

SUPERFUND

Fact Sheet

HARBOR ISLAND

Seattle, Washington



U.S. ENVIRONMENTAL PROTECTION AGENCY

December 2001

Comments Requested on the Harbor Island Lockheed Shipyard Sediments Cleanup Proposal

The U.S. Environmental Protection Agency (EPA) invites you to comment on possible strategies to clean up contaminated sediments at the Lockheed Shipyard. This fact sheet provides information about six possible cleanup strategies and proposes one. This fact sheet also includes an update on the cleanup of petroleum-contaminated soils at the Harbor Island site.

Send your written comments on the Lockheed sediments proposal by January 24, 2002:

Lynda Priddy, Project Manager
U.S. Environmental Protection Agency
1200 Sixth Avenue, ECL-112
Seattle, WA 98101

EPA's complete proposal is presented in the "Explanation of Significant Differences: Lockheed Shipyard Sediments Operable Unit," which is available for review at the Superfund Records Center listed at the end of this fact sheet.

Proposal Refines Earlier Cleanup Plan

During former shipbuilding and maintenance operations, shipyard wastes and hazardous substances were released at the Harbor Island shipyards. The releases included marine paint additives such as arsenic, copper, lead, mercury, tributyl tin, and zinc. These substances contaminated the sediments at the Lockheed site.

EPA's November 1996 Record of Decision (ROD) documented the overall cleanup plan for the contaminated shipyard sediments, which included dredging shipyard waste, and dredging and capping contaminated sediments. However, the ROD specified that the extent of dredging of contaminated sediments and waste under the Lockheed Shipyard pier would be determined during the design of the cleanup. The determination would be based on cost, benefit, and technical feasibility. The Explanation of Significant Differences for the Lockheed Shipyard sediments presents EPA's strategies for the dredging and capping.

Based on the State of Washington Sediment Management Standards, EPA had estimated in the ROD that the uppermost 3 to 5 feet of sediments in the Lockheed open water area would require dredging. The ROD did not include estimates for the contamination under the pier. Subsequent sampling showed that contamination beneath the pier exceeds

the state standards at depths up to 12.5 feet, and contamination in the open water area exceeds the standards generally at depths up to 5 feet. The contaminants exceeding the standards are primarily arsenic, copper, lead, mercury, and zinc.

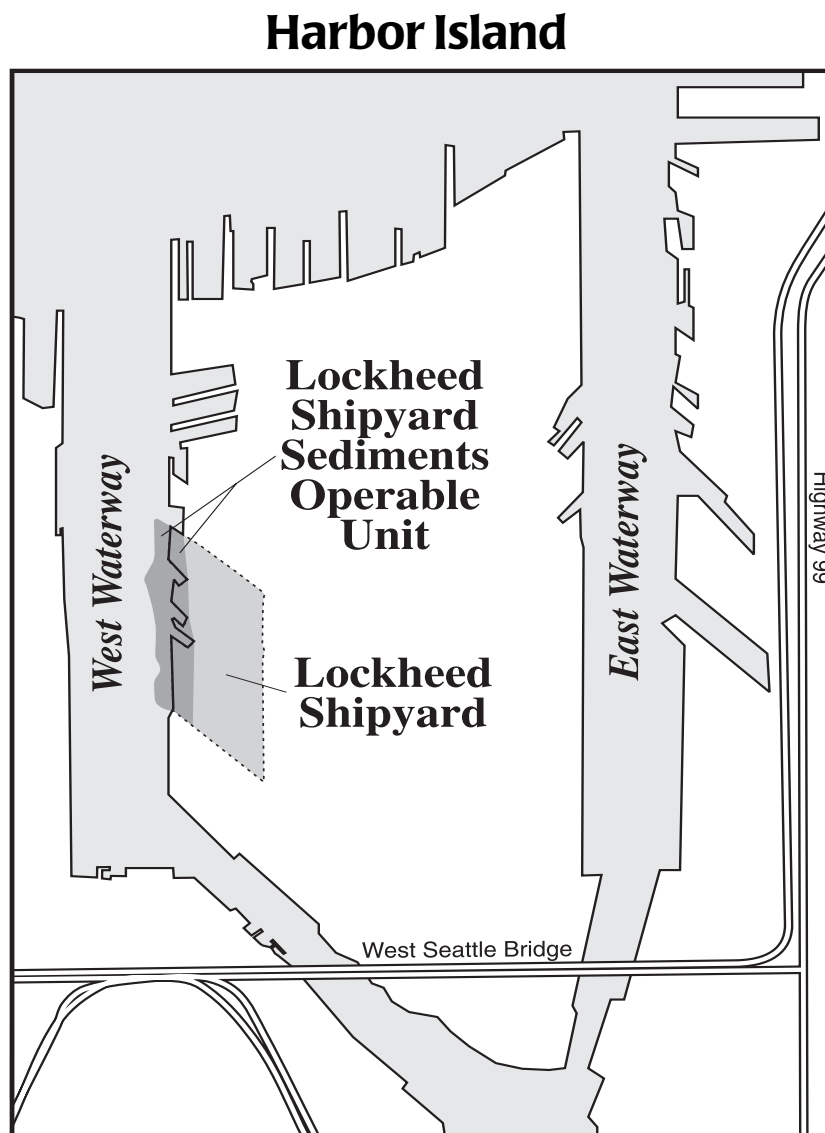
Six Strategies Evaluated for Dredging and Capping

All of the strategies assume the removal of the Lockheed pier and most of the more than 6,000 pilings. The strategies vary in cost, benefit, and technical feasibility. Because the contamination is so deep, none of the strategies would result in the removal of all sediments with contamination levels exceeding the Sediment Management Standards.

