



Fredrickson Industrial Park

18001 Canyon Road East
Puyallup, Washington

SOIL MANAGEMENT PLAN

JANUARY 14, 2022

PREPARED FOR:

CH REALTY IX-JV I FRED310 INDUSTRIAL, L.P.
c/o Panattoni Development Company, Inc.
7887 E. Belleview Avenue, Suite 475
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PREPARED BY:

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VERTEX PROJECT NO: 71555

January 14, 2022

Mr. Trevor McKune
Associate Risk Manager
C.H. Realty IX-JV Fred310 Industrial. L.P.
c/o Panattoni Development Company, Inc.
7887 E. Belleview Avenue, Suite 475
Denver, CO 80111

Re: Soil Management Plan
Frederickson Industrial Park
18001 Canyon Road
Puyallup, Washington
VERTEX Project Number: 71555

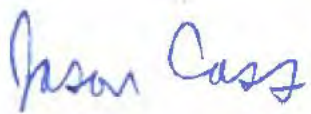
Dear Mr. McKune:

The Vertex Companies, Inc. (VERTEX) is pleased to submit this Soil Management Plan (SMP) for the above referenced property (the Site). The purpose of this SMP is to identify procedures for handling and disposal of potentially contaminated soils at the site, as well as contingency procedures to handle unexpected conditions.

Please do not hesitate to contact us at your convenience should you have any questions or comments regarding this report or our recommendations. It has been a pleasure working with you on this project.

Sincerely,

The Vertex Companies, Inc.



Jason Cass
Project Manager



Stephen P. Long
Vice President

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1.0 SUMMARY

On November 4, 2021, The Vertex Companies, Inc. (VERTEX) was contracted by C.H. Realty IX-JV Fred310 Industrial. L.P. c/o Panattoni Development Company, Inc. to prepare a Soil Management Plan (SMP) for use during site development activities at the Fredrickson Industrial Park property at 18001 Canyon Road East in Puyallup, Washington (the Site) to address known and potential environmentally-impacted soil.

1.1 Purpose of SMP

The purpose of the SMP is to describe the procedures that Site contractors must follow in the event that contaminated soil and/or other regulated material is encountered, removed, and transported off site for disposal. In addition, this SMP provides protocols for the re-use of contaminated soils on-site and the import of soil onto the Site for use as fill. The SMP has been developed to facilitate the redevelopment of the Site by outlining specific procedures that will be used for identifying, testing, handling, and disposal or reuse of soil and any other encountered potentially hazardous substances. Implementing the procedures in this SMP will help to ensure that any contaminated soil or other hazardous materials are managed in a manner that is protective of human health and the environment and compliant with applicable Federal, State and local regulations.

A copy of this Soil Management Plan will be kept in the on-site construction management office for reference, and it is the responsibility of the General Contractor and applicable subcontractors to ensure it is followed. The project Environmental Consultant will also be on-Site during all grading and underground excavation activities to conduct monitoring, oversight and sampling as required by this SMP.

1.2 Background

The “Site” or “Subject Property” is located adjacent to the Boeing Frederickson Fabrication Division (BFFD) aircraft manufacturing plant at 18001 Canyon Road East, Puyallup, Pierce County, Washington, and consists of an approximate 312.1-acre vacant wooded property. The Site was previously owned by Boeing from 1990 to 2021 and was not generally used for industrial purposes during Boeing’s ownership other than the placement of excess soil from the development of the BFFD. The Site location is shown on **Figure 1**. According to the Pierce County Assessor and Treasurers Office, the Site consists of two tracts of undeveloped land, totaling approximately 312-acres, occupying all, or parts of the following assessor’s parcel numbers (APN):

Parcel	APN	Listed Address	Acres
2	0418061016	18001 Canyon Road East	127.97
3	0419311021	6402 180 th Street East	184.13
Total			312.10

The Site is located within an area referred to as the Frederickson Industrial Park, which is located adjacent to the north, east, and south of the BFFD aircraft manufacturing plant.

Features of the Site include an approximately 60-foot mound of fill material known as Mount Frederickson located in the northern portion of Parcel 2. The mound reportedly was used to stockpile fill from clearing and grading of the Site and BFFD manufacturing facility. A former gravel pit is also present on the northeast section of the Site, which has reportedly been backfilled with materials from construction activities on the adjacent BFFD facility. As discussed in Section 2.1 below, based on previous testing by Boeing and a Phase II completed in 2021 by Vertex, these

fill materials are not known to be contaminated with any hazardous substances or petroleum products.

Portions of the Site and the adjacent BFFD property were historically occupied by an explosives/propellant manufacturing facility between 1936 and 1976, and a lumber company between 1976 and 1986. The majority of the structures associated with these facilities were located on the southern portion of the Site. All structures have been removed.

1.3 Proposed Development

The Owner is proposing to construct six industrial buildings on the Site ranging from approximately 144,620 to 118,480 square feet in size. The buildings will generally be constructed with dock height floor slabs and concrete tilt-up walls and metal roof construction. No underground levels are planned and excavation for foundations should be limited to within 5 feet of the surface.

1.4 Covenants and Restrictions

The Declaration of Covenants, Conditions, Easements and Restrictions (CCERs) that was executed between Owner and Boeing at the time of the property sale also places certain requirements on the Site development, including over-excavation and screening of soils beneath proposed building footprints on the Site. The CCER requirements are summarized as follows:

- The CCER exhibits include a “Vapor Barrier Area”, which encompasses the northwest section of the Site. Building A is located within the vapor barrier area and must include a chemical vapor barrier to limit the potential for vapor intrusion.
- The developer is also required to over-excavate soils beneath all six buildings to a depth of 3 feet bgs and extending 15 feet outside the building footprints in all directions.

- The developer is also required to perform a soil gas study before constructing any buildings outside the vapor barrier area to determine if volatile chemicals are present in the subsurface. If volatile chemicals are identified beneath the building footprint at concentrations that might result in vapor intrusion, then a vapor barrier shall also be implemented beneath the building. VERTEX has completed the soil gas study, which did not indicate any need for vapor barriers beneath Buildings B-F.
- The developer must inform Boeing at least 10 days prior to beginning excavation for any building.
- During all excavation work, the developer must have an environmental professional present to conduct visual and field screening of the excavated soils with a photoionization detector (PID) for the presence of visual or olfactory evidence of chemical impacts (staining, odor) or PID readings indicating potential volatile organic chemical (VOC) impacts.
- In the event that the field screening indicates a potential for impacts, appropriate soil sampling must be performed in the area of concern. Any potentially impacted soils should be separately stockpiled, and confirmatory soil sampling should be performed within the excavation. The potentially impacted soils may also need to be characterized for off-site disposal.
- The developer must provide notice to Boeing and Ecology if any potentially contaminated soils or hazardous materials are encountered during construction. The developer must provide a written report of any impacted soil or hazardous material removal to Boeing and Ecology.
- Within 30 days of completion of over-excavation activities for a particular building, the developer must provide a written report to Boeing documenting the soil removal and screening activities, and any confirmatory soil sampling that was performed.

