STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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July 7, 2021

Avery Despi
Despi Delite Bakery
2701 15th Avenue South
Seattle WA, 98144

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

- **Site Name:** Kwik Cleaners
- **Site Address:** 2701 15th Avenue South, Seattle, WA. 98144
- **Facility/Site No.:** 82774832
- **Cleanup Site ID No.:** 1215
- **VCP Project No.:** NW3274

Dear Avery Depsi:

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

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

- Total Petroleum Hydrocarbons-Diesel Range (TPH-Dx), Total Petroleum Hydrocarbons Heavy Oil-Range (TPH-HO), Total Petroleum Hydrocarbons-Gasoline Range (TPH-Gx) potentially into *Soil* and *Groundwater*.
- Chlorinated solvents and associated degradation products trichloroethylene (TCE), tetrachloroethylene (PCE), 1,1-dichloroethene (cis-/trans-DCE), and vinyl chloride (VC) into *soil, groundwater*, and indoor *air/soil-gas*.

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 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 action(s):

1. Aspect Consulting, LLC (Aspect), *Vapor Intrusion Assessment Work Plan-Former Kwik Cleaners Site, Seattle, Washington.* May 24, 2021.
2. Ecology, *Opinion Pursuant to WAC 173-340-515(5) on Proposed Remedial Action for the following Hazardous Waste Site*, *Kwik Cleaners, NW3274*. August 24, 2020.

These 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 calling the NWRO resource contact at (425) 649-7235 or sending an email to nwro_public_request@ecy.wa.gov.

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

The Site is more particularly described in **Enclosure A** to this letter. The description of the Site is based solely on the information contained in the documents listed above.

Based on a review of supporting documentation listed above, pursuant to requirements contained in MTCA and its implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release(s) at the Site, Ecology has the following comments regarding the above-referenced Aspect work plan, dated May 24, 2021:

1. Ecology concurs with the proposed elements in the work plan (Aspect, May 2021), to include the following:
    - Collect and analyze (analytical method TO-15) indoor air samples from five residential addresses using 6-liter canisters, under 24-hour exposure:
        - 2702 14th Avenue S.
        - 2706 A & B 14th Avenue S.
        - 2708 A & B 14th Avenue S.

    - Advance, develop, & sample up to two sub-slab soil-gas sampling ports (vapor pin®) at each of the five residences, potentially totaling ten soil vapor sampling ports.

2. Please note that due to the potential elevated risk associated with TCE vapors into residentially-occupied structures, an additional sampling event is likely warranted[1]. Two sampling events are necessary to effectively evaluate the indoor air exposure pathway. These sampling events are to be conducted during the winter and summer months to capture potential vapor concentration variations in the structure during heating and cooling periods[2].

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.

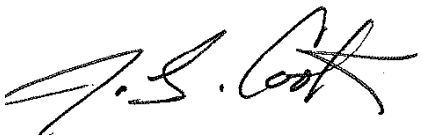
Again, Ecology appreciates your initiative in conducting independent remedial action and requesting technical consultation under the VCP. As the cleanup of the Site progresses, you may request additional consultative services under the VCP, including assistance in identifying applicable regulatory requirements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

[1] https://apps.ecology.wa.gov/publications/SummaryPages/1809047.html

[2] https://apps.ecology.wa.gov/publications/documents/0909047.pdf

If you have any questions regarding this opinion, please contact me at (360) 763-2777 or jason.cook@ecy.wa.gov.

Sincerely,



J.G. Cook, LG
Headquarters Toxics Cleanup Program

JGC:AF

Enclosure

cc: Adam Griffin, PE, Aspect Consulting, LLC
Sandra Caldwell, Ecology
Sonia Fernandez, Ecology
Frank Winslow, Ecology

Enclosure A

Description of the Site

Site Description

Site & Source Property:
The Property is comprised of a single King County parcel (no. 368600-2495), totaling 0.28-acre. The Site is located at 2701 15th Avenue South, in the Beacon Hill Neighborhood in Seattle, WA. Residential properties, including single family residences and apartments are located to the north, west, and south of the Site. Commercial buildings housing a bank and grocery are located to the northeast and east of the Site.

The Site is currently improved with a 5,746 square-foot, split-story commercial building, and associated asphalt paving and landscaping, and is zoned for mixed commercial and residential use.

