Site is defined by the projected extent of contamination caused by cPAHs released to soil.

Area and Property Description: The Property is in the central business district of downtown Seattle in an area zoned as DMC (Downtown Mixed Commercial). The Property is currently developed with a 16-story office building (Amazon Frontier Building) with five levels of below ground parking. The building is owned by Amazon and is a part of the larger Amazon campus. The address for the Amazon Frontier Building is 2205 7th Avenue.

Site History and Current Use: The Property is located within the Denny Regrade area of Seattle (currently known as the Denny Triangle neighborhood) which included the area bound by Denny Way to the north, 3rd Avenue to the southwest, and Olive Way to the southeast. The Denny Regrade was a major regrading and filling project from 1897 to 1930 that included the removal of Denny Hill, essentially reducing the elevation approximately 100 feet. During regrade activities, the land at and around the Property was cut in elevation up to 20 feet and subsequently filled with up to 25 feet of fill soil from nearby hills and other sources. The fill soil in the area has been found to contain PAHs.

Historically, the Property was residential from about the 1900s to the 1930s. A one-story retail building was present on the northern portion of the Property from the 1940s to 2018. Former businesses in the retail building included an auto supply store (Schuck's Auto Supply), and an industrial supply store (Fastenal Company) from the 2000s to 2011. A four-story commercial building was located on the southern portion of the Property from 1950s to 2018. The building was historically used as a motel (Towne Motel/Days Inn) from 1958 to the 2000s, and as Cornish College dormitory from early 2010s to 2015. The remainder of the Property was

covered with asphalt parking. There are no underground storage tanks (USTs) associated with the Property and none were found during redevelopment activities. The location of the former buildings is depicted on **Figure 2**.

The Property was redeveloped from 2018 to 2021 to current configuration. The redevelopment of the Property (Block 18) was one phase of a multi-office-tower redevelopment project that spanned five contiguous city blocks, known as Rufus 2.0 development.

Sources of Contamination: Soil contamination on the Property is likely a result of PAH-contaminated fill from unknown sources that was placed on the Property during the Denny Regrade project.

Physiographic Setting: The Property is located within the Puget Sound Lowland Physiographic Province, a north-south trending structural and topographic depression that is bordered on its west side by the Olympic Mountains, and to the east by the Cascade Mountain foothills. The Puget Sound Lowland is underlain by Tertiary volcanic and sedimentary bedrock and has been filled to the present-day land surface with Pleistocene glacial and non-glacial deposits.

In the early 1900's, soil was moved into the area where the Property is located from what was formerly Denny Hill during the Denny Regrade project. The Denny Regrade consisted of the removal of a steep hill (Denny Hill) north of downtown Seattle as part of a large development project in the early part of the 20th century.

Surface/Storm Water System: The nearest surface water is Elliot Bay located approximately 0.5 miles to the southwest. Lake Union is located approximately 0.75 miles to the north. Surface water runoff in the area is captured in municipal storm drains and transported to the nearest surface water drainage.

Ecological Setting: The Property is in the downtown area of Seattle in a typical urban setting. The surface of the Property is covered by a building and associated, surrounding paved areas. Denny Park, a 4.6-acre city park, is located approximately 450 feet north of the Property. Other surrounding areas are covered with asphalt, concrete, or buildings.

Geology: The Site is located within the Puget Sound Lowlands geologic region which is characterized by complex sequences of glacial and non-glacial sediments that overlie bedrock. The Property is underlain by approximately 1 to 10 feet of fill consisting of loose to medium dense silty sand and silt with varying amounts of gravel and cobbles. The fill in underlain by

glacially consolidated deposits (native soil) consisting of a cohesive silt and clay layer at approximately 5 to 15 feet below the ground surface (bgs), and interbedded cohesionless very dense sand and gravel and very dense silty sand with gravel with isolated layers of hard clay from approximately 15 feet bgs to the maximum depth explored (96 feet bgs). A cross section trending northwest to southeast across the Property (section A-A') is shown on **Figure 3** and the section line is shown on **Figure 4**.

Groundwater: Groundwater is documented beneath the Property at approximately 89 feet bgs, based on data from one on-Property monitoring well MW18-1. The monitoring well was decommissioned prior to redevelopment activities. The inferred groundwater flow direction is to the east or northeast based on groundwater data from adjacent properties.

Water Supply: Drinking water for the area is supplied by Seattle Public Utilities (SPU) and is provided by the Cedar River Municipal Watershed. The Cedar River originates in the Cascade Mountains and drains into Lake Washington. Chester Lake is the main storage reservoir for the Cedar River Watershed system. No drinking water wells were identified within 500 feet of the Property.

