REGULATORY TREATMENT OF DIOXINS

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U.S. regulators are conducting a multi-faceted program to control environmental risks related to dioxin. New efforts are underway to regulate dioxin contamination from paper mills and other sources. Potential common law tort liability and statutory liability for clean-up costs create further strong incentives for careful treatment of dioxin-contaminated materials.

Recent scientific studies suggest that the risks associated with dioxin exposure have been overstated. To a degree, however, emotion may have overcome science so that politics and popular opinion drive the debate and fuel the regulatory machinery. Consequently, regulation of dioxin in the United States is expanding.

Under a consent decree resulting from litigation brought by a public interest environmental group, the U.S. Environmental Protection Agency (EPA) has recently conducted a comprehensive risk assessment for dioxin, considering possible regulation under a range of regulatory programs. Under the consent decree, EPA has agreed to consider possible regulation of dioxins arising from paper pulp mills, municipal incinerators, and wood wastes treated with pentachlorophenol, a wood preservative often contaminated with dioxins.

Dioxin emanating from certain paper mills has received a great deal of attention recently. EPA and the American Paper

Institute conducted a cooperative study of the 104 U.S. pulp and paper mills using chlorine bleaching processes. The data from that study showed concentrations of 2,3,7,8 TCDD (one of the most common and potent forms of dioxin) in pulp sludge at levels up to 1.39 parts per billion. Concentrations in the effluent were measured at levels up to 640 parts per quadrillion. Concentrations in fish in the receiving water bodies reached 157 parts per trillion at one plant. Note that direct measurement of concentrations of dioxin at levels below 10 parts per quadrillion is currently impossible, so EPA often must rely on extrapolations based on assumptions about bioaccumulation to estimate water quality.

According to EPA, a person who regularly eats fish caught one or two miles downstream from a discharge from this type of paper mill has a substantially elevated risk of developing cancer -- the excess cancer rate is roughly one per one thousand over a 70-year lifetime. This is based on eating 130 grams of fish per day for 70 years. Moreover, only a diet of certain fish that do not migrate, such as carp and catfish, would produce these risks.

Discharges of toxic pollutants are regulated under section 304(l) of the Clean Water Act, which authorizes water permit restrictions needed to assure that the concentration of toxic pollutants in water bodies meets health-based water quality standards established by the states and EPA. As a result of the problems described above, tighter dioxin discharge restrictions will be imposed on 58 paper mills where health-based water quality standards were not satisfied. The new permit restrictions will be based on achieving a water quality standard of 0.014 parts per quadrillion, or 1.4×10^{-17}. (This extraordinarily low water quality standard gives a sense of how extremely hazardous EPA believes dioxin to be.) These new permit restrictions will take effect in 1993.

Means of reducing dioxin contamination are available. For instance, the American Paper Institute has concluded that substituting hydrogen peroxide and other substances for chlorine can cut down on dioxin production, but also raises costs.

EPA has also announced regulatory action on several other fronts with respect to paper pulp mills that use chlorine

bleaching processes. First, EPA plans to regulate the land spreading of paper mill sludges under the Toxic Substances Control Act, the federal law governing the manufacture, distribution and use of products containing toxic constituents based on health considerations. Land spreading, the use of wastewater treatment sludges as a soil conditioner, is covered under this statute.

EPA also recently announced that it will set guidelines under the Resource Conservation and Recovery Act, the principal federal law governing practices for handling and disposing of hazardous waste, for best management practices for the control of dioxin in landfills and sludge lagoons used by paper mills.

EPA's dioxin risk assessment also considered the need for possible regulation by the Food and Drug Administration (FDA), the U.S. agency charged with health regulation of foodstuffs. Industry and the FDA have already implemented a voluntary program to reduce the trace levels of dioxin in paper milk containers to a level no higher than the background levels of dioxin in milk, and EPA has asked FDA to continue these cooperative efforts. The FDA has not made any formal regulatory proposals on this matter.

Dioxin has also created special problems for municipal waste incinerators. For instance, a new incinerator in Hempstead, New York was closed in 1980 in part because of dioxin emissions from the combustion of municipal garbage. Based on concerns about public health risks, EPA proposed dioxin emission guidelines for both new and existing municipal waste combusters in late 1989 under section 111 of the Clean Air Act.

Dioxin will be regulated as an air toxic under the proposed Clean Air Act Amendments of 1990. These proposed air toxic regulations would require emitters such as municipal incinerators to implement Maximum Achievable Control Technology (MACT) for control of toxic emissions, and could also require further emission reductions if substantial health risks remain after achieving the MACT standard.

Dioxin-contaminated wastes are included as hazardous wastes under the so-called Superfund law (more formally, the Comprehensive Environmental Response, Compensation, and Liability Act, or CERCLA). If a property is contaminated with dioxin

containing wastes, the generators of the waste and the past and present owners of the property can be held strictly liable (i.e., negligence by the defendant need not be shown) and jointly and severally liable (i.e., any one of the responsible parties can be held liable for all of the remediation costs). Thus, improper disposal of these dioxin contaminated materials can lead to enormous liabilities for the costs of waste site clean up and any related damages to natural resources.

Perhaps the most infamous case of CERCLA liability arising from dioxin contamination was in Times Beach, Missouri, where waste oil contaminated with dioxin was sprayed on dirt roads as a dust retardant. The federal government evacuated the town and bought the residents' contaminated property after the high levels of dioxin were discovered, at a cost of over $30 million. The company that generated the waste, the company that arranged for the transportation of the waste, and the person who actually stored and sprayed the waste oil were all held liable under CERCLA. United States v. Bliss, 667 F. Supp. 1298 (E.D. Mo. 1987).

Overlaid on top of this web of interrelated regulations is the possibility of common law tort suits. For instance, the companies responsible for the dioxin contamination of Times Beach settled tort litigation with the residents of Times Beach for $19 million. Tort liability will, of course, depend on the specific facts. Mere compliance with applicable government regulations, however, will not necessarily protect a defendant from tort liability. The risk of substantial tort liability, along with the concern of insurers, are likely to push responsible industry to be even more careful with dioxin-contaminated materials than required by the regulators.

Industrial producers of dioxin containing materials and wastes must be vigilant with respect to both the changing federal regulatory restrictions and the ever-present threat of costly liabilities under the common law tort system.