



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

*Northwest Regional Office • 3190 160th Ave SE • Bellevue, WA 98008-5452 • 425-649-7000
711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341*

February 18, 2016

Mr. Todd Leber
Acorn Development, LLC
1191 Second Avenue, Suite 1500
Seattle, WA 98101

**Re: Opinion Pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the
Following Hazardous Waste Site:**

- **Site Name:** Block 19 7th and Lenora
- **Site Address:** 2101 7th Avenue, Seattle, WA 98119
- **Facility/Site No.:** 17031
- **VCP Project No.:** NW3011
- **Cleanup Site ID No.:** 12918

Dear Mr. Leber:

Thank you for submitting documents regarding your proposed remedial action for the Block 19 7th and Lenora facility (Site) for review by the Washington State Department of Ecology (Ecology) under the Voluntary Cleanup Program (VCP). Ecology appreciates your initiative in pursuing this administrative option for cleaning up hazardous waste sites under the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

This letter constitutes an advisory opinion regarding a review of submitted documents/reports pursuant to requirements of MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release at the Site:

- Total petroleum hydrocarbons in the diesel range (TPH-D) and the oil range (TPH-O) and polycyclic aromatic hydrocarbons (PAHs) into soil.

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WAC 173-340-515(5).

This opinion does not resolve a person's liability to the state under MTCA or protect a person from contribution claims by third parties for matters addressed by the opinion. The state does not have the authority to settle with any person potentially liable under MTCA except in accordance with RCW 70.105D.040(4). The opinion is advisory only and not binding on Ecology.



Mr. Todd Leber
February 18, 2016
Page 2

Ecology's Toxics Cleanup Program has reviewed the following information regarding your proposed remedial action(s):

1. GeoEngineers, Cleanup Action Report, June 10, 2015.
2. GeoEngineers, Construction Contingency Plan, Soil and Groundwater Management, March 4, 2014.
3. GeoEngineers, Phase II Environmental Site Assessment, June 7, 2012.
4. GeoEngineers, Phase I Environmental Site Assessment, June 7, 2012.

The reports listed above will be kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. Appointments can be made by calling the NWRO resource contact at (425) 649-7235 or sending an email to: nwro_public_request@ecy.wa.gov.

The Site is defined by the extent of contamination caused by the following release:

- TPH-D, TPH-O, and PAHs into soil.

The Site is more particularly described in Enclosure A to this letter, which includes a detailed Site diagram. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to **requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site, Ecology has determined:**

- Your characterization of the Site is not sufficient to establish cleanup standards and select a cleanup action. Soil samples were collected after discovery of contaminated areas during construction activities at the Property and were collected and analyzed for TPH-D and TPH-O. Several of the samples contained concentrations above the MTCA Method A cleanup levels for TPH-D and/or TPH-O, however, only limited areas were sampled for PAHs. None of the samples were analyzed for volatile organic compounds (VOCs) or metals even though some of the exceedances were in an area known to have a history of vehicle maintenance activities.
- Confirmation samples obtained during post-excavation activities, were not collected below the areas where contamination was previously identified (PCS-4, SP-2, and PCS-2). Therefore, complete removal of impacted soil cannot be confirmed at this time.

Additional information describing current status of the Site, including all Site activities such as final depth of soil excavation, additional contaminated soil removal, dewatering activities during Property redevelopment, and any other information that may be pertinent to the Site characterization and cleanup, should be submitted.

- No perched ground water was encountered during excavation activities. However, during exploration prior to Site cleanup, perched ground water was identified on the Property at two locations (borings B19-6 and B19-7) at depths between 10 and 17.5 feet bgs. While these locations are approximately 80 feet to the north and northwest of where the cleanup activities were completed, it is an indication that perched water may be present on the Property. Explorations closer to the contaminated areas did not reveal the presence of perched ground water. These explorations were as shallow as 10 feet below ground surface (bgs) and as deep as 76 feet bgs. Based on the incomplete vertical delineation of soil impacts described above, it is not known if the soil contamination possibly extended into ground water, therefore Ecology cannot determine if the ground water investigation is complete. Additional information, as described above and including cross sections of the final excavated areas, are needed to further understand the current status of the Site.
- The Site does not qualify for the Terrestrial Ecological Evaluation (TEE) exclusion selected per WAC 173-340-7491 as Denny Park is located approximately 300 feet north of the Site and it is considered to be more than 1.5 contiguous acres of undeveloped land. Please include the completed TEE form in future submissions.
- Excavation of contaminated soil is the cleanup action selected for the Site. While this is a permanent cleanup action, due to the incomplete Site characterization and confirmation sampling, Ecology cannot determine if this cleanup action meets the substantive requirements of MTCA.

