STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
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March 11, 2014

Mr. Kurt Fisher
Endolyne Gardens, LLC
2143 North Northlake Way, #C-1
Seattle, WA 98103

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

- **Name:** 45th Avenue SW Apartments
- **Address:** 9212 45th Avenue SW, Seattle, WA
- **Facility/Site No.:** 71883959
- **VCP No.:** NW2809
- **Cleanup Site ID No.:** 10264

Dear Mr. Fisher:

Thank you for submitting documents regarding your proposed remedial action for the **45th Avenue SW Apartments** 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 gasoline-range petroleum hydrocarbons (TPHg), total oil-range petroleum hydrocarbons (TPHo) and benzene, toluene, ethylbenzene, and xylenes (BTEX) in 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 actions:

1. GeoTech Consultants (GeoTech), *Removal of Underground Storage Tanks, 14-Unit Apartment Building, 9212 45th Avenue SW, Permit No. 645073, Seattle, WA,* September 5, 1989.

2. GeoTech, *Closure Report: Underground Storage Tanks, 14-Unit Apartment Building, 9212-45th Avenue Southwest, Seattle, WA,* December 5, 1989.

3. Terracon, *Phase I Environmental Site Assessment Report, Endolye Garden, 9212 and 9214 45th Avenue Southwest, King County Parcel No. 234670-0000, Seattle, King County, WA*, December 9, 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 sending an email to nwro_public_request@ecy.wa.gov.

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

- TPHg, TPHo and BTEX in Soil;

The 45th Avenue SW Apartments is on King County Tax Parcel 2346700000 which is comprised of 0.22 acres of land (Property). The 45th Avenue SW Apartments facility is located east of 24th Avenue SW and north of SW Wildwood Place in Seattle, WA. The Property is currently in use as 14 apartment units and a restaurant. The Property was historically used as a gas station and for automotive repair from prior to 1940 to approximately 1989. Six underground storage tanks (USTs) were removed from various portions of the Property in 1989. Two of the USTs were reportedly used to store oil, and four were used to store leaded gasoline. The dispensation of the rest of the former Property structures is unknown. BTEX and TPHo were detected in soil samples collected during the tank removal activities.

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 determined:**

- Complete Site characterization is a necessary prerequisite for determining an appropriate cleanup action and cleanup standard. Ecology requires current data in order to evaluate Site conditions and make a determination as to the adequacy of cleanup actions.

- The characterization of this Site is not complete. The vertical and lateral extent of contamination in soil identified in 1989 near the USTs has not been determined. Soil samples were not collected from the base and sidewalls from each UST excavation. For example, base of excavation samples were not collected below Tanks 3 and 4, and sidewall samples were not collected at Tanks 3 through 6.

  Soil samples collected at Tanks 3 through 6 were not analyzed for TPHg, and analysis was not conducted to determine if lead was released to soil at the Site related to the former storage of leaded gasoline. Soil samples collected at Tanks 1 and 2 were analyzed using an outdated analytical methodology, and were not analyzed for the parameters currently required to characterize waste oil releases as presented on Table 830-1 of the MTCA regulation. The location of Tank 2 is noted on a historic drawing dated October 23, 1951, presented in the Phase I ESA as a "w.o." tank, which typically denotes waste oil tanks. This figure also shows potential hydraulic lifts and sumps within the service garage. The former locations of dispenser islands and automotive service areas have not been sampled. A letter from the Seattle Department of Construction and Land Use dated June 21, 1989, indicates "The nearby ravine will also be cleared of waste and debris from former uses on the site." The potential for releases to the ravine also needs to be explored.

  Therefore, additional sampling and analysis needs to be conducted at the Site to determine compliance with MTCA soil cleanup levels. In addition, the historic documentation in the Phase I ESA should be reviewed and evaluated to determine if any other former structures at the Site may have caused releases.

- No current information regarding the depth of groundwater at and in the vicinity of the Site is provided. Additional information regarding the occurrence and depth of groundwater at the Site is needed to determine whether groundwater is a potentially impacted media at the Site. Any potential ground water contamination will need to be characterized.

- A Terrestrial Ecological Evaluation (TEE) is required per WAC 173-340-7490 to determine if cleanup levels that are protective of terrestrial species are applicable to the Site. A TEE form can be found at http://www.ecy.wa.gov/programs/tcp/vcp/vcp2008/vcpForms.html.

- Soil and ground water samples collected from the Site should be analyzed according to Table 830-1 of the MTCA regulation and following the requirements of Table 7.2, page

95, in the ***Guidance for the Remediation of Petroleum Contaminated Sites*** published by Ecology as Publication No. 10-09-057, September 2011. Where hydrocarbons are detected, the additional parameters listed on Table 830-1 of the MTCA regulation should then be analyzed in the samples with the greatest TPH concentrations.

- All potential contaminants of concern (COCs) need to be identified and discussed, and appropriate cleanup levels identified for comparison. Once the RI is complete and each potential COC is discussed, Ecology will comment on the final COCs for the Site.

- Under Washington State law, specifically Chapters 18.43 and 18.220 RCW, hydrogeologic and engineering work must be conducted by or under the supervision of a 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 seal of such an appropriately licensed professional. This work includes but is not limited to interpretations of geologic or ground water data, design calculations or as-built plans. The previously submitted reports lack evidence of this certification, mainly due to their age. Subsequent reports submitted for the cleanup of this Site need to meet this requirement.

- Before further work is completed at the Property, Ecology recommends the development of a work plan to facilitate collection of appropriate data. 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 RI.

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) 649-7257 or by email at masa461@ecy.wa.gov.

Sincerely,

Louise Bandy for Maureen Sanchez

Maureen Sanchez
Site Manager
Toxics Cleanup Program

Enclosure (1): Remedial Investigation Outline

cc: Sonia Fernandez, VCP Coordinator, Ecology

Enclosure A

Remedial Investigation Outline

Outline for Remedial Investigation Report
For Discussion Purposes

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 for this project 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 DESCRIPTION
(*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
- Physiographic setting/topography

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

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

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

NATURAL CONDITIONS

- Geology
  (*focus on interpretation*)

  - Regional Setting (*brief*)
  - Property Geologic Conditions (*synthesis, not regurgitation of boring logs*)
  - 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 TEE*)

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

7493

Figure – showing natural areas, as appropriate

CONTAMINANT OCCURRENCE AND MOVEMENT
(*brief 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 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*)

- Constituents 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 later
- Sediment –
- Surface Water
- Soil Vapor/air

Figures – Plan view and vertical sections of areas requiring cleanup

REFERENCES