

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OCT 20 1988

OFFICE OF  
WATER

MEMORANDUM

SUBJECT: Release of Dioxin Treatability Study and Interim Control Measures for Regulating Dioxin Discharges from Pulp and Paper Mills

FROM: Martha G. Prothro, Director  
Office of Water Regulations and Standards (WH-551)

James R. Elder, Director  
Office of Water Enforcement and Permits (EN-335)

TO: Regional Water Management Division Directors

State NPDES Directors

Attached is a preliminary report that presents the results of EPA's bench scale wastewater treatability study for 2378-TCDD and 2378-TCDF in pulp and paper mill wastewaters. The report also sets out proposed interim control measures for chlorine minimization and suspended solids controls consistent with the interim strategy issued on August 9, 1988.

Although data regarding the formation and discharge of 2378-TCDD and 2378-TCDF for most pulp and paper mills in the U.S. are not yet available, data from the U.S. EPA/Paper Industry Cooperative Dioxin Screening Study (the Five-Mill Study), limited industry data, and native fish results from the bioaccumulative pollutant study clearly indicate that discharges of 2378-TCDD and 2378-TCDF may occur at most bleached kraft pulp and paper mills. Also, for most mills, detectable discharges are likely to result in ambient water quality levels that exceed the Agency's current water quality criterion for protection of human health. Accordingly, the interim strategy included development of interim BPJ BAT effluent limitations for 2378-TCDD and 2378-TCDF. The enclosed bench scale wastewater treatability results indicate that virtually all of the 2378-TCDD and 2378-TCDF are adsorbed onto suspended solids in activated sludge treatment systems and that effective removal of these suspended solids can be a key factor in minimizing dioxin discharges. Also, the report, along with data from other studies, indicates that chlorine minimization and chlorine dioxide substitution in bleacheries may be effective at minimizing the formation of 2378-TCDD and 2378-TCDF.

To the extent that any available data indicate that dioxin is present at a mill, the attached report provides information that can be used to establish interim chlorine minimization and suspended solids minimization programs at this time. The Regions should work with the states to implement the proposed interim control measures as soon as possible, taking into account any site-specific conditions, as appropriate.

Analyses of samples from the 104 mill study are now underway. We anticipate initial results by the end of November 1988 with final results by Spring 1989. OWRS staff will provide individual mill results to the Regions as they become available.

Staffs of OWRS and OWEP are available to provide technical assistance. If you have any questions, please call Wendy Smith (FTS 382-7184) or Gary Hudiburgh (FTS 475-4531).

Attachment