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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

15 West Yakima Avenue, Suite 200 • Yakima, Washington 98902-3452 • (509) 575-2490

October 5, 2009

Mr. Marc Thornsby  
Klickitat County Port District No. 1  
154 E. Bingen Point Wy, Ste A  
Bingen, WA 98605

**Re: No Further Action at the following Site:**

- **Site Name:** Dow Road Site Dallesport Industrial Park
- **Site Address:** T2N, R13E, S26 Dallesport, WA
- **Facility/Site No.:** 8573210
- **VCP Project No.:** CE0311

Dear Mr. Thornsby:

The Washington State Department of Ecology (Ecology) received your request for an opinion on your independent cleanup of the Dow Road 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:

- Aluminum salt-cake and associated metals into the soil



Mr. Marc Thornsbury  
October 5, 2009  
Page 2

**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 parcel(s) associated with this Site are affected by other sites.

### **Basis for the Opinion**

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

1. Port of Klickitat, Remedial Action Report Dow Road Saltcake Cleanup Site, June 30, 2009.
2. Dow Road Site file, Central Regional Office Central Files.
3. Department of Ecology, Intermediate Remedial Action Plan, RAMCO Site, October 9, 2006.
4. Department of Ecology, Intermediate Remedial Action Report Phases 1&2, RAMCO Site, June 4, 2008.

Those documents are kept in the Central Files of the Central Regional Office of Ecology (CRO) for review by appointment only. You can make an appointment by calling the CRO resource contact at (509) 454-7658.

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

### **Analysis of the Cleanup**

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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**.

The Site was sampled on August 14, 2007, by Robert Swackhamer, an Engineer, and Brianne Harcourt, a Hydrogeologist, both employed by the Department of Ecology. A backhoe, hand auger, and shovel were utilized to collect soil samples at the site. Visual inspection and analytical results confirmed that contaminants found at the Dow Road Site

consisted of the same salt-cake material found at the nearby RAMCO Site. Analytes included a total of 18 metals, 13 of which were the EPA priority pollution metals (Sb, As, Be, Cd, Cr, Cu, Pb, Hg, Ni, Se, Ag, Tl, Zn). The five additional metals included were Al, Ca, K, Na, and Mg. During excavation, the extent of contamination was determined by visual means. Soil having a white to grey coloration, very distinctive from the native soil, was excavated and hauled to the Wasco County Landfill. Confirmatory sampling indicated that contaminants of concern were removed to below the applicable MTCA Method A or Method B soil cleanup levels for unrestricted land use; or, in cases where published cleanup levels were not available, contaminants were removed to concentrations comparable to state background levels or sampled background levels.

**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.

Published Method A and Method B soil cleanup levels for unrestricted land use were used as cleanup levels for the site. Where neither Method A nor Method B cleanup levels are available for a particular contaminant, background concentrations were used as a reference.

Points of compliance are standard for soil and are based on protection from direct contact. That is, throughout the site and to a depth of 15 feet below the surface.

**3. Selection of cleanup action.**

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

The cleanup action selected for this Site was excavation and removal of contaminated soils to a landfill. The criteria for this cleanup action were adopted directly from the Interim Remedial Action Plan developed by Ecology for the related RAMCO Site. The Dow Road cleanup was performed by the same contractor hired by Ecology to conduct the RAMCO interim action. The contractor used the same methods and equipment, and disposal of the contaminated soil was at the same landfill utilized for the RAMCO cleanup (Wasco County Landfill). In essence, the cleanup performed at Dow Road was an extension of Ecology's ongoing cleanup at the RAMCO site, except that the Dow Road cleanup was funded by the Port of Klickitat, not Ecology.

The cleanup action selected meets the minimum requirements of WAC 173-340-360(2) because it is a permanent solution that protects human health and the environment and complies with MTCA cleanup standards as well as local, state, and federal laws.

