Environmental Fact Sheet

Source Reduction and Combustion of Hazardous Waste

The Environmental Protection Agency (EPA) is issuing a directive to its Regional Offices outlining the importance of source reduction and a series of protective actions to be taken during the permitting of hazardous waste incinerators and boilers and industrial furnaces (BIFs). In addition, EPA is issuing guidance on the elements that should be included in a generator's waste minimization program in order to properly certify that the generator has a waste minimization program in place. Finally, EPA is issuing a draft strategy as the starting point for a broad and open evaluation of how source reduction and waste combustion must be integrated in the nation's hazardous waste management strategy.

Overview of the Combustion Debate

The role that combustion plays in hazardous waste management has changed dramatically over the last decade and a half. Early on, disposal of hazardous waste primarily involved putting wastes into landfills and surface impoundments. As we reached the mid-1980's, there arose a widespread recognition that land-based disposal practices were continuing to present long term pollution problems, particularly with respect to contamination of the nation's ground water.

In 1984, the Resource Conservation and Recovery Act (RCRA) was substantially amended by the Hazardous and Solid Waste Amendments (HSWA). These Amendments charted a new course for hazardous waste management -- away from historic land disposal practices and towards much greater use of treatment technologies prior to disposal. HSWA also further articulated the national policy to emphasize pollution prevention as the first and primary goal for the waste management program.

As a result of this change, combustion of hazardous waste in incinerators and boilers and industrial furnaces (BIFs) began to increase substantially. Concurrent with increased use of combustion as a form of waste management, public concerns began to be voiced about the safety and reliability of combustion facilities. In addition, citizens began to ask whether an overabundance of combustion capacity serves to undercut reduction of waste generated at industrial facilities.

At this juncture, EPA has decided to initiate a fresh look at how to achieve a fully integrated waste management program in which source reduction is given its proper emphasis and in which the role of combustion is carefully considered. As detailed below, this involves the establishment of a broad dialogue on these national policy questions under the joint leadership of EPA and the states. At the same time, EPA will take a series of interim actions designed to further ensure the safety and

reliability of hazardous waste combustion in incinerators and BIFs while longer-range scientific research is being conducted and while technical amendments to the regulations are being evaluated. These interim actions will help to ensure that operation of combustion facilities do not present unacceptable risks to human health or the environment.

Background Facts and Figures

About 5 million tons of liquid, semi-solid, and solid hazardous waste are burned each year in hazardous waste incinerators and BIFs. In everyday terms, these 5 million tons would fill up a line of tank trucks stretching from Washington, D.C. to Los Angeles, some 2400 miles. About 90% of the wastes combusted today are generated by 10 industry categories, which comprise major segments of American industry, for example, petroleum refineries, agricultural chemical manufacturers, and organic and inorganic chemical plants. Common types of wastes being combusted are spent solvents, distillation bottoms, and off-spec organic chemicals and products.

EPA's incinerator regulations were adopted under the Resource Conservation and Recovery Act (RCRA) in 1981. In 1988, EPA's Office of Solid Waste issued supplemental guidance that directed use of the RCRA "omnibus" permit authority to add controls for emissions of metals, products of incomplete combustion (PICs), and hydrochloric acid (HCl) into new incinerator permits on a case-by-case basis.

As of July 1, 1993, there are 190 hazardous waste incinerators, 149 of which can operate under final permits and another 22 of which are operating in interim status pending final resolution of their permit applications. Another 19 facilities have submitted permit applications for new incinerator units. There are 27 commercial incinerators in the United States, 21 of which are in commercial operations today.

Major types of BIFs burning hazardous waste include cement kilns, lightweight aggregate kilns, and industