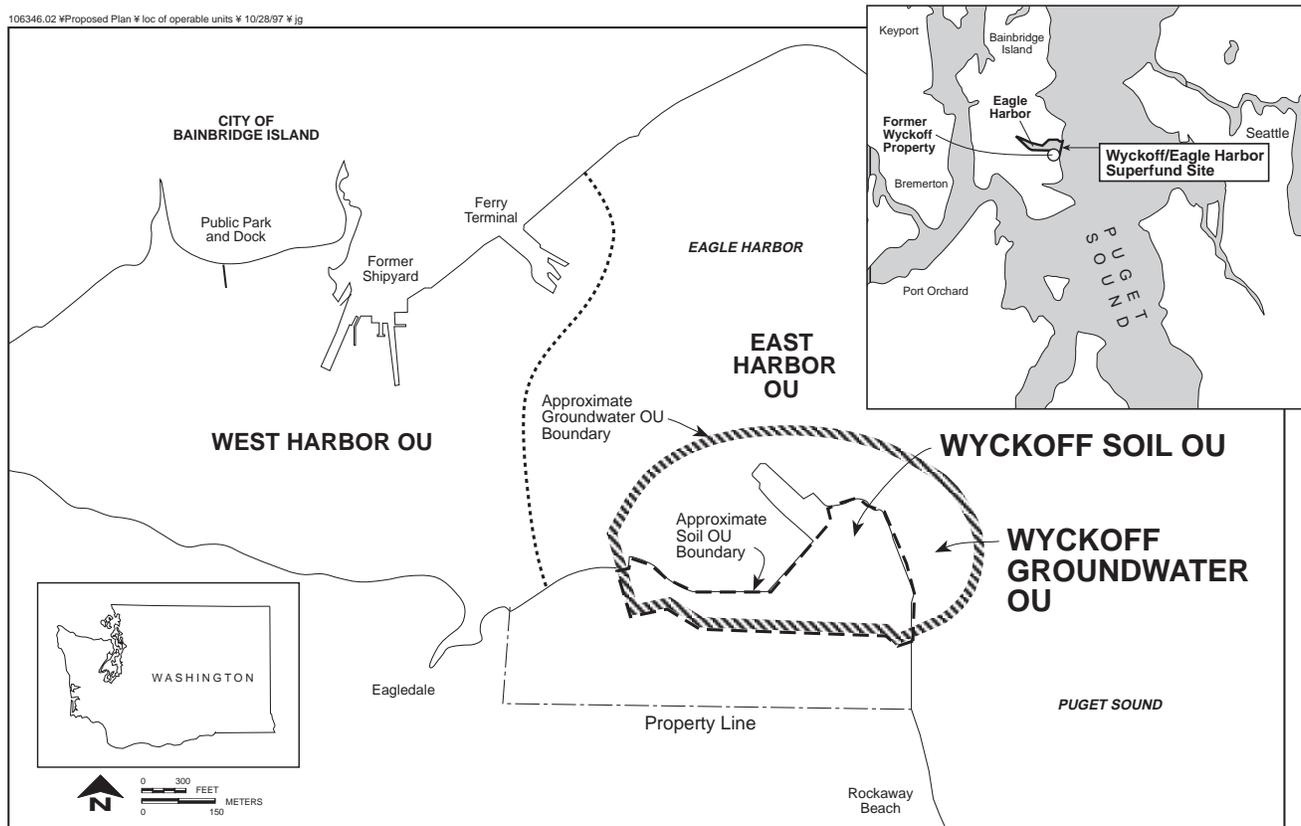


## Superfund Fact Sheet Wyckoff/Eagle Harbor Site Bainbridge Island, Washington

Many significant developments have taken place recently associated with the Wyckoff/Eagle Harbor Superfund Site. This fact sheet is designed to update you on those developments, discuss implications for site cleanup, and take a look back on accomplishments for 1997. We invite your questions and comments. Please feel free to contact anyone listed on the last page.

The Wyckoff/Eagle Harbor site is divided, for program purposes, into four work areas called "operable units." The four areas are: West Harbor Operable Unit, East Harbor Operable Unit, Wyckoff Soil Operable Unit, and Wyckoff Groundwater Operable Unit.