Based on currently available information, the Kwik Cleaners Site contamination originates on the tax parcel listed above (Property). Contamination occurred while the Property housed the Kwik Cleaners dry cleaners.

Contamination extends off of the Property onto a northwest-adjacent parcel that houses a King County Metro rectifier, and into right-of-ways including an alleyway west of the Property and South Lander Street, located north and northwest of the source Property.

The Site was previously enrolled in Ecology's Voluntary Cleanup Program from 2003 to 2006 and 2007 to 2018. It was assigned VCP ID numbers of NW 1049 and NW1779.

Property Historical and Current Use:
The Site is currently used as a commercial bakery and restaurant – Depsi Delite Bakery (since 2005).

The Property was initially utilized as a roofing company from 1937 to 1940, and improved with several small commercial structures/sheds. From 1940 to 1955, the Property was occupied by a gasoline and service station, and improved with the existing commercial structure associated with the former roofing business, one 500-gallon underground storage tank (UST), one 1,000-gallon UST, and one hydraulic hoist (Aspect, April 2020).

The Property was improved with the existing commercial structure in 2004.

Surface/Storm Water System:
No surface water features are located on or within the immediate vicinity of the Site. The Site is located approximately 7,500-feet from Lake Washington to the east and the Duwamish Waterway approximately 1-mile to the west.

It is assumed stormwater is conveyed to the municipal separate storm sewer system operated and maintained under the NPDES Phase One Municipal Stormwater Permit issued to the City of Seattle.

The stormwater utility line backfill along South Lander Street has been impacted with groundwater by dissolved-phase chlorinated solvents. These solvents followed preferential pathways along utility backfill/corridors with higher hydraulic conductivity.

In 2012, Aspect sampled down-gradient stormwater from a manhole/control structure, exhibiting non-detect results. As such, stormwater is likely not-impacted.

Soils and Geology:

The Site and much of the Puget Sound Region is underlain by alluvial Quaternary sediments deposited during multiple glacial episodes. The sediments consist of interlayered alluvial clays, silts, sands, & gravels as well as intermittent peat layers. These alluvial sediments are typically situated under glacial till, primarily comprised of consolidated silts, sands, & gravels.

Site geology determined through historical investigations indicate the Site is underlain by a surficial fill, containing silt, gravel and miscellaneous debris to approximately 5-feet bgs. This unit is underlain by a dense glacial till, extending to approximately 15-feet bgs. The glacial till is comprised of compacted silt, with sand and gravels. Under the glacial till is an advance glacial outwash deposit extending to approximately 30-feet bgs. The advance outwash contains gravel and sand with trace silts. A geologic unit described as transitional beds underlie the advance outwash and extends to a depth of approximately 225-feet bgs. The transitional bed unit contains variable sand, silt, and gravel deposits, some of which may serve as semi-permeable aquatards, impeding down-profile migration of contaminants or may contain significant amounts of groundwater in the sandy and gravel layers. Two such deeper water-bearing units underlie the Site between 70- to 100-feet bgs and between 140- to 150-feet bgs.

Groundwater:

Groundwater at the Site is encountered in two water-bearing zones. The shallow water-bearing zone has a static water level ranging between 9- to 15-feet bgs, with a general flow direction towards the west. The shallow water-bearing zone is encountered in geologic units up to 30-feet bgs, principally in the outwash deposits referenced above.

The deeper water-bearing zone is generally encountered in the aforementioned transitional bed unit, at depths greater than 30-feet bgs. MW-17 is the only MW screened in the deeper water-bearing zone between 89- to 99-feet bgs.

Source of Contamination & Contamination Extent:

Environmental investigations began on the Site in 2000. These investigations were done by Shannon and Wilson on behalf of Sound Transit, who was considering acquiring the Property as part of Beacon Hill Light Rail Station construction. Chlorinated solvents above Method A cleanup levels were found in soil from boring SB-328, located on the east side of the Property. Samples were analyzed from soil collected 70-, 75.5-, and 85-feet bgs. These samples contained TCE and/or PCE above Method A cleanup levels.