- The CCER allows re-use of non-contaminated soils on-site. However, any soils that are contaminated or that must be transported off-site due to unsuitable geotechnical properties or other reasons, must be handled, transported, and disposed in accordance with all applicable Federal, State, and local requirements. These requirements would include proper stockpiling and characterization of the soil prior to off-site transport.

1.5 Roles and Responsibilities

The roles and responsibilities for each party involved in the development efforts are described below:

Owner - CH REALTY IX-JV I FRED310 INDUSTRIAL, L.P. is the owner of the project. Panattoni is the Development Manager and will be responsible for all communications with Ecology, Boeing, and other outside regulatory agencies or stakeholders. Panattoni will be responsible for signing all waste manifests as agent for generator and for obtaining all permits necessary to conduct the project development.

Environmental Consultant – VERTEX was retained by Development Manager on behalf of Owner and will be responsible for daily screening and oversight of grading, excavating and soil disturbance activities. VERTEX shall also conduct soil sampling and profiling of any suspect contaminated soils and/or hazardous materials and will be responsible for preparing disposal profiles and securing disposal facility acceptance for any off-site waste shipments.

Contractor – The General Contractor or Earthwork Contractor is responsible for routine grading and excavation activities. The Contractor shall immediately inform the Owner’s representatives and VERTEX if any suspect contaminated soil, buried debris, or other subsurface structures that are suspected to contain hazardous substances or petroleum products are identified.

HAZMAT Contractor – The HAZMAT Contractor shall be responsible for excavation and handling of any suspect contaminated soil or hazardous materials that may be encountered during

construction. The General Contractor or Earthwork Contractor may assume this role if OSHA Hazardous Waste Operations and Emergency Response (HAZWOPER) trained crews are provided.

Washington Department of Ecology (Ecology) –Olin and Malinkrodt are currently monitoring the Carbon Tetrachloride plume that has migrated under the northwest portion of the Site under Agreed Order No. DE 9514, dated February 27, 2014. Ecology is the lead regulatory agency for these activities and any hazardous waste activities.

Boeing Environmental Coordinator – Under the terms of the CCER’s, Boeing must be notified of impending excavation activities and the discovery of any suspect contamination on the Site. The Boeing Environmental Coordinator shall be notified of activities as required in the CCR agreement. Boeing is not responsible in any way for the implementation of the Soil Management Plan.

1.6 Project Contacts

Owner(s)

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2.0 SUBSURFACE CONDITIONS

The following is a summary of Site assessment activities conducted to date at the Site, the results of which were used to assist in developing the soil and solid waste management approach described in this SMP.

2.1 Previous Environmental Investigations

2.1.1 Phase I Environmental Site Assessment (ESA)

VERTEX prepared a Phase I ESA report for the site, dated August 23, 2021, which provides a detailed summary of the site history and previous environmental investigation and cleanup efforts on the site. The Phase I ESA identified the following recognized environmental conditions (RECs) that should be considered during development of the site:

- An off-site source of carbon tetrachloride (CT) was previously identified in the groundwater that encroaches upon Parcel 3 of the Subject Property, which is considered a REC. CT is a volatile organic compound (VOC) and may migrate into the soil gas from underlying contaminated groundwater, this REC also is considered a vapor encroachment concern (VEC).
- The historical presence of buildings/structures associated with a former explosives/propellant plant on Parcel 2, and the likely use of hazardous substances associated with the explosives manufacturing process in these areas was considered a REC, including potential aerial emissions of explosive residues. These features were centered around the current location of a large fill pile that has been previously identified as Mt. Frederickson.

- The presence of a large mound of fill materials, known as Mt. Frederickson area on Parcel 2 and the fill materials within a former gravel pit on Parcel 3 was considered a REC, given the unknown origin of these materials.
- A former dump area known as the “barrels found area” was identified on Parcel 2, which was considered a REC. The former dump area is shown on Figure 3. Previous remediation efforts were undertaken to remove the waste from this area, but VERTEX did not believe this area had adequately been characterized post-remediation.
- A previous 2021 environmental investigation on the site undertaken by Boeing documented benzene in soil gas at several locations across the Subject Property at concentrations exceeding applicable screening levels. The source of the benzene is not known.
- An area of petroleum impacted soil was previously discovered and removed from two areas in the vicinity of Mt. Frederickson. The excavation and removal of petroleum contaminated soil from these two areas was considered to represent a Historical Recognized Environmental Condition (HREC).

2.1.2 Phase II Limited Site Investigation

VERTEX also performed a Phase II Limited Site Investigation (LSI) on the site, dated August 27, 2021. The purpose of the Phase II LSI was to evaluate each of the RECs that were identified in the Phase I ESA. The Phase II LSI included the collection and laboratory analysis of surface and subsurface soil samples from across the site, soil screening and monitoring during geotechnical test pit excavations, and collection of shallow soil gas samples from across the site. The Phase II LSI identified the following conditions on the site:

- No subsurface debris was encountered in any of the test pits or soil borings installed across the site.

- No shallow soil impacts due to the historical operation of the explosives plant on the site and adjacent site were identified in any of the surface composite soil samples collected across the site.
- No contaminants of concern were detected in the soil samples collected from the deep soil borings installed in the Mt. Frederickson and gravel pit areas at concentrations exceeding the applicable MTCA soil cleanup levels, with the exception of arsenic, cobalt, and iron and those detected concentrations appear to be consistent with naturally occurring background in Washington State.
- The test pits installed in the “barrels found area” did not identify any buried subsurface debris or other evidence of impacted soils in this area. No explosives or perchlorate were identified in any of the surface or sub-surface soil samples collected from this area.
- Shallow soil gas samples collected from the proposed building footprints did not identify any VOCs at concentrations above the MTCA Method B soil gas screening levels.
- VERTEX identified petroleum odors in one test pit installed in the vicinity of Mt. Frederickson in an area that previously was remediated to remove petroleum impacted soils; however, no significant contamination was encountered. The soil sample collected from this area contained 1-methylnaphthalene at a concentration exceeding the MTCA Soil: Protection of Groundwater cleanup level, but below the MTCA Method B soil cleanup level for unrestricted use, suggesting that minor residual impacts may have been left in place in this area upon completion of the previous remediation effort. VERTEX has recommended removal of these soils prior to development.
- Elevated PID readings (>50 ppmv) were detected in a few locations across the site, including adjacent to Mt. Frederickson and within the gravel pit area; however, no volatile contaminants were detected above MTCA soil cleanup levels in any of the soil samples collected from the locations/depths where the elevated PID readings were encountered.