*Locations of Operable Units at Wyckoff/Eagle Harbor Superfund Site*

**Site Background:** The former Wyckoff wood-treating facility, located at the mouth of Eagle Harbor on Bainbridge Island, forms part of the Wyckoff/Eagle Harbor Superfund site. The facility operated as a wood-treating operation from 1903 until 1988. As a result of these operations, surface and subsurface soils at the facility, and groundwater beneath the facility, have been severely contaminated with creosote and pentachlorophenol. Bottom sediments in much of Eagle Harbor are contaminated with chemicals from wood-treating and shipyard operations. These sediments are toxic to marine organisms. A public health advisory is in effect recommending against eating fish and shellfish harvested from the Harbor.

---

## EPA Delays Cleanup Selection

### Possible New Groundwater Remedy Under Evaluation

Because choosing the best cleanup strategy is top priority, EPA recently halted the remedy selection process for Wyckoff groundwater to evaluate a possible new cleanup technology. The objective of this evaluation is to decide whether this new technology can replace the cleanup remedy previously proposed for the site. The previously identified remedy involves replacing the existing groundwater treatment system and constructing a "slurry" wall below the ground surface around the site's perimeter to contain contamination. EPA collected public comments on that proposed cleanup remedy last December.

With participation from the Washington Department of Ecology, EPA is now considering the potential application of *Thermal Treatment Technologies* at the Wyckoff site. One thermal technology under consideration, Steam Injection, involves pumping steam underground to heat and mobilize the creosote and drive it to extraction wells. This technology would also involve extraction of vapor above the groundwater surface. Once extracted, the groundwater and vapor would be treated and the creosote disposed or reused. Another technology, Electrical Resistance Heating, involves passing an electrical current through the soil to produce heat and steam. This process mobilizes and vaporizes the contaminants, which are then recovered by vacuum extraction.

With Thermal Treatment Technologies, containment of groundwater would still be necessary to avoid creosote release to the harbor. As part of the evaluation, EPA is re-evaluating alternatives to the slurry wall to determine whether a different and less costly barrier or control system could contain contamination on the site during

groundwater cleanup.

Evaluation of the new technology will include consideration of its cost and its ability to achieve long-term effectiveness and permanence without jeopardizing overall protection of human health and the environment. A decision on the groundwater cleanup remedy is expected this summer. If the current selected remedy goes forward, then a *Record of Decision*, or ROD---the official report describing the chosen cleanup method and how it was selected---can be expected by about December 1998. If the new Thermal Treatment Technologies remedy is selected, then EPA will reissue a Proposed Plan for public comment this fall, with a final ROD targeted for early next year.

Work on the Wyckoff Soil Operable Unit is also on hold because the soils cleanup remedy may be modified if Thermal Treatment Technology is employed at the site. Additionally, the investigation to determine if further contamination exists on the hillside portion of the property cannot proceed until a Record of Decision is final.

### National Board to Review Wyckoff Cleanup Strategy

On July 20-23, EPA Region 10 staff will appear before the *National Remedy Review Board*, a team of EPA experts from around the country, to discuss cleanup strategies for the Wyckoff Groundwater Operable Unit. The Board reviews all proposed Superfund cleanup decisions which involve a remedy that costs more than \$30 million, to make sure those decisions meet regulations and guidance. The groundwater cleanup strategy for the Wyckoff site is expected to cost more than \$30 million---whether the remedy is a replacement treatment plant and a slurry wall surrounding the site, or thermal technology with an alternative containment barrier---so Board review is required. The Board will make recommendations during the review meeting. EPA's groundwater cleanup decision will occur after the Board review.

---

## Progress Report and 1997 Year in Review

Following is a status report and brief look back at accomplishments over the past year for each operable unit.

### West Harbor Operable Unit

1997 was a big year for the portion of the site which includes the Washington State Ferries maintenance terminal and adjacent sediments in Eagle Harbor. Between April and October 1997, PACCAR Inc. led the cleanup of the former shipyard under EPA oversight. The work included removal of underground oil tanks and construction of hydraulic controls to keep water from passing through a former landfill into Eagle Harbor. In addition, PACCAR cleaned up sediments which had been contaminated by heavy metals from boat bottom paints. The most contaminated sediments were placed inside a containment facility adjacent to the land, which has increased the ferry maintenance facility property by an acre. Washington State Ferries is currently using the property, now paved, for parking, but has committed to setting aside one acre of the property for use by a private water-dependent operation, such as a boatyard.

