STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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October 17, 2014

Mr. Simon Payne
Cardno ATC
6347 Seaview Avenue NW
Seattle, WA 98107

Re: Opinion under WAC 173-340-515(5) on Site Environmental Assessments for the Following Hazardous Waste Site:

- **Site Name:** Harbour Pointe Cleaners Lynnwood
- **Site Address:** 13619 Mukilteo Speedway, Lynnwood, WA 98037
- **Facility/Site No.:** 41352598
- **Cleanup Site ID No.:** 12413
- **VCP Project No.:** NW2902

Dear Mr. Payne:

Thank you for submitting documents regarding your Environmental Site Assessments, to determine whether there is a need to further delineate the nature and extent of contamination, and media of concern, for the **Harbour Pointe Cleaners Lynnwood** 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 authority of 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 implementing regulations, Chapter 70.105D RCW and Chapter 173-340 WAC, for characterizing and addressing the following release at the Site:

- Tetrachloroethylene (PCE) and Trichloroethene (TCE) into the Soil.

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 action:

1. Cardno ATC, *Limited Subsurface Investigation, Speedway Shopping Center - Harbour Pointe Cleaners, 13619 Mukilteo Speedway, Lynnwood, WA,* dated April 3, 2014.

2. EBI Consulting, *Phase II Environmental Site Assessment, Speedway Shopping Center, CE Capital Loan #168-41, 13632 Highway 99, Lynnwood, WA,* dated March 18, 2013.

3. Buchanan Environmental Associates, *Mukilteo Speedway Center Limited Phase II Environmental Site Assessment, 13619 Mukilteo Speedway, Lynnwood, WA,* dated September 6, 2006.

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 calling the NWRO resource contact at (425) 649-7235, or via email at nwro_public_request@ecy.wa.gov.

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

- Tetrachloroethylene (PCE) and Trichloroethene (TCE) into the Soil.

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 impacted area that comprises the Site, both on- and off-Property, and all media of concern, needs to be fully characterized. Complete Site characterization is a necessary prerequisite for determining an appropriate cleanup action and cleanup standards for the Site. Ecology requires current, representative data in order to evaluate Site conditions and make a determination as to the appropriateness and adequacy of cleanup actions. The objectives and scope presented in the submitted Limited Subsurface Investigation report is not comprehensive enough to achieve this goal. We need to fully understand any impacts to Site soil, groundwater, and soil gas potentially caused by release(s) from historic use of PCE on the Property.

- The objective of a Remedial Investigation (RI), are to define and fill existing data gaps, and gather sufficient information to support the development of feasible cleanup alternatives. An annotated outline of a Remedial Investigation (RI) report is presented in **Enclosure A** to provide an understanding of Ecology's expectations for conducting and documenting the Site RI.

- The vapor intrusion pathway has not been fully characterized and must be considered during development of cleanup levels and cleanup actions for the Site. Please refer to Ecology's Draft *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action,* dated October 2009, for addressing soil vapor issues.

- The cleanup action selected must meet the minimum requirements in WAC 173-340-360(2).

- Additional Site maps, the updated data, updated boring logs, cross-sections, and figures showing groundwater elevation contours and indicating the flow direction would aid in describing the Site conditions, and enable review of the proposed remedy for Ecology's formal determination. Please provide a Rose diagram depicting the ground water flow directions and magnitudes of hydraulic gradients measured over time.

- Additional figures should be provided that:

    - Present all soil and ground water sampling data exceedances in an enlarged, color-coded, or bold text.

    - Present the ground water elevation contours with arrows to demonstrate the gradient direction.

- Note that MTCA Method A soil cleanup levels for unrestricted land uses are appropriate (Table 740-1) with the standard point of compliance throughout the Site to a depth of 15 feet below the ground surface (WAC 173-340-740(6)(d)).

- A Terrestrial Ecological Evaluation (TEE) has not yet been performed at this Site. The TEE is necessary to meet substantive requirements of MTCA, and to set cleanup levels that are protective of terrestrial species, and to determine an appropriate cleanup action. Additional information on satisfying this requirement can be found at the following link: www.ecy.wa.gov/programs/tcp/policies/terrestrial/TEEHome.htm

- Note that for direct contact, the MTCA Method A cleanup levels for ground water (Table 720-1) at the standard point of compliance, which is throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest depth which could potentially be affected, are appropriate.

