



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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June 11, 2014

Ms. Elise Gronewald
Port of Everett
PO Box 538
Everett, WA 98206

Re: Opinion on Proposed Cleanup of a Property associated with a Site:

- Property Address: 1332 West Marine View Drive, Everett, WA 98201
- Facility/Site No.: 9286485
- VCP Project No.: NW2842

Dear Ms. Gronewald:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your proposed independent cleanup of a Property associated with the North Marina Bayside ABW 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.

Issues Presented and Opinion

1. Upon completion of the proposed cleanup, will further remedial action likely be necessary at the Property to clean up contamination associated with the Site?

NO. Ecology has determined that no further remedial action will likely be necessary at the Property to clean up contamination associated with 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 Property and the Site

This opinion applies only to the Property and the Site described below. This opinion does not apply to any other sites that may affect the Property. Any such sites, if known, are identified separately below.



1. Description of the Property.

The Property includes the following tax parcel in Snohomish County, which is affected by the Site and will be addressed by your cleanup:

- 29051800401100

Enclosure A includes a legal description of the Property. **Enclosure A** includes a diagram of the Site which illustrates the location of the Property within the Site.

2. Description of the Site.

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

- Arsenic, lead, copper, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), and gasoline-, diesel-, and oil-range total petroleum hydrocarbons (TPHg, TPHd, TPHo) into the Soil.
- Arsenic, zinc, and TPHo into the Ground Water.

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

3. Identification of Other Sites that may Affect the Property.

Please note a parcel of real property can be affected by multiple sites. At this time, we have no information that the Property is affected by other sites.

Basis for the Opinion

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

1. Landau Associates, Inc, *Ecology Review Draft Report, Environmental Investigation and Cleanup Activities, American Boiler Works-Bayside Marine Site, Everett, Washington, April 25, 2014.*
2. Pinnacle GeoSciences, *Remedial Excavation, Former ABW Technologies Facility, 1332 West Marine View Drive, Everett, Washington, March 27, 2006.*
3. Pinnacle GeoSciences, *Limited Soil Investigation, Former ABW Technologies Facility, 1332 West Marine View Drive, Everett, Washington, February 2, 2006.*

4. A-1 Pump Service, Letter to Port of Everett, Everett, Washington re: *Site Assessment, Port of Everett, 1001 14th Street, Boat House / Yacht Sales, Everett, WA. 98021* from Bud Ebeling, A-1 Pump Service, August 23, 1991.
5. Kaldveer Associates Geoscience Consultants, Letter to Bud Ebeling, re: *Tank Removal and Soil Sampling, 1001 14th Street, Everett Boat House, Port of Everett, Everett, WA. 98021* from Kaldveer Associates Geoscience Consultants, March 19, 1991.

Those documents are kept in the Central Files of the Headquarters Office of Ecology (HQ) for review by appointment only. You can make an appointment by calling the HQ resource contact at (360) 407-6000.

This opinion is void if any of the information contained in those documents is materially false or misleading.

Analysis of the Cleanup

1. Cleanup of the Property located within the Site.

Ecology has concluded that, upon completion of your proposed cleanup, **no further remedial action** will likely be necessary at the Property to clean up contamination associated with the Site. That conclusion is based on the following analysis:

a. Characterization of the Site.

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

Soil

Subsurface soil investigation and compliance sampling have determined the lateral and vertical extent of releases in Cleanup Action Areas B-1a, L-3, and ABW-P1.

Subsurface soil investigation in the boat wash area (B-FA-20) and compliance sampling at the south sidewalls in Cleanup Action Area B-1 (B1-S6) and (B1-S7) have impacts remaining.

Based on results presented on Figure 9, the extent of arsenic contamination may not have been fully defined to the southwest of Cleanup Action Area L-1 and to the south of Cleanup Action Area L-2.

Ecology agrees with the cleanup action to excavate and remove contaminated soil in the proposed Cleanup Action Area B-1b which includes the contaminated soil remaining from Cleanup Action Area B-1 (B1-S6) and (B1-S7).

Additional characterization is warranted underneath the concrete slab of the former American Boiler Works building to determine the lateral extent of contamination and quality of fill material placed beneath the building footprint. Proposed soil boring locations are proposed on **Enclosure A**.

