



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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September 24, 2019

Joe Borrelli  
Borelli Real Estate Investments, LLC  
13028 Interurban Ave S, Suite 108  
Tukwila, WA 98168

**Re: No Further Action at the following Site:**

- **Name:** Borrelli Real Estate Investments
- **Address:** 4404 South 133<sup>rd</sup> Street, Tukwila, WA 98168
- **Facility/Site No.:** 24470
- **VCP Project No.:** NW3093
- **Cleanup Site ID No.:** 12293

Dear Joe Borrelli:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Borrelli Real Estate Investments facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

**Issue Presented and Opinion**

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Is further remedial action necessary to clean up contamination at the Site?

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

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively “substantive requirements of MTCA”). The analysis is provided below.

**Description of the Site**

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



- Gasoline range petroleum hydrocarbons (TPHg) into the Soil.
- TPHg and diesel range petroleum hydrocarbons (TPHd) into the Ground Water.

**Enclosure A** includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note that a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcel associated with this Site is affected by other sites.

### **Basis for the Opinion**

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This opinion is based on the information contained in the following documents:

1. Environmental Associates, Inc. (EAI), *Phase I Environmental Assessment, Borrelli Real Estate Investments, LLC*, May 7, 2013.
2. EAI, *Underground Storage Tank Removal & Site Assessment, Borrelli Real Estate Investments, LLC*, June 14, 2013.
3. EAI, *Limited Subsurface Sampling and Testing, Borrelli Real Estate Investments*, May 27, 2016.
4. EAI, *Independent Cleanup Action, Borrelli Real Estate Investments*, September 1, 2016.
5. Ecology, *Opinion pursuant to WAC 173-340-515(5) on Remedial Action for the following Hazardous Waste Site: Borrelli Real Estate Investments*, August 21, 2017.
6. EAI, *Monitoring Well Installation and Initial Groundwater Testing Event, Borrelli Real Estate Investments*, December 11, 2017.
7. EAI, *Fourth Quarter Monitoring Well Sampling and Testing Event, Borrelli Real Estate Investments*, October 4, 2018.
8. EAI, *Cleanup Action Report, Borrelli Real Estate Investments*, May 21, 2019.

Those documents are kept in the Central Files of the Northwest Regional Office of Ecology (NWRO) for review by appointment only. You can make an appointment by completing a Request for Public Record form (<https://www.ecology.wa.gov/About-us/Accountability-transparency/Public-records-requests>) and emailing it to [PublicRecordsOfficer@ecy.wa.gov](mailto:PublicRecordsOfficer@ecy.wa.gov), or contacting the Public Records Officer at 360-407-6040. A number of these documents are

accessible in electronic form from the Site web page  
<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=12293>.

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

### **Analysis of the Cleanup**

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

#### **1. Characterization of the Site.**

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

The contamination sources at the Site have been identified as former gasoline and waste oil underground storage tanks (USTs) and dispenser islands associated with a former gasoline/automotive service station that operated on the southeastern portion of the Site from 1924 to 1970s. The petroleum hydrocarbon contamination in soil was identified between approximately 3 and 5 feet below ground surface (bgs) in the source area. The lateral and vertical extents of the petroleum-hydrocarbon contaminated soil have been adequately defined upon completion of Site investigations and a remedial excavation in 2013 through 2016.

Former service station facilities including USTs and dispenser islands have been removed from the Site in 2013 through 2016. All known petroleum-hydrocarbon contaminated soil was removed from the Site by the remedial excavation in 2016.

Soil samples collected during the Site investigations and remedial excavation were analyzed for TPHg, TPHd, heavy-oil range petroleum hydrocarbons (TPHo), benzene, toluene, ethylbenzene, xylenes (BTEX), and lead. Soil samples collected from stockpiles that were removed from the Site were additionally analyzed for polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and volatile organic compounds (VOCs). The soil analysis meets the requirements of Table 830-1 of the MTCA regulation for gasoline, diesel, and waste oil. Confirmation soil samples collected from the final excavation limits were below the MTCA Method A soil cleanup levels for these constituents.

Ground water is present beneath the Site from approximately 1 to 5 feet bgs. Ground water flow direction varies from northeasterly to southwesterly. The variation in ground

water flow may be due to the effects of topography and nearby surface water bodies. Three ground water monitoring wells (MW-1 through MW-3) were installed to evaluate the ground water conditions. Based on the observed ground water flow directions, these three monitoring wells are located directly downgradient of the historic soil contamination source area.

Ground water samples were collected from the three monitoring wells from September 2017 to May 2019, and analyzed for TPHg, TPHd, TPHo, and BTEX. Ground water samples collected in March 2018 were additionally analyzed for PAHs, PCBs, total lead, and VOCs, including 1,2-dibromoethane (EDB), 1,2-dichloroethane (EDC), and methyl tertiary-butyl ether (MTBE). The ground water analysis meets the requirements of Table 830-1 of the MTCA regulation for gasoline, diesel, and waste oil.

Until May 2019, ground water samples from all three monitoring wells contained concentrations of TPHg, TPHd, TPHo, and BTEX below the MTCA Method A ground water cleanup levels for at least four consecutive quarters. In addition, concentrations of PAHs, PCBs, VOCs, and total lead were below the MTCA Method A ground water cleanup levels and laboratory practical quantitation limits (PQL) for all three monitoring wells.

#### **Use of Silica Gel Cleanup**

During the first three ground water sampling events from September 2017 to March 2018, the TPHd concentrations in ground water of monitoring well MW-3 were above the MTCA Method A ground water cleanup level when analyzed without the use of silica gel cleanup, but below the MTCA Method A ground water cleanup level when analyzed with the use of silica gel cleanup.

*Ecology's Opinion pursuant to WAC 173-340-515(5) on Remedial Action letter (opinion Letter), dated August 21, 2017, stated that, "Ecology does not concur with the use of silica gel cleanup in the TPHd analysis of ground water samples unless uncontaminated background samples indicate that naturally occurring organic matter is a significant component of the TPH being detected in the ground water samples."*

It is Ecology's opinion that the impacts of natural organic matter in ground water was successfully demonstrated by the following evidences:

- A ground water sample was collected from monitoring well MW-2 and analyzed for total organic carbon (TOC) in March 2018.

- TPHd concentrations in ground water of monitoring well MW-2 were consistently below the laboratory PQL since well installation. Therefore, the ground water sample from monitoring well MW-2 is considered background water sample.
- The TOC concentration in the background water sample was 53.6 milligrams per liter (mg/L), which is well above the typical dissolved organic carbon concentration for uncontaminated ground water<sup>1</sup>.
- A chromatogram review was conducted for the ground water sample collected from monitoring well MW-3 in September 2017.
  - The chromatograms were reviewed independently by a chemist from Friedman & Bruya and a chemist from Manchester Environmental Laboratory.
  - Based on the chromatogram review, the chromatograms did not match the common diesel patterns. In addition, the chromatograms indicated the presence of biogenic interferences.
- Based on the soil boring logs, a layer of highly organic material in fairly non-decomposed forms (wood, leaves, etc.) was observed at approximately 10 to 15 feet bgs at monitoring well MW-3.

