



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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September 12, 2019

Nicholas Bahn
Manor Market
3609 164th Avenue Southwest
Lynnwood, WA 98087

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

- **Site Name:** Manor Market Deli
- **Site Address:** 3609 164th Avenue SW, Lynnwood, WA 98087
- **Facility/Site No.:** 77492944
- **Cleanup Site ID No.:** 11939
- **VCP Project No.:** NW2621

Dear Nicholas Bahn:

Thank you for submitting documents regarding your proposed remedial action for the **Manor Market Deli** 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 releases at the Site:

- Total petroleum hydrocarbons in the gasoline range (TPH-G), benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tert-butyl ether (MTBE) into the Soil;
- TPH-G, BTEX, MTBE and lead into the Ground Water;
- BTEX, tetrachloroethene (PCE) and trichloroethene (TCE) into the Soil Gas;
- BTEX and PCE into the Indoor Air.
- BTEX into the Air.

Please note the Crystal Cleaners Lynnwood facility (Facility Site ID No.: 32839377; Cleanup Site ID No.: 4572; former VCP No.: NW0179) also affects the parcel of real property associated with this Site. This opinion includes information and new data pertaining to the contamination associated with the Crystal Cleaners Lynnwood facility.

VCP NW0179, Crystal Cleaners Lynnwood, received a No Further Action (NFA) determination in 1999. Because inaccessible soil beneath the former cleaners tenant space contained PCE at concentrations above the Method A cleanup level, an Environmental Covenant was placed on the Property. At the time that the NFA was issued, it was assumed that ground water occurred 100 to 200 feet below the ground surface based on a 1991 Snohomish County Groundwater Characterization Study.

When the Manor Market Deli was enrolled in the VCP and shallow perched ground water was encountered, Ecology requested that ground water samples from monitoring wells on the Property be tested for halogenated volatile organic compounds (VOCs) and that the potential for vapor intrusion into the building from soil contaminated with PCE be assessed.

Based on Site characterization work in response to Ecology's requests, this opinion letter redefines the Site as including VOCs in the soil vapor and indoor air.

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. Associated Environmental Group, LLC, 2019. *Remedial Investigation Addendum & Opinion Letter Response, Work Plan and Request for Opinion, Manor Market, 3609 - 164th St. SW, Lynnwood, WA 98087*. April 5.
2. Associated Environmental Group, LLC, 2018. *Phase II Environmental Site Assessment; conducted on Spruce Market, 16404 - 36th Avenue West Lynnwood, Washington 98036*. August 23.

3. Associated Environmental Group, LLC, 2017. *Work Plan and Request for Opinion, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* October 27.
4. Associated Environmental Group, LLC, 2016. *Remedial Investigation/Model Remedy Review Request, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* December 29.
5. Associated Environmental Group, LLC, 2013. *Supplemental Remedial Investigation – 3rd Phase Workplan, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* June 10.
6. Associated Environmental Group, LLC, 2012. *Supplemental Remedial Investigation – 2nd Phase, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* April 5.
7. Associated Environmental Group, LLC, 2011. *Supplemental Site Characterization, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* September 14.
8. Envitech, Llc, 2011. *Phase II Environmental Site Assessment, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* April 26.
9. Envitech, Llc, 2010. *Phase I Environmental Site Assessment, Manor Market, 3609 164th St. SW, Lynnwood, WA 98087.* November 8.
10. Environmental Associates, Inc., 1998. *Limited Subsurface Sampling & Testing, The Manor Market, 3609 164th Street Southwest, Lynnwood, Washington.* November.
11. Robert M. Rodman, 1998. *Site Characterization, Crystal Cleaners, Unit D, 3609 164th St. S.W., Lynnwood, Washington.* November.
12. Quest, 1998. *Results of Underground Storage Tank Removal and Site Remediation Program at Manor Market, 3609 164th St. SW, Lynnwood, WA.* February 6.

The reports listed above will be 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, or contacting the Public Records Officer at (360) 407-6040. A number of these documents are accessible in electronic format from the Site web page (<https://fortress.wa.gov/ecy/gsp/Sitepage.aspx?csid=11939>).

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 releases at the Site, Ecology has determined:

Off-Property Impacts

- Off-Property impacts into a City of Lynnwood right-of-way (ROW) are suggested by the results of soil and ground water samples collected in monitoring wells MW-6 and MW-11 however, there is limited access for characterization in the ROW due to the presence of overhead power lines and multiple utilities. As a result, the extent of the Site off the Property could not be determined. For this reason, it is not possible to use a Model Remedy for the cleanup of this Site.
- In 2018, a Phase II Environmental Site Assessment was conducted at the Spruce Market (Facility Site ID No. 74865182; Cleanup Site ID No. 10391) located at 16404 36th Avenue West which is south of the Property. Due to the distance from the Property, soil and ground water samples collected at this location cannot be considered comparable to environmental conditions in the ROW just south of and adjacent to the Property. Also, based on ground water elevation contour maps presented in Figures 3 through 6 of the 2019 *Remedial Investigation Addendum* report, this location is most likely hydrogeologically cross-gradient in relation to the Property.