Since MTCA does not have any specific standards for PID readings and the confirmatory soil samples at these locations did not identify any impacts, no further action is recommended associated with the elevated PID readings.

- The investigation included collection of representative samples from each of the areas that were identified in the VERTEX Phase I ESA as RECs. Based on the findings of the Phase II LSI, no evidence of a release associated with the current or historic use of the site was identified.

It should be noted that Panattoni has completed the removal of the small area of petroleum contaminated soil proximate to Mt. Frederickson prior to the development of the site. The removal action was conducted by VERTEX and the contaminated soil was disposed off-site at a permitted landfill. For the purposes of this SMP, the Contractor can assume that this petroleum contaminated soil is no longer present on-site when mass grading activities commence.

2.2 Summary of the Site Regulatory Status

The site is not currently under enforcement or regulated under any under any state or local regulatory programs, with the exception that the CT groundwater plume that encroaches upon the northern portion of the property that is being addressed by Mallinckrodt US LLC and Olin Corporation under Ecology Agreed Order No. DE 9514, dated February 27, 2014. Although the CT plume appears to originate on the BFFD property, Boeing is not a party to this Agreed Order and is not responsible for the cleanup implementation. There are no underground storage tanks or other underground features known to be present which would be regulated.

In the event that unforeseen conditions are encountered, such as buried tanks, piping, potential asbestos containing debris, stained soils, etc., the contractor should immediately contact the Environmental Coordinator.

3.0 SITE SECURITY

The Site will be an active construction site surrounded by a chain link fence with access restricted to authorized personnel through locked gates.

In the event that any unforeseen conditions are encountered, public access to the potentially contaminated work area will be restricted by the security fencing around the Site boundaries. If warranted, the area of the identified hazard will be cordoned off with security tape, safety cones, or other measures.

4.0 SOIL MANAGEMENT

This SMP addresses the disposition, off-Site reuse and/or disposal of soil during the proposed development of the Site. The objective of this SMP is to identify relevant procedures for the management, proper handling and disposal of soil in a manner that facilitates construction and is protective of human health, safety, public welfare and the environment, as required by federal, state, and local requirements. The general procedures for soil and materials management at the Site are discussed below. The site features and soil management areas are indicated on **Figure 5**.

4.1 General Construction Earthwork

In general, the soils at the site are not known to contain any chemicals of concern that would prevent their re-use on-site or that would trigger regulatory involvement, provided that the soil is not transported off-site. However, the Contractor shall carefully monitor all excavations for the presence of debris or other indications of chemical impacts such as stained soil, as well as for the presence of unknown conditions such as buried underground storage tanks. The Contractor shall immediately inform the Environmental Coordinator if indications of contaminated soil or other unknown conditions are encountered during earthwork. Any off-site disposal shall be performed in conformance with all applicable local, state and federal regulations. The Contractor should be aware that Ecology may have more stringent regulations than the MTCA soil cleanup levels that govern the off-site re-use of soil.

4.2 Imported Soils

Soil that is imported to the Site from an off-site location must be pre-approved by the Environmental Coordinator for use as fill at the Site.

Soil that is imported to the Site from a commercial borrow pit, must be certified as non-contaminated by the borrow pit source. The Contractor shall provide the certification to the

Environmental Coordinator prior to importing the soil. The Environmental Coordinator shall approve of the imported soil prior to transport on-site.

If any soil is imported from a non-commercial source, such as a construction site with excess fill, or surcharge materials from another property, it may need to be tested prior to transporting the soil on-site. The Contractor shall provide at least three (3) week's notice to the Environmental Coordinator to allow for review of the import source's environmental history and chemical characterization of soil proposed for importing. If required, the Environmental Consultant may sample the material at the borrow site prior to transport. The Environmental Coordinator shall approve of the non-commercial source soil prior to its transport to the Site.

4.3 Contingency Plan

The Environmental Coordinator must be notified if any of the following conditions are encountered or if any situations arise that could potentially affect the environmental integrity of the Site or potential worker safety:

- If additional fill material is encountered outside of the known fill areas.
- If visual or olfactory evidence of potentially contaminated soil (odor, color, staining, etc.) is encountered.
- If any underground tanks, vaults or cisterns or piping are encountered so the potential environmental risks may be evaluated.
- If building drains and associated sewer piping are encountered so the potential environmental risks may be evaluated.
- If excessive dust is encountered where dust control measures will need to be implemented.

- If unmarked utility corridors are encountered so the potential environmental risks may be evaluated.

In the event that suspect contaminated soil or other hazardous materials are identified during the course of soil cleanup activities, then the Contractor shall follow the procedures outlined below for preventing transport of known or potentially impacted media off the Site. The following contingency procedures will be followed upon discovery of an unknown source of constituents of potential concern (COPCs) that may require remediation (such as unknown USTs, stained soil, drums, etc.), and the procedures for suspending excavation work, and transferring any materials.

1) If an underground tank, container, or other previously unidentified waste and/or suspected hazardous substance or petroleum product, or suspect asbestos containing debris is encountered during construction, grading or excavation, the following action must immediately be followed:

- Immediately suspend all activity in the affected area;
- Notify the Environmental Coordinator.
- Isolate the affected area (e.g., hay bales, absorbents, anchored silt fencing, etc.) to prevent migration from the immediate locale,
- Install security measures to prevent further access by construction workers and equipment.

2) Sampling will be performed by the Environmental Consultant on the material, surrounding soils, groundwater, etc., as necessary to determine the nature and extent of the material and proper disposal options. Chemical analysis will be directed by the Environmental Consultant consistent with the COPCs that are tentatively identified.