The Washington State Department of Transportation (WSDOT) completed the construction of the Shel-chelb estuary on South Bainbridge Island to mitigate for the loss of aquatic habitat as a result of the containment facility. Additional mitigation work is planned for 1998, including the planting of eelgrass near the ferry maintenance facility. WSDOT is also responsible for the monitoring and maintenance of the completed cleanup, and has installed a groundwater monitoring well at the facility. Sampling will be conducted quarterly during 1998.

### East Harbor Operable Unit

After a summer of reviewing the sediment cap data from the spring sampling, 1997 ended with headlines about the creosote which EPA divers found pooled on the harbor bottom next to the large dock at the Wyckoff facility. Although EPA was aware of heavy sediment contamination

and pockets of creosote in this area, the pooled creosote was unexpected. EPA was concerned that the material might move away from shore and recontaminate clean areas. EPA contained the material with a physical barrier—a plastic “fence” on the harbor bottom—and conducted test pumping to determine if the material can be readily removed. EPA is planning additional removal of the creosote in 1998.

Sediment cap sampling from 1997 showed that the cap continues to work and that a community of marine organisms is developing. EPA is planning additional sampling to determine if contaminated sediments which were not capped in 1994 have recovered over time. Some additional capping is anticipated after a groundwater remedy is in place, particularly in areas closer to the Wyckoff Facility.

1998 will see the demolition of the West Dock. This large dock is the last in-water structure to be removed. The dock is no longer sound and is unlikely to be of use to future occupants of the site. The benefits of removing the dock include removal of a safety hazard, opening of the under-pier area to sunlight for faster breakdown of contaminants in the beach area, and removing a source of creosoted wood fragments.

In addition, EPA expects to propose anchoring restrictions in capped areas in eastern Eagle Harbor through the federal rulemaking process. This effort, combined with plans for the City of Bainbridge to lease the harbor from the State, is intended to make protection of the cap easier. Details regarding public comment opportunities will be provided soon.

### Wyckoff Soil and Groundwater Operable Units

1997 marked the completion of the *Remedial Investigation* and *Feasibility Study* for the Wyckoff Soil and Ground Water Operable Units. The Remedial Investigation, or RI, focused on assessing the nature and extent of contamination at the site and the associated health and environmental risks. The Feasibility Study, or FS, evaluated the range of cleanup alternatives, and included an analysis of technologies and costs. These studies contributed to the development of a *Proposed Plan*, also completed in 1997. The Proposed Plan presented the preferred cleanup

alternatives for both the soil and groundwater operable units (see box below). Public comments on the plan were accepted through December 20, 1997.

A *Record of Decision* (ROD) is the next milestone in the Wyckoff/Eagle Harbor project. The ROD is the official report documenting background information on the site and describing the chosen cleanup method and how it was selected. It will also include a summary of public comments and EPA's responses to those comments. As discussed earlier in this fact sheet, the ROD is currently on hold due to evaluation of a possible new groundwater remedy and an upcoming review of the groundwater cleanup strategy by the EPA National Remedy Review Board. EPA expects to make a decision by July 1998 whether to proceed with the current selected remedy ("pump and treat" with a slurry wall) or whether to pursue the new Thermal Treatment Technologies. If the current selected remedy goes forward, then a ROD can be expected by about December 1998. If the new Thermal Treatment Technologies remedy is selected, then EPA will reissue a Proposed Plan for public comment this fall, with a final ROD targeted for early next year.

Also in 1997, building demolition work was completed at the Wyckoff site. All structures unrelated to the groundwater extraction system and treatment plant have been demolished and removed, except for concrete foundations.

The current on-site groundwater treatment plant and extraction system continued its seventh year of operations in 1997. Over the course of the year, 39.5 million gallons of contaminated groundwater were extracted from the site and treated before being discharged to the harbor. Over 10,000 gallons of creosote product were recovered. To date, a cumulative total of 240 million gallons of contaminated groundwater have been extracted and treated, and nearly 62,000 gallons of creosote product have been recovered.

