

July 19, 2016

Mr. Bryan Taylor
Antea Group
4006 148th Ave NE
Redmond, WA 98052

Re: No Further Action at the following Site:

- **Name:** Olympic Pipe Line Co. Kent
- **Address:** 74th Avenue South and South 259th Street, Kent
- **Facility/Site No.:** 2401
- **VCP No.:** NW2705
- **Cleanup Site No.:** 3070

Dear Mr. Taylor:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Olympic Pipe Line Co. Kent facility (Site). This letter provides our opinion. We are providing this opinion under the authority of the Model Toxics Control Act (MTCA), Chapter 70.105D RCW.

Issue Presented and Opinion

Is further remedial action necessary to clean up contamination at the Site?

NO. Ecology has determined that no further remedial action is necessary to clean up contamination at the Site.

This opinion is based on an analysis of whether the remedial action meets the substantive requirements of MTCA, Chapter 70.105D RCW, and its implementing regulations, Chapter 173-340 WAC (collectively “substantive requirements of MTCA”). The analysis is provided below.

Description of the Site

This opinion applies only to the Site described below. The Site is defined by the nature and extent of contamination associated with the following release:

- Total petroleum hydrocarbons (TPH), benzene, ethylbenzene, toluene and xylenes

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(BTEX) into soil and ground water

Enclosure A includes a detailed description and diagram of the Site, as currently known to Ecology.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the parcels associated with this Site are affected by other sites.

Basis for the Opinion

This opinion is based on the information contained in the following documents:

1. Work Plan for Confirmatory Soil Sampling, dated August 25, 2014, prepared by Antea Group.
2. Semi-Annual Status Report – First Half 2014, dated August 13, 2014, prepared by Antea Group.
3. Subsurface Investigation Report, dated November 18, 2015, prepared by Antea Group.

Those 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.

Analysis of the Cleanup

Ecology has concluded that **no further remedial action** is necessary to clean up contamination at the Site. That conclusion is based on the following analysis:

1. Characterization of the Site.

Ecology has determined your characterization of the Site is sufficient to establish cleanup standards and select a cleanup action. The Site is described above and in **Enclosure A**.

Following the discovery of a release of gasoline and diesel associated with the Olympic Pipe Line Company (OPLC) Kent Block Valve (block valve) in August 1989, a Site investigation was performed to determine the extent of petroleum impacts at the Site.

Characterization of the Site showed an area of soil and ground water contaminated with TPH extending approximately 60 feet to the southeast, 100 feet to the east, and 530 feet to the southwest of the block valve.

The ground water contaminant plume originally extended from the block valve in a southwesterly direction beneath the 25618 74th Avenue South property towards the Green River which is located approximately 570 feet south of the Property.

2. Establishment of cleanup standards.

Ecology has determined the cleanup levels and points of compliance you established for the Site meet the substantive requirements of MTCA.

- The established cleanup standards for ground water are MTCA Method A for unrestricted land use.
- The established cleanup standard for soil once ground water has been remediated is MTCA Method B for direct contact. The two samples with the highest total petroleum hydrocarbon (TPH) concentrations (CB-5-10 at 1,300 mg/kg and CB-6-20 at 350 mg/kg) provided the most reliable results for making this calculation. Utilizing the MTCATPH 11.1 Method B Worksheet, the averaged cleanup level for TPH is established at 2,279 milligrams per kilogram (mg/kg).
- For soil, the point of compliance is defined as throughout the Site from the ground surface to fifteen feet below the ground surface.
- The point of compliance for ground water is throughout the Site.

3. Selection of cleanup action.

Ecology has determined the cleanup action you selected for the Site meets the substantive requirements of MTCA.

The selected cleanup actions for the Site included:

- Excavation of all accessible contaminated soil in the source area
- Air sparging
- Enhanced liquid recovery (ELR)
- Use of oxygen-releasing compound (ORC) socks
- Natural attenuation

4. Cleanup.

Ecology has determined the cleanup you performed meets the cleanup standards established for the Site.

In August 1989, OPLC discovered a release of gasoline and diesel fuel to soil and ground water due to the failure of the block valve. Following repairs to the block valve in 1989, OPLC excavated approximately 30 cubic yards of hydrocarbon-impacted soil from the area immediately surrounding the block valve.

