



Summary of Proposed Plan for the Marine Operable Unit “Ward Cove Sediment Remediation Project”

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The U.S. Environmental Protection Agency (EPA) is asking for public comments on the Proposed Plan for addressing contaminated sediments in Ward Cove. Public comments on the Proposed Plan are due by August 10, 1999. This document briefly summarizes the plan.

The KPC site is divided into two administrative units: the Marine Operable Unit and the Uplands Operable Unit. Work underway in the Marine Unit, generally referred to as the Ward Cove Sediment Remediation Project, is the focus of this proposed plan. (The Uplands Operable Unit, which includes the pulp mill area, the wood waste and ash disposal landfill, and other land-based areas that may have been affected by the pulp mill operations, was considered in a separate proposed plan with a comment due date of July 19.)

Site Evaluation

Comprehensive studies were conducted in 1996 and 1997 to determine the extent to which sediments in Ward Cove may pose risks to humans and the environment and therefore potentially warrant cleanup. Results were documented in the **Detailed Technical Studies Report for Ward Cove**.

The report confirmed the presence of a thick, organic-rich layer of sediment in Ward Cove. This layer is concentrated offshore of the KPC facility and along the north shore, and is the result of historical releases of pulping by-products and log handling activities in Ward Cove. Within this layer of sediments, numerous chemicals were evaluated to assess their potential

effects on human health and the environment.

Risk Assessment Results

Assessments were conducted to determine what risks might exist to humans and the environment if contamination were not cleaned up. Results of the evaluations were used to help select remedial actions.

Sediments in Ward Cove pose a risk to organisms that live in the sediments. Chemicals of Concerns (CoCs) identified for sediment toxicity are ammonia, sulfide, and 4-methylphenol. The area of most concern is offshore and downcurrent from the KPC facility.

No chemicals of concern were identified for

human health. The evaluation looked at contact both through eating seafood and through direct contact with sediments. Further, no chemicals of concern were identified for wildlife. Thus, sediments in Ward Cove do not pose unacceptable risk to human health or to wildlife.

Area of Concern

The area of concern, or AOC, is the area within Ward Cove where sediments pose a risk to organisms and cleanup may be warranted. It encompasses about 87 acres, with total sediment volume estimated at about 840,000 cubic yards.

Remedial Action Objectives

The objectives of the remedial action in Ward Cove are to:

- Reduce toxicity of sediments to bottom-dwelling animals in Ward Cove.
- Enhance recolonization of animals that live in surface sediments to support a healthy community of marine animals on the bottom of Ward Cove.
- Provide a community of bottom-dwelling animals that serves as an abundant food source to larger invertebrates and fishes in Ward Cove.

Remedial Action Alternatives

Contaminated sediments can be dredged, capped in place, or left to recover naturally. If sediments are to be dredged, they could be disposed of in various ways.

The Proposed Plan presents and compares five alternatives that consider different combinations and degrees of these approaches, as well as a no-action alternative.

Sunken logs will only be removed in areas where dredging is performed.

The different cleanup alternatives were evaluated against the criteria used by EPA to assess remedies under the Superfund program, and these evaluations are described in detail in the Proposed Plan. EPA believes the preferred alternative provides the best balance of tradeoffs among the other alternatives.

The Preferred Alternative

The preferred alternative for remediating the Marine Unit of the KPC site includes:

- thin-layer capping of contaminated bottom sediments with clean sandy material;
- navigational dredging in the vicinity of KPC's main dock and upland disposal of those dredged sediments;
- natural recovery for those areas where thin-layer capping is not practicable (sediments are expected to recover in 8 to more than 20 years);
- requirements on certain future activities to ensure continued recovery of bottom-dwelling animals in the sediments; and
- long-term monitoring of the remedy.

Community interests and concerns will be a factor in determining a cleanup plan. The public comment period for the Proposed Plan runs from July 12 to August 10, 1999. An availability session and public meeting will take place July 29 to allow community members an opportunity to receive information on the plan and share comments. (See schedule in Proposed Plan.) All comments will be considered before a final cleanup decision is made.