



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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March 21, 2017

Mr. Ed Ralston
Phillips 66 Company
76 Broadway
Sacramento CA 95818

**Re: Opinion under WAC 173-340-515(5) on Ground Water Monitoring Reports
for the following Hazardous Waste Site:**

- **Site Name:** Burien 76
- **Site Address:** 12660 1st Avenue South, Seattle WA 98168
- **Facility/Site No.:** 35395376
- **Cleanup Site ID No.:** 8839
- **VCP Project No.:** NW2718

Dear Mr. Ralston:

Thank you for submitting documents regarding your proposed cleanup action for the **Burien 76** 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:

- TPH-G (gasoline-range petroleum hydrocarbons), and benzene into the Soil.
- TPH-G, Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX), and lead into the Ground Water.

Ecology is providing this advisory opinion under the specific authority of RCW 70.105D.030(1)(i) and WC 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



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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. SECOR International, Inc., *Step-Drawdown Aquifer Test, Constant-Rate Aquifer Test, and Percolation Test for Circle K Store #1476 (Burien 76 Property), 12660 1st Avenue South, Seattle, Washington*, dated October 31, 1995.
2. Cardno ATC, *Ground water Monitoring Report (Third Quarter 2012), Burien 76 Property, 12660 1st Avenue South, Seattle, Washington, VCP No. VW2718*, dated December 27, 2012.
3. Cardno ATC, *Post Conditions Assessment Report, Burien 76 Property, 12660 1st Avenue South, Seattle, Washington, VCP No. VW2718*, dated April 10, 2013.
4. ATC Group Services LLC, *Groundwater Monitoring Report (2015 Second Quarter Event), Phillips 66 Facility No. 2063 (Burien 76 Property), 12660 1st Avenue South, Seattle, Washington*, dated June 1, 2015.
5. ATC Group Services LLC, *Email from K. Sattler to G. Carrosino*, dated July 28, 2015.
6. ATC Group Services LLC, *Groundwater Monitoring Report (2015 Fourth Quarter Event), Phillips 66 Facility No. 2063 (Burien 76 Property), 12660 1st Avenue South, Seattle, Washington*, dated March 15, 2016.

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 via email at 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 defined by the extent of contamination associated with the following releases:

- TPH-G and benzene into the Soil.
- TPH-G, BTEX, and lead into the Ground Water.

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:

- It remains unclear whether all of the impacted areas comprising the Site, both on- and off-Property, have been adequately characterized. Only two quarterly ground water monitoring reports (Second Quarter 2015 and Fourth Quarter 2015) have been provided to Ecology since Ecology's most recent opinion letter dated July 29, 2013. Ecology understands (July 28, 2015 email from K. Sattler to G. Carrosino) that the results of the following planned tasks will be incorporated in the next comprehensive report:
 - Further characterization and evaluation of shallow ground water non-potability.
 - Additional Site maps, updated data, boring logs, cross-sections and figures
 - Characterization of the magnitude and extent of soil and ground water contamination, on-Site and off-Site.
 - Evaluation of all exposure pathways, and appropriate MTCA cleanup levels. A description of how Site cleanup standards will be achieved. Exposure parameters will be determined and presented, with the appropriate calculations.
- The current vapor intrusion pathway has not been fully evaluated and must be considered during the development of cleanup levels and cleanup actions for the Site. For the vapor intrusion pathway to be considered complete, there must be three components: a source of volatile compounds in the subsurface environment (soil and ground water), inhabited buildings close enough to subsurface contamination to be threatened by vapor intrusion, and a migration route present to connect them. Refer to Ecology's Draft ***Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action***, dated October 2009, and revised in 2016, for assessing and addressing soil vapor issues.

Please also note:

As of June 2016, Ecology has revised vapor intrusion screening levels to reflect updated toxicological information. In addition, the sub-slab attenuation factor was reduced from 0.1 to 0.03 which raises sub-slab screening levels by about a factor of 3.