#### 4. Cleanup.

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

The cleanup action consisted of excavation, crushing, seasoning, and disposal of contaminated soil and salt-cake material. The Dow Road cleanup was performed according to the criteria specified in the Interim Cleanup Action Plan for the related RAMCO Site, as previously agreed upon between the Port of Klickitat and Ecology.

Approximately 1,263 tons of salt-cake material and contaminated soil were excavated, crushed, and removed to the Wasco County landfill. Contaminated soil and salt-cake material were excavated and fed through a crusher with a jaw setting of no more than four and one-half inches. The purpose of crushing was to expose the salt-cake material completely to the air to ensure that it had completely reacted out before removal to the landfill. Crushed material displaying off-gassing or exothermic properties was seasoned in stock piles for up to seven days prior to disposal. Non-reactive material was then disposed of at the Wasco County landfill as non-hazardous waste.

Confirmatory sampling was performed by PBS Engineering and Environmental, Inc. Six samples were obtained from native soil at the bottom of the excavation. The samples were collected from six test pits, which were located randomly throughout the backfilled excavation. One background sample was collected from a location outside of the excavation pit. Analytical results indicated that all contaminants of concern for which MTCA Method A or Method B cleanup levels have been published were either non-detectable, or were present at concentrations below MTCA cleanup standards. Contaminants of concern for which there are no published MTCA Method A or Method B cleanup levels were present at concentrations below state and/or measured background concentrations, with the exception of magnesium, potassium, and sodium. Results for magnesium consistently approximated the measured background concentration. One sample slightly exceeded measured background, and can be discounted as natural variation in background concentrations. Results for potassium and sodium showed greater variation from the measured background concentrations. Both sodium and potassium were likely leached from the salt cake-material as highly soluble salts. The maximum concentration of sodium was reported at 907 ppm, nearly seven times the measured background concentration (131 ppm). As a comparison, sea water contains nearly 11,000 ppm sodium, and is not considered toxic. Results for potassium varied from roughly 70% of the background sample (background was reported as 1410 ppm) to approximately 230% of background, and ranged from approximately 1000 to 3000 ppm. The even distribution of the data may represent normal variation in background concentrations, or it may indicate slightly high levels of potassium. However, none of the results for potassium can be considered extraordinarily high, since the recommended

concentration of potassium in soil for growing apples is in the order of 500 ppm. Based on information available from the PAN Pesticides database ([www.pesticideinfo.org](http://www.pesticideinfo.org)), neither chloride nor nitrate salts of either sodium or potassium are acutely poisonous to humans or other organism groups.

This Site no longer poses a threat to human health or the environment. Contaminants of concern have been permanently removed, and the excavation pit has been backfilled with native soil from the surrounding landscape. Current and proposed land-use is for industrial development and as a right-of-way easement for BPA transmission towers.

### **Listing of the Site**

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Based on this opinion, Ecology will remove the Site from our Confirmed and Suspected Contaminated Sites List.

### **Limitations of the Opinion**

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**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 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).

Mr. Marc Thornsbury  
October 5, 2009  
Page 6

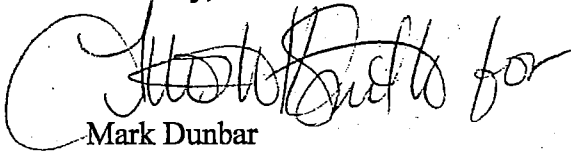
### **Termination of Agreement**

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Thank you for cleaning up the Site under the Voluntary Cleanup Program (VCP). This opinion terminates the VCP Agreement governing this project (#CE0311).

For more information about the VCP and the cleanup process, please visit our web site: [www.ecy.wa.gov/programs/tcp/vcp/vcpmain.htm](http://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 (509) 454-7836 or e-mail at [mdun461@ecy.wa.gov](mailto:mdun461@ecy.wa.gov).