Extent of Soil and Groundwater Contamination: The lateral extent of soil contamination has been limited to the two areas identified during preconstruction activities and was limited in depth to 5 feet bgs. Contaminants have not been detected in groundwater beneath the Property. Volatile organic compounds (VOCs) have not been detected in soil; therefore, vapor intrusion is not a risk.

Property Cleanup Actions:

Pre-Redevelopment Investigations.

An investigation was conducted on the Property in 2017. Four borings (MW18-1 and B18-1 through B18-3) were drilled to depths from approximately 80 to 96 feet bgs, and six borings (B18-4 through B18-9) were advanced to a depth of 15 feet bgs (**Figure 4**). MW18-1 was completed as a groundwater monitoring well, to a total depth of 95 feet bgs.

Soil and groundwater samples were analyzed for total petroleum hydrocarbons as gasoline, diesel, and oil (TPH-G, TPH-D, and TPH-O, respectively), VOCs, PAHs, and metals. The soil

sample collected from boring B18-2 at 2.5 feet bgs (identified as fill soil) contained total carcinogenic PAHs (cPAHs) exceeding the MTCA Method A cleanup level. However, the sample collected from the same boring at 5 feet bgs (identified as native soil) did not contain any cPAHs above the method reporting limits (MRLs) and Method A cleanup level. Boring B18-2 was located in the south corner of the Property (**Figure 4**). All other analytes were below the cleanup levels for all other soil samples.

Total arsenic was detected above the MTCA Method A cleanup level in the groundwater sample collected from well MW18-1 in May 2017. However, the report noted suspended solids including silt and sand were present in the sample. The well was resampled in June 2017. Results confirmed that both total arsenic and dissolved arsenic concentrations were below the Method A cleanup level.

In November 2018, 14 test pits (TP-1 through TP-14) were excavated on the Property to a maximum depth of approximately 5 feet bgs for soil sampling (**Figure 5**). A soil sample collected from TP-8 at 2.5 feet bgs (sample TP-8-2.5) contained total cPAHs above the Method A soil cleanup level. However, cPAHs were below the MRLs and Method A cleanup level in the same test pit at 5 feet bgs (sample TP-8-5.0). All other analytes in all other samples were below the MTCA cleanup levels. **Figure 6** shows the location of TP-8.

Soil Removal and Confirmation Sampling during Property Construction.
Two remedial excavations were completed to remove the contaminated soil in two areas: Area A around TP-8, and Area B around B18-2 (**Figure 6**). The remedial excavation activities were conducted concurrently with the mass excavation earth work during Property construction.

Area A. The remedial excavation was approximately 40 feet by 40 feet by 5 feet deep. Four confirmation samples were collected from 2.5 feet bgs at the lateral extents of the excavation (TP-8-N, TP-8-E, TP-8-W, and TP-8-S). These samples were analyzed for TPH-D, TPH-O, and PAHs. None of the soil samples contained analytes above the MRLs and the Method A cleanup levels. Previous sample TP-8-5.0 was also used as a confirmation soil sample for Area A.

Area B. The remedial excavation was approximately 25 feet by 25 feet by 5 feet deep. Previous samples from TP-13 and TP-14 at 2.5 feet bgs and the sample collected from B18-2 at 5 feet bgs were used as confirmation soil samples. Two additional confirmation soil samples (EX-1-2.5 and EX-2-2.5) were collected along the southwest and southeast extents of the remedial excavation, adjacent to the Property boundary. All confirmation soil samples contained cPAHs below the Method A cleanup level.

Approximately 904 tons of cPAH-contaminated soil were removed from the Property during the remedial excavation activities and disposed offsite.