- Under Washington State law (RCW Chapters18.43 and18.220), all hydrogeological and engineering work must be conducted by, or under the supervision of a Washington State licensed geologist, hydrogeologist or professional engineer qualified to conduct the work. Any Site investigation/cleanup document containing geologic or engineering work must be submitted under the signature and seal of such an appropriately licensed professional. The previously submitted reports including: *the Limited Subsurface Investigation Report dated April 3, 2014; the Phase II Environmental Site Assessment dated March 18, 2013; and the Limited Phase II Environmental Site Assessment dated September 6, 2006*, all lacked evidence of this required certification. Subsequent reports submitted regarding the investigation and cleanup of this Site must meet this requirement.

- Electronic submittal of all sampling data into Ecology's Electronic Environmental Information Management (EIM) database is a requirement in order to receive a final Ecology opinion for this Site. Jenna Durkee (email jedu461@ecy.wa.gov, or via telephone at 509-454-7865) is Ecology's contact and resource on entering data into EIM.

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 also 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 feel free to contact me at (425) 649-4422, or via email at gcar461@ecy.wa.gov.

Sincerely,

Glynis A. Carrosino
Project Manager
Toxics Cleanup Program

Enclosure: A: Remedial Investigation Report Outline

By Certified Mail [7011 0470 0003 3682 5483]

cc: Jahan Moslehi, B33 Mukilteo LLC
Sonia Fernandez, VCP Coordinator, Ecology

DEPARTMENT OF ECOLOGY
NORTHWEST REGIONAL OFFICE
REMEDIAL INVESTIGATION OUTLINE
MTCA VCP SITES

The following annotated outline is a suggested schematic for elements to be included in a Remedial Investigation report. It is not intended to replace MTCA's specific requirements as presented in 173-340-350(7) WAC.

The main purpose of the outline is to facilitate the preparation of a document that is clear, comprehensive, and to the point. A secondary, but important, purpose is to make document preparation and review more efficient.

INTRODUCTION *(Concise, bulleted if possible)*

- **Site name, VCP number, Name, address, and phone number of project consultant, Current owner/operator**
- **Purpose of document** *(very brief restatement of what an RI is for, reference the WAC)*

SITE IDENTIFICATION AND LOCATION *(Focus on defining the site in the context of its location)*

- **Site discovery and regulatory status** *(describe how the site was identified and where it is in the MTCA process)*
- **Site and property location/definition** *(define actual MTCA site location relative to property or study area)*
- **Neighborhood setting**

Figure – Vicinity Map *(preferably with topography)*
Figure – Property/Site Map *(preferably with topography)*

Appendix – Legal description of property, present owner and operator, chronological listing of past owners and operators

ENVIRONMENTAL INVESTIGATION/INTERIM ACTION SUMMARY *(Concise summary presentation of the investigations that have been done at the site, along with prior remedial actions. Focused mostly on figures and tables. Details of and methods used in former investigations and remediation in appendices)*

- **Constituents of Concern** *(brief discussion about which specific compounds were chosen for analysis and why)*
- **Soil**
- **Surface water**
- **Ground water**
- **Sediment**
- **Air/soil vapor**

- **Natural resources/wildlife**
- **Cultural history/archeology**
- **Interim actions** *(brief intro to prior remediation activities)*

Figure – Soil investigation data points *(show potential source areas)*
Figure – Surface water/groundwater investigation data points *(show potential source areas)*
Figure – Air investigation data points *(show potential source areas)*
Figure – Prior remediation activities

Table – Exploration Summary
Table – Analytical Schedule per media *(include analytical methods and reporting limits, as possible)*

Appendix – Previous Investigations *(detailed discussion goes here)*
Appendix - Exploration and sampling methodology *(may combine with Previous Investigations)*
Appendix – Boring / Well logs
Appendix - Prior Interim Actions

PROPERTY DEVELOPMENT AND HISTORY *(This section focuses on the built environment, both current and historical, and presents the sources of contamination and release mechanisms.)*

- **Past site uses and facilities**
- **Current site use and facilities**
- **Proposed or potential future site uses**
- **Zoning** *(if appropriate)*
- **Transportation/roads**
- **Utilities, water supply**
- **Potential sources of site contamination**
- **Potential sources of contamination from neighboring properties** *(discuss nearby sources if known)*