Four of the strategies, which are EPA modifications of Lockheed

proposals, include dredging to a depth of 3.5 feet under the pier. These four strategies differ from each other in the suggested cleanup for the open water areas. Two require dredging and capping in the open water areas, one requires only capping in these areas, and one requires dredging to State Sediment Management Standards levels, without capping, in these areas. Estimated costs range from \$11.2 million to \$13 million.

For comparison, EPA included two other strategies developed by Lockheed. One, estimated to cost \$32.4 million, includes the removal of the largest amount of sediments exceeding the Sediment Management Standards that is technically feasible. The other, estimated to cost \$7.1 million, calls for capping sediments in the under-pier and open water areas, without any dredging. Lockheed recommended the capping only strategy.



The proposed cleanup includes the open water area and the under-pier area.

Dredging Proposed for Open Water Areas

EPA is proposing to adopt the strategy that includes dredging to State Sediment Management Standards levels, without capping, for the open water areas, and dredging to 3.5 feet and capping for the other areas. This proposal would result in dredging of 46,600 cubic yards of contaminated sediments and placing 85,210 tons of capping material, at an estimated total cost of \$12.1 million. EPA believes that this proposed cleanup would protect human health and the environment.

Let us know what you think about this proposal, or any of the other strategies, by writing to us during the public comment period.

Future Activities Planned for Lockheed Shipyard

The Port of Seattle purchased the Lockheed property in 1996 and plans to develop it for commercial marine clients. EPA expects that the Lockheed sediment cleanup work could begin in 2003 and be completed in early 2004.

Cleanup Levels Revised for Soil and Groundwater

Work is continuing at other areas of the Harbor Island site. In October 2001, EPA revised the allowed cleanup levels for certain petroleum-contaminated soils at the site. This change allows an increase in the concentration of total petroleum hydrocarbons (TPHs) that may remain in certain areas at the site from 10,000 to 20,000 parts per million (ppm).

EPA has learned that there are more highly contaminated soils at the site than originally estimated. The cost of removing these soils is higher than

expected because they extend under buildings, roads, and buried utilities. Before the cleanup level is increased for any area, that area will be evaluated to ensure that the contamination can be properly controlled and the cleanup will protect people and the environment. An asphalt cap will cover soils with TPH contamination from 10,000 to 20,000 ppm that remain at the site. Groundwater will be monitored for TPH to ensure that the cleanup is protective.

EPA documented this change in the cleanup plan in an "Explanation of Significant Differences #2," which is also available at the Superfund Records Center.

Background

Harbor Island lies at the mouth of the Duwamish River on the southern edge of Elliott Bay. The island was constructed between 1903 and 1905 from sediments dredged from the Duwamish River to create the East and West Waterways and the navigational channel of the upper Duwamish River. The island has been used for shipbuilding and maintenance, lead smelting, and other industrial activities.

In 1983, after finding hazardous substances in soils on the island and in sediments near the island, EPA added Harbor Island to its National Priorities List (NPL). The NPL is a list of sites targeted for further investigation and possible cleanup under EPA's Superfund program.

EPA divided the site into units for investigation and cleanup purposes. The Washington State Department of Ecology (Ecology) is overseeing the work on the tank farms unit. EPA is overseeing the work on the Lockheed, marine sediments, and soil and groundwater units.

For More Information

Detailed information about the proposed strategy for the Lockheed Shipyard sediments cleanup, and other site documents, are available at the EPA office at 1200 Sixth Avenue in Seattle. If you would like to review any of these documents, please call the Superfund Records Center at (206) 553-4494 to arrange a time.

Some Harbor Island site documents are available on the EPA Region 10 web site: <http://www.epa.gov/r10earth> (click on "Index," then "H," and then "Harbor Island").

Questions? If you have questions about the Harbor Island site, please contact one of the following persons:

General information: Cindy Colgate, EPA Community Involvement Coordinator, (206) 553-1815

Soil and Groundwater: Neil Thompson, EPA Project Manager, (206) 553-7177

Lockheed and Todd Shipyard Sediments: Lynda Priddy, EPA Project Manager, (206) 553-1987

East Waterway: Allison Hiltner, EPA Project Manager, (206) 553-2140

West Waterway: Karen Keeley, EPA Project Manager, (206) 553-2141

Tank Farms: Nnamdi Madakor, Ecology Project Manager, (425) 649-7112

To ensure effective communication with everyone, additional services can be made available to persons with disabilities who contact one of the EPA representatives listed above.