- Laboratory analysis may include total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), heavy metals, polychlorinated biphenyls (PCBs) or other analyses that are deemed appropriate based on field indicators. If suspect asbestos containing materials (ACM) are identified, the Environmental Consultant shall deploy an Asbestos Hazard Emergency Response Act (AHERA) accredited asbestos inspector to the Site for sampling and providing further direction for abatement.
- 3) Identification of an unknown or unexpected condition must be promptly communicated by telephone to the Environmental Coordinator. Any required reporting to Boeing or regulatory agencies will be done by the Environmental Coordinator and should not be initiated by the Contractor.
 - 4) The appropriate response action (e.g., source material removal/off-site disposal) will be developed by the Environmental Coordinator and Environmental Consultant, with the objective of minimizing disruption to the construction schedule, while maintaining compliance with applicable local, State, and Federal regulations, and will be directly communicated to the Contractor.
 - 5) Response actions that involve potential contact with impacted soil or other hazardous materials (e.g., excavation, stockpiling, loading) should be performed only by personnel with the appropriate OSHA HAZWOPER training. The Environmental Consultant will guide the removal actions and will conduct soil screening, as appropriate during removal actions.
 - 6) Upon completion of any removal actions, the Environmental Consultant will conduct compliance monitoring in accordance with WAC 173-340-410 to confirm that the interim action has attained cleanup standards, including collection of confirmatory

soil samples for laboratory analysis to verify that all contaminated materials have been removed.

- 7) The Contractor shall obtain clearance from the Environmental Consultant that the hazards have been abated prior to re-entering the area.

Prior to transportation of any contaminated soils from the Site, a waste disposal authorization (WDA) must be obtained from the Tacoma-Pierce County Health Department (TPCHS) and a waste profile acceptance will be obtained from the disposal facility and pre-printed and signed manifests provided to the transporter. The Environmental Coordinator must review all waste profiles and waste shipping papers including manifests and bills of lading.

Additional investigation and analysis will be conducted as needed by the Environmental Consultant to ensure that any impacted soils and debris are properly characterized, segregated, and transported from the Site.

Field screening may also be performed by the Environmental Consultant to determine whether HAZWOPER-trained construction workers and equipment operators are needed in areas of previously undocumented conditions showing potential soil impact, until conditions are verified with laboratory data. If field instrument readings of 10 parts per million by volume (ppmv) plus background are consistently recorded in an area or if USTs or other structures containing hazardous substances or petroleum products are encountered, then the Contractor will be notified by the Environmental Consultant to temporarily vacate the area until a determination can be made whether trained HAZWOPER personnel will be required to continue working in the area.

4.4 Contaminated Soil Handling and Stockpiling

Any soils, debris or other structures that are suspected to contain hazardous substances or petroleum products based on field screening shall be handled only by OSHA HAZWOPER trained personnel. Suspect impacted soils should be stockpiled in an engineered stockpile area located

as close to the excavation area as possible. The soil stockpile shall be constructed on minimum 20 mil thick plastic sheeting and should be surrounded by hay bales or other berm material to prevent run-off from the stockpile from impacting stormwater. The stockpile shall be covered with a secure plastic sheeting cover at all times when the pile is not actively being managed or sampled. The stockpile shall be labeled to denote Suspect Hazardous Materials and properly secured with safety fencing to avoid unauthorized entry. The Contractor shall take precautions to ensure that potentially impacted soil is not tracked out or spread to non-contaminated areas.

It will be the responsibility of the Contractor to mitigate potential air emissions and fugitive dust by limiting free fall of excavated materials, limiting vehicle speed, preventing tracking of soils and mud, and use of truck covers during off-Site hauling. Watering and/or other dust suppression methods should be utilized as necessary.

4.5 Soil Disposal Characterization

Excavated soil that is suspected to contain hazardous substances or petroleum products based on field screening, or that is designated for off-site disposal must be appropriately characterized prior to being transported off-site for disposal or cleared for on-site reuse. Washington solid waste regulations (Washington Administrative Code [WAC] 173-351) and Dangerous Waste regulations (WAC 173-303), and other applicable soil reuse or waste management regulations have requirements and procedures for handling soil containing hazardous constituents. The regulations regarding land disposal or reuse of soil are overseen by Ecology. As applicable, such affected soil will be adequately characterized to ensure proper management and disposal using standard State or United States Environmental Protection Agency (USEPA) testing methods employed by a State and National Environmental Laboratory Accreditation Program (NELAP) certified laboratory.

Profiling of soil for disposal at an off-site disposal facility is necessary to determine proper disposal methods in order to verify that the soil meets all acceptance criteria of the proposed reuse or disposal facility, and ensure compliance with all Federal, State, and local regulations.

Stockpile soil samples will be collected by the Environmental Consultant per Ecology guidance and regulations. Soil samples will be collected from the stockpiled soil in accordance with the following frequency:

Number of Samples Required To Characterize Stockpiled Soil¹	
Cubic Yards of Soil	Number of Composite Samples to Be Collected
0-100	3
101-500	5
501-1000	7
1001-2000	10
>2000	10+ 1 sample for each additional 500 cy

¹The sampling frequency in the above table is adapted from Ecology’s 2016 *Guidance for the Remediation of Petroleum Contaminated Sites*. VERTEX evaluated this sampling frequency and judged it suitable for this project.

Stockpiled soil samples will be analyzed for one or more of the following analyte groups, depending on field indications of potential impacts**:

- Volatile Organic Compounds (VOCs), EPA 8260
- Semi-Volatile Organic Compounds (SVOCs), EPA 8270

- Organochlorine Pesticides (OCPs), EPA 8081
- Total Petroleum Hydrocarbons (NWTPH-Gx and NWTPH-Dx),
- RCRA Metals (As, Ba, Cd, Cr, Pb, Hg, Se, Ag), EPA 6010/6020/7471
- Polychlorinated Biphenyls (PCBs), EPA 8082

** Note – based on results, supplemental analysis using Toxicity Characteristic Leaching Procedure (TCLP, EPA 1311) may be required.

Generator knowledge from screening activities will be utilized when possible to limit the number of analyte groups for laboratory testing.

4.6 Soil Transportation

All soil transportation will be performed by properly licensed and permitted haulers in accordance with appropriate local, state and federal regulations. In accordance with the requirements under WAC 173-350-300, loaded transport vehicles leaving the Site will, as required, be appropriately lined, securely covered, manifested and placarded in accordance with appropriate local, State and Federal requirements including the Washington Department of Transportation (WDOT). All shipments of non-hazardous waste will be accompanied by a Bill of Lading documenting the description and volume of material being disposed, the transporter name, and the disposal facility.

In the event that any waste materials are characterized as Washington Dangerous Waste, the waste shipments must be prepared for transport in accordance with WAC 173-303-190, which requires that the wastes must be packaged for transport in accordance with United States DOT regulations on packaging (49 C.F.R. Parts 173, 178, and 179). The HAZMAT Contractor must label each package in accordance with United States DOT regulations (49 C.F.R. Part 172). All

shipments of Washington Dangerous Waste will be accompanied by a uniform Hazardous Waste Manifest and will be transported by a transporter that is licensed to transport Dangerous Waste.