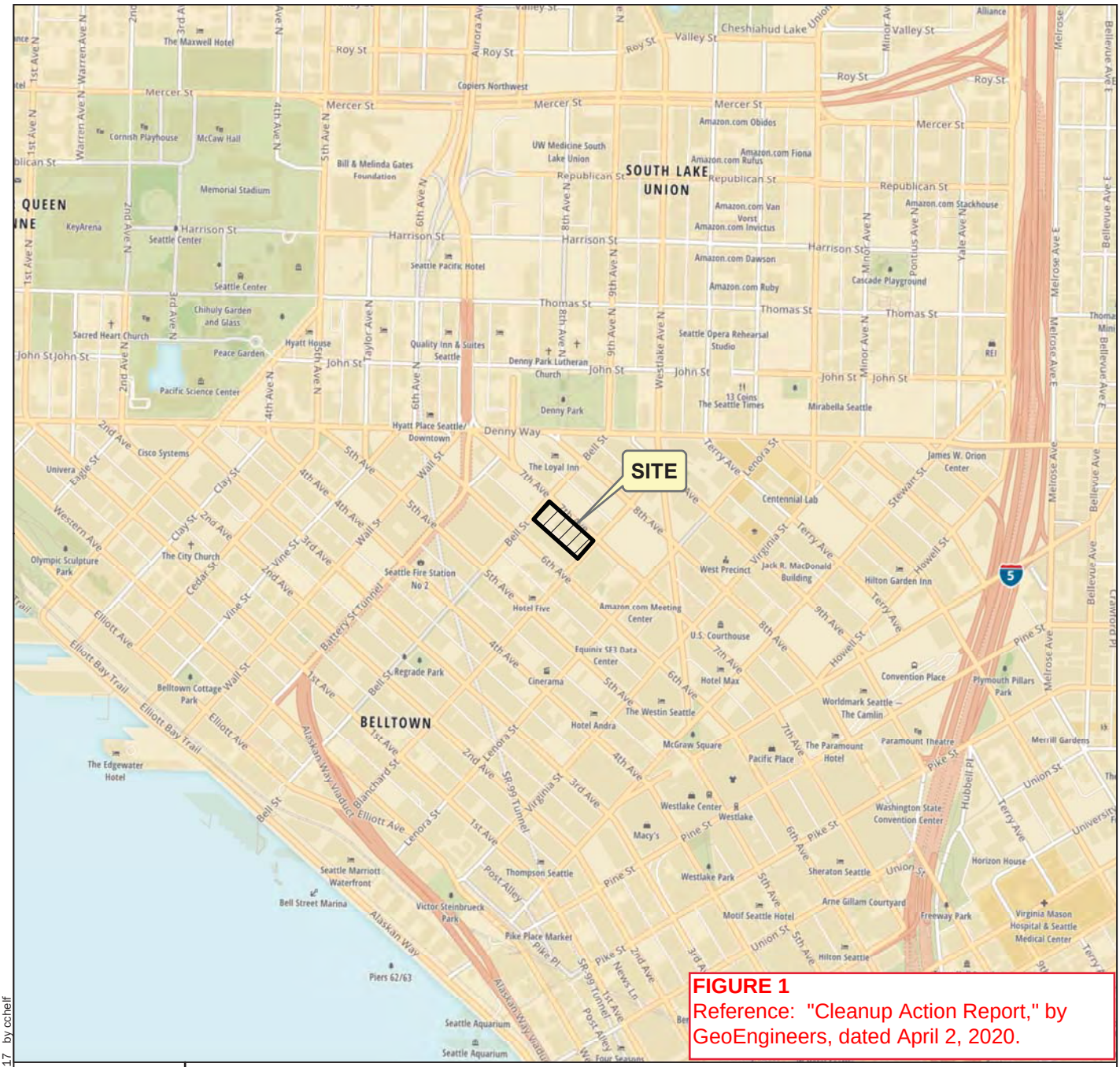


FIGURE 1
Reference: "Cleanup Action Report," by GeoEngineers, dated April 2, 2020.

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Mapbox Open Street Map, 2016

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Vicinity Map

Rufus 2.0 Development - Block 18
Seattle, Washington

GeoEngineers

Figure 1

P:\20\20434001\GIS\2043400131_F01_VicinityMap.mxd Date Exported: 05/09/17 by cchelf

