United States Environmental Protection Agency

NESHAP: Final Standards for Hazardous Air Pollutants for Hazardous Waste Combustors; Final Rule

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Office of Solid Waste (5305W)

Hazardous Waste Combustion (HWC) National Emissions Standards for Hazardous Air Pollutants (NESHAP) Final Rule Fact Sheet:

REVISED TECHNICAL STANDARDS FOR HAZARDOUS WASTE COMBUSTION FACILITIES

To further reduce exposure to hazardous air pollutants, the U.S. Environmental Protection Agency (EPA) is issuing national-wide emissions standards for hazardous waste burning incinerators, cement kilns and lightweight aggregate kilns. These standards will significantly limit future emissions of many hazardous air pollutants of concern, including dioxins and furans, mercury, and other heavy metals.

Background

Today's final standards will increase control over emissions of hazardous air pollutants at 172 incinerators, cement kilns and lightweight aggregate kilns now operating in the U.S. These facilities burn about 80%—approximately 3.3 million tons—of the 4 million tons of hazardous waste being combusted each year. The remaining 15 to 20 percent of waste is burned in industrial boilers and other types of industrial furnaces that will be addressed in a future rulemaking.

We are finalizing this rule under the joint authority of the Clean Air Act (CAA) and the Resource Conservation and Recovery Act (RCRA). In doing so, we establish a common-sense approach for coordinated CAA and RCRA permitting of hazardous waste-burning facilities. This final rule ensures that combustion facilities will be able to avoid two potentially different regulatory compliance schemes by integrating the monitoring, compliance testing, and record keeping requirements of the CAA and RCRA into one permit—the Title V CAA permit. The only exception would be extra, site-specific permit conditions as needed to protect human health and the environment under a RCRA permit.

In developing this final rule, we met with affected stakeholders to elicit their feedback on a wide range of regulatory approaches. These groups included owners and operators of affected facilities, environmental and other community-based citizen groups, nonprofit health organizations, and states.

Action

EPA's final rule creates a comprehensive set of clear national emission limits under the CAA. This action fulfills our commitment to substantially upgrade the emission standards for hazardous waste-burning facilities, as stated in our *Hazardous Waste Minimization and Combustion Strategy*. Today's standards are based on the Maximum Achievable Control Technology (MACT) approach required by the CAA. MACT reflects the maximum degree of hazardous air pollution reduction that can be achieved considering the availability, current use, costs, and non-air environmental impacts of emissions control technologies. We estimate that
the costs of compliance for hazardous waste burners will be between $50-63 million annually.

The revised standards will limit emissions of dioxins and furans, mercury, semi-volatile metals (cadmium and lead), low-volatile metals (arsenic, beryllium, chromium, and antimony), particulate matter, acid gas emissions (hydrochloric acid and chlorine), hydrocarbons, and carbon monoxide. Within the next 3-4 years under the final emission limits, hazardous waste burners must significantly reduce emissions of top priority pollutants. For example, dioxins and furans will be reduced by 70%, mercury by 55%, cadmium and lead by 88%, four other toxic metals by 75%, and particulate matter by 42%.

This rule will complement the Agency's other combustion regulations for municipal waste combustors and medical waste incinerators. Overall these three rules will provide reductions of 95% for dioxin, 80% for mercury and 83% for cadmium and lead.

Children exposed to lead can suffer from damage to the brain and central nervous system, slow growth, hyperactivity, and behavior and learning problems. Adults exposed to lead can suffer difficulties during pregnancy, high blood pressure, nervous disorders and memory and concentration problems. Mercury exposure can lead to similar nervous system disorder, particularly in newborn infants whose mothers are exposed during pregnancy. These toxic substances all accumulate in the environment, leading to potential long-term health impacts.

Other key provisions of the final rule include:

- An alternative PM standard for incinerators that have *de minimis* levels of metals in their incoming feed streams; and

- A compliance time line that allow for coordinated testing that might be needed to satisfy risk assessments under RCRA and the performance demonstrations under the CAA.

In an earlier related action, we adopted other regulatory provisions in a companion final rule— known as the "Fast Track Rule", promulgated in June 1998—that dovetail with the provisions of this MACT rule.

Three significant features of the fast track rule are: (1) a comparable fuels exemption for hazardous waste fuels that have constituent levels comparable to those in traditional fossil fuels; (2) a streamlined permit modification process to facilitate compliance with the final standards adopted in this MACT rule; and (3) encouragement of waste minimization by extending compliance deadlines for worthy compliance-oriented facility changes that will reduce the amount of hazardous constituents going to combustion units.

Applicability

This final rule applies to hazardous waste incinerators and cement kilns and lightweight aggregate kilns that burn hazardous waste as fuel.

- **Hazardous waste incinerators** are enclosed, controlled flame combustion devices used primarily to treat organic and/or aqueous wastes.

- **Cement kilns** receive liquid hazardous waste to burn as fuel to run their cement processes. Cement is produced by heating mixtures of limestone and other minerals or additives at high temperatures in a rotary kiln, followed by cooling, grinding, and finish mixing.

- **Lightweight aggregate kilns** produce lightweight aggregate and burn liquid hazardous waste as fuel to run their processes. Lightweight aggregate refers to a wide variety of raw materials (such as clay, shale, or slate) which, after thermal processing, can be combined with cement to form concrete products. It is produced either for structural or thermal insulation purposes.

For More Information

The *Federal Register* notice and this fact sheet are available in electronic format on the Internet at our Web site—www.epa.gov/hwcmact. For additional information or to order paper copies of the *Federal Register* notice, call the RCRA Hotline at 800 424-9346 (outside the Washington, D.C. area), or 703 412-9810 in the Washington, D.C. area or TDD 800 553-7672 (hearing impaired). Copies of documents applicable to this rule are also available on our Web page at www.epa.gov/hwcmact or can be obtained by writing: RCRA Information Center (RIC), U.S. Environmental Protection Agency, Office of Solid Waste (5305), Ariel Rios Building, 1200 Pennsylvania Ave., Washington, DC 20460.