It is Ecology's opinion that these evidences indicate that naturally occurring organic matter is a significant component of the TPH being detected in the ground water samples from monitoring well MW-3. Ecology concurred that use of silica gel cleanup is appropriate in the TPHd analysis of the ground water samples from monitoring well MW-3. Please note this is a Site-specific determination based on multiple lines of evidence.

In accordance with the August 2017 *Opinion Letter*, ground water samples collected from monitoring well MW-3 were split and analyzed for TPHd, both with and without the use of silica gel cleanup. The TPHd concentrations in ground water samples from monitoring well MW-3 were below the MTCA Method A ground water cleanup levels for at least four consecutive quarters, both with and without the use of silica gel cleanup.

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<sup>1</sup> Multiple resources were reviewed for typical dissolved organic carbon (DOC) concentration for uncontaminated ground water, including E.M. Thurman, 1985; M. Urbaniak, *et al.*, 2011; S. Regan, *et al.*, 2017. DOC in natural ground water appears to have a median concentration of 0.7 mg/L, and is typically below 4 mg C/L.

**2. Establishment of cleanup standards.**

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

**Soil**

**Cleanup levels.** The Site does not meet the MTCA definition of an industrial property; therefore, soil cleanup levels suitable for unrestricted land use are appropriate. Soil cleanup levels based on the leaching (protection of ground water) pathway and protection of the direct contact pathway are appropriate. The MTCA Method A cleanup levels are considered appropriate for protection of the leaching and direct contact pathways. These Method A soil cleanup levels are available in WAC 173-340-900, Table 740-1.

Soil cleanup levels protective of terrestrial ecological receptors are not necessary because the Site meets the simplified terrestrial ecological evaluation (TEE) exclusion criteria in accordance with WAC 173-340-7492(2)(a)(i). The total area of soil contamination at the Site is not more than 350 square feet. A TEE form was submitted to Ecology in 2016 with the Voluntary Cleanup Program (VCP) application.

**Point of compliance.** For soil cleanup levels based on the protection of ground water, the point of compliance is defined as Site-wide throughout the soil profile and may extend below the water table. This is the appropriate point of compliance for the Site.

**Ground Water**

**Cleanup levels.** Cleanup levels were set for ground water based on its potential use as a drinking water source. The MTCA Method A cleanup levels are considered appropriate for ground water at the Site and are protective of drinking water beneficial uses. These Method A ground water cleanup levels are available in WAC 173-340-900, Table 720-1.

**Point of compliance.** The standard point of compliance for ground water is throughout the Site from the uppermost level of the saturated zone, extending vertically to the lowest depth which could potentially be affected. This is the appropriate point of compliance for the Site.

**3. Selection of cleanup action.**

Ecology has determined the cleanup actions you selected for the Site meet the substantive requirements of MTCA. The cleanup actions included the following:

- Removal of one 550-gallon gasoline UST, one 1,100-gallon waste oil UST, and former dispenser islands from the Site in 2013 through 2016.
- Excavation and disposal of a total of 74.58 tons of petroleum-hydrocarbon contaminated soil from the southeastern portion of the Site in 2016.
- Collection of confirmation soil samples after the remedial excavation to demonstrate compliance with the established soil cleanup levels.
- Installation of three ground water monitoring wells and collection of ground water samples to demonstrate natural attenuation and compliance with the established ground water cleanup levels.

#### **4. Cleanup.**

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site.

- May 2013: One 550-gallon gasoline UST was removed from the southeastern portion of the Site. TPHg concentrations above the established soil cleanup levels were detected between 3 and 5 feet bgs in the gasoline UST excavation and beneath a former dispenser island.
- 2014 and 2015: The former dispenser islands and former service station building were removed from the southeastern portion of the Site.
- May 2016: Six test pits were excavated to investigate the extent of the soil contamination. No soil contamination was detected in the soil samples collected from these test pits.
- July 2016: A total of 74.58 tons of petroleum-hydrocarbon contaminated soil was removed from the vicinity of the former service station facilities on the southeastern portion of the Site. One 1,100-gallon waste oil UST was discovered and removed during the excavation. The final excavation was completed to total depths ranging from 8 to 9 feet bgs. All confirmation soil samples collected from the final excavation limits contained concentrations of petroleum hydrocarbons constituents below the established soil cleanup levels.
- September 2017 through May 2019: Three monitoring wells were installed southwest and northeast of the soil excavation area to evaluate the ground water conditions. Concentrations of petroleum hydrocarbon constituents were all below the established

ground water cleanup levels for at least four consecutive quarters, or below the laboratory PQLs.

In the *Cleanup Action Report*, dated May 21, 2019, a request was made to utilize Model Remedy No. 1 for Ground Water in Site cleanup, per Ecology's *Model Remedies for Sites with Petroleum Impacts to Ground water (Model Remedies Guidance)*, Publication No. 16-09-057, August 2016, Revised December 2017. Ecology concurs that the Site cleanup qualifies for Model Remedy No. 1 for Ground Water, by meeting the following requirements:

- A release to the environment has been confirmed and Ecology has been notified of the release.
- Emergency/interim actions have been implemented (if appropriate). Emergency or interim actions were not required due to the lower risk nature of the Site.
- An adequate Site characterization has been completed. The Site investigations from 2013 to 2019 provide sufficient Site characterization data.
- The Site characterization confirmed that surface water or sediment exposure pathways are not present at the Site.
- The Site characterization confirmed that TPHg and TPHd are the only contaminants present in soil and ground water.
- A TEE has been completed and submitted to Ecology. The Site meets the simplified TEE criteria per WAC 173-340-7492(2)(a)(i). Further TEE is not needed.
- The Site did not cause impacts to any water supply well used for drinking water purposes.
- A primary remedy consisting of source removal, including removal of contaminated soil to the greatest degree practicable, has been completed. This primary remedy was conducted in July 2016, when a total of 74.58 tons of petroleum hydrocarbon-impacted soil was removed from the southeastern portion of the Site.
- Appropriate remedies have been selected for the Site after the primary remedy. The Site cleanup action included natural attenuation. This cleanup action is among the appropriate model remedies listed in Ecology's *Model Remedies Guidance, Chapter 3*.



- After implementing the selected model remedy, sufficient compliance monitoring has been completed to document that the soil and ground water have met the established cleanup levels. The soil confirmation sampling results in 2016, and the ground water sampling results in 2018 and 2019, confirmed soil and ground water throughout the Site are in compliance with the established cleanup levels.
- The air cleanup standards, as determined in accordance with WAC 173-340-750, have been met. The soil and ground water concentrations in 2016 through 2019 confirmed the vapor intrusion pathway evaluation is not necessary.

Per Ecology *Model Remedies Guidance*, a Site cleanup that complies with a Model Remedy does not require a Feasibility Study and a Disproportionate Cost Analysis.

### **Listing of the Site**

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Based on this opinion, Ecology has completed the process of removing the Site from our lists of hazardous waste sites, including:

- Hazardous Sites List.
- Confirmed and Suspected Contaminated Sites List.
- Leaking Underground Storage Tank List.

