Guidance for Minimizing the Effect of Preservative Treated Wood on Sensitive Environments

BACKGROUND: Treating wood products protects wood from wood destroying organisms or decay and extends the useful life and structural performance of the material. The American Wood Protection Association (AWPA) establishes the appropriate applications of each product, its minimum penetration, and the minimum retention (amount of preservative in the *assay zone*—the zone in which wood is subject to testing).

Using treated wood in an aquatic environment is a controversial topic. The installation of treated wood structures has a physical and a chemical impact on the immediate aquatic environment. When manufacturers use best management practices to apply wood treatment pesticides and implement post-treatment recovery, they reduce the problems caused by the excessive use and improper fixation of treatment chemicals. Up-to-date guidelines for specifying best management practices have been developed through the combined efforts of the Western Wood Preservers Institute, Wood Preservation Canada, the Southern Pressure Treaters Association, and the Timber Piling Council. You can find these practices on the Western Wood Preservers Institute Web site.

WHAT YOU MUST DO: Engineers, Project Leaders, and Facility Managers must consider the following points when reviewing proposals to use treated wood in water:

1. There will be an impact on fish habitat from the presence of a structure, whatever the construction material.

2. Use alternatives to treated wood wherever practicable.

3. Use only wood treated to AWPA specifications in or adjacent to aquatic areas.

4. Place the minimum volume of treated wood in water by considering alternative materials and designs.

5. For most projects, we do not require or recommend using creosote-treated wood in freshwater.

6. Carefully evaluate proposals to use exposed creosote-treated wood for above-water structures and only accept its use when there is no alternative. If you use creosote-treated wood, do everything you can to shield the wood from exposure to the sun and to keep the creosote from entering the aquatic environment.

7. Do not use creosote-treated wood in areas with anaerobic sediments and low organic content.

8. It may not be appropriate to use metal-oxide or waterborne preservatives in areas where the water pH is less than 5.5, or where high background copper levels are present.

9. Carefully consider when you time projects if you may expose particularly-sensitive biota to the first flush of chemical released after installation of treated wood products. It may also be necessary to require a non-routine prewashing of metal oxide-treated wood at the treatment plant.

10. Install and maintain absorbent booms during installation of structures that use oil-borne wood treatments. These booms should remain in place and operational until there is no visible evidence of wood-treatment chemicals on the water surface.

11. All cutting and boring of treated wood should take place in upland areas. Keep waste materials out of the aquatic environment and properly dispose of them. If you must perform work within the aquatic

environment, you must fully contain activities so that no waste materials are deposited into water or onto aquatic sediments.

12. Promptly collect and dispose of any cut wood, chips, or sawdust that enters the aquatic environment.

13. Avoid applying wood treatment chemicals on the installation site. If you must apply a minor amount of wood treatment chemicals after construction, you must contain or tarp application areas so that no chemicals are deposited into the water or onto aquatic sediments.

14. Pentachlorophenol-treated wood should never be specified for use in water. There are alternative chemicals that are just as effective.

15. Never use railroad ties in aquatic structures. Their standards are different (lower) than materials used in construction.

The first step in specifying a particular treatment is to assure that the U.S. Environmental Protection Agency (EPA) has approved the preservative for the intended application. EPA establishes the legal parameters for use of wood preservatives.

The second step in specifying a treatment is to find the appropriate product standard from the Use Category System that AWPA develops and maintains.

When designing a project, you need to consider the characteristics of various treated wood products in relation to the purpose of the project and the environmental characteristics of the site. You can reduce the risk to aquatic environments by:

- Using wood treated in accordance with AWPA standards,
- Following the guidance provided by the Material Safety Data Sheets (MSDS) and other documents that come with the wood, and
- Using treated wood that the manufacturer produced using best management practices.