

**Comment Period:**

**Nov. 19 to  
Dec. 19 31, 1999**

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Seattle Public Library  
Downtown Branch  
Gov't. Documents 2<sup>nd</sup>  
Floor  
1000 4<sup>th</sup> Avenue, Seattle

West Seattle Library  
2306 42<sup>nd</sup> Ave SW  
(West) Seattle

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(425) 649-7190

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**Questions?**

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*For special  
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7254 or 425-649-4259*

**ARCO bulk fuel storage site**

Harbor Island

**Revised environmental cleanup plan for bulk fuel terminal site ready for public review****Ecology issues 2<sup>nd</sup> draft Consent Decree and Cleanup Action Plan**

In response to public concerns expressed during a comment period held in late 1997 through early 1998, the Washington State Department of Ecology (Ecology) has drafted a new legal agreement for the environmental cleanup of the ARCO bulk fuel terminal site, located on Harbor Island, Seattle, Washington.

The legal agreement, called a Consent Decree, between Ecology and ARCO Products Company (ARCO), will ensure that the cleanup meets the requirements of the Model Toxics Control Act (WAC Chapter 173-340).

The revised final draft Cleanup Action Plan (CAP), which is being implemented under the Consent Decree, describes the proposed cleanup actions and the work to be performed at the site.

**Opportunity to comment**

Before these draft documents become final, we offer you the opportunity to review the documents and give us your input. If, during the comment period, 10 or more people request a public hearing, Ecology will hold one for the purpose of receiving oral comments on the proposals.

**Background**

The ARCO Harbor Island Terminal Plant 1 and Plant 2 located at 1652 Southwest Lander Street consists of two separate bulk storage plants. Plant 1 consists of approximately 12 acres located along the west waterway of the Duwamish River. Plant 2 consists of 6 acres located in the north-central

(TDD).

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part of Harbor Island. Both plants were constructed in the 1930s and have operated as bulk fuel storage and transfer facilities since that time under a variety of owners. ARCO assumed operation of Plant 1 in the 1940s and Plant 2 in the 1950s.

The soil and groundwater are contaminated due to spills and leaks from above-ground and underground storage tanks, product piping, and an oil/water separator.

ARCO completed a Remedial Investigation (RI) in 1994 and a Feasibility Study (FS) in 1996. Both were available for public review in 1997. A draft Consent Decree and Cleanup Action Plan was submitted for public comment from 11/10/97 to 2/18/98.

### **Harbor Island history**

From 1903 to 1905, Harbor Island was created from marine sediments dredged from the Duwamish River. Approximately 70% of Harbor Island is covered with buildings, roads or other impervious surfaces except for the above-ground storage tank areas where the oil companies are located. Harbor Island was placed on the National Priorities List in 1983 as a Superfund Site due to elevated lead concentrations in soil, as well as elevated levels of other hazardous substances.

Under a Memorandum of Agreement (MOA) between EPA and Ecology, EPA designated Ecology the lead agency for the tank farms.

### **Results of the investigation**

The results of the RI/FS indicate the following areas of concern.

#### ***Primary areas of concern:***

Of concern are areas beneath the shoreline warehouse (inaccessible) adjacent to the West Waterway and in the inland (accessible) areas of Plant 1. Approximately 14,000 gallons of weathered diesel and gasoline (including about 11,700 gallons recovered to date) are trapped behind the shoreline bulkhead-seawall structures that form a partial barrier to groundwater flow to the West Waterway. An interim remediation system has been installed to remove floating petroleum product and associated dissolved hydrocarbons in

this area. The soils beneath the warehouse and inland portions of Plant 1 are contaminated with total petroleum hydrocarbons (TPH) and are potential sources of groundwater contamination.

### ***Secondary Areas of Concern:***

Of concern are areas of TPH contamination of the inland subsurface soils (accessible areas) in Plant 2, located in the middle of the Island.

### **Summary of proposed cleanup actions**

The proposed actions for cleaning up both the accessible and inaccessible TPH-contaminated soils include:

*NOTE: KEY REVISIONS TO THIS FINAL DRAFT CAP ARE DENOTED BY THIS SYMBOL: <sup>a</sup>*

<sup>a</sup> Excavate the accessible TPH-contaminated soil hot spots located inland of Plant 1 that are above 10,000 parts per million. This remedial action level will address the primary areas of concern impacted by TPH and it is based on EPA's Record of Decision for the industrial Harbor Island.

<sup>a</sup> Excavate accessible TPH-contaminated soil hot spots located inland of Plant 2 that are above 20,000 parts per million. This remedial action level will address the secondary areas of concern impacted by TPH and it is based on EPA guidance for natural attenuation.

- Treat inaccessible TPH-contaminated soil hot spots beneath the shoreline warehouse in the unsaturated zone with vapor extraction technology.
- Treat remaining residual TPH-contaminated soil with bioremediation.
- Place a restrictive covenant on the property deed for "industrial use" only.

<sup>a</sup> Implement Contingency Plan, if needed.

The proposed actions for cleaning up the TPH-contaminated ground water include:

- Treat soil below the water table by air sparging. Air sparging involves injecting air into the groundwater which promotes a transfer of contaminants from soil and water to the air. These vapors are then pulled away.
- Extract the groundwater and/or product. Extracted groundwater will be treated before disposal.
  - <sup>a</sup> Remove free-product from the water table, wherever present.
- Conduct long-term ground water monitoring.
  - <sup>a</sup> Implement Contingency Plan, if needed.
  - <sup>a</sup> Remove free-product beneath the warehouse after 18 months of implementing this CAP.
- Restore site groundwater to state standards after 5 years of implementing this CAP.

### **What happens next**

After this public comment period, Ecology will review all the comments submitted and will make recommendations for any suggested changes to the documents. Ecology will then prepare a response to the comments. If no significant changes are made, then the Consent Decree is recorded in the Washington State Superior Court of King County and cleanup action can begin.