Groundwater

Groundwater at the Site has been impacted based on the results from three grab groundwater samples (L-FA1, L-FA-2, and B-4). A total of two groundwater monitoring wells (P-26 and P-27) were installed in the vicinity of the grab groundwater exceedences and sampled once. No analytes were detected at concentrations greater than the cleanup level during the initial sampling events. A minimum of one additional round of groundwater sampling and analysis is required to confirm concentrations of groundwater are less than the cleanup levels. Since both monitoring wells were sampled during March, a corresponding sample should be collected during September to account for seasonal variability. Additional groundwater monitoring may be required based on analytical results from the next round of sampling.

Monitoring wells should be installed and groundwater samples collected from the proposed borings to be advanced beneath the former American Boiler Works building. A minimum of two rounds of groundwater sampling is required to confirm concentrations of groundwater are less than the cleanup levels. If analytes are detected above the cleanup levels, then additional sampling will be required.

All environmental sampling data must be submitted in both printed form and entered into Ecology's data management system (Electronic Information Management system or EIM system), consistent with procedures specified by Ecology and as required by WAC 173-340-840(5).

b. Establishment of cleanup standards for the Site.

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

Soil Cleanup Levels

A terrestrial ecological evaluation (TEE) has been completed and is excluded because all contaminated soil, is or will be covered by physical barriers (such as

buildings or paved roads) that prevent exposure to plants and wildlife. Therefore, soil cleanup levels protective of terrestrial species are not required.

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, direct contact, MTCA Method B cleanup levels were developed in accordance with WAC 173-340-740(3).

Groundwater Cleanup Levels

Since groundwater is not potable per WAC 173-340-720(2), groundwater cleanup levels for protection of drinking water are not applicable. As a result, groundwater water cleanup levels protective of marine surface water were developed in accordance with WAC 173-340-730(3).

c. Selection of cleanup for the Property.

Ecology has determined the cleanup you proposed for the Property meets the substantive requirements of MTCA. Your proposed cleanup meets minimum cleanup requirements and will not exacerbate conditions or preclude reasonable cleanup alternatives elsewhere at the Site.

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**:

- Change the boundaries of the Site.
- 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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proposed will be substantially equivalent. Courts make that determination. *See* RCW 70.105D.080 and WAC 173-340-545.

3. Opinion is limited to proposed cleanup.

This letter does not provide an opinion on whether further remedial action will actually be necessary at the Property upon completion of your proposed cleanup. To obtain such an opinion, you must submit a report to Ecology upon completion of your cleanup and request an opinion under the VCP.

4. 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).

Contact Information

Thank you for choosing to clean up your Property under the Voluntary Cleanup Program (VCP). As you conduct your cleanup, please do not hesitate to request additional services. We look forward to working with you.

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 by phone at (360)407-6913 or by e-mail at nack461461@ecy.wa.gov.

Sincerely,



Nicholas M. Acklam
HQ Toxics Cleanup Program

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

cc: Kathryn Hartley, Landau Associates, Inc.
Dolores Mitchell, Ecology - VCP Financial Manager (without enclosures)
Andy Kallus, Ecology – Port Gardner Baywide Coordinator (electronic)

Enclosure A

Description and Diagrams of the Site (including the Property)

Introduction

Site Definition

The Site is located at 1332 West Marine View Drive, Everett, WA 98201. Contamination at the Site consists of gasoline-, diesel-, and oil range total petroleum hydrocarbons (TPHg, TPHd, TPHo), carcinogenic polycyclic aromatic hydrocarbons (cPAHs), arsenic, and zinc to soil and/or groundwater. The impacts are currently located primarily within Cleanup Action Area B-1 and B-1b.

Area Description

The property consists of an open lot and is currently leased by the Port of Everett (Port) to various tenants for boat storage. The eastern two-thirds of the property [former American Boiler Works (ABW) leasehold] are mostly paved with some areas of gravel. The western one-third of the property (eastern portion of former Bayside Marine leasehold) is covered with gravel and is also used for boat and mast storage. A boat wash is located to the south of the boat and mast storage area.

Property History

There have been a variety of leaseholds by the Port to various tenants around the North Marina Area. The tenants utilized the leaseholds for a variety of business ventures, primarily related to marine repair and other marine support services. Former leaseholds within the Site include ABW and Bayside Marine.