This opinion does not represent a determination by Ecology that a proposed remedial action will be sufficient to characterize and address the specified contamination at the Site or that no further remedial action will be required at the Site upon completion of the proposed remedial action. To obtain either of these opinions, you must submit appropriate documentation to Ecology and request such an opinion under the VCP. **This letter also does not provide an opinion regarding the sufficiency of any other remedial action proposed for or conducted at the Site.**

Please note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

The state, Ecology, and its officers and employees make no guarantees or assurances by providing this opinion, and no cause of action against the state, Ecology, its officers or employees may arise from any act or omission in providing this opinion.

Mr. Todd Leber
February 18, 2016
Page 4

Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements and opinions regarding whether remedial actions proposed for or conducted at the Site meet those requirements.

If you have any questions about this opinion, please contact me by phone at (425) 649-7058 or by e-mail at tamara.cardona-marek@ecy.wa.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read "T. Cardona".

Tamara Cardona, PhD
Toxics Cleanup Program

Enclosures: A – Description and Diagrams of the Site

cc: Jessica Smith, GeoEngineers
Sonia Fernandez, Ecology

Enclosure A

Description and Diagrams of the Site

Site Description

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

Site: The Site is defined as total petroleum hydrocarbons in the diesel range (TPH-D), total petroleum hydrocarbons in the oil range (TPH-O) and polycyclic aromatic hydrocarbons (PAHs) in soil at 2101 7th Avenue in Seattle, WA (Property). The Property corresponds to contiguous King County tax parcel numbers 0660000220, -215, -205, -195, -176, -165 which are 0.45, 0.15, 0.30, 0.30, 0.30, and 0.30 acres in size, respectively, for a total of 1.8 acres.

Area and Property Description: The Property is currently part of the Amazon Campus located west of Lake Union in a mixed use area of residential, commercial and retail land uses. An apartment building is located to the southwest, an office building and an apartment building to the northwest, other buildings that are part of the Amazon Campus are located to the northeast and southeast, an apartment building is located directly to the east, and an office building to the south. The former existing buildings on the Property were demolished in 2014. The Property is currently undergoing redevelopment as a 38-story office building with seven levels of underground parking.

Property History and Current Use: Block 19 was originally developed with approximately 18 residential buildings in 1905 which were all demolished in the 1930s. In a 1936 aerial photograph, the western half of the block appears vacant. Historical documents suggest auto sales and repair businesses and possibly a fuel station may have been located on the Property in the late 1930s. Between 1940 and 1980, residential and office buildings were constructed and demolished. Prior to the 2014 demolition, the Property was occupied by office space, a theater and surface parking. The Property is currently undergoing redevelopment as part of the Amazon campus.

Sources of Contamination: Specific sources of TPH-D, TPH-O, and PAHs contamination throughout the Property are not all known. Of the six areas of contamination identified, only two can be associated to prior uses of the Property including a residential heating oil underground storage tank and an oil water separator. Although no contamination was identified during a Phase II investigation, contamination was found during excavation for the current building.

Physiographic Setting: The Property is located in 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 sediments.

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 construction project in the early part of the 20th century. Explorations and geologic analysis indicate that a thickness of between one to 22 feet of fill was placed on the Property. The Property currently lies at an elevation of approximately 100 feet above mean sea level.

Surface/Storm Water System: The surface water body closest to the Site is Puget Sound approximately 0.6 miles southwest (and west) of the Property. Lake Union is located 0.6 miles

north of the Property. Surface water runoff in the area is captured in municipal storm drains and transported to the nearest surface water drainage.

Ecological Setting: The surface of the Property will be covered by a building following redevelopment. Denny Park, a 4.6 acre city park, is located approximately 300 feet north of the Property. Other surrounding areas are covered with asphalt or buildings.

Geology: Soils encountered at the Site consist of fill consisting of loose to dense silty sand and silt with variable gravel and cobble content and occasional brick, charcoal or wood debris. The fill overlies recent deposits (stiff to very stiff silt and clay with occasional sand interbeds and variable gravel content or medium dense to dense sand with variable silt and gravel content) and competent glacially-consolidated soils to depths of up to 75 feet below ground surface (bgs), the maximum depth explored.