That process included public notice and opportunity to comment. The public comment period was open between August 16 and September 16, 2019. Based on the comments received, Ecology will remove the Site from the applicable lists.

### **Decommissioning of Site Resource Protection Wells**

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When resource protection wells associated with the Site are no longer to be used for their intended purposes, these wells must be decommissioned in accordance with WAC 173-160-460 (<http://apps.leg.wa.gov/wac/default.aspx?cite=173-160-460>). Per WAC 173-160-410 (<http://apps.leg.wa.gov/wac/default.aspx?cite=173-160-410>), resource protection wells include monitoring wells, observation wells, piezometers, spill response wells, remediation wells, environmental investigation wells, vapor extraction wells, ground source heat pump boring, grounding wells, and instrumentation wells.

### **Limitations of the Opinion**

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1. **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 70.105D.040(4).

**2. 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 70.105D.080 and WAC 173-340-545:

**3. 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 70.105D.030(1)(i).

**Termination of Agreement**

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Thank you for cleaning up the Site under the VCP. This opinion terminates the VCP Agreement governing this project (#NW3093).

For more information about the VCP and the cleanup process, please visit our web site: [www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm](http://www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm). If you have any questions about this opinion or the termination of the Agreement, please contact me at 425-649-7109 or [jing.song@ecy.wa.gov](mailto:jing.song@ecy.wa.gov).

Sincerely,



Jing Song  
Site Manager  
NWRO Toxics Cleanup Program

Joe Borrelli  
September 24, 2019  
Page 11

Enclosures (1): A – Description and Diagram of the Site

Ecc: Robert Roe, Environmental Associates, Inc.  
Garrett Scheuerman, Environmental Associates, Inc.  
Sonia Fernandez, VCP Coordinator, Ecology  
Lindsay Gordon, VCP Financial Manager, 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 by TPHg released to soil, and TPHg and TPHd released to ground water. The Site consists of King County parcel number 2613200134, which covers a 0.58-acre irregular-shaped land with the street address of 4404 South 133<sup>rd</sup> Street in Tukwila, Washington (the Property, **Figure 1**).

**Area and Property Description:** The Property is located within a mixed residential, commercial, and light industrial area in Tukwila. The Property is bounded to the south by South 133<sup>rd</sup> Street. Two warehouse buildings are located further south across South 133<sup>rd</sup> Street. The Property is bounded to the west by 44<sup>th</sup> Avenue South with a single family house located across the street. The Property is bounded to the east by a small vacant lot. South 131<sup>st</sup> Place is located northeast of the Property and the small vacant lot. Two warehouse buildings, one office building, and one cell phone tower, are located further northeast across South 131<sup>st</sup> Place (**Figure 2**). Seattle Tacoma International Airport is approximately 2 miles southwest of the Site.

**Site History and Current Use:** The Property was undeveloped prior to 1924. In 1924, a residential building was constructed on the northeastern portion of the Property, and a gasoline/automotive service station building was constructed on the southeastern portion. The 1924-vintage residential building was torn down in about 1947. The service station reportedly operated on the Property from 1924 until the mid- to late-1970s.

The western portion of the Property, along with adjacent lands to the west, were used for agricultural purposes, until a second residential building was constructed on the western portion of the Property in 1942. In or prior to 1969, 44<sup>th</sup> Avenue South was constructed to the west of the current western Property boundary.

The 1942-vintage residential building, the former service station building, and the former dispenser islands were removed from the Property in 2014/2015. One 550-gallon gasoline UST and one 1,100-gallon waste oil UST were removed from the Property in 2013 and 2016, respectively. The Property is currently covered with natural grass and brush, except for a small shed on the eastern portion (**Figure 2**).

**Sources of Contamination:** The sources of contamination at the Site are the releases from the former USTs and dispenser islands associated with the former gasoline/automotive service station. The gasoline released to soil was initially discovered in 2013 during the removal of the 550-gallon gasoline UST. The gasoline and diesel released to ground water was discovered in 2017 in a ground water monitoring event. The exact timing of the releases is unknown.

**Physiographic Setting:** The Site is situated at an elevation of approximately 20 feet above mean sea level. The land surface in the immediate vicinity of the Site is relatively flat and slopes gently to the east/southeast.

**Surface/Storm Water System:** Southgate Creek is located immediately adjacent to the southern and eastern Site boundaries (**Figure 2**). Southgate Creek flows to the north and discharges to the Duwamish River approximately 1,600 feet north of the Site. Storm water from the Property and adjoining properties discharges to Southgate Creek along South 133rd Street to the south.

**Ecological Setting:** The Property and adjacent properties to the north, south and east are zoned for commercial/light industrial use. The adjacent property to the west is zoned for residential use. The land surfaces on the Property and the small vacant lot immediately east of the Property are covered by natural grass and brush. The land surfaces north, south, and east of the Property and the small vacant lot are primarily covered by buildings and asphalt or concrete pavement.

The land surface west of the Property across 44<sup>th</sup> Avenue South is a large lot covered by trees and grass developed with a single family house. Riverton Park is located approximately 430 feet west of the Property beyond the single family house. Riverton Park is a City of Tukwila park with 4.14 acres of land covered predominantly by trees, grass, and plants.

**Geology:** The Site is situated on the floor of a broad, alluvial valley known locally as the Duwamish River Valley. Published geologic maps for the Site vicinity suggest that much of the underlying geologic material is alluvium, which may include organic-rich silt to fine sands with some gravel, and possible deposits of artificial fill. Typically, the alluvium exhibits highly variable vertical hydraulic conductivity, depending on the texture and gradation of the material.

The geologic map also shows that the area nearby to the east has been modified extensively by excavation, filling, or construction. These man-made processes have greatly modified or obscured the original geology. Additionally, the area only a short distance to the west may be underlain by glacial outwash, a deposit of sand and gravel carried by running water from the melting ice of a glacier.

Subsurface soil encountered at the Site consisted of well-sorted fine- to medium- grained brown and grey silty sand with some pebbles and cobbles, from ground surface to the total explored depth of 20 feet bgs. This silty sand is interpreted to be alluvium. At approximately 10 to 15 feet bgs, a layer of highly organic material was observed in fairly non-decomposed forms (leaves, sticks, etc.). This organic layer includes intermittent thin layers of grey silty sands.

**Ground Water:** Shallow ground water is present in Site monitoring wells at depths ranging from approximately 1 to 5 feet bgs. Ground water flows are variable, from northeasterly to southwesterly. A rose diagram depicting the variable ground water flows is presented in **Figure 3**. The variation in ground water flows may be due to effects of topography and nearby surface water bodies.

Three ground water monitoring wells (MW-1 through MW-3) were installed in September 2017 (**Figure 3**). Monitoring wells MW-1 and MW-2 were installed to a total depth of 20 feet bgs and screened from 5 to 20 feet bgs; monitoring well MW-3 was installed to a total depth of 15 feet

bgs and screened from 5 to 15 feet bgs.