4.7 On-Site Soil Re-Use

Soil generated from on-site during grading or utility installation activities may generally be used across the site without restriction, provided that the soil does not exhibit any field indications of impact. No sampling or testing is generally required as long as the soil remains on-site.

4.8 Off-Site Soil Reuse and Disposal

Soil transported off-site must be disposed at facilities that are permitted by the applicable regulatory authorities to receive such material. Facility acceptance of the soil and Environmental Coordinator approval are required before transporting any soil or debris off-site.

The Environmental Consultant will evaluate the potential reuse of any identified petroleum contaminated soils according to the guidance in Section 12 of Ecology's *Guidance for Remediation of Petroleum Contaminated Sites* (Publication No. 10-09-057, June 2016 revision). If a petroleum contaminated soil is deemed potentially acceptable for reuse in accordance with Ecology guidance, then the Contractor will consult with the Panattoni Environmental Coordinator and evaluate whether there is an off-Site property or facility that is suitable for reuse of this petroleum affected soil.

Ecology does not provide guidance for the reuse of soil with contaminants other than petroleum related. Ecology's *Guidance for Remediation of Petroleum Contaminated Sites* states: "Soils with contaminants other than petroleum-related are not addressed by these guidelines and these guidelines should not be used for these soils." Consequently, re-use of soil with 'contaminants other than petroleum-related' will be evaluated on a case-by-case basis by the Environmental Consultant, with regard to: 1) contaminant(s), 2) contaminant concentrations, 3) quantity of soil for potential re-use, 4) potential receiving properties or facilities for re-used soil, and 5) soil reuse

restrictions implemented by municipalities and/or local health departments/districts. The Environmental Consultant will make a soil reuse recommendation to the client based on this case-by-case evaluation.

Soil containing contaminant concentrations above the MTCA Method A industrial cleanup levels or containing debris, odors, staining or other evidence of impacts will not be re-used on-site or off-site. VERTEX contemplates that the majority of these materials to be disposed off-site can be managed as non-hazardous special waste. Contaminated soils that are not classified as Dangerous Wastes are regulated under the Solid Waste Handling Standards, Chapter 173-350 WAC. This rule applies to the handling of contaminated soil when removed from a MTCA site.

All non-hazardous soils that cannot be re-used on-site or off-site will be transported and disposed at either the Waste Management Columbia Ridge facility in Arlington, Oregon or the Republic Services Roosevelt Regional Landfill in Roosevelt, Washington, or another permitted disposal facility approved by the client. Both of these facilities are permitted as Subtitle D landfills that are permitted to accept industrial and special wastes. These facilities are not permitted to accept Washington Dangerous Wastes.

In the event that disposal characterization indicates that any of the soil or debris should be classified as a Washington Dangerous Waste, the soil will require disposal at a permitted Dangerous Waste disposal facility. The disposal facility selection will be dependent upon characterization results and whether the waste is subject to land disposal restrictions.

Generation, treatment, transportation, and disposal of Dangerous Wastes are subject to the state Dangerous Waste regulations, Chapter 173-303 WAC. Dangerous Wastes can be transported only to specifically permitted facilities for treatment, storage, or disposal. It is possible that gasoline vapors, lead, benzene, polycyclic aromatic hydrocarbons, or polychlorinated biphenyls could trigger dangerous waste designation. Soils and groundwater contaminated by releases from regulated USTs are exempt from most of the Dangerous Waste regulations under WAC 173-303-

071(3)(t). However, the contents of tanks, and petroleum contaminated soils generated by other petroleum cleanups, are not exempt from the dangerous waste regulations.

In accordance with WAC 173-303-140, generators of Dangerous Waste must comply with the applicable regulations of WAC 173-303-140 to WAC-303-220.

In the event that PCBs are identified, the federal Toxic Substances Control Act (TSCA) may apply. TSCA is administered by USEPA. In general, this act is applicable to cleanups of wastes, including contaminated soils, containing PCBs greater than one part per million (1 ppm). Under 40 CFR 761.61(a) the USEPA must be notified of any cleanup of PCB contamination 30 days prior to beginning the cleanup.

Note: No soil or waste material may be transported for beneficial re-use or disposal at a residential, school, playground, agricultural, or commercial site with sensitive receptors.

4.9 Dust Mitigation

It will be the responsibility of the Contractor to mitigate potential air emissions and fugitive dust by limiting free fall of excavated materials, limiting vehicle speed, preventing tracking of soils and mud, and use of truck covers during off-Site hauling. Watering and/or other dust suppression methods will also be utilized as necessary.

4.10 Documentation

All off-Site disposal activities will be documented and off-Site shipments of any of the above materials must be accompanied by appropriate shipping papers in accordance with Ecology regulations.

5.0 STORMWATER AND WASTEWATER DISCHARGES

5.1 Stormwater Management

Based on the area of soil disturbance activities the Contractor will need to apply for coverage for discharge of stormwater generated on-site under the Construction Stormwater Discharge General Permit by submitting an electronic Notice of Intent and permit application form to Ecology.

The Contractor must also prepare and implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must outline sediment, erosion and pollution prevention control best management practices (BMPs), inspection procedures, and reporting requirements. The Contractor will be responsible for obtaining permit coverage, preparing the SWPPP and compliance with the SWPPP and stormwater permit requirements, including performance of any inspections and testing.

5.2 De-Watering Discharges

During previous on-Site investigations, groundwater was generally encountered at depths in excess of 50 feet bgs; although shallow perched water may be found in some areas at shallower depths. The proposed development includes excavation activities to accommodate for underground Site utilities, building foundations, and stormwater retention ponds. The maximum depth of planned excavations will be significantly less than 50 feet, so dewatering is not likely to be required during construction. However, in the event that perched groundwater is encountered that must be pumped, the procedures outlined below should be followed.