Two additional soil excavations were performed on the east and west sides of the pipeline and block valve between August 31 and September 27, 1989. Excavation of impacted soil extended to approximately six feet below ground surface (bgs) on the east side of the pipeline and extended to depths between 16 feet and 24 feet bgs on the west side of the pipeline. Excavation was discontinued in the vicinity of the pipeline due to the risk of compromising the structural integrity of the pipeline. Approximately 1,950 tons of contaminated soil were removed during the remedial excavations.

In 2003, four air sparge wells were installed to a depth of 40 feet bgs. Monthly air sparging events on BS-1 through BS-4 were initiated on January 21, 2004, with the purpose of increasing dissolved oxygen concentrations in the ground water and to enhance volatilization of benzene, toluene, ethylbenzene, and total xylenes (BTEX) constituents in the ground water. Air sparging activities continued monthly through August 2004. On September 2 and 17, 2004, enhanced liquid recovery (ELR) events were performed. During these events, a total of approximately 168 gallons of contaminated ground water and product was extracted. Following the ELR events, oxygen-releasing compound (ORC) socks were placed in wells MW-15 and MW-16. The purpose of the ORC socks was to increase the amount of oxygen available for microbial respiration, thus facilitating the process of natural attenuation via aerobic degradation. However, an evaluation of the October 2004 ground water analytical data showed that concentrations of petroleum hydrocarbons were not decreasing significantly. Therefore, air sparging and ORC applications were subsequently discontinued.

Quarterly ground water monitoring and sampling was conducted at the Site from 2003 through the first quarter of 2014. Four consecutive quarters of ground water concentrations below Ecology MTCA Method A cleanup levels were obtained on June 5, 2013, in all groundwater monitoring wells at the Site with the exception of MW-15. MW-15 was found damaged in September 2012, and no samples were collected in the third and fourth quarters of 2012. Repairs to MW-15 were made during the first quarter of 2013, and quarterly ground water sampling in MW-15 resumed in March 2013. Three consecutive quarters of ground water concentrations below MTCA Method A cleanup levels had been obtained in the third quarter of 2013; however, construction materials

were located on top of MW-15 in the fourth quarter of 2013 and it was again unable to be sampled. In March, the first quarter of 2014, four quarters of ground water concentrations below MTCA Method A cleanup levels were obtained in MW-15. No additional ground water monitoring was conducted at the Site after March 2014.

In August 2014, after receiving Ecology's opinion letter requesting that confirmation soil sampling be performed in the adjacent property area of the Site, a work plan for was submitted to Ecology for review. Ecology concurred with the work plan, and subsequently 14 soil borings were advanced to depths of approximately 20 feet bgs. All soil boring locations were based on historical impacts identified during the 1989 remedial excavation and ground water monitoring events. A total of 25 soil samples were submitted for analysis.

The soil samples were analyzed using the following methods:

- BTEX by Environmental Protection Agency (EPA) Method 8260;
- TPH-G by Northwest Method NWTPH-Gx;
- TPH-D and TPH-O ranges using Northwest Method NWTPH-Dx with silica gel cleanup; and
- Total lead by EPA Method 6020.

Selected soil samples were also analyzed for:

- Extractable petroleum hydrocarbons (EPH) by Northwest Method NWEPH; and
- Volatile petroleum hydrocarbons (VPH) by Northwest Method NWVPH.

TPH-G concentrations in excess of MTCA Method A cleanup levels ranged from 35 to 1,300 mg/kg. Benzene concentrations in excess of MTCA Method A cleanup levels were detected in soil samples CB-4-6, CB-4-20, CB-5-5, CB-5-10, CB-5-15, CB-6-15, and CB-6-18. Benzene concentrations ranged from 0.034 mg/kg to 0.39 mg/kg which is above the Method A cleanup level of 0.05 mg/kg.

Concentrations of toluene, ethylbenzene, xylenes, TPH-D, TPH-O, and total lead were not detected in excess of MTCA Method A cleanup levels.

Confirmatory soil samples CB-4-6, CB-5-10, CB-6-18 and CB-6-20 were analyzed for EPH/VPH. The results of the EPH/VPH values were used in calculating a Site-specific Method B cleanup level for TPH which is described below.