Sincerely,



Mark Dunbar  
Site Manager  
CRO Toxics Cleanup Program

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

cc: Dolores Mitchell, VCP Financial Manager

## **Enclosure A**

### **Description and Diagrams of the Site**

## Site Description

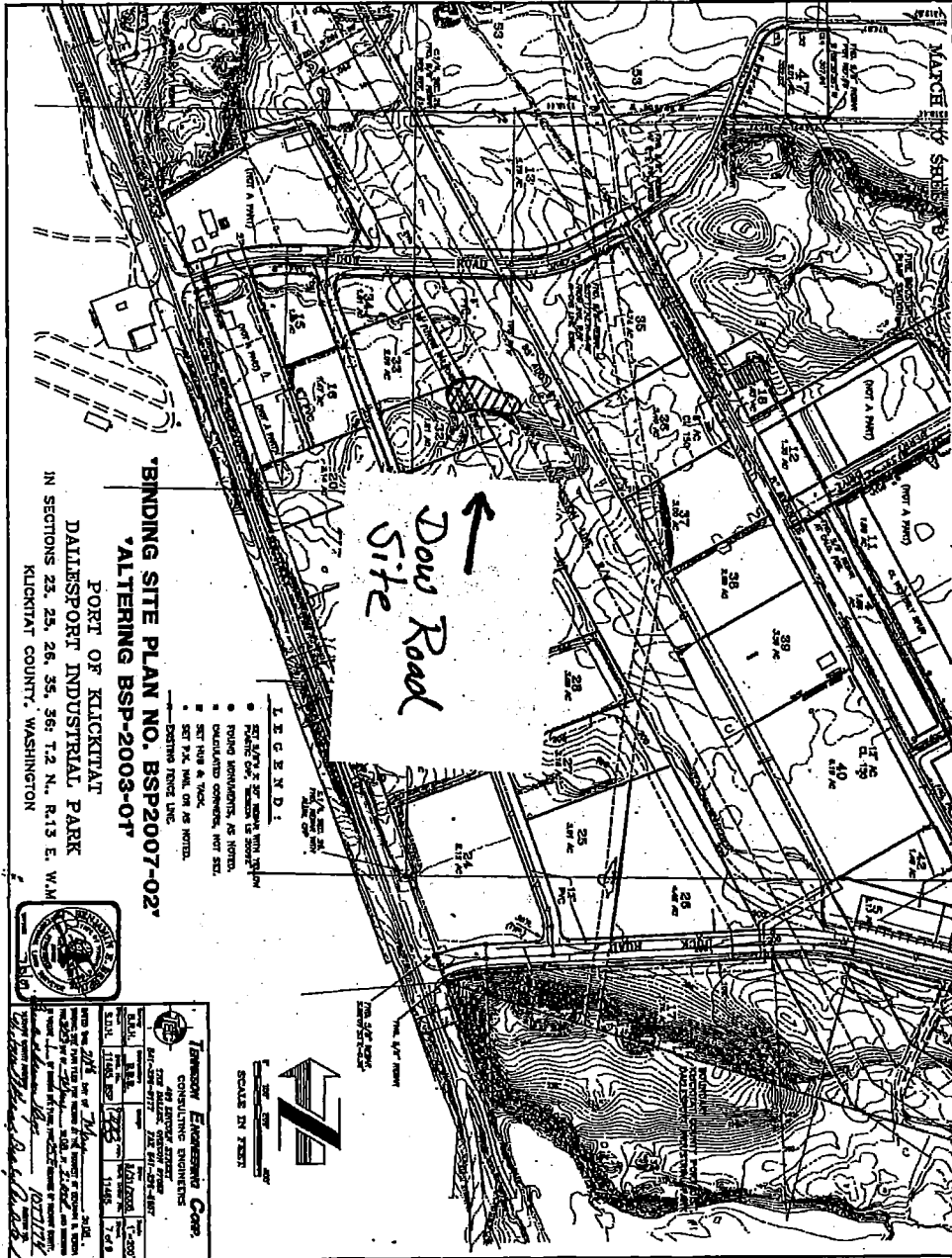
The Site is located on Lot 32 of the Dallesport Industrial Park and the adjacent BPA transmission line right-of-way (see Site Diagram). The Site was discovered during the course of the nearby RAMCO facility cleanup, which is also located within the Industrial Park. The Dow Road site was discovered as the result of a tip from a citizen, who claimed that waste from the RAMCO facility had been dumped at Dow Road. Sampling by Ecology personnel confirmed the same aluminum salt-cake material found at RAMCO was also present at the Dow Road Site. The salt-cake material contains up to 28% aluminum, 8% sodium, 2.8% magnesium, 2.1% calcium, 1.5% potassium, and lesser amounts of chromium, manganese, iron, copper, nickel, and zinc.