Ground Water: Discontinuous zones of shallow perched water were encountered in isolated soil boring locations B19-6 and B19-7 during the Phase II investigation. The perched ground water occurred at depths of 10 to 17.5 feet bgs in the northeast and northwest portions of the Property. Based on topographic contours, shallow ground water is inferred to flow to the west/southwest. Regional ground water at the Property was observed at depths of 70 feet bgs in soil boring B19-5.

Water Supply: The Property's drinking water is supplied by Seattle Public Utilities (SPU). Water provided by SPU is obtained from the Cedar and Tolt River watersheds.

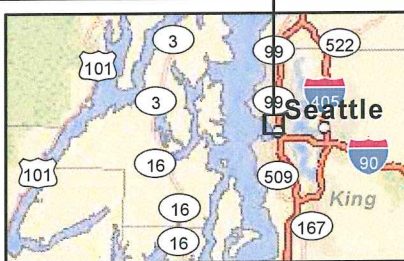
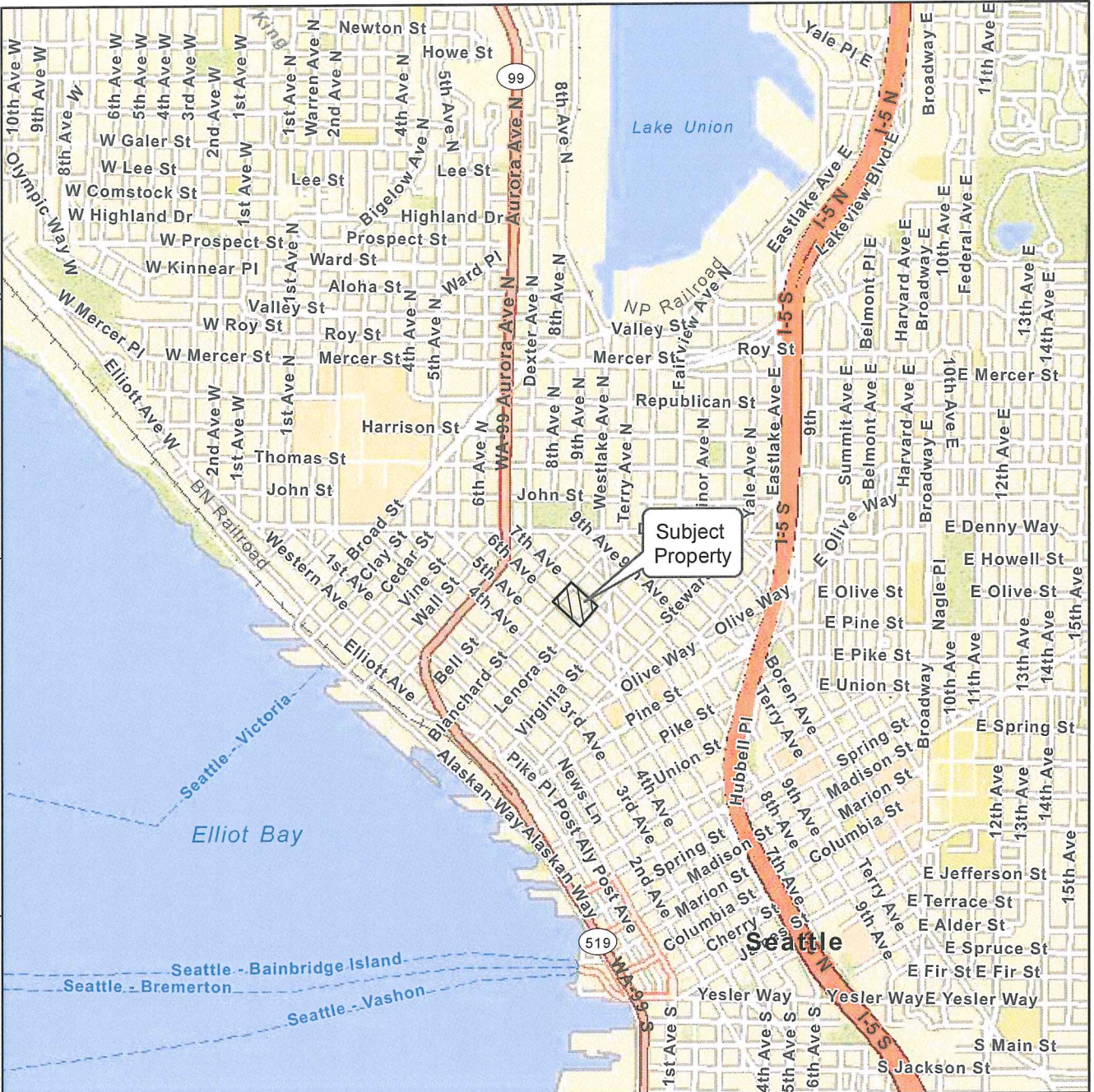
Release and Extent of Soil and Ground Water Contamination: Phase I and Phase II Environmental Site Assessments were completed in 2012 at the Site prior to Property redevelopment. While some potential Property uses suggested contamination may be present on the Property, 11 soil boring explorations advanced to a maximum depth of 76 feet bgs found no contamination. At a minimum, one soil sample was collected from each boring at depths varying from 2.5 to 70 feet bgs., most samples were collected at depths between five and 15 feet bgs. All soil samples were analyzed for TPH-G, TPH-D, TPH-O, and metals. A selected group of samples was also analyzed for volatile organic compounds and PAHs. None of the samples analyzed had detections above the MTCA Method A Cleanup levels. Ground water was encountered in a shallow zone in two of the 11 soil borings but it was not sampled during the Phase II investigation.

