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

September 29, 2014

Mr. Brett Harrison
Alliance Residential Company
1300 Dexter Avenue North, Suite 110
Seattle, WA 98109

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

- **Name:** Broadstone Capital Venture LLC
- **Address:** 1414 10th Avenue, Seattle, WA
- **Facility/Site No.:** 17539
- **VCP No.:** NW2703
- **Cleanup Site ID No.:** 12090

Dear Mr. Harrison:

Thank you for submitting documents regarding your proposed remedial action for the Broadstone Capital Venture LLC (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 releases at the Site:

- Total petroleum hydrocarbons - diesel and oil range (TPH-D, TPH-O) into soil and groundwater.
- Benzene, toluene, ethylbenzene, xylenes (BTEX) into soil and groundwater.
- Chlorinated volatile organic compounds - tetrachloroethene (PCE), trichloroethene (TCE), and vinyl chloride into groundwater.
- Naphthalene into soil and groundwater.

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.

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

1. PES Environmental, Inc., *Remedial Investigation/Feasibility Study and Interim Cleanup Action Report*, dated April 8, 2014.

2. PES Environmental, Inc., *Cleanup Action Plan Addendum Broadstone Capital Hill Property – VCP Project No. NW2703 11th & Union Development Site, Seattle, WA*, dated June 10, 2013.

3. PES Environmental, Inc., *Cleanup Action Plan Broadstone Capital Hill*, dated March 13, 2013.

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 by sending an e-mail to nwro_public_request@ecy.wa.gov.

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

- TPH-D, TPH-O into soil and groundwater.
- BTEX into soil and groundwater.
- PCE, TCE and vinyl chloride into groundwater.
- Naphthalene into soil and groundwater.

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 releases at the Site, Ecology has determined:**

- The Site is located in a mixed commercial and residential area. Soil cleanup levels suitable for unrestricted land use are therefore applicable to this Site. MTCA Method A clean up levels were selected for this Site which are protective for direct contact and leaching

pathways. This is an appropriate cleanup standard for this Site. The MTCA Method A ground water cleanup levels were deemed applicable and appropriate for this Site. The cleanup levels were established for ground water based on its use as a potential drinking water source. This is an appropriate cleanup standard for this Site.

- This Property qualifies for a Terrestrial Ecological Evaluation (TEE) exclusion based on the absence of more than 1.5 contiguous acres of undeveloped land on or within 500 feet of any area of the Property in accordance with WAC 173-340-7491(1)(c). Land use at the Site and surrounding area makes substantial wildlife exposure unlikely.

- Excavation of contaminated soil appears to have removed impacted soil exceeding MTCA Method A cleanup levels from the Property. Laboratory analytical data should be included with the final cleanup action report. An appropriate number of sidewall and bottom confirmation soil samples were collected from appropriate locations to demonstrate compliance with cleanup levels in soil within the Property boundary. However, soil contamination above MTCA Method A cleanup levels remains at three sidewall locations (eastern sidewall sample locations SW-F11-BW-282 and SW-D11-283 and western sidewall sample location SW-DHT3-283) and likely extends beyond the Property boundary at these locations. Ecology agrees with the collection of additional soil samples beyond the Property boundary to delineate the extent of contamination defining the Site at the eastern sidewall locations. Delineation of soil contamination at the western sidewall location is needed as well. Any remaining soil contamination would need to be addressed prior to obtaining an NFA determination for the Site.

- Prior to initiation of remedial activities, petroleum impacts above MTCA Method A cleanup levels were documented in Site ground water. Prior to redevelopment, the lateral extent of the impacts was not delineated and the characterization of potential off-Property ground water exceeding cleanup levels was incomplete. Ecology agrees with proposed monitoring well locations MW-7 through MW-10, reinstallation of MW-3 and quarterly sampling of MW-3 and MW-6 through MW-10 to assess post-excavation ground water conditions. Ecology recommends adding BTEX analysis to the sampling and analysis plan. Depending on soil and ground water conditions encountered, additional wells may be necessary to demonstrate compliance. If off-Property soil contamination is left in place (if pursuing a No Further Action determination for the Property), it must be demonstrated that off-Property, upgradient soil contamination associated with the Site is not leaching to ground water and migrating onto the Property resulting in groundwater levels exceeding cleanup standards.

- Pre-excavation ground water concentrations of benzene, PCE, TCE and vinyl chloride exceed ground water screening levels for the vapor pathway for benzene, PCE, TCE and vinyl chloride. Post-excavation ground water conditions should be used to determine if further vapor assessment is necessary.

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.

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 regarding this opinion, please contact me at (425) 649-7097 or e-mail at desc461@ecy.wa.gov.