State law requires a water quality discharge permit when water from a contaminated site is discharged to surface water or groundwater. There are four options for discharge of contaminated water from contaminated sites:

- (a) Treatment and discharge to surface water
- (b) Pretreatment and discharge to sanitary sewer
- (c) Treatment and discharge to ground and groundwater
- (d) Transport to a permitted industrial wastewater treatment facility

The Contractor must obtain an appropriate permit prior to discharge of dewatering effluent. The means and methods of excavation dewatering and treatment are not specified and are the responsibility of the Contractor. If groundwater is encountered, the Contractor shall dewater excavations to enable the excavation and backfill work in those areas to be conducted and the Contractor shall construct all groundwater removal points/sumps/pits necessary to dewater the excavations as necessary. Attention should be focused on keeping the suspended sediment to a minimum using separately excavated settlement areas and applying filter fabric to pump intakes. The Contractor shall also be responsible for testing and reporting in order to meet discharge permit requirements. The Environmental Consultant will determine if environmental testing is required and will conduct such testing if needed. Depending on the test results, the Environmental Consultant will determine if pre-discharge treatment is necessary or if offsite disposal will be required.

6.0 NOTIFICATIONS AND DOCUMENTATION

6.1 Notifications

Notifications of the discovery of suspect contaminated soils or hazardous materials based upon field screening, observations, laboratory analytical results or other conditions of potential environmental concern will be immediately made to the Owner and Environmental Consultant. If analytical testing identifies COPCs above applicable screening levels, Boeing will be notified by the Owner as appropriate. The discovery of a UST or similar feature also will be reported to Ecology when required in accordance with MTCA regulations. If such discovery(s) or conditions require notification(s) to the other contractors or Subcontractors, then such notification(s) will be made by the Contractor.

Boeing will be notified by the Owner at least 10 days in advance of any grading, excavation activities.

Boeing will be notified by the Owner of any suspect contaminated soils or debris, or structures that may contain or be associated with the presence of hazardous substances or petroleum products (e.g., undocumented USTs).

6.2 Documentation

Records of the off-Site transportation of any impacted soil or debris (if encountered) will be managed by the Contractor. Such records will include but are not limited to Hazardous Waste Manifests, bills of lading, records of recycling, signed by the receiving facilities and weight slips. The Contractor will submit the completed waste shipping documentation to the Environmental Coordinator.

Copies of disposal documentation for Site soils, debris, solid waste, water, groundwater, surface water, and trash including but not limited to shipping records and logs, the location of the disposal facility, and the quantity of such materials disposed including those materials not included as regulated waste must be provided to the Environmental Coordinator within 14 days of disposal.

Additionally, at the conclusion of any required remedial activities, the Environmental Consultant will gather documentation from the Contractor any required submittal to Ecology: waste management documentation during excavation, characterization and confirmation sampling data, soil management and disposal data (wastes managed on and off-Site).