The site is defined by the extent of contamination. Removal of the salt-cake material left an excavation pit that was elongated in shape and extended approximately 300 feet East to West by 100 feet North to South. The depth of the excavation was approximately four feet. The Site is a shallow depression in the basalt bedrock, which had been filled with the salt-cake material and covered with a soil cap. Following excavation of the salt-cake and contaminated soil, the depression was filled with clean soil from the surrounding undeveloped landscape (personal observation and Remedial Action Report).

The pathway for exposure prior to removal of the salt-cake material was through direct contact and inhalation of the dust. Because the Site was capped, it is not likely that human or environmental exposure had occurred prior to removal. Removal of the salt-cake material and contaminated soil eliminates the potential for human or environmental exposure during future development activities on the site, and eliminates any potential for leaching of metals to groundwater.



# Site Diagrams

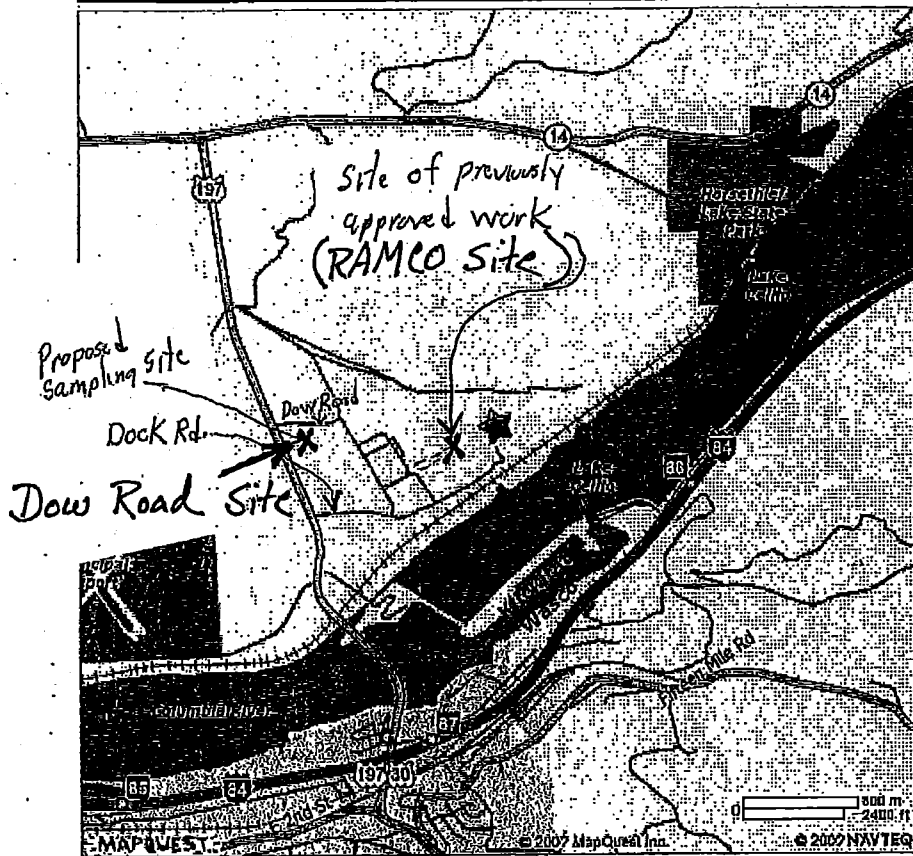


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★ Spearfish Lake  
Dallesport, WA US

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