The ABW Plant I leasehold was located at the southwest corner of the intersection of West Marine View Drive and 13th Street. Based on review of aerial photographs, the eastern portion of the manufacturing building was constructed between 1965 and 1969. The western portion of the manufacturing building was constructed between 1974 and 1976. The facility was historically used for metal manufacturing and machining operations. Milling machines that used cutting oil were commonly used within the building. A smaller office building was located near the southeast corner of the leasehold and appears to have been present since approximately 1953. No known underground storage tanks (USTs) were documented in association with the ABW facility. The manufacturing building was vacated and demolished in 2005, leaving the footings and original concrete pad in place and the office building was demolished in 2009.

The Bayside Marine former leasehold was located west of the ABW Plant I leasehold. Bayside Marine leased the property from 1992 to 2007. The leasehold was previously leased by others for marine-related business ventures similar to Bayside Marine. The leasehold included a gravel boatyard, a dry stack building that was used for covered storage of boats, and a combination maintenance shop and office building. The dry stack building was constructed between 1961 and 1965 and the office/shop building was built between 1970 and 1971; both were demolished in early 2008. The buildings were located on the western portion of the leasehold, which was included in the Phase I VCP Site and is not part of the ABW/Bayside Marine Site. Two former gasoline USTs (one 500-gallon and one 2,000-gallon) were located immediately south of the dry stack building on the Bayside Marine boatyard property and removed in 1991. Following the UST removal, eight soil samples were collected and analyzed for TPH and BTEX. TPH and xylenes were detected above the cleanup levels from one sample (T-4) and free product was observed on groundwater within the excavation. The area was over-excavated and groundwater

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pumped out of the excavation. Confirmation soil and groundwater analysis came back below cleanup levels. The amount of soil removed was not discussed. All removed soil was placed in a berm yard and aerated over 30 days, and then placed in the north section of the Port property.

Contaminate Sources and History of Release

A specific release or releases have not been identified or reported at the Site. It is inferred based on the contaminate concentrations, distribution, and visual observations, the source may have been the result of overfills, spills, and leaks from the former ABW cutting activities and boat maintenance activities.

Physiographic Setting

The ground surface of the entire North Marina area is generally flat ranging from about 13 ft to 18 ft above mean lower low water (MLLW). Site geologic conditions encountered within the depth range of environmental explorations consisted primarily of a pavement section or a granular fill trafficking layer overlying hydraulic fill. Hydraulic fill is typically a loose to medium dense, poorly graded fine to medium sand with silt, or silty fine to medium sand. Native marine sediment consisting of soft, loose silt to silty sand directly underlies the hydraulic fill. Across the North Marina Site, the hydraulic fill thickens from east to west, and is about 15 ft thick near West Marine View Drive and about 70 ft thick at the west of the North Marina Site adjacent to the Snohomish River. Glacial soil, consisting of dense soil of variable composition, underlies the marine sediment and slopes steeply downward from east to west, resulting in a thickening layer of marine sediment to the west.

Surface/Storm Water System: The majority of the property is covered by gravel and concrete pads. Two storm water catch basins drain a majority of the storm water from the former ABW leasehold area. Where the storm water does not drain to the catch basins, it is infiltrated into the Site through permeable surfaces.

Ecological Setting

The area surrounding the property is primarily commercial development. Port Gardner Bay is located approximately 100 feet southwest.

Geology

The uppermost hydrostratigraphic unit at the North Marina Site consists of the fill unit that overlies the finer-grained marine sediment unit. The local Site geology is defined by the soil borings that have been advanced at the Site. The ground surface is generally overlain by gravel or concrete. Fill material immediately underlying the asphalt is typically comprised of fine to fine medium sand with silt to trace silt, and silty fine sand to fine sandy silt with areas of wood, concrete, and metal debris to approximately 15 feet below ground surface (bgs). Marine sediment deposits underlying the fill consist of fine sand with silt to silty fine sand, and fine sandy silt to clayey silt. This layer grades downward into a fine to medium sand with silt to trace silt and clayey silt. The sand/silt layer corresponds with glacial drift deposits that are prevalent throughout the region.