**Water Supply:** Drinking water for the area is supplied by King County Water District (KCWD) 125. KCWD 125 purchases water from city of Seattle, which is sourced from the Cedar River watershed approximately 24 miles east of the Site. Drinking water is provided to the Site via the main water line along South 133rd Street south of the Site. According to Ecology's *Well Logs* database, there are no water supply wells located within a 0.5-mile radius of the Site.

**Release and Extent of Contamination:** Petroleum hydrocarbons released to soil were initially confirmed in May 2013 during the removal of one 550-gallon gasoline UST on the southeastern portion of the Site. TPHg concentrations were detected above the MTCA Method A soil cleanup level in the soil samples collected at 5 feet bgs from the south and east sidewalls of the UST excavation (UST-S-5/E-5), and at 3 feet bgs from beneath a former dispenser island (PI-3). The former gasoline UST location and the soil sampling locations are depicted on **Figure 4**.

In May 2016, six test pits (TP-1 through TP-6) were excavated to approximately 7 to 8 feet bgs to investigate the extent of the soil contamination (**Figure 5**). Soil samples were collected from the test pits between 4 and 8 feet bgs. The soil samples contained concentrations of TPHg, TPHd, TPHo, and BTEX below the MTCA Method A soil cleanup levels.

Groundwater was observed in test pits TP-1 through TP-4 between approximately 4 and 8 feet bgs. One ground water sample was collected from each of the test pit TP-1 through TP-4. The ground water sample collected from test pit TP-4 contained a TPHd concentration above the MTCA Method A ground water cleanup level. However, this ground water sample was not collected from a discrete vertical interval, and Ecology does not recognize this ground water sample as representative of Site ground water conditions.

In July 2016, a remedial excavation was conducted to remove the petroleum hydrocarbon-impacted soil from the Site. During the excavation, a second 1,100-gallon waste oil UST was discovered and removed from the Site. Final excavation was completed to 8 feet bgs on the west and 9 feet bgs on the east. A total of 74.58 tons of petroleum hydrocarbon-impacted soil was removed from the Site. The former UST locations and excavation limits are depicted on **Figure 6**.

A total of 13 soil samples were collected from the final excavation limits between 5 and 9 feet bgs (**Figure 7**). The soil samples contained concentrations of TPHg, TPHd, TPHo, BTEX, and/or lead below the MTCA Method A soil cleanup levels. Ten stockpile samples were also collected from the soil stockpiles that were removed from the Site. These stockpile samples were additionally analyzed for PAHs, PCBs, and VOCs; all these constituents' concentrations were below the MTCA Method A soil cleanup levels.

Ground water was encountered at 5 to 7 feet bgs in the excavation. One ground water sample was collected from the excavation; this sample contained concentrations of TPHg, TPHd, TPHo, and BTEX below the MTCA Method A ground water cleanup levels. However, this ground water sample was collected directly from the excavation and was not representative of Site

ground water conditions.

In September 2017, three ground water monitoring wells (MW-1 through MW-3) were installed to evaluate Site ground water conditions. The monitoring well locations relative to the soil excavation area is depicted on **Figure 8**. Ground water samples were collected from the monitoring wells from September 2017 to May 2019.

During the ground water sampling events from September 2017 to March 2018, TPHg or TPHd concentrations (without the use of silica gel cleanup) exceeded the MTCA Method A ground water cleanup levels in the ground water samples from monitoring well MW-3. TPHg and TPHd concentrations (without the use of silica gel cleanup) have decreased to below the MTCA Method A ground water cleanup levels since June 2018.

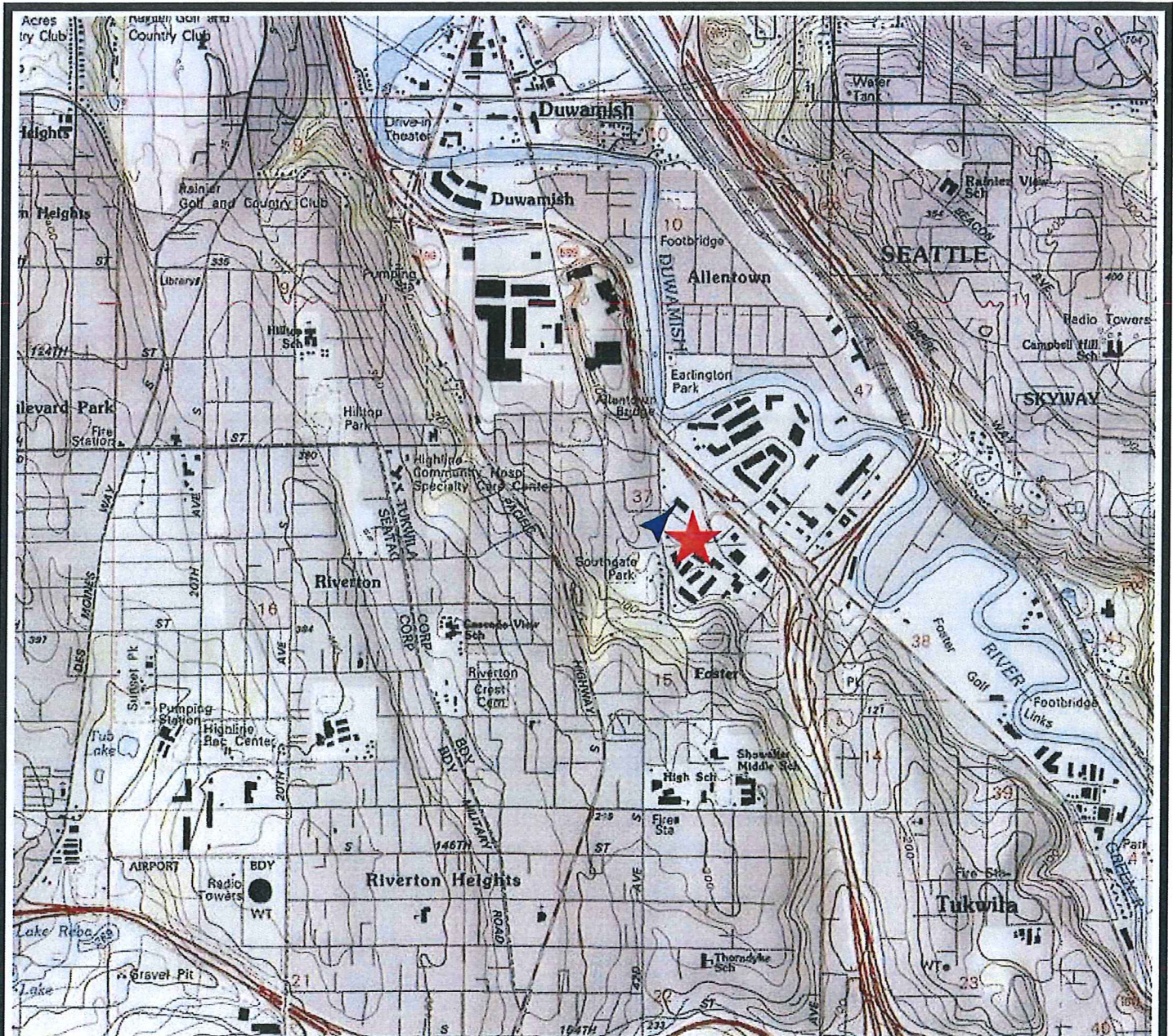
Until May 2019, concentrations of TPHg, TPHd, TPHo, and BTEX were below the MTCA Method A ground water cleanup levels for at least four consecutive quarters in all Site monitoring wells. Additionally, ground water samples from all Site monitoring wells were analyzed for PAHs, PCBs, VOCs and lead in March 2018. None of these constituents were detected above the laboratory PQL and MTCA Method A ground water cleanup levels.

