



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

**REGION 10**  
1200 Sixth Avenue  
Seattle, WA 98101

Reply To  
Attn Of: ECL-112

TO: Michelle Pirzadeh, Associate Director  
Office of Environmental Cleanup

THRU Sylvia Kawabata, Unit II  
Office of Environmental Cleanup

FROM: Sean Sheldrake, Project Manager

SUBJECT: EE/CA Approval Memorandum for Proposed Non-Time Critical Removal Action  
at Portland Harbor Superfund Site, Port of Portland Terminal 4

The purpose of this memorandum is to request approval to proceed with an Engineering Evaluation/Cost Analysis (EE/CA) for a non-time critical removal of contaminated sediments at Terminal 4 within the Portland Harbor site, Portland, Oregon. At this time, the Environmental Protection Agency (EPA) expects the Port of Portland to prepare the EE/CA and implement the removal activities with EPA oversight.

I. Site Background

The Port of Portland, a port district of the State of Oregon, owns the Terminal 4 uplands located between River Miles 4.1 and 4.5 on the Lower Willamette River. The Port also owns a portion of the submersible and submerged lands in Slips 1 and 3 located within the Removal Action Area, as depicted on Appendix A. The remainder of submersible or submerged land is owned by the State of Oregon Department of State Lands ("DSL"), also as depicted on Appendix A. Terminal 4 is an operating marine facility that includes a variety of tenant operations, including importation of automobiles, exportation of soda ash, import and export of dry and liquid bulk cargo, including vegetable oil and molasses, associated rail inter-modal facilities, and associated petroleum product storage facilities. Historically, Slip 3 has been used for loading and unloading dry and liquid bulk cargo such as Bunker C, diesel, pencil pitch and metal ores. Historically, Slip 1 has been used for bulk and break-bulk cargo loading and unloading operations handling liquid fertilizer, lead and zinc concentrates, cured meats, agricultural produce, flour, vegetable oils, molasses, tallow, caustic soda, and a variety of general cargoes.

## II. Threat to Public Health, Welfare, or the Environment

Hazardous substances found in the Removal Action Area to date include, but may not be limited to, polyaromatic hydrocarbons (PAHs), metals (mercury, cadmium, chromium, lead, and zinc), pesticides and polychlorinated biphenyls (PCBs). PAHs in surface sediments exceed Lower Columbia River Management Area Maximum Level (ML) values, which are the least conservative biological adverse effects threshold values. When compared to their respective ML values, total low molecular weight PAHs (LPAHs) were found to exceed it up to a factor of 4 and total high molecular weight PAHs (HPAHs) exceeded that value as much as a factor of 11. When compared to other established biological adverse effects threshold values, PAHs and metals in the Removal Action Area show significantly higher potential adverse effects.

Sources of releases of hazardous substances, pollutants or contaminants into the Terminal 4 Removal Action Area include, but are not limited to: pencil pitch handling procedures and spills, petroleum handling and storage, contaminated groundwater seeps from petroleum spills and an abandoned pipeline; metal ores spilling from bulk handling practices; and storm water runoff. Contaminated sediment also may have migrated to the Removal Action Area from other areas of the Willamette River.

Therefore, sufficient evidence exists to justify proceeding with the preparation of an EE/CA. The goals of the EE/CA are to identify removal action objectives at Terminal 4; analyze the effectiveness, implementability, and cost of various alternatives that satisfy these objectives; and recommend a removal action alternative. The primary concerns are potential impacts to marine organisms and specific human exposure pathways.

If this removal action is not taken, then necessary cleanup work will be delayed until after completion of a harbor-wide Remedial Investigation/Feasibility Study and Record of Decision (ROD), during which time unacceptable exposures may continue to occur. It is expected that the ROD will be completed in 2006 at the earliest. By not conducting an early action at Terminal 4 EPA could lose the opportunity for the potentially responsible party to conduct this work.

## III. Statutory Basis for Action

The information presented in this memorandum indicates that actual or threatened releases of hazardous substances from this site may present an imminent and substantial endangerment to public health and the environment. Through this proposed cleanup action, EPA will minimize and further reduce potential harm to public health and the environment.

IV. Factors for Determining Appropriateness of a Removal Action

Section 300.415(b)(2) of the National Contingency Plan (NCP) provides factors for determining the appropriateness of a removal action. The factor most applicable to current conditions at Terminal 4 are the actual or potential contamination of sensitive ecosystems. Other factors that may be applicable include: actual or potential exposure to nearby human populations or the food chain from hazardous substances or pollutants. In accordance with 300.415(b)(4) of the NCP, EPA has determined that a planning period of at least six months exists before on-site activities could be initiated; therefore; an EE/CA must be conducted for a non-time critical removal action.

V. Enforcement/Proposed Actions/Cost Estimates

EPA has entered into an Administrative Order on Consent with the Port of Portland to conduct this work. The Port will prepare the EE/CA, EPA will issue an Action Memorandum, and the Port has agreed to implement the removal actions on the site. EPA anticipates that some of the potential removal response options may include the following: dredging, capping, and confined aquatic disposal. EPA estimates that the very approximate cost of these various removal responses could range from five to fifteen million dollars.

VI. Public Involvement

EPA expects to issue an EE/CA for public comment early in 2005.

VII. Approval/Disapproval

The conditions at the Terminal 4 site meet the NCP criteria for a removal action. Therefore, I am requesting approval to proceed with an EE/CA. Your approval or disapproval should be indicated below.

Approve: \_\_\_\_\_  
Disapprove: \_\_\_\_\_

Date: \_\_\_\_\_  
Date: \_\_\_\_\_