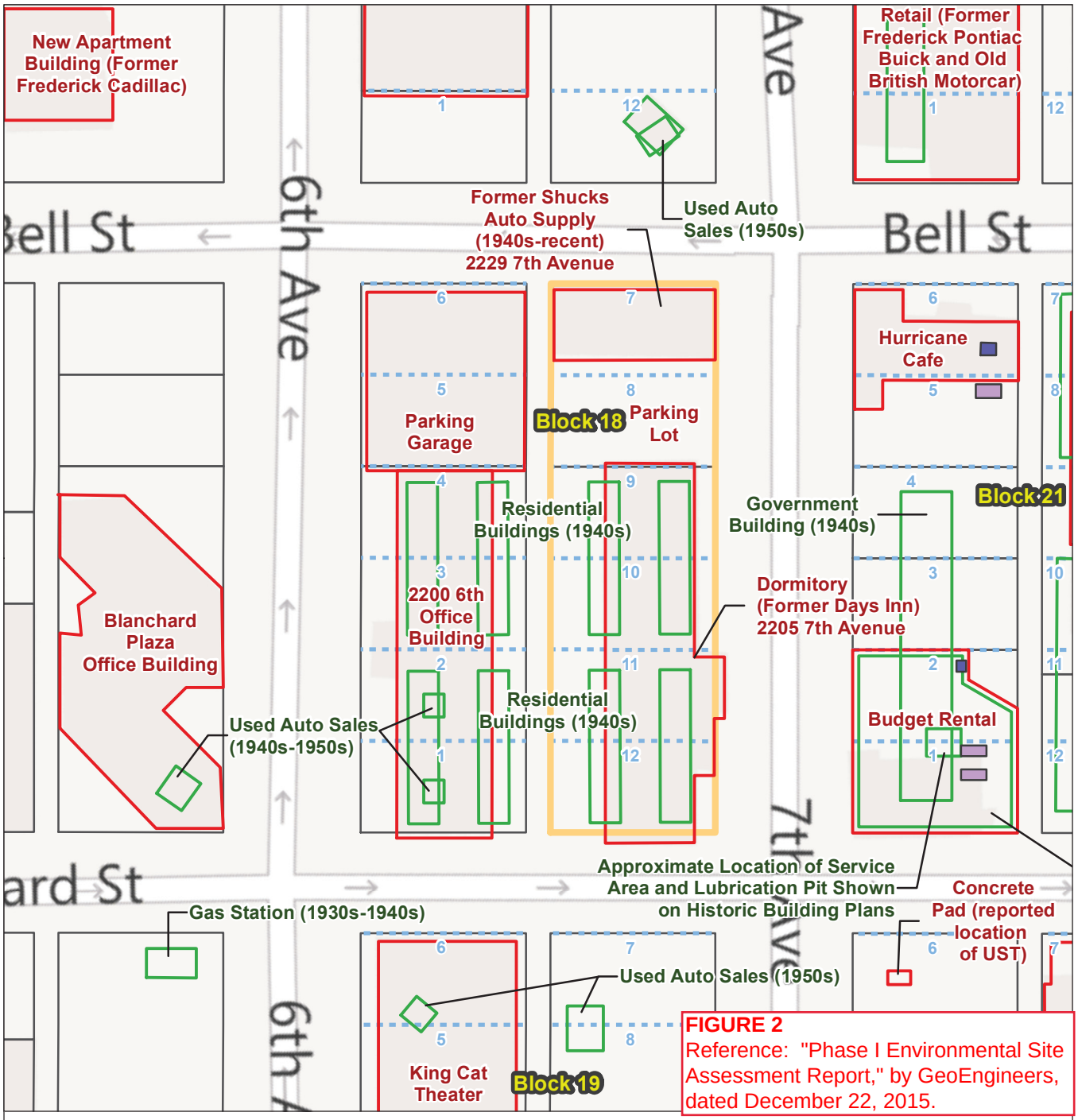


FIGURE 2
Reference: "Phase I Environmental Site Assessment Report," by GeoEngineers, dated December 22, 2015.

Data Source: Aerial Image, parcel boundaries and street lines from King County GIS. Bing Maps Road, 2011.