Sincerely,

Diane Escobedo
Site Manager
Toxics Cleanup Program

Enclosure: A – Site Description and Diagrams

cc: Daniel A. Balbiani, PES Environmental
Sonia Fernandez, VCP Coordinator, Ecology

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 releases of diesel- and oil-range total petroleum hydrocarbons (TPH-D and TPH-O) and associated volatile organic compounds to the soil and ground water. The Site is also defined by releases of tetrachloroethylene (PCE) and associated degradation products trichloroethylene (TCE) and vinyl chloride to the ground water.

Area and Property Description: The Property is currently addressed as 1406 and 1416 10th Avenue and 1401 and 1405 11th Avenue in Seattle, WA. As part of the redevelopment of the Property, the address will be changed to 1414 10th Avenue. The Property consists of seven King County tax parcels (6003500135, 60035000140, 6003500150, 6003500055, 6003500060, 6003500065 and 6003500070) totaling 1.02 acres and encompassing the southern half of the block bounded by East Pike Street to the north, East Union Street to the south, 10th Avenue to the west and 11th Avenue to the east. The Property vicinity is zoned NC3P-65, a larger neighborhood commercial zone consisting of commercial, multi-story mixed use and residential structures.

Property History and Current Use: Prior to redevelopment, four commercial structures built between 1913 and 1920 occupied the northwestern, southern and southeastern portions of the Property. The area within a few blocks of the Property is populated with mixed businesses, restaurants, apartments and Seattle University. Prior use of the Property includes an auto body shop, a paint shop, an auto repair facility, a machine shop, a blacksmith and forging shop, an automotive parts manufacturing facility, a bakery and various warehouse and offices. An automobile repair facility operated at the 1406 10th Avenue address between 1920 and 1980. An automobile repair facility operated at the 1408 10th Avenue address around 1951 in a former building north of the 1406 10th Avenue building. Three automobile repair facilities operated at the 1401 11th Avenue address between 1930 and 1937, 1943 and 1953, and 1954 and 1956. An automobile facility was identified at 1405 11th Avenue in 1920. The Ruth Ashbrook Bakery (1951-1985), historically located at 1416 10th Avenue was listed regarding the release associated with the former 6,000-gallon diesel underground storage tank (UST), which may have been used. The Ruth Ashbrook Bakery Property refers to five parcels located at 1401 and 1405 11th Avenue and 1408, 1410, 1414 and 1416 10th Avenue. The UST removal and excavation corresponded with 1408 and 1410 10th Avenue. Evidence of a steam source, stove heating and suspended heating were found at the Property.

The current redevelopment of the building includes the demolition of all existing structures with the exception of the brick façades of the 1406 10th Avenue, 1401 11th Avenue and 1405 11th Avenue buildings along East Union Street and 11th Avenue (completed in 2013). Construction of an eight story building, including street level retail units, 248 residential units and one floor of below ground parking was partially completed as of June 2014. Construction for the underground parking floors required excavation of the entire Property, extending six to nine feet below the former basement surface floor (approximately 14 feet below the adjacent East Union Street grade).

Contaminant Source and History: Petroleum hydrocarbons were released to the soil from a 6,000-gallon diesel UST in the southwestern portion of the Property and from the prior operation of automotive repair and manufacturing facilities formerly located at the Property. The UST and

approximately 100 cubic yards of surrounding contaminated soil were removed from the Property in 1990. Confirmation soil sampling indicated petroleum-contaminated soil still remained; however, no additional excavation was done until 1993. Over-excavation of the 1990 UST excavation area and on-Site bioremediation of over-excavated soil and groundwater was performed and the remediated soil was returned to the excavation pit. However, confirmation sampling confirmed petroleum-contaminated soil remained beneath the building south of the excavation and former UST area (1416 10th Avenue) at levels ranging from 330 mg/kg to 3,800 mg/kg. Petroleum and PCE-contaminated groundwater was treated by pumping through a carbon filter unit and then reportedly re-circulating through the excavation until several rounds of confirmation sampling indicated that contaminants were below the specified regulatory levels.

Three abandoned USTs were discovered during redevelopment excavation. All three tanks were decommissioned and removed for disposal. A 1,765-gallon UST was located in the northwest corner of the Property, under the 1416 10th Avenue building. Approximately 1,200 gallons of oil were removed from the UST during decommissioning. The UST exterior surface exhibited visible corrosion and multiple holes. Three sidewall and one bottom soil sample were collected. All samples were below MTCA Method A cleanup levels for TPH-D and TPH-O. An approximately 2,000-gallon UST was discovered on the north side of the former 1405 11th Avenue building. At the time of discovery, the UST was full of mostly water, with approximately 10 gallons of oily sludge. The liquid was removed from the tank during decommissioning and removal activities. One bottom sample was collected in which TPH-D and TPH-O concentrations were below MTCA Method A cleanup levels. A 3,000-gallon UST was discovered under the east side of the 1405 11th Avenue building.

