

WOOD PRESERVING CHEMICALS IN CALIFORNIA LANDFILL LEACHATE:

Executive Summary

This study responds to concerns related to the disposal of treated wood waste in lined portions of Class 2 and Class 3 (non-hazardous) landfills in California. To evaluate possible environmental impacts of current methods of disposal, leachate monitoring data from a variety of California landfills has been reviewed and concentrations of chemicals used in treated wood have been compared to screening levels. Data have been gathered both from landfills that accept treated wood waste and from those which do not.

Lined Class 2 and 3 landfills are engineered and managed to minimize the impact of leachate from any type of waste on ground and surface water. They provide a secure, monitored environment for disposal of many types of waste.

While this study's focus is on the chemicals used to treat wood, treated wood waste is clearly not the only potential source of these chemicals in landfills. The metals, arsenic, chrome, copper, and zinc, exist naturally in soil and groundwater, and in many types of municipal and industrial waste. The polycyclic aromatic hydrocarbons, naphthalene and benzo(a)pyrene exist naturally in petroleum and coal, as combustion by-products and in normal municipal and industrial waste. Although the fraction of chemicals contributed by treated wood waste to landfill leachate is not known, conclusions about the levels of these chemicals found in leachate can still be made.

These results support a conclusion that most metals from treated wood chemicals in landfill leachate are below drinking water standards and, therefore, present no significant risk of contaminating drinking water. Arsenic and the organic chemicals which might result from treated wood products were either below the drinking water standard or below the Limit Threshold Concentration Value modeled for landfills with composite liners using the U.S. Environmental Protection Agency's Tier I Industrial Waste Management Evaluation Model. In summary, the study supports the safety of the current practice of disposal of treated wood waste in Class II or Class III composite-lined landfills. Current practice does not create a threat to human health or the environment.

Wood Preserving Chemicals in California Landfill Leachate March, 2004

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