Projection: NAD 1983 StatePlane Washington North FIPS 4601 Feet

Notes:
1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

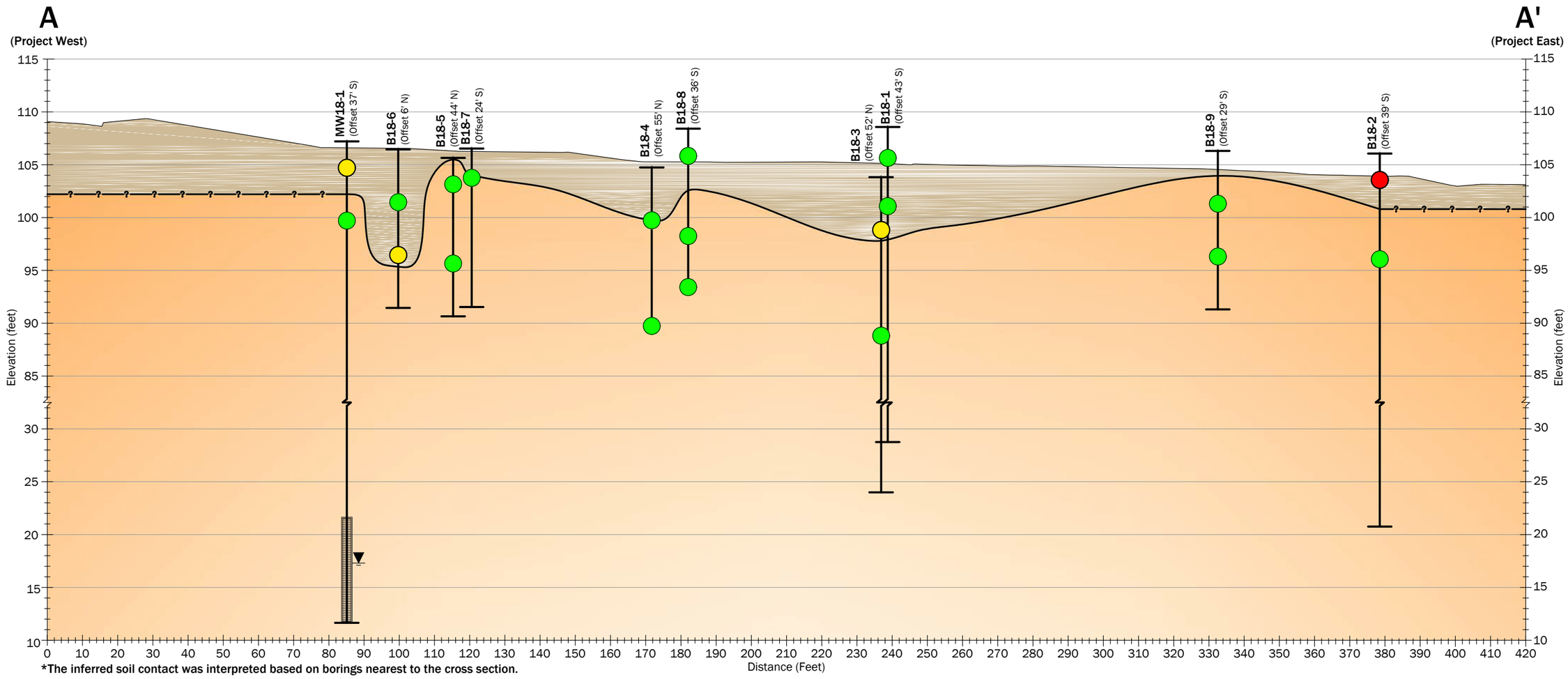
Site Plan - Block 18

Rufus 2.0
Seattle, Washington

GeoEngineers

Figure 2

Path: P:\20\20434001\GIS\2043400129_ESA_BlockFigures.mxd Map Revised: 17 December 2015 cchelf



*The inferred soil contact was interpreted based on borings nearest to the cross section.

Notes:

1. The subsurface conditions shown are based on interpolation between widely spaced explorations and should be considered approximate; actual subsurface conditions may vary from those shown.
2. This figure is for informational purposes only. It is intended to assist in the identification of features discussed in a related document. Data were compiled from sources as listed in this figure. The data sources do not guarantee these data are accurate or complete. There may have been updates to the data since the publication of this figure. This figure is a copy of a master document. The hard copy is stored by GeoEngineers, Inc. and will serve as the official document of record.

Datum: NAVD 88, unless otherwise noted.

30 0 30
Horizontal Scale in Feet

10 0 10
Vertical Scale in Feet
Vertical Exaggeration: 3X

Legend

B18-1 (Offset 57' S)

- Boring
- Inferred Soil Contact
- Groundwater Measured in Depth 5-23-2017
- Well Screen
- Fill
- Native Soil

Soil Chemical Analytical Results

- Contaminants of concern detected at concentrations greater than the corresponding MTCA cleanup levels
- Contaminants of concern detected at concentrations less than the corresponding MTCA cleanup levels
- Contaminants of concern were not detected, or were detected at concentrations similar to natural background concentrations (metals only).

FIGURE 3
Reference: "Phase II Environmental Site Assessment," by GeoEngineers, dated November 13, 2017.