The source area of the southern Property TPH-D and TPH-O contamination is not known, but based on historical tenant information and soil data, the sources are likely associated with historical automotive repair operations within the three southern buildings (1406 10th Avenue, 1401 11th Avenue and 1405 11th Avenue).

Physiographic Setting: The Property is located within the Puget Lowland physiographic province, a broad, low-lying region situated between the Cascade Range to the east and the Olympic Mountains to the west. The Property lies on the glacial deposits forming Capitol Hill, with the lowlands of Puget Sound to the west and Lake Washington to the east. The elevation of the top of Capitol Hill ranges from 100 to 400 feet above mean sea level (amsl), with the Property at an elevation of approximately 290 feet amsl. The Property lies in a saddle, with the ground surface relatively flat in the immediate vicinity of the Property.

Surface/Storm Water System: The closest surface water bodies to the Property are Elliot Bay, located 1.2 miles to the southwest, Lake Union 1.3 miles to the northwest and Lake Washington 1.8 miles to the east. Storm water runoff is collected in the city's storm water drainage system.

Ecological Setting: The new building will cover the Property lot line to lot line. The Property is surrounded by paved two-lane surface streets and buildings with minor landscaping.

Geology: The Property is directly underlain by glacial recessional outwash deposits generally consisting of loose to dense, fine to coarse sand and gravel, with localized discontinuous silt, silty sand and fine sand lenses (Troost et al., 2005). The predominant lithology encountered was silty sand, with lesser amounts of clayey sand, clay, silt and sand. The soil is coarser (silty sand and sand) beneath the western part of the Property and somewhat finer (silty sand to clay) in the central and southeastern parts of the Property.

Ground Water: Ground water beneath the Property ranges in depth from 2.39 to 13.44 feet (elevations ranging from 283.84 to 258.78 feet amsl) below the top of the well casing. The ground water gradient is approximately 0.006 feet/foot. Ground water flow direction reportedly varies from the northwest to south-southeast flow direction. The wide variation in flow direction may be due to the low ground water gradient (0.006 feet per foot).

Water Supply: A review of Ecology's well log database and water rights tracking system, the Washington State Department of Health's public water system database and the King County Groundwater Protection Program ground water monitoring well database found no records of ground water or surface water beneficial use within a one-mile radius of the Property.

Release and Extent of Soil and Ground Water Contamination: TPH-D was detected near the former UST location just north of the 1406 10th Avenue building, in the southeastern portion of the Property beneath buildings at 1406 10th Avenue, 1401 11th Avenue and 1405 11th Avenue and in the northern gravel parking lot. Near the former UST, petroleum hydrocarbons were detected above Method A in samples ranging in depth from three to 10 feet below the ground surface (bgs), with the highest concentrations detected in the three foot sample in boring B-2 (8,780 milligrams per kilogram (mg/kg)) adjacent to the former UST.

The highest concentration of TPH-D in ground water was detected at the temporary well location B-21 (961,000 micrograms per liter (µg/l), in the southeast portion of the Property beneath the 1405 11th Avenue building. The TPH-o and benzene concentrations exceeded the MTCA Method A cleanup levels (500 µg/l and 5 µg/l respectively) in one ground water sample collected from boring location B-18 (194,000 µg/l and 12.5 µg/l respectively). PCE, TCE and vinyl chloride exceeded their respective cleanup levels in ground water samples collected from the central portion of the Property at locations MW-1 (TCE = 7.56 µg/l, PCE = 20.1 µg/l), B-8 (TCE = 7.74 µg/l, PCE = 35.5 µg/l , vinyl chloride = 0.49 µg/l) and B-21(vinyl chloride = 0.41 µg/l). The extent of ground water contamination has not been delineated.

Excavation activities were conducted in conjunction with redevelopment of the Property. The redevelopment required excavating the entire Property to an elevation of approximately 282.5 feet, which is approximately six to nine feet below the prior basement floor. Confirmation soil samples were collected from the bottom and sidewalls of the contaminated areas once the required excavation depths were obtained or field screening indicated that the remaining soil was relatively clean. A total of 71 confirmation samples (37 bottom and 34 sidewall) were collected and analyzed for TPH-D and TPH-O. Two samples located along the eastern sidewall and one along the western sidewall exceeded the MTCA Method A cleanup level for TPH-D (concentrations ranging from 2,260 to 4,600 mg/kg).