Based on multiple lines of evidence, Ecology has made a Site-specific determination that use of silica gel cleanup is appropriate in the TPHd analysis of ground water samples collected from monitoring well MW-3. Ground water samples collected from monitoring well MW-3 were split and analyzed for TPHd, both with and without silica gel cleanup. The TPHd concentrations in ground water of monitoring well MW-3 were below the MTCA Method A ground water cleanup levels for at least four consecutive quarters, both with and without the use of silica gel cleanup.



# Site Diagram

Enclosure A: Figure 1



Approximate Property Location



Inferred Approximate Direction of Groundwater Flow



**ENVIRONMENTAL  
ASSOCIATES, INC.**

1380 - 112th Avenue N.E., Ste. 300  
Bellevue, Washington 98004

### Vicinity/Topographic Map

Borrelli Real Estate Investments  
4404 South 133rd Street  
Tukwila, Washington 98168

VCP Number:

NW3093

Date:

May 2019

Plate:

1



**Approximate Site Boundary**



**Location Detailed on Plate 3**



**Inferred Approximate Direction of Groundwater Flow**



**ENVIRONMENTAL  
ASSOCIATES, INC.**

1380 - 112th Avenue N.E., Ste. 300  
Bellevue, Washington 98004

## SITE PLAN

Borrelli Real Estate Investments  
4404 South 133rd Street  
Tukwila, Washington 98168

VCP Number:

NW3093

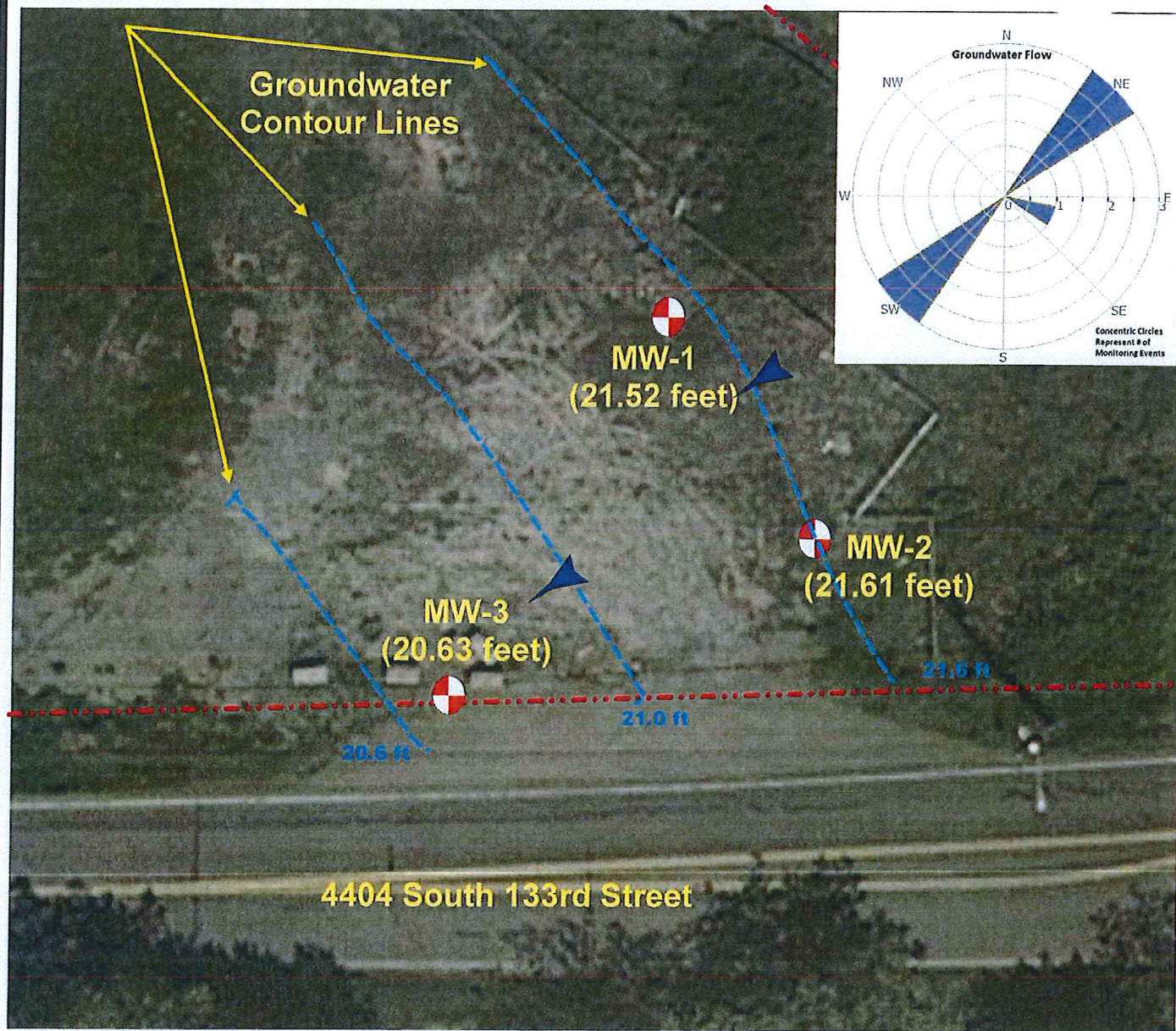
Date:

May 2019

Plate:

2

Enclosure A: Figure 3



..... Approximate Site Boundary

 Approximate Location of Monitoring Well With Groundwater Depth

 Inferred Approximate Direction of Groundwater Flow (Current May 2019 Monitoring Event)