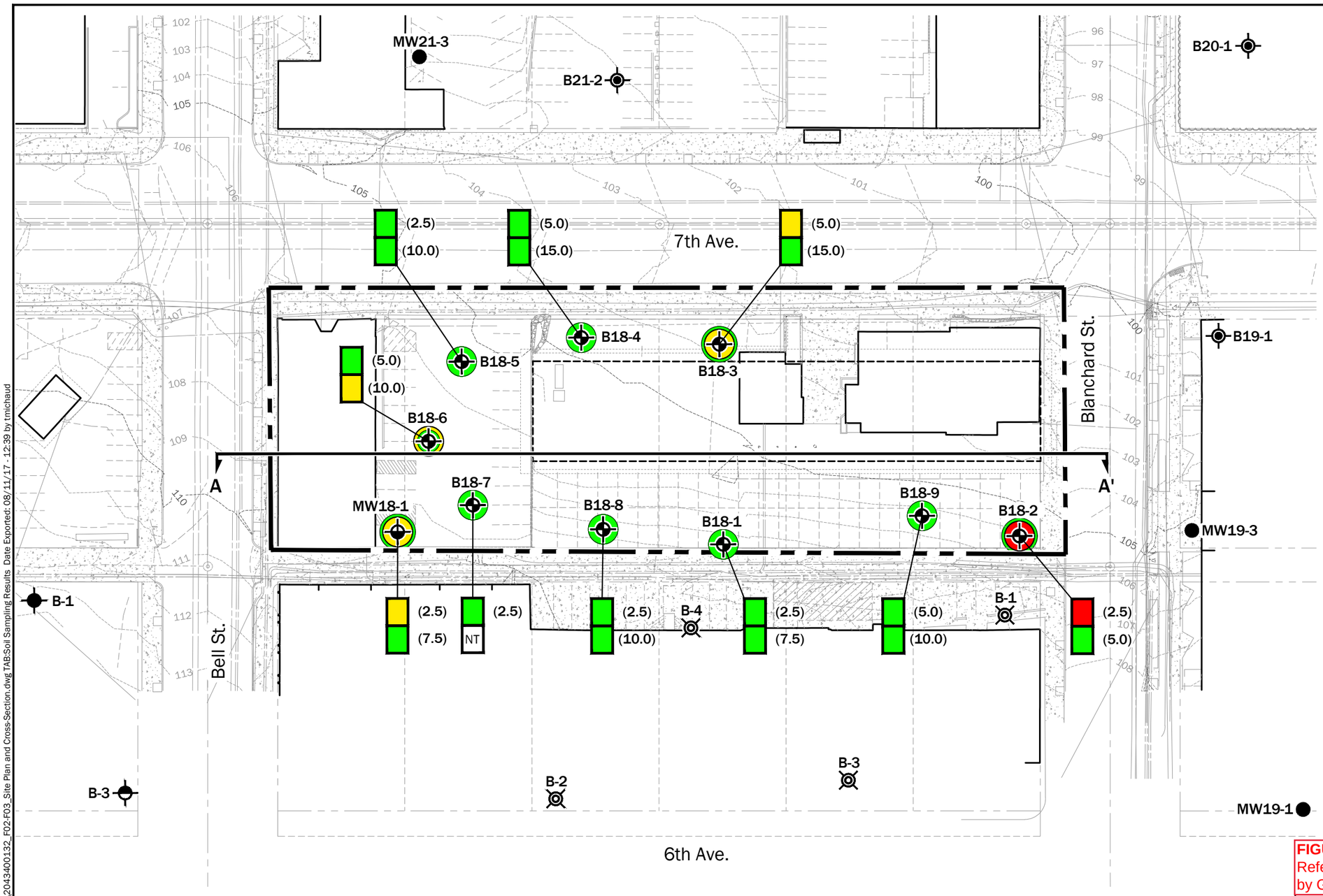
Cross Section A - A'

Rufus 2.0 Development - Block 18
Seattle, Washington

GeoEngineers

Figure 4

P:\20\20434001\CAD\32\Environmental\20434001320_F02-F03_Site Plan and Cross Section.dwg TAB:Section A-A' Date Exported: 08/15/17 - 16:02 by tmichaud



Legend

A — A' Cross Section Location

Site Boundary

MW18-1 Boring with Monitoring Well by GeoEngineers, 2017 (Current Study)

B18-1 Boring by GeoEngineers, 2017 (Current Study)

B-3 Boring with Monitoring Well by Aspect, 2016

B-1 Boring by Aspect, 2015

MW19-1 Boring with Monitoring Well by GeoEngineers, 2012 and 2013

B19-1 Boring by GeoEngineers, 2012

B-1 Boring by Shannon and Wilson, 1964

Soil Chemical Analytical Results

Contaminants of concern detected at concentrations greater than the corresponding MTCA cleanup levels

Contaminants of concern detected at concentrations less than the corresponding MTCA cleanup levels

Contaminants of concern were not detected, or were detected at concentrations similar to natural background concentrations (metals only).

(2.5) Sample obtained from Fill Soil

(7.5) Sample obtained from Native Soil

Depth bgs
Sample Result

bgs = Below Ground Surface

NT = Not Tested

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Base map was taken from BRH, Dated 12/21/2016

Projection: WA State Plane, North Zone, NAD83, US Foot

Actual

Project

50 0 50

Feet

FIGURE 4
Reference: "Phase II Environmental Site Assessment," by GeoEngineers, dated November 13, 2017.