FIGURES

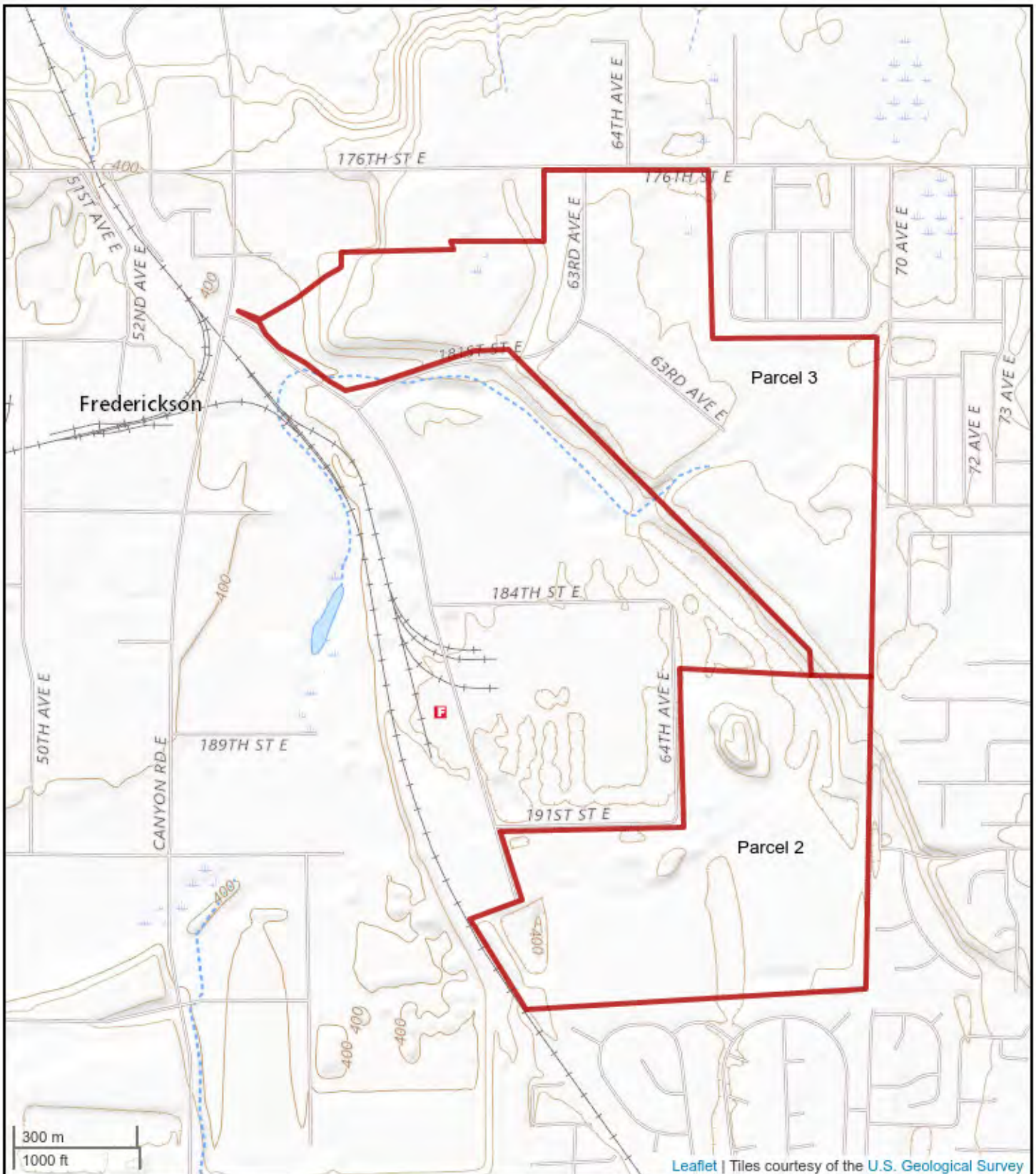


Figure 1: Site Locus Map

Boeing Frederickson Property
 18001 Canyon Road East
 Puyallup, Washington

VERTEX
 400 LIBBEY PARKWAY
 WEYMOUTH, MA 02189
 (T): 781.952.6000

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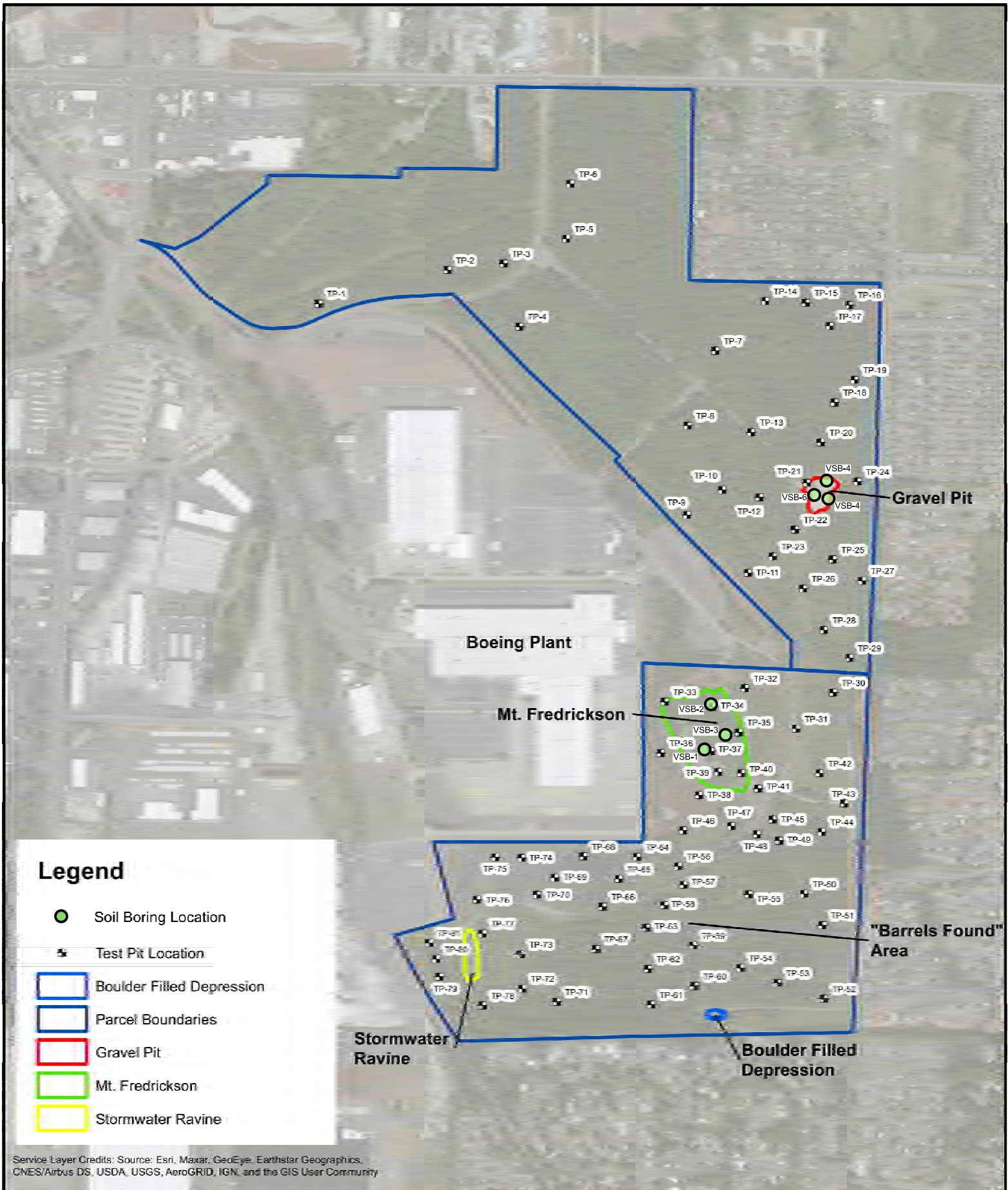


Figure 2: Shallow Composite Soil Sample Locations

Boeing Fredrickson Disposition Property
 18001 Canyon Rd E
 Puyallup, Washington 98375

VERTEX
 400 LIBBEY PARKWAY
 WEYMOUTH, MA 02189
 (T): 781.952.6000

VERTEXENG.COM



Figure

3

Soil Boring And Test Pit Location Map
Boeing Fabrication Plant
18001 Canyon Road East,
Puyallup, WA 98375



Date: 12-27-2021

Drawn: MM

VERTEX

133 N. Jefferson Street, 3rd Floor
 Chicago, IL 60661
 PHONE 312.428.3658

Document Path: Z:\Private\mapcache\Shortcuts\Boeing - Steve Long\Figure 5 - Soil Gas Sampling Location Map.mxd