The median Method B cleanup level for the four samples is 2,797 mg/kg. The calculated Method B cleanup level for TPH in soil at the Site is therefore 2,797 mg/kg. According to Ecology's Cleanup Level and Risk Calculation (CLARC) Data Tables, the Method B

cleanup levels for BTEX in soil are 18.2 mg/kg, 6,400 mg/kg, 8,000 mg/kg, and 16,000 mg/kg, respectively. All soil samples analyzed were below the Method B cleanup levels for BTEX. All soil samples collected at the Site between August 12 and 13, 2015 did not contain concentrations of TPH or BTEX in excess of the MTCA Method B cleanup levels for direct human contact calculated for the Site.

Ecology chose to be more conservative and averaged the CULs for the two samples with the highest concentration resulting in a lower Method B cleanup level of 2,279 mg/kg. The maximum concentration of 1,300 mg/kg detected on the Site (in CB-5-10) is below this cleanup level, therefore it is Ecology's opinion that remedial activities performed at the Site have met the substantive requirements of MTCA and the Site qualifies for a No Further Action determination.

Listing of the Site

Based on this opinion, Ecology will initiate the process of removing the Site from our lists of hazardous waste sites, including:

- Hazardous Sites List.
- Confirmed and Suspected Contaminated Sites List.

Limitations of the Opinion

1. Opinion does not settle liability with the state.

Liable persons are strictly liable, jointly and severally, for all remedial action costs and for all natural resource damages resulting from the release or releases of hazardous substances at the Site. This opinion **does not**:

- Resolve or alter a person's liability to the state.
- Protect liable persons from contribution claims by third parties.

To settle liability with the state and obtain protection from contribution claims, a person must enter into a consent decree with Ecology under RCW 70.105D.040(4).

2. Opinion does not constitute a determination of substantial equivalence.

To recover remedial action costs from other liable persons under MTCA, one must demonstrate that the action is the substantial equivalent of an Ecology-conducted or Ecology-supervised action. This opinion does not determine whether the action you

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performed is substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. State is immune from liability.

The state, Ecology, and its officers and employees are immune from all liability, and no cause of action of any nature may arise from any act or omission in providing this opinion. *See* RCW 70.105D.030(1)(i).

Termination of Agreement

Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (# NW2705).

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 or the termination of the Agreement, please contact me by phone at 425.649.4446 or e-mail at damy461@ecy.wa.gov.

Sincerely,

Dale R. Myers
Site Manager
NWRO Toxics Cleanup Program

dm: [SECRETARY INITIALS]

Enclosures (1): A – Description and Diagrams of the Site

cc: [Sonia Fernandez, VCP Coordinator](#)
[Matthew Alexander, VCP Financial Manager](#)

Enclosure A

Description and Diagrams of the Site

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Site Description

This section provides Ecology's understanding and interpretation of Site conditions, and is the basis for the opinions expressed in the body of the letter.

Site: The Site is defined by the release of petroleum hydrocarbons to soil and ground water as described below.

A release of gasoline and diesel associated with the Olympic Pipe Line Company (OPLC) Kent Block Valve (block valve) was discovered in August 1989. The resulting ground water contaminant plume extended from the block valve in a southwesterly direction beneath the 25618 74th Avenue South property towards the Green River which is located approximately 570 feet south of the Property.

The Site spans three King County Tax Parcels which comprise the Property:

- Parcel 261100-0020, an active warehouse, located at 25618 74th Avenue South in Kent
- Parcel 000660-0028, the right of way (ROW) owned by Puget Sound Energy (PSE) and is the corridor for PSE's transmission lines as well as the Interurban Trail.
- Parcel 261100-0200, occupied by Foster Industrial Park owned by the City of Kent and is currently a stormwater retention area and active industrial site.

The parcel in which the release occurred is a narrow ROW located approximately 500 feet east-northeast of the intersection of 74th Avenue South and South 259th Street (the Property). The ROW, which is also where the block valve is located, is owned by PSE and leased by OPLC. The block valve is part of an underground pipeline that supplies refined petroleum products from refineries in north Washington to bulk fuel terminals and other facilities for distribution. Characterization of the release shows that the Site includes an area extending approximately 60 feet to the southeast, 100 feet to the east, and 530 feet to the southwest of the ROW/block valve parcel.

A Site Hazardous Assessment was performed in January 2000. The Site was ranked as a '2' using the Washington Ranking Method and listed on the Hazardous Sites List in February 2000.