In 2014, Property redevelopment was under way. While no details were provided regarding the excavation activities, a Construction Contingency Plan was in place and was being followed in case contaminated soil was encountered. Petroleum- and PAH-contaminated soil was encountered in six localized areas (areas A, B, C, D, E, and F). In addition, a heating oil UST was also found associated with area C. A total of six discrete or composite soil samples were collected from areas B, D, E, and F to characterize the soil for disposal. Samples were analyzed for TPH-G, TPH-D, TPH-O. Two soil samples from area D were also analyzed for PAHs. TPH-D and TPH-O were detected in all samples. Areas D, E, and F had TPH-D and/or TPH-O sampling results as high as 10,000 and 3,530 milligrams per kilogram (mg/kg) respectively, exceeding their MTCA Method A cleanup levels. One of the PAHs samples from area D also had results (131 micrograms per kilogram) exceeding the MTCA Method A cleanup level.

Following removal of the heating oil UST in area C, three discrete soil samples were obtained from soil adjacent to the UST. Highest concentrations detected in these samples were 20,700 mg/kg for TPH-D and 3,320 mg/kg for TPH-O.

Soil in all impacted areas was removed and confirmation samples collected. Approximately 996 tons of contaminated soil were removed from area C, adjacent to the UST. Eight confirmation samples were collected from the limits of the UST excavation. No detections above the MTCA Method A cleanup levels were present. Samples from area C were not collected below previous detections but from a location between five and 10 feet away.

The depth and size of the remaining five excavated areas was not reported. A total of 23 confirmation soil samples were collected. Confirmation samples in all areas were analyzed for TPH-D and TPH-O. Only samples from area D were analyzed for PAHs. None of the samples had detections exceeding Method A cleanup levels. Confirmation samples from area E were not collected below the previous detection (PCS-2) but from a location approximately five feet away.



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.
3. It is unlawful to copy or reproduce all or any part thereof, whether for personal use or resale, without permission.

Data Sources: ESRI Data & Maps, Street Maps 2013
Transverse Mercator, Zone 10 N North, North American Datum 1983
North arrow oriented to grid north



2,000 0 2,000
Feet

**Vicinity Map
Block 19**

Rufus 2.0
Seattle, Washington

GEOENGINEERS

Figure 1

Legend

Remedial Excavation Areas (A-E). Excavation areas identified by field screening and soil sampling. See figures 2-6 for characterization and confirmation soil sample locations.

- A: Petroleum impacted soil near soldier pile N13
- B: Petroleum impacted soil near soldier pile N44
- C: Former underground storage tank and remedial excavation of petroleum contaminated soil
- D: PAH contaminated soil from tremie pipe
- E: Petroleum contaminated soil
- F: Former oil-water separator and petroleum contaminated soil

- B19-12 Lead Flight Auger Test Boring Completed in February 2014
- MW14-3 Shallow Monitoring Wells Completed in April 2012
- B14-6 Direct-Push Borings Completed in April 2012
- B14-1 Hollow-stem Auger Borings Completed in February 2012
- MW19-1 Monitoring Well Completed in February 2012



Notes

- The locations of all features shown are approximate.
- 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.

