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THE DECLINE IN MERCURY EMISSIONS FROM SOLID WASTE MANAGEMENT

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Abstract

Mercury pollution is a growing health and environmental concern. The 1997 EPA Mercury Report to Congress identified mercury emissions from solid waste combustors as causing 1/3 of all emissions in the US. The report attributed smaller amounts to emissions from landfill and product breakage. Some states are targeting solid waste management for regulatory action.

Mercury use in products has declined by 90% since 1980. The electrical industry has been at the forefront of this decline. Incinerator companies have successfully implemented the requirements for mercury emission controls required by the Clean Air Act Amendments of 1990. As a result, there has been a substantial reduction of mercury emissions from solid waste combustors and these combustors are now a very small source of mercury emissions. This and other actions are resulting in demonstrable declines of mercury in the environment. Proposed state action inappropriately still targets the solid waste system as a source of mercury and consists of programs that are not cost-effective and that have no priorities.

The advancements have largely taken place. Industry needs to document and disseminate its achievements. Industry also should foster cost-effective efforts to enhance existing achievements.

Emissions of Mercury from the Solid Waste Stream

In the late 1980s there was a growing concern about the effects of mercury emissions in the environment. As a result, the Congress included in the Clean Air Act Amendments of 1990 a requirement that EPA prepare a report to Congress on the scope of the problem and recommendations for action.

The EPA Mercury Report to Congress, which was released in 1998, showed that municipal solid waste incinerator emissions were the largest anthropogenic source of mercury except for fossil fuel power plant combustion. The report relied on 1995 data and did not consider reductions in industry's use of mercury or the implementation of the Clean Air Act of 1990 municipal solid waste incinerator emission requirements. The report also focused on US emission sources.

The report estimated that mercury deposition in the US was caused equally by natural emissions, by the global background and by US sources. It also estimated that the US was responsible for only 3% of the mercury in the global background. Mercury is the sixth most prevalent metal in the earth's crust