Property History and Current Use:

- **Current Property Use and Facilities**
Currently the OPLC Kent block valve is part of an underground pipeline that supplies refined petroleum products from refineries in north Washington State to bulk fuel terminals and other facilities for distribution.
- **Proposed or Potential Future Property Uses**
The planned future use for the Property is continued operation as a block valve location for OPLC.

Contaminant Source and Cleanup History: Prior to a real estate transaction, a site assessment was conducted in August 1989 on the adjacent property, 25618 74th Avenue South, which is

located west of the Site. Site assessment activities included the installation of three ground water monitoring wells (MW-1 through MW-3) on the adjacent property. Ground water laboratory analyses showed elevated concentrations of benzene (2,400 parts per billion (ppb)) in MW-1. OPLC was subsequently informed of the results. OPLC inspected the pipeline and block valve, at which time a pinhole-sized leak was observed in the threading of a bolt located on the west side of the block valve. Following repairs, OPLC excavated approximately 30 cubic yards of hydrocarbon impacted soil from the area immediately surrounding the block valve.

Two additional soil excavations were performed on the east and west sides of the pipeline and block valve between August 31 and September 27, 1989. Excavation of impacted soil extended to approximately six feet bgs on the east side of the pipeline and extended to depths between 16 feet and 24 feet bgs on the west side of the pipeline. Excavation was discontinued in the vicinity of the pipeline due to the risk of compromising the structural integrity of the pipeline. Additional excavation to remove the deeper layers of impacted soil to the west of the pipeline and block valve was discontinued due to the logistics associated with the removal of large thicknesses of overlying uncontaminated soil (up to 20 feet) in order to access the thin zone of impacted soil. Approximately 1,950 tons of soil were removed during the remedial excavations.

The ground water contaminant plume extended from the block valve in a southwesterly direction beneath the 25618 74th Avenue South property towards the Green River which is located approximately 570 feet south of the Property.

Utilizing a network of 21 monitoring wells, ground water sampling was performed at the Site from 1989 until 2003. From 2003 until 2004 monthly air-sparging was performed using two air sparge wells. In 2004, enhanced liquid recovery (ELR) was performed and oxygen-releasing compound (ORC) socks were installed. After an evaluation of the October 2004 ground water analytical data showing that concentrations of petroleum hydrocarbons were not decreasing significantly, air sparging and ORC applications were discontinued.

Quarterly ground water monitoring and sampling has been conducted at the Site from 2004 through the first quarter of 2014. Four consecutive quarters of ground water concentrations below Ecology MTCA Method A cleanup levels were obtained in June 2013, in all ground water monitoring wells at the Site except MW-15. Using Site-Specific Method B calculations, MW-15 is in compliance.

Physiographic Setting: The Site is located approximately 35 feet above mean sea level within the Green River basin of the Puget Lowlands. The Green River is the nearest surface water body and is located approximately 570 feet south of the Property. The Green River flows in a general northerly direction to Puget Sound approximately 15 miles north of the Site. The lower 12 miles of the Green River is referred to as the Duwamish River. With the exception of the parking lot

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for the warehouse facility located to the west of the Property, the remainder of the Site is mostly unpaved.

Surface/Storm Water System: Surface water (storm water) runoff from the Property infiltrates into grass and or flows towards the Green River.

Ecological Setting: Land use in the vicinity of the Property is primarily commercial and industrial. The block valve is located approximately 570 feet north of the Green River. Between the Green River and the block valve is Foster Park, which is owned by the City of Kent. Adjacent to the Property to the west is Foster Industrial Park, a commercial warehousing facility. The ROW owned by PSE contains a former railroad route that has been converted to the Interurban Trail Right of Way, a public park trail. An existing railroad track parallels the trail to the east. All parcels that comprise the Property are zoned as light industrial (M2).

Geology: The Site is underlain by Quaternary alluvium, which is classified as unconsolidated sand and silt, with varying amounts of gravel and cobbles. Soils observed at the Site during drilling and well installation activities generally consisted of sand and/or silty-sand underlain by sandy-silt and silt.

Ground Water: Ground water has been observed seasonally between 16 to 24 feet below ground surface in monitoring wells advanced at the Site. Ground water on the Site flows to the southwest towards the Green River.

Water Supply: Water and sanitary sewer services are not utilized at the Property.

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Site Diagrams

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