Tier II Vapor Intrusion Assessment

- On May 8, 2018, sub-slab vapor sample SS1 and indoor air sample Indoor 2 were collected in the former Crystal Cleaners tenant space. PCE and TCE were detected in SS1 at concentrations of 2,500 and 81 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$) respectively, both exceeding Method B sub-slab screening levels. Sample Indoor 2 contained PCE at a concentration of $0.92 \mu\text{g}/\text{m}^3$ which is an order of magnitude less than the Method B indoor air cleanup level. Benzene was also detected in sample Indoor 2 at a concentration of $0.69 \mu\text{g}/\text{m}^3$, which exceeds Ecology's Method B sub-slab screening level; however the result can be adjusted to $0.25 \mu\text{g}/\text{m}^3$ based on the benzene detected in an ambient air sample collected outside contemporaneously. The adjusted concentration is below the Method B sub-slab screening level of $0.321 \mu\text{g}/\text{m}^3$.
- On the same day, sub-slab vapor sample SS2 and indoor air sample Indoor 1 were collected in the Manor Market Deli tenant space. Benzene was detected in SS2 at a concentration of $230 \mu\text{g}/\text{m}^3$, exceeding the Method B sub-slab screening level. Benzene was also detected in Indoor 1 at a concentration of $0.64 \mu\text{g}/\text{m}^3$, which exceeds Ecology's Method B sub-slab screening level but can be adjusted to $0.20 \mu\text{g}/\text{m}^3$ based on benzene detected in an ambient air sample collected outside on the same day. The adjusted benzene concentration is below the Method B sub-slab screening level of $0.321 \mu\text{g}/\text{m}^3$.

- The unadjusted indoor air concentrations of benzene exceeding Ecology's cleanup levels in the Manor Market Deli are most likely partially due to vapor intrusion, since benzene was detected at a concentration of $230 \mu\text{g}/\text{m}^3$ in sub-slab vapor beneath the deli tenant space floor.
- Ecology recommends that at a minimum, a second sampling indoor air sampling event be conducted in 2019 to confirm the results presented in Table 1.
- Please provide a detailed description of the soil vapor and indoor air sample collection methodology, including the sample containers and collection durations.
- The name of the ambient air sample 'Outdoor' shown in Table 1 should be used to label the sample location in Figure 2 to be consistent with the other sample labels.
- Methyl tert-butyl ether (MTBE) has been detected in ground water at concentrations exceeding the Method A cleanup level and the Method B vapor intrusion ground water screening level ($62 \mu\text{g}/\text{L}$). Although no MTBE was detected in sub-slab soil gas, indoor air or ambient air samples, please include the analytical results for MTBE in Table 1 in future submittals.

Groundwater Sampling Event

- The first paragraph under 'Groundwater Sampling' on page 2 does not list chlorinated volatile organic compounds (cVOCs) as having been analyzed for but cVOCs are presented in the discussion of the results and in Table 2. Please correct this inconsistency in future submittals.
- All Site monitoring wells have been analyzed for cVOCs during at least one ground water sampling round with no detections.
- No complete set of ground water elevation data from the Site monitoring well network is presented in Figures 3 through 6. Please provide ground water contour maps that include data from all Site wells for multiple measuring events so that the interpreted ground water flow direction can be verified. Also, the map symbol 'NG' needs to be defined in the legend in Figures 4 and 5.
- Ground water elevation data should be collected in all monitoring wells including wells that have not yet been surveyed. Once the surveying of monitoring wells has been completed, previous ground water elevation contour maps should be regenerated with the previous data added. As stated above, the regenerated maps should include data from all Site monitoring wells or new rounds need to be collected.

- Ecology suggests consideration of the use of in-situ treatment methods to enhance the remediation of ground water on the Property within a reasonable time frame.
- A minimum of four consecutive quarters of ground water monitoring data at concentrations below MTCA Method A cleanup levels for all contaminants of concern in the Site monitoring well network are needed in order for Ecology to consider a Property-specific No Further Action determination at this Site.

Draft RI/FS Report

- Geologic cross-sections presented in the 2016 Remedial Investigation report do not show static water levels measured in monitoring wells on the Property. Water encountered at the time of drilling is not representative. The well completion details for MW-11 are not shown on cross-section A-A' in Figure 7. Monitoring wells MW-4 and MW-6 are too far away from cross-section B-B' to be projected onto the section. According to Figure 2, these wells are approximately 60 feet apart but projected onto the cross-section (Figure 8) where the wells are shown as just over 20 feet apart which is not representative. A separate cross-section should be drawn through these two wells and any other wells or borings that the line intersects.
- Figures need to be presented that show contoured concentrations of contaminants of concern in soil and ground water rather than areas of color that represent exceedances of cleanup levels.
- Ecology's recommended Remedial Investigation (RI) report format consolidates all pertinent Site historical information, collected soil and ground water data, and completed soil cleanup data. See the following Ecology web page for RI report format and content requirements: <http://www.ecy.wa.gov/programs/tcp/policies/checklists>
- The completed Site characterization (RI) should be the basis for preparation of a Feasibility Study (FS) that meets the MTCA requirements for selection of a cleanup action including a disproportionate cost analysis (DCA). See the following Ecology web page for FS report format and content requirements: <http://www.ecy.wa.gov/programs/tcp/policies/checklists>

Institutional Controls

- Inaccessible soil contaminated with petroleum hydrocarbons and MTBE at concentrations exceeding Method A cleanup levels will likely remain in two locations on the Property. These areas include the vicinity of monitoring wells MW-4 and MW-6.

- Consideration of the placement of an Environmental Covenant on the Property will be based on the results of the FS and DCA.

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.

For more information about the VCP and the cleanup process, please visit our web site: www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm. If you have any questions about this opinion, please contact me at (425) 649-7064 or heather.vick@ecy.wa.gov.

Sincerely,



Heather Vick, LHg
NWRO Toxics Cleanup Program

cc: Scott Rose, Associated Environmental Group, LLC
Sonia Fernandez, VCP Coordinator, Ecology