Groundwater

The marine sediment unit forms the uppermost aquitard throughout the Site. In the North Marina Area, the depth to groundwater ranges from about 3.0 to 7.5 ft bgs, depending on the season and

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proximity to the shoreline. The depth to water is generally deep toward the center of the North Marina Area and shallower in the vicinity of the shoreline, which is consistent with groundwater flow toward marine surface water. Depth to water was measured in two monitoring wells at the ABW/Bayside Marine Site and ranged from about 4.0 to 5.5 ft bgs.

Surface Water

Port Gardner Bay is the most proximal surface water feature to the Site, located immediately to the southwest of the Site.

Water Use

The City of Everett requires that all residences and businesses within the city limits connect to city water, which comes from Spada Lake Reservoir, located about 30 miles east of Everett at the headwaters of the Sultan River.

Release and Extent of Contamination – Soil

Soil contamination includes TPHg, TPHd, TPHo, arsenic, lead, copper, and cPAHs.

Release and Extent of Contamination – Groundwater

Groundwater contamination includes TPHo, arsenic, and zinc.

Interim Actions

During 2006 and 2007, a total of 2,597 tons of contaminated soil was excavated and disposed of from Cleanup Action Area B-1. Cleanup Action Area B-1 consisted of cPAHs and arsenic contaminated soil. Sidewall samples, B1-S6 and B1-S7, located on the south side of Area B-1 exceeded the cleanup level for arsenic (34 mg/kg and 28 mg/kg, respectively). No additional excavation occurred here because the boat wash facility was obstructing further excavation. Arsenic-impacted soil will be excavated and removed as part of Action Area B-1b after the boat wash is decommissioned.

During 2007, a total of 449 tons of contaminated soil were excavated and disposed of from Cleanup Action Area B-1a. Cleanup Action Area B-1a consisted of a localized area of petroleum hydrocarbon-impacted soil in the southwestern portion of Cleanup Action Area B-1.

During 2006, a total of 455 tons of contaminated soil were excavated and disposed of from Cleanup Action Area L-1. Area L-1 consisted of shallow arsenic soil contamination encountered during soil characterization. The approximate upper 1.5 ft of soil was excavated across the affected area. Sidewall samples, L1-S1 and L1-S4, and base sample L1-B4 exceeded the cleanup level for arsenic (23 mg/kg, 24 mg/kg, and 30 mg/kg, respectively).