Figure – Historical site features *(may be combined with Figure 2)*
Figure – Potential contaminant sources
Figure – Utilities *(may be combined with Figure 2)*

Table – Potential Contaminants

NATURAL CONDITIONS

- **Physiographic setting/topography**
- **Geology** *(focus on interpretation)*
    - Regional Setting *(brief)*

- Property Geologic Conditions *(synthesis, not a copy of boring logs, provide cross sections)*
- Physical Properties *(unlikely to need this section, but in some cases may be useful to present data on soil adsorptive capacity, organic content, strength, etc.)*

Figure – Plan view of geologic unit distribution *(if helpful)*
Figure - Cross section A-A' *(show borings, wells, screened intervals, water levels)*
Figure – Cross section B-B' *(if necessary)*

- **Surface Water** *(brief description of the surface water system)*

  - Property drainage
  - Area surface water/floodplain issues
  - Regulatory classifications, if any *(e.g. surface water classification)*

Figure – Surface water Conditions *(only if information not already in a prior figure)*

- **Ground Water** *(focus on interpretation, show on cross sections)*

  - Occurrence *(aquifers, water levels, confinement, geometry, continuity, physical properties)*
  - Movement *(directions, gradient if important, seasonal fluctuations, tidal influence)*
  - Discharge
  - Recharge *(if significant for site)*
  - Regulatory classifications, if any *(e.g. sole source aquifer)*

Figure – Cross section with ground water information *(if not already included above)*
Figure – Water table/potentiometric surface maps *(for various seasons or tidal conditions, show surface water)*

Appendix – Ground water elevation data *(a table)*

- **Natural Resources and Ecological Receptors** *(preparatory to a Terrestrial Ecological Evaluation)*

  - Greenbelts and other natural habitat
  - Wildlife
  - Other Information required to conduct evaluations under WAC 173-340 -7491, -7492, or if necessary -7493

Figure – showing natural areas, as appropriate

CONTAMINANT OCCURRENCE AND MOVEMENT *(Very little text, mostly figures and tables, main point is to provide easy-to-understand figures showing the depth and breadth of contamination.)*

- **Waste Material** *(sludges, fluids, stockpiles)*
- **Soil**
- **Surface Water**
- **Ground Water**
- **Sediment**
- **Air/Soil Vapor**

Figures – Cross sections showing soil contamination with depth
Figures – Plan views showing soil contamination across site *(relative to releases if known)*
Figures – Cross section showing ground water contamination with depth *(if appropriate)*
Figures – Plan views showing ground water contamination in each aquifer *(relative to soil contamination and P-head map)*
Figures – XY plots of specific contaminants with time *(as appropriate)*
Figures – Others as appropriate to show the distribution of surface water, ground water, or air data

Tables – All of the analytical data against final cleanup levels *(exceedances highlighted, no need to develop screening levels)*
Tables – Summary of exceedances *(if helpful)*

Appendix – QA report
Appendix – Analytical lab reports

CONCEPTUAL MODEL *(Putting the whole story together, graphic illustrations are best.)*

- **Contaminant release/fate and transport/potential or actual receptors**
- **Data gaps** *(is anything missing)*

CLEANUP STANDARDS *(Developing appropriate cleanup standards based on receptors and pathways.)*

- **Soil**
    - Reasonable maximum exposure
    - Cleanup levels protective of direct contact, ground water, inhalation, terrestrial species, surface water, sediment
    - Points of compliance
    - Regulatory classifications *(classification of soil as dangerous or solid waste)*

- **Ground Water**
    - Highest beneficial use/reasonable maximum exposure
    - Cleanup levels protective of potable use, inhalation, surface water, sediment
    - Points of compliance

- **Other Media as appropriate**
    - Cleanup levels protective of ….
    - Points of compliance

Table – Cleanup Levels *(all potentially applicable values with final selected cleanup level noted)*

AREAS REQUIRING CLEANUP *(The final story detailing where the contamination exceeds an applicable cleanup standard, brief text, mostly tables, figures.)*

- **Constitutuents of Concern** *(a brief summary of compounds that exceed cleanup levels or "indicator hazardous substances" under MTCA. For most service station sites, the COCs should be the same)*
- **Soil – vertical and lateral**
- **Ground water – vertical and lateral**
- **Sediment**
- **Surface Water**
- **Soil Vapor/air**

Figures – Plan view and vertical sections of areas requiring cleanup

REFERENCES

Revised 8/21/14