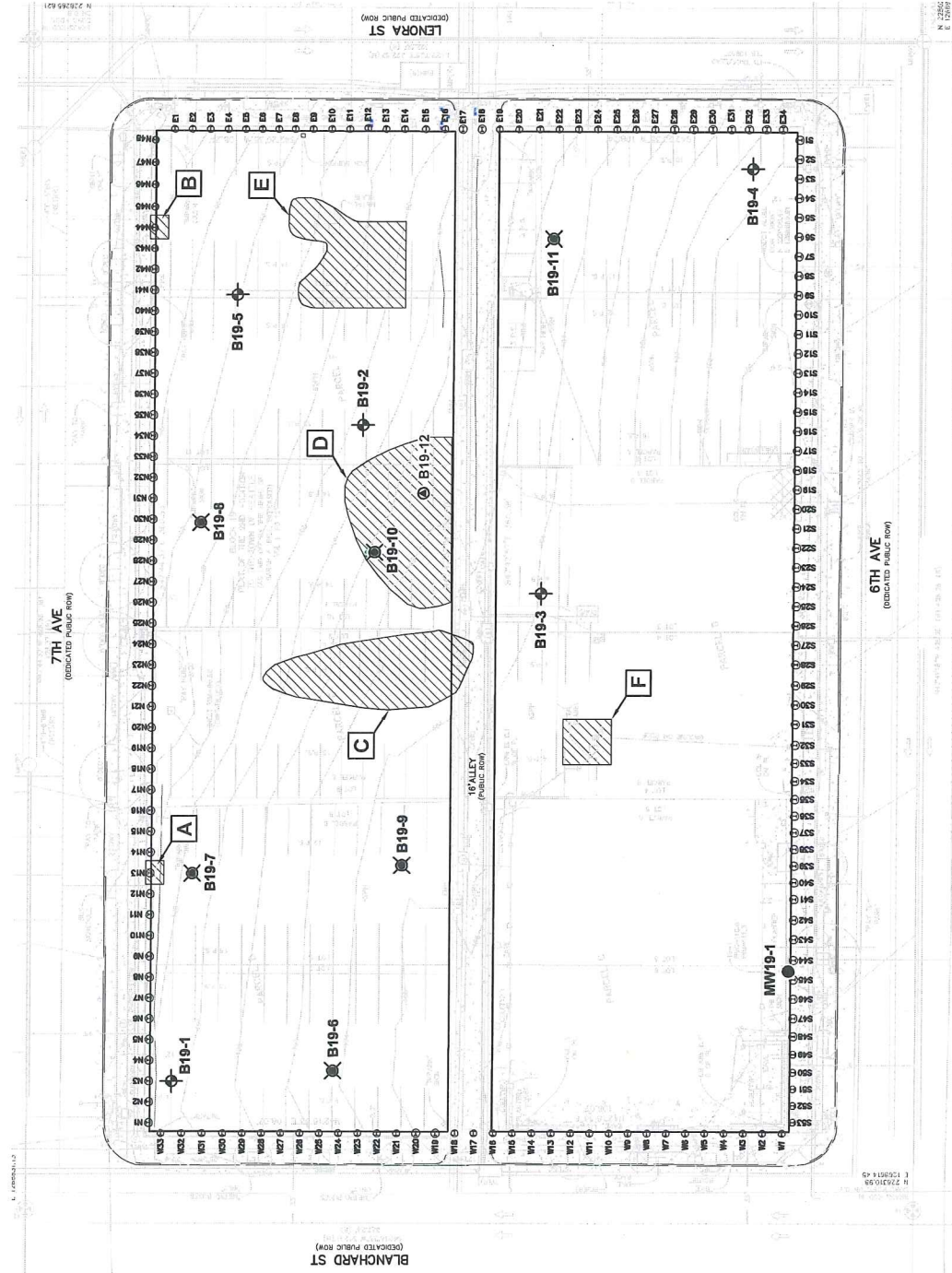
Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Reed & Hitchings, Inc., dated March 2012. Shoring design cad files by Ground Support provided on 4-9-14.

Block 19 Remedial Excavation Areas

Block 19 Remedial Excavation Areas
Seattle, Washington



Figure 2



Legend

- Approximate Remedial Excavation Area. Soil excavated from this area was transported to CEMEX in Everett, WA for permitted disposal.
- Direct-Push Borings Completed in April 2012
- Characterization or Confirmation Soil Sample
- Contaminants of concern were not detected
- Soldier Pile



Notes

- The locations of all features shown are approximate.
- 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.

Reference: Site survey CAD file "XS-SUR.dwg" provided by Bush, Roed & Hitchings, Inc., dated March 2012. Showing design cad files by Ground Support provided on 4-9-14.

Remedial Excavation Area A

Block 19 Remedial Excavation Areas
Seattle, Washington



Figure 3