Design of a new, more efficient on-site treatment plant progressed last year. The replacement treatment system would consist of physical separation of oil and water, activated sludge for biological treatment, and carbon polishing as a final step. The plant, designed to treat up to 80 gallons per minute, would help maintain groundwater at a level that could be contained within the confines of the slurry wall.

This plant design will be modified if Thermal Treatment Technologies is selected.

Progress associated with the slurry wall also continued. An investigation to determine the appropriate location of the wall to capture the creosote in soils and groundwater under the Wyckoff site was completed last August. In October, a preliminary Clean Water Act 404(b)(1) *Alternatives Analysis* was completed and submitted to resource agencies for review. In this analysis, EPA evaluated options for minimizing any harm to the marine environment that might be associated with the wall. In December, a determination was made that part of the wall would need to be constructed in an area currently under water, just north of the facility. To support the wall, a portion of the former lografting area would need to be filled.

### ***Proposed Plan Identified Preferred Cleanup Remedies***

*The Proposed Plan completed last year lays out preferred cleanup alternatives for the groundwater and soil operable units. The remedy for the **groundwater** unit involves replacement of the groundwater treatment plant and construction of a slurry wall below the ground surface around the site's perimeter. The wall would act as a barrier to prevent contaminants from seeping from the site into the harbor. Also, groundwater monitoring would be conducted outside the wall to confirm that contaminants will not cause risks to human health and the environment and to determine whether future action is needed. As noted above, further evaluation of the groundwater cleanup remedy is underway due to the possibility of a new technology.*

*The preferred alternative for the **soil** operable unit includes placing a "cap" on the soil of the former log storage/peeler area, as well as the former process area. Additionally, it involves removing contaminated soil from the "Well CWO1" area, and replacing it with clean fill. Soils on the hillside portion of the Wyckoff property would be analyzed to identify any additional contamination.*

## EPA Staff Changes In The Works

After more than ten years as a Project Manager for the Wyckoff/Eagle Harbor Site, Elly Hale is moving on to other projects at EPA. Peter Rubenstein will take over her responsibilities associated with the West Harbor and East Harbor Operable Units. Elly will be working closely with Peter during the transition period and assures us that she will continue to be available to share her historical knowledge of the site. Thank you, Elly, for all your good work over the years!

Nancy Wilson, EPA's Community Relations Coordinator for the site, is also transitioning to other projects at EPA. Thanks for your contributions and good luck with your new projects, Nancy! Andrea Lindsay, the new Community Relations Coordinator, is very excited about joining the EPA Wyckoff Team.

## For more information...

### Contact:

Peter Rubenstein, EPA Project Manager (Soil, West and East Harbor), 206/553-1067

Christina Ngo, EPA Project Manager (Groundwater), 206/553-0171

Andrea Lindsay, EPA Community Involvement Coordinator, 206/553-1896

### Toll-Free Telephone Number:

1-800-424-4372

*Those with impaired hearing or speech can contact EPA's telecommunications device for the hearing impaired (TDD)\* at 206/553-1215.*

### EPA Region 10 Internet Homepage:

<http://www.epa.gov/r10earth/>

### Wyckoff /Eagle Harbor Homepage:

<http://epainotes1.rtpnc.epa.gov.7777/r10/cleanup.nsf/webpage/wyckoff-Eagle+Harbor>

**Documents:** The Administrative Record is a file that contains all information used by EPA to make decisions on cleanup actions from the beginning of the site's history. The Administrative Record can be reviewed at the EPA Records Center, 7th Floor, 1200 Sixth Avenue, Seattle. Call 206/553-4494 to make an appointment. Select documents can also be viewed at the Information Repository located at the Bainbridge Island Public Library, 1270 Madison Avenue North. If the library does not have the document you seek, feel free to call Andrea Lindsay at 206/553-1896.

*\*Additional services can be made available to persons with disabilities by contacting one of the EPA staff listed on this page or call toll-free 1-800-424-4372.*



United States  
Environmental Protection  
Agency

Region 10 (ECO-081)  
1200 Sixth Avenue  
Seattle WA 98101

BULK RATE  
POSTAGE & FEES PAID  
U.S. EPA  
Permit No. G-35

**SUPERFUND FACT SHEET**  
**WYCKOFF/EAGLE HARBOR SITE**  
**Bainbridge Island, Washington**