Additional site investigations were done between 2001 and 2003, and all of the data collected

was evaluated as part of the 2003 Remedial Investigation report. The likely release points of chlorinated solvents to the subsurface were identified as a sump within the building footprint and an oil-water separator located outside the building footprint but connected to the sump and floor drains within the building (Aspect, April 2020). During building demolition in 2002, the sump and oil-water separator were removed. It was noted that both contained solvent-saturated sludge at the time of removal, and that the concrete bottom of the sump had largely disintegrated, likely due to direct-contact with solvent. Deeper groundwater layers (up to 90-feet bgs) were also documented to be contaminated with chlorinated solvents above cleanup levels. Due to limited wells in the deeper layers, the extent of contamination at that depth was not determined. Soil vapor samples collected during this phase of site characterization contained PCE at concentrations up to 345 micrograms per cubic-meter ($\mu g/m^3$), slightly above the current MTCA Method B screening level of 320 $\mu g/m^3$.

An interim cleanup action was performed at the Site between November 2003 and June 2004, in conjunction with the construction of the new bakery building. Soil with PCE concentrations above the Method B direct-contact cleanup level (19.6 milligrams per kilogram [mg/kg]) was excavated. This occurred in two general areas, depending on the depth of soil excavation required. Soils in Area A were removed down to 30 feet bgs, while those in Area B and under the new building footprint were removed down to 4-6 feet bgs. Three treatment cells were constructed during the backfilling of Area A. The cells were constructed by filling the area between 20- and 30-feet bgs with crushed gravel mixed with potassium permanganate to encourage the breakdown of chlorinated solvents in groundwater passing through the cells. To mitigate potential vapor intrusion into the new bakery building, an HDPE vapor barrier and subgrade passive gas collection and venting system were installed during building construction.

Additional sampling was conducted between 2006 and 2010 to further evaluate the extent of contamination. Groundwater monitoring wells were installed along South Lander Avenue to the west of the Site in 2006. Samples from these wells confirm that the backfill material around the stormwater pipes is providing a preferential pathway for the migration of contaminated groundwater. To determine the extent of contamination in the deeper groundwater levels, samples were collected from groundwater seeps on the slope west of the Site. Chlorinated solvents were not present above laboratory reporting limits in the seep samples. Indoor air was evaluated both in the new bakery building and in residences to the west and south of the Property. Samples collected in the bakery in 2006 indicated vapors were entering the building in spite of the mitigation technologies installed during construction. A sump under the building was found, identified as a potential source of vapors, and sealed in 2007. Samples collected within the bakery in 2008 and 2009 had lower concentrations of chlorinated solvents than those collected in 2006. Indoor and outdoor air was collected at three residences in 2008. Concentrations of PCE (one residence) and TCE (three residences) above detection limits were observed in indoor air samples. The TCE concentration in the outdoor air sample was greater than any indoor air sample. When the indoor air PCE concentration was adjusted for the outdoor air PCE concentration, it was below the Method B cleanup level. Based on these results, the indoor air TCE and PCE could not definitively be linked to a subsurface source.

Additional remedial actions have been conducted in small areas on the Site since the 2004 interim action. Injections of permanganate into the subsurface were done at IP-1, IP-3, W-SD[E], MW-4, MW-5, MW-10, and MW-11 in March 2006. Additional groundwater monitoring events in 2007 and 2009 indicated that chlorinated solvents remained in groundwater above cleanup levels. An enhanced in-situ remediation pilot study began in 2011. A product known as EHC was selected for the injections. Pilot study results are summarized in a 2014 report by Aspect Consulting. Anaerobic conditions and chemical degradation were observed in the treatment cells where the injections occurred. Decreases in chlorinated solvent concentrations were also observed in some shallow groundwater monitoring wells downgradient of the treatment area. It is unclear if the injections had any impact on contaminant concentrations in deeper groundwater. Aspect's recommendations were to continue to monitor groundwater for an additional two years to further evaluate the length of effectiveness of the EHC injections; no additional data has been submitted to Ecology, with the exception of the Aspect, April 2020 data gap work plan.

In February 2020, Aspect sampled groundwater from MW-10 & -11, in an effort to assess vapor risk off-Property. Groundwater reportedly exhibited PCE concentrations of 500 µg/L & 170 µg/L, respectively, above the respective MTCA Method B SLs. Degradation products such as TCE and Vinyl Chloride were additionally above the respective MTCA Method B SLs.

In March 2020, Aspect advanced three soil vapor probes surrounding the Property (SV-6, -7, & -8). SV-7 exhibited a soil vapor PCE & TCE concentrations of 350 $\mu g/m^3$ & 28 $\mu g/m^3$. These concentrations are above the respective MTCA Method B SLs.

In summary, additional characterization is necessary at this time.