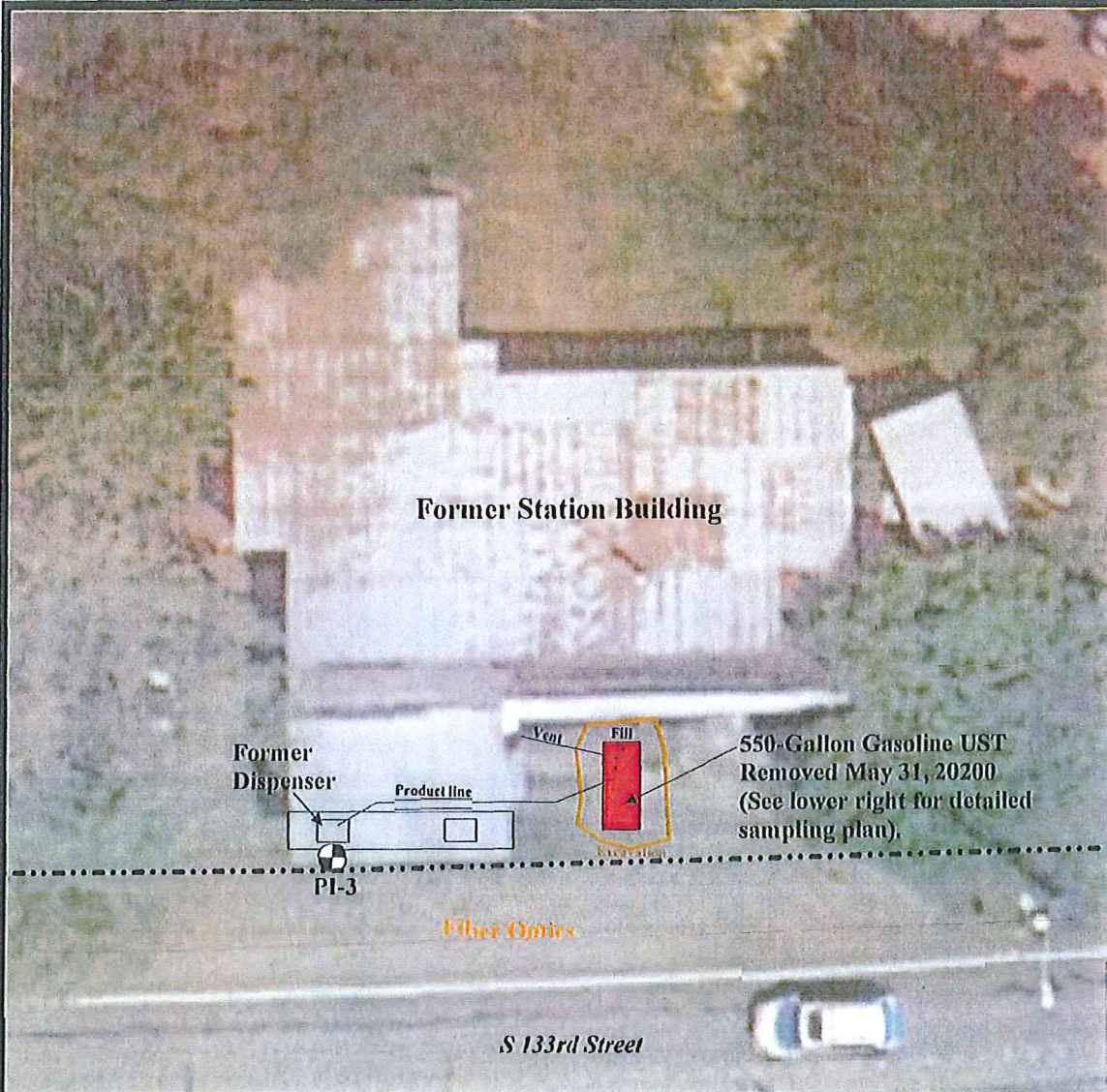


**ENVIRONMENTAL ASSOCIATES, INC.**  
 1380 - 112th Avenue N.E., Ste. 300  
 Bellevue, Washington 98004

**GROUNDWATER FLOW**

Borrelli Real Estate Investments  
 4404 South 133rd Street  
 Tukwila, Washington 98168

VCP#	Date:		
Nw3093	May 2019		



Former Station Building

Former Dispenser

Product line

Vent

Fill

550-Gallon Gasoline UST  
Removed May 31, 20200  
(See lower right for detailed  
sampling plan).

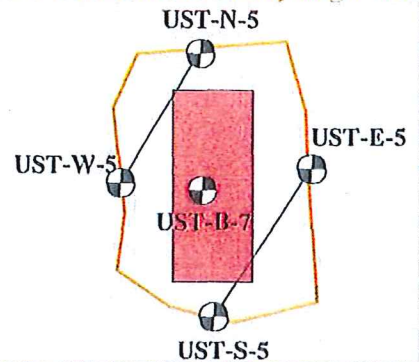
PI-3

Filter Lines

S 133rd Street

⊕ Soil Samples

UST Excavation Sampling Plan



Groundwater flow direction reported by others.