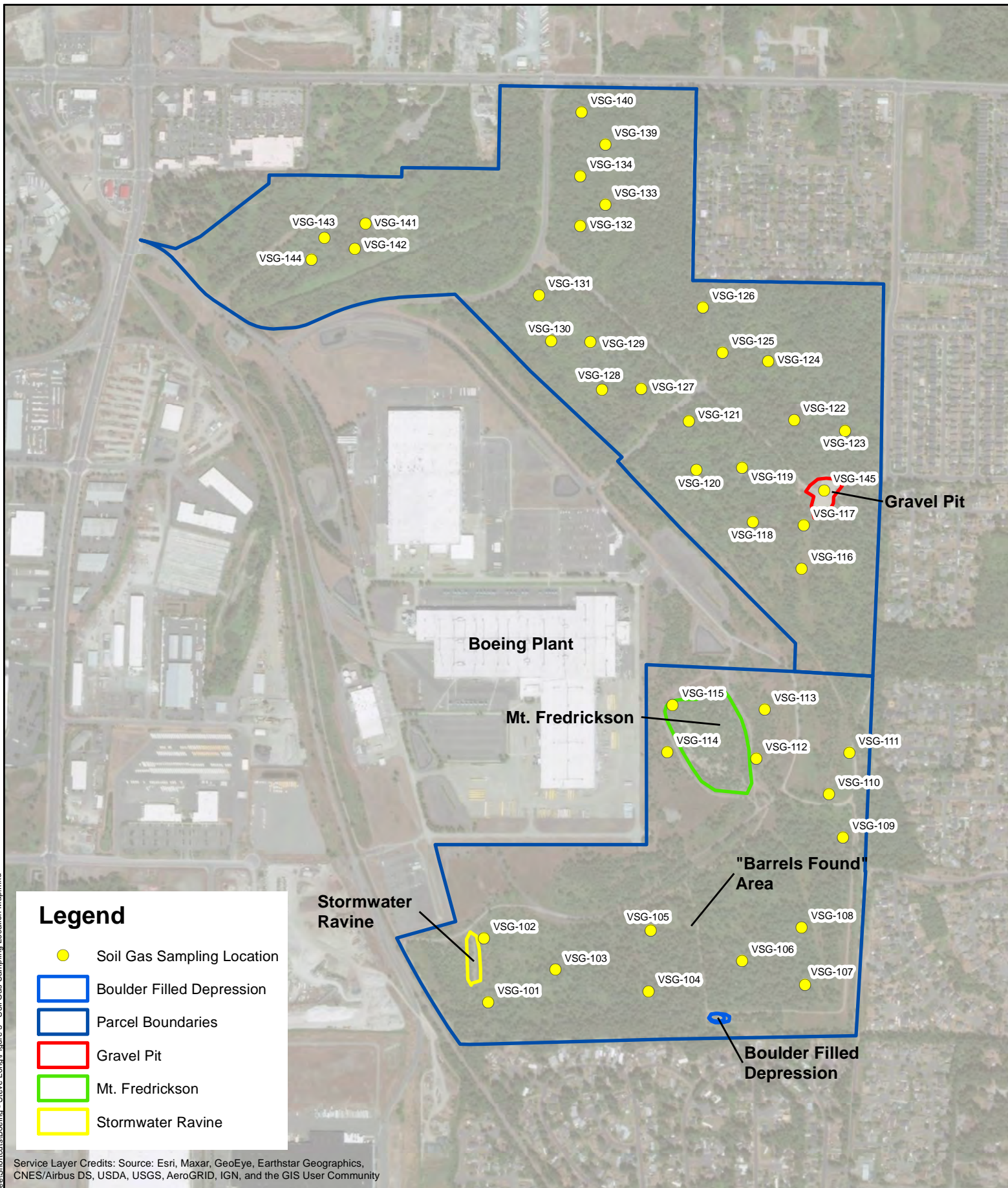
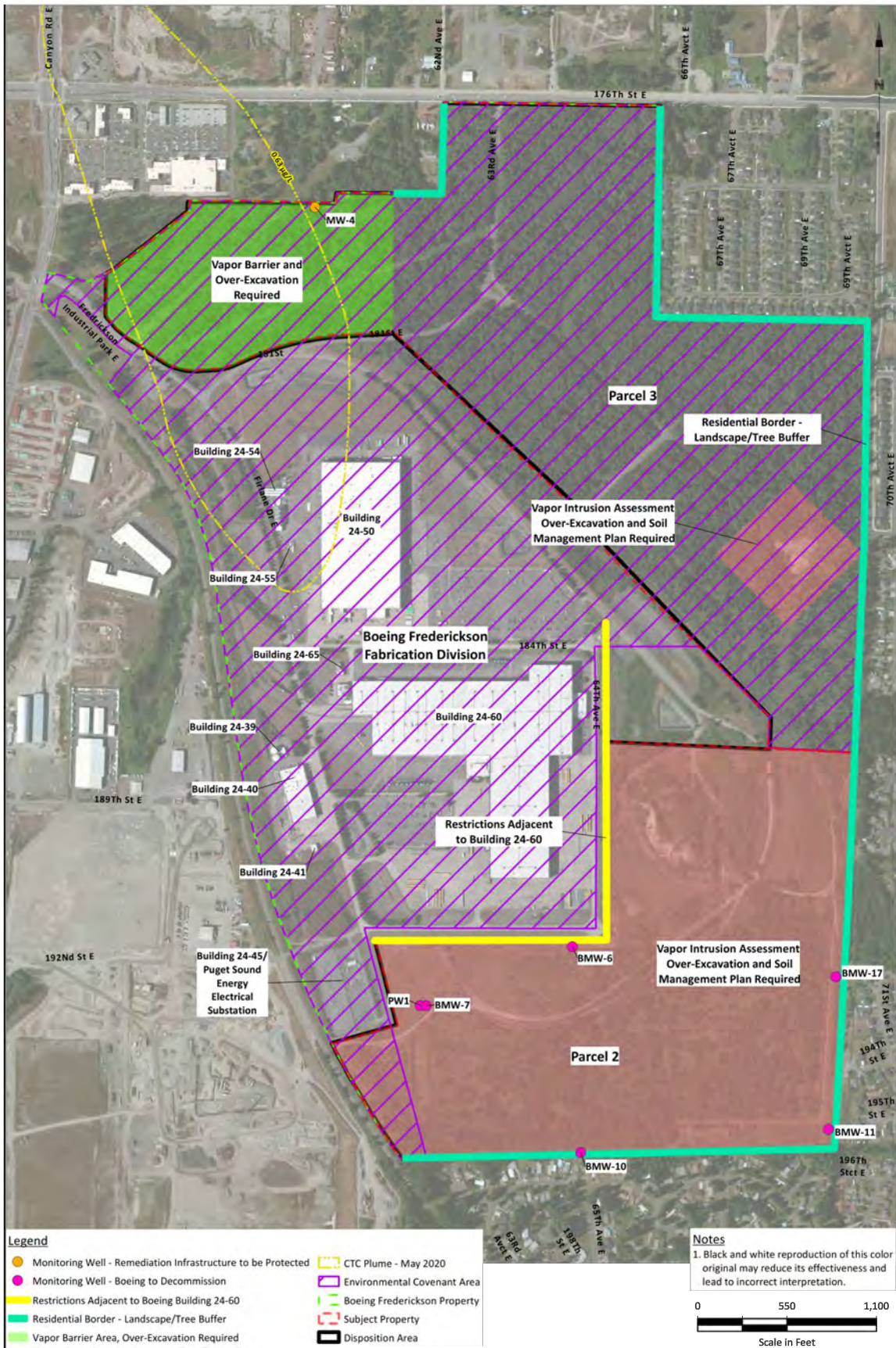


Figure 4
Soil Gas Sampling Location Map
Boeing Fabrication Plant
18001 Canyon Road East,
Puyallup, WA 98375



Date: 08-03-2021	<p>133 N. Jefferson Street, 3rd Floor Chicago, IL 60661 PHONE 312.428.3658</p>
Drawn: RNM	



SOIL MANAGEMENT MAP

BOEING FREDERICKSON PROPERTY
 18001 CANYON ROAD EAST
 PUYALLUP, WASHINGTON

DATE: 6/21/2022
 DRAWN BY: NAH
 CHECKED BY: JC
 VERTEX PROJ NO.: 71555

FIGURE
5

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