An Excel spreadsheet with revised ground water, sub-slab soil gas and deep soil gas screening levels is now available at:

<http://www.ecy.wa.gov/programs/tcp/policies/VaporIntrusion/Vapor%20Intrusion%20Table%20update%20April%206%202015.xlsx>

These changes to the toxicity values and screening levels are summarized in the following Ecology website link:

<http://www.ecy.wa.gov/programs/tcp/policies/VaporIntrusion/2015-changes.html>

Table B-1 in the draft *Guidance for Evaluating Soil Vapor Intrusion in Washington State: Investigation and Remedial Action* (October 2009) is outdated and should not be used. The draft Guidance was revised February 2016 to reflect this change. Publication No. 09-09-047 can be found on Ecology's Publications page at:
<https://fortress.wa.gov/ecy/publications/SummaryPages/0909047.html>

On June 11, 2015, EPA released two guidance documents related to vapor intrusion:

- Technical Guide for Assessing and Mitigating the Vapor Intrusion Pathway from Subsurface Vapor Sources to Indoor Air and
- Technical Guide for Addressing Petroleum Vapor Intrusion at Leaking Underground Storage Tank Sites

Both of the above documents can be accessed on the following website:
<http://www.epa.gov/vaporintrusion>

- The standard point of compliance for air is in the ambient air throughout the Site.
- The Site is located in a mixed residential and commercial area. The Site does not meet the MTCA definition of an industrial property; therefore, soil cleanup levels suitable for unrestricted land use are appropriate. For unrestricted land use; through protection of direct contact, and protection of leaching to ground water, either Method A or Method B cleanup levels can be used.
- The cleanup action selected must meet the minimum requirements in WAC 173-340-360(2).
- Ecology recommends utilizing outlines of MTCA investigation and evaluation processes which are presented in the VCP Program section of Ecology's website under "**Checklists and RI Template**" <http://www.ecy.wa.gov/programs/tcp/policies/checklists.html>
 - **RI Checklist**
 - **Feasibility Checklist**
 - **Cleanup Action Plan Checklist**
 - **RI Template**

A Site Cleanup Action Report (CAR) should provide a demonstration of an understanding of Ecology's expectations for conducting and documenting the cleanup actions. The Cleanup

Action Report should be the final Site submittal to Ecology which summarizes all work conducted at the Site as well as results, interpretations and conclusions. The procedure is to submit the CAR with a request for a formal NFA determination for the Site.

- Note that MTCA Method A soil cleanup levels for unrestricted 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 (reference WAC 173-340-740(6)(d)).
- Note that MTCA Method A cleanup levels for ground water (Table 720-1) at the standard point of compliance, throughout the Site from the uppermost level of the saturated zone extending vertically to the lowest depth which could potentially be affected, are appropriate.
- Soil cleanup levels protective of terrestrial ecological receptors are not necessary because the Site meets the Terrestrial Ecological Evaluation exclusion criteria {WAC 173-340-7491(1){(a), (b) and (c)}. There are less than 1.5 acres of contiguous undeveloped land on or within 500 feet of any area of the Site. Therefore, land use at the Property and surrounding area makes substantial wildlife exposure unlikely.
- Under Washington State Law (reference Chapters 18.43 and 18.220 RCW), hydro geologic and engineering work must be conducted by or under the supervision of a licensed geologist, hydrogeologist or professional engineer (PE) qualified to conduct the work. Any document containing geologic or engineering work must be submitted under the seal of such an appropriately licensed professional. Thank you for providing the seal of your licensed hydrogeologist as evidence of this certification in the project reports submitted to Ecology for this Site.
- 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. Note that all data must be uploaded into the Ecology EIM system upon submission of each report to Ecology. This allows the Ecology Site Manager to access data to check results or perform additional analyses with those data. Erika Fot (email efot461@ecy.wa.gov, or via telephone at 360-407-6692) 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.**

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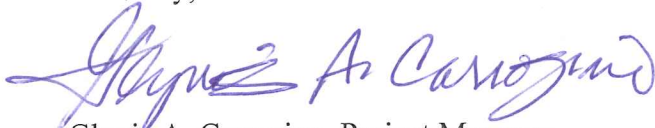
Please also note that this opinion is based solely on the information contained in the documents listed above. Therefore, if any of the information contained in those documents is materially false or misleading, then this opinion will automatically be rendered null and void.

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 e-mail me at glynis.carrosino@ecy.wa.gov.

Sincerely,



Glynis A. Carrosino, Project Manager
NWRO Toxics Cleanup Program

cc: Kyle Sattler, ATC
Sonia Fernandez, VCP Coordinator, Ecology