SITE PLAN DETAILED

Former Gasoline Station  
4404 South 133rd Street  
Tukwila, Washington

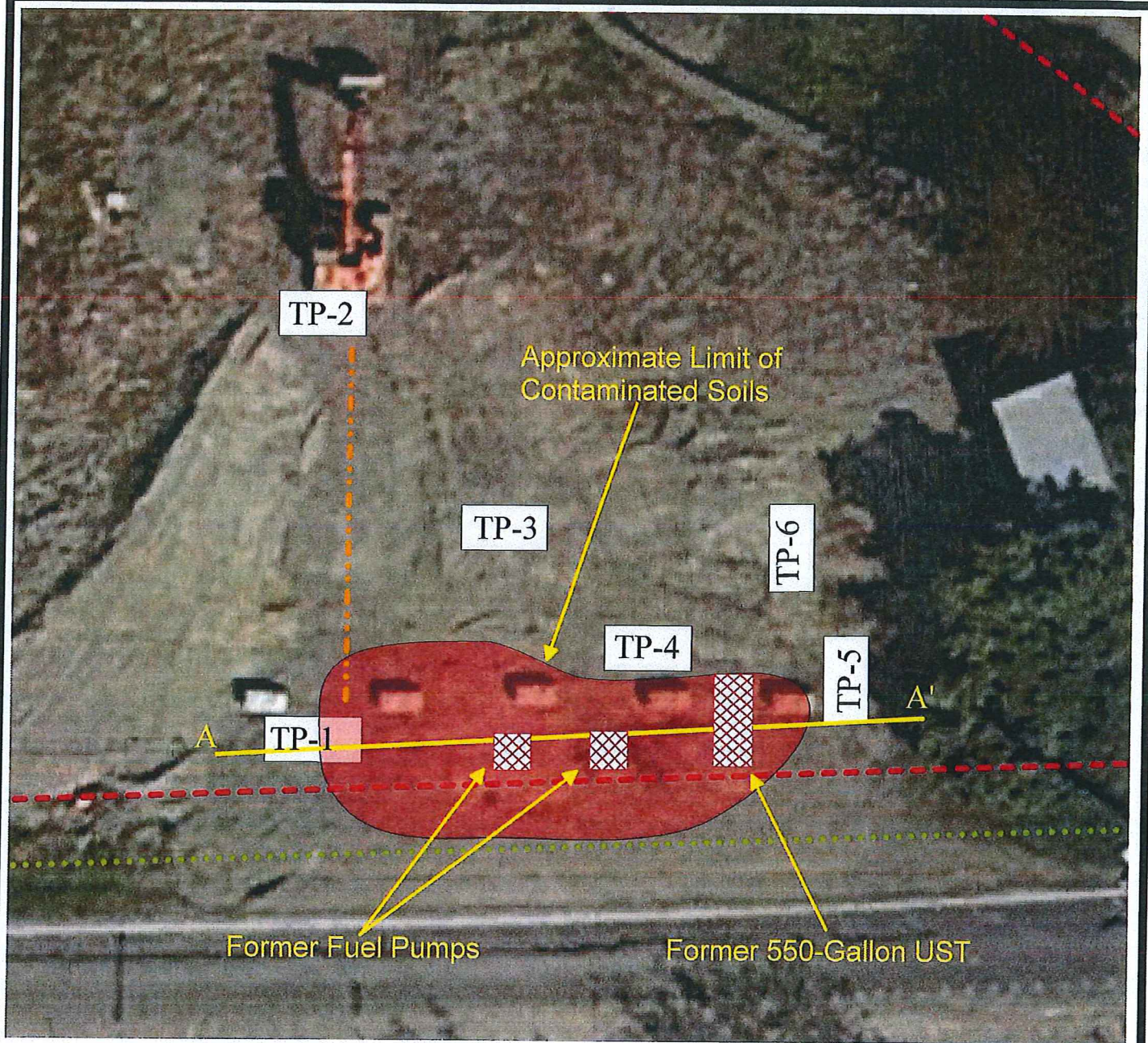
**ENVIRONMENTAL  
ASSOCIATES, INC.**






1380 - 112th Avenue N.E., Ste. 300  
Bellevue, Washington 98004



Job Number:	Date:	Scale:	Plate:
JN-33076-1	May 2013	1" = 10'	3

Enclosure A: Figure 5



-  **Approximate Site Boundary**
-  **Approximate Location of Fiber Optic Line**
-  **Approximate Location of Underground Pipe Detection**
-  **Cross Section Location**
-  **Inferred Approximate Direction of Groundwater Flow**



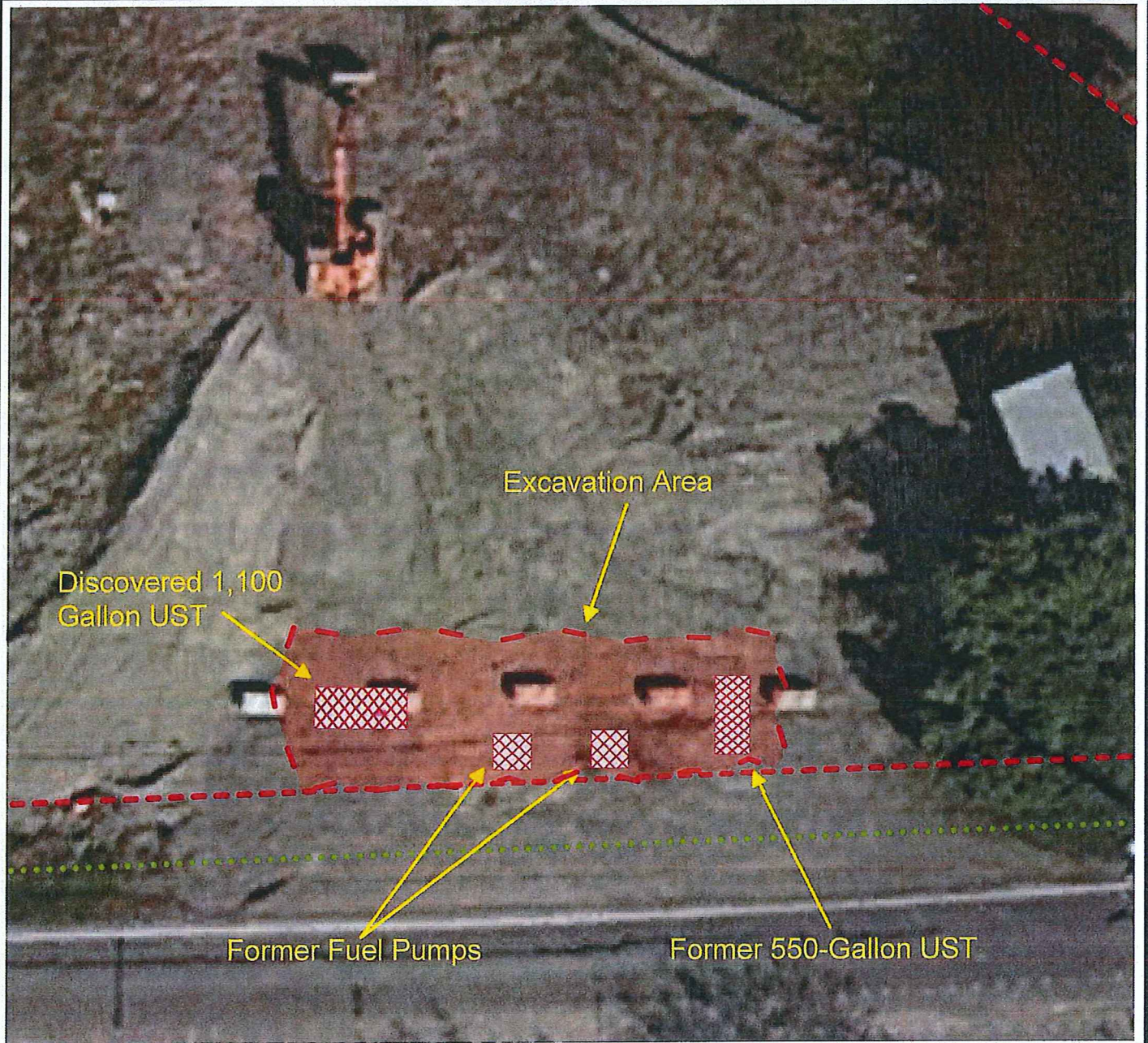
**ENVIRONMENTAL  
ASSOCIATES, INC.**

1380 - 112th Avenue N.E., Ste. 300  
Bellevue, Washington 98004

**TEST PIT LOCATIONS**

Former Gas Station Site  
4404 South 133rd Street  
Tukwila, Washington 98168

<i>Job Number:</i>	<i>Date:</i>	<i>Scale:</i>	<i>Plate:</i>
JN 33076-2	May 2016	1"= 20'	3