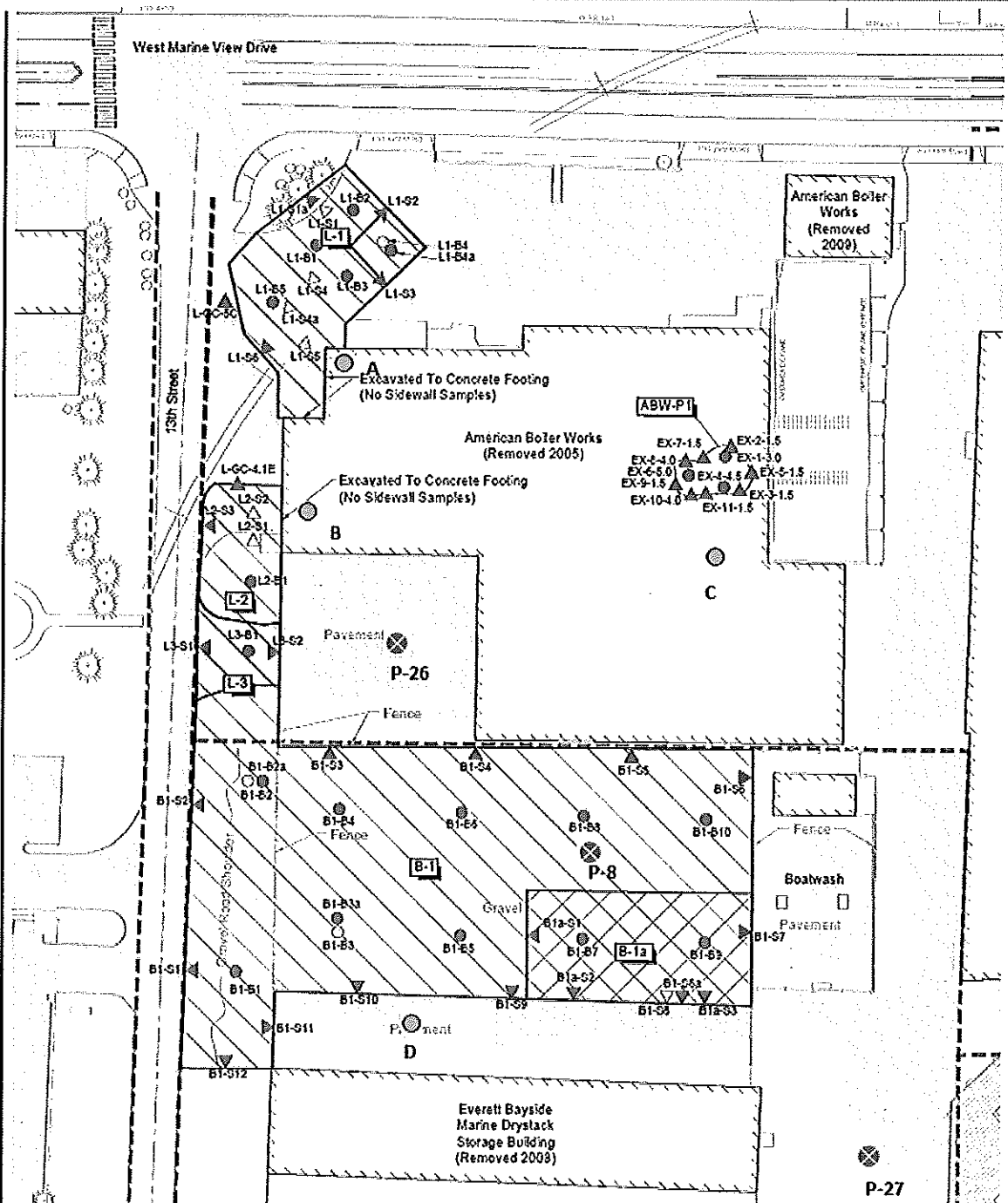
The area around bottom sample L1-B4 and sidewall sample L1-S1 were over-excavated, and confirmation samples L1-B4a and L1-S1a were collected and did not exceed the soil cleanup level. The area around sidewall sample L1-S4 was over-excavated, and confirmation samples L1-S4a and L1-S5 were collected. Confirmation samples L1-S4a and L1-S5 exceed the soil cleanup level. The excavation was expanded to the northwest of compliance sample L1-S6 and west to the concrete footing of the former ABW building. Detected concentrations of arsenic in compliance sample L1-S6 and bottom sample L1-B5 did not exceed the soil cleanup level.

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During 2006, a total of 30 tons of contaminated soil were excavated and disposed of from Cleanup Action Area L-2. Area L-2 consisted of shallow arsenic soil contamination encountered during soil characterization. The approximate upper 1 ft of soil was excavated across the affected area. Sidewall sample L2-S1 exceeded the soil cleanup level for arsenic. The excavation was expanded to the east of Area L-2 and sidewall sample L2-S2 was collected. This sample also exceeded the soil cleanup level for arsenic. The excavation was expanded east to the location of characterization sample L-GC-4.1E. Compliance monitoring samples were not collected from the south sidewall of the L-2 excavation because soil was excavated to the concrete footing of the former ABW building. Compliance monitoring samples were also not collected from the west sidewall of the L-2 excavation because it was continuous with the L-3 excavation.

During 2006, a total of 60 tons of contaminated soil were excavated and disposed of from Cleanup Action Area L-3. Area L-3 consisted of shallow arsenic soil contamination encountered during soil characterization. The approximate upper 2.5 ft of soil was excavated across the affected area.

During 2006, a total of 234 tons of contaminated soil were excavated and disposed of from Cleanup Action ABW-P1. Area ABW-P1 consisted of TPH-impacted soil identified following demolition of the ABW building. The depth of the excavation ranged from 3 to 5 ft.



Legend

- Vegetation
- Environmental Site Assessment Investigation Area Limits
- Soil Cleanup Action Area
- Existing Paved Areas
- Abbreviations**

- Proposed Monitoring Well**
- Groundwater Monitoring Well**
- Sidewall Sample Below Cleanup Level
- Bottom Sample Below Cleanup Level
- Sidewall Sample Above Cleanup Level
- Bottom Sample Above Cleanup Level
- Sidewall Sample Fated Compliance - Soil Removed
- Bottom Sample Fated Compliance - Soil Removed