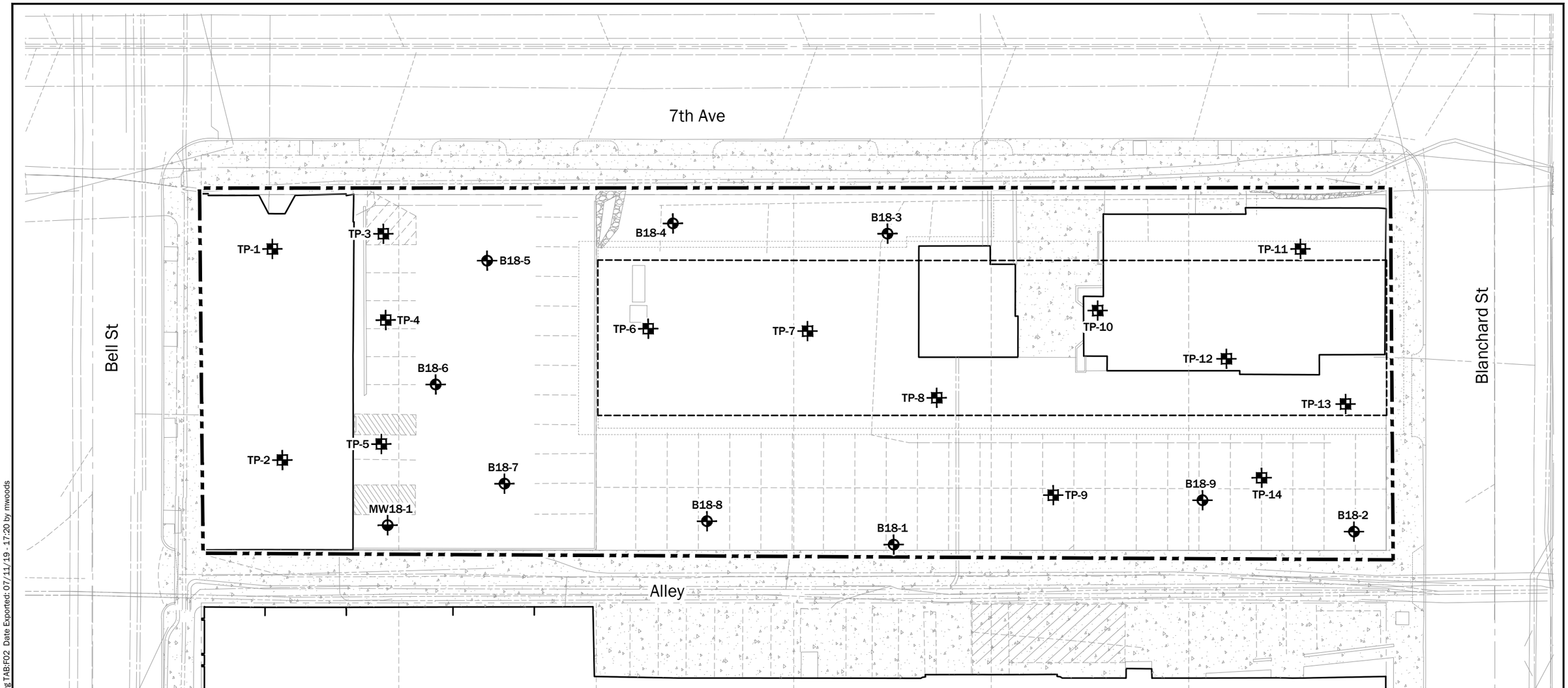
Soil Chemical Analytical Results

Rufus 2.0 Development - Block 18
Seattle, Washington

GeoEngineers

Figure 3

P:\20\20434001\CAD\32\Environmental\20434001 32_F02-F03_Site Plan and Cross-Section.dwg TAB:Soil Sampling Results Date Exported: 08/11/17 - 12:39 by tmichaud



Actual

Project

30 0 30

Feet

Notes:

1. The locations of all features shown are approximate.
2. This drawing is for information purposes. It is intended to assist in showing features discussed in an attached document. GeoEngineers, Inc. cannot guarantee the accuracy and content of electronic files. The master file is stored by GeoEngineers, Inc. and will serve as the official record of this communication.

Data Source: Base map was taken from BRH, Dated 12/21/2016

Projection: WA State Plane, North Zone, NAD83, US Foot

Legend

- Property Boundary
- TP-1 — Test Pit Location by GeoEngineers, 2018
- MW18-1 — Boring with Monitoring Well by GeoEngineers, 2017
- B18-1 — Boring by GeoEngineers, 2017
- B19-1 — Boring by GeoEngineers, 2012

FIGURE 5
Reference: "Cleanup Action Report," by GeoEngineers, dated April 2, 2020.

Site Plan

Rufus 2.0 Development - Block 18
Seattle, Washington

GeoEngineers

Figure 2

P:\20\20434001\CAD\32\Cleanup Action Report\20434001132_F02_Site Plan.dwg TAB:F02 Date Exported: 07/11/19 - 17:20 by mwoods

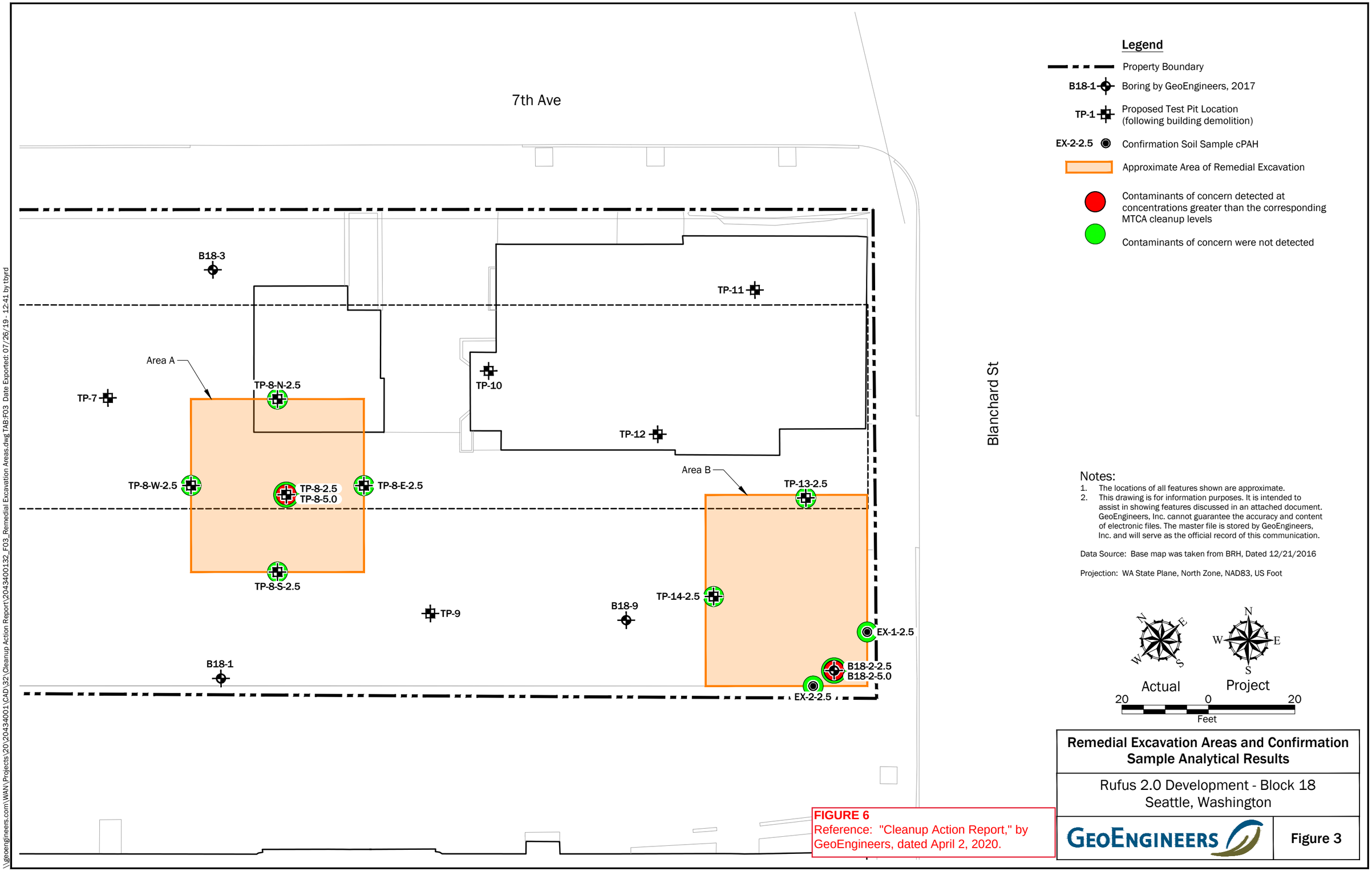


FIGURE 6
Reference: "Cleanup Action Report," by GeoEngineers, dated April 2, 2020.

Remedial Excavation Areas and Confirmation Sample Analytical Results

Rufus 2.0 Development - Block 18
Seattle, Washington

GeoEngineers

Figure 3