**Approximate Site Boundary**



**Approximate Location of Fiber Optic Line**



**Inferred Approximate Direction of Groundwater Flow**



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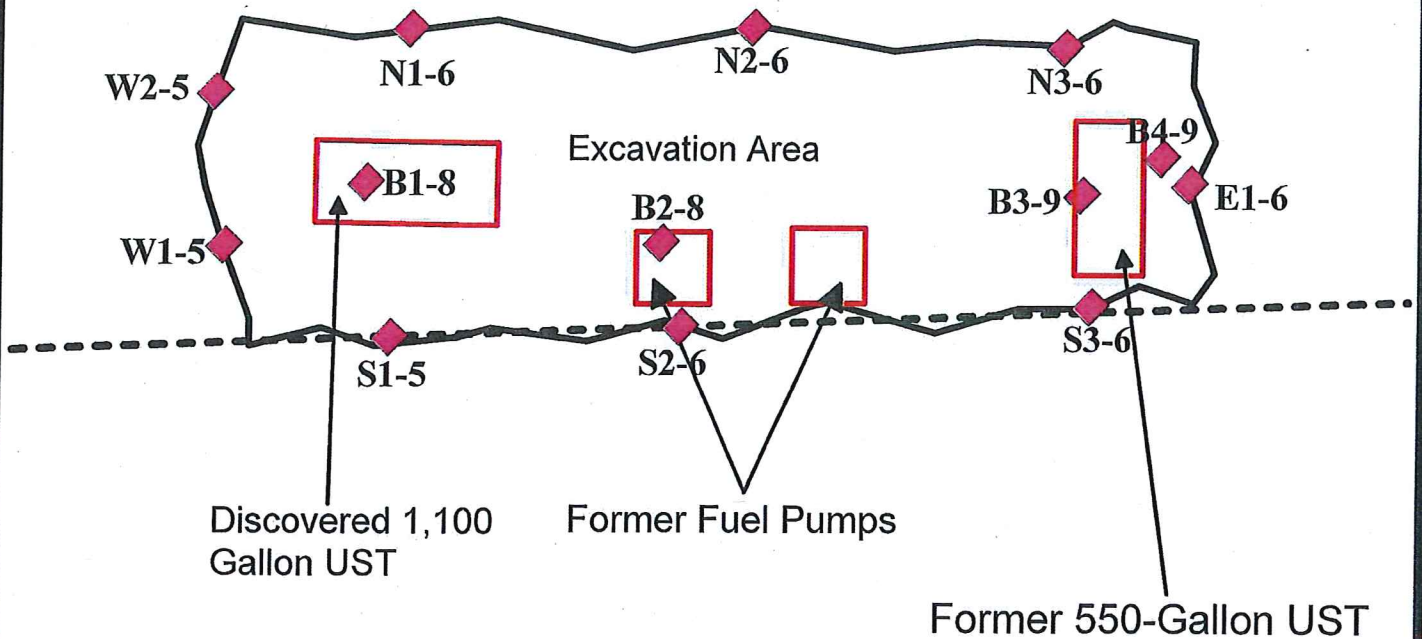
**FORMER TANK AND  
PUMP LOCATIONS**

Former Gas Station Site  
4404 South 133rd Street  
Tukwila, Washington 98168


Job Number:	Date:	Scale	Plate:
JN 33076-3	September 2016	1"= 20'	3

**SOURCE OF STOCKPILE (SP) SAMPLES**  
(not shown on sketch below)

Presumed Contaminated Stockpile	Potentially Impacted Stockpile	Suspected Clean Stockpile
SP-1	SP-4	SP-7
SP-2	SP-5	SP-8
SP-3	SP-6	SP-9
		SP-10



**Approximate Site Boundary**  
 **Approximate Sample Locations**  
 **Inferred Approximate Direction of Groundwater Flow**





**ENVIRONMENTAL ASSOCIATES, INC.**

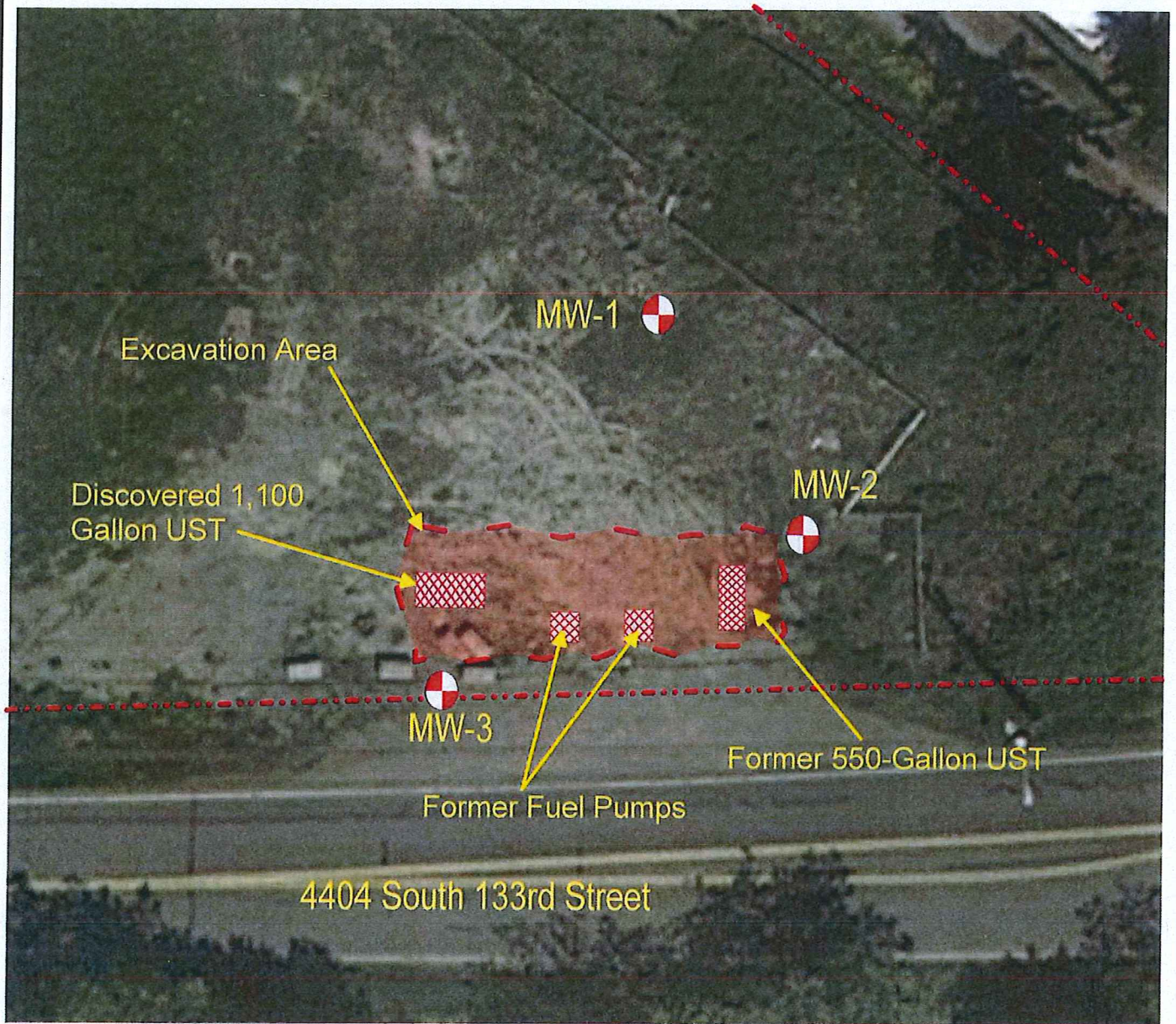
1380 - 112th Avenue N.E., Ste. 300  
Bellevue, Washington 98004

**Excavation and Boring Locations Map**

Former Gas Station Site  
4404 South 133rd Street  
Tukwila, Washington 98168

<i>Job Number:</i>	<i>Date:</i>	<i>Scale:</i>	<i>Plate:</i>
JN 33076-3	September 2016		4





..... Approximate Site Boundary

 Approximate Location of Monitoring Well

 Inferred Approximate Direction of Groundwater Flow



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Bellevue, Washington 98004

**SITE PLAN**

Former Gas Station Site  
4404 South 133rd Street  
Tukwila, Washington 98168

<i>Job Number:</i>	<i>Date:</i>		<i>Plate:</i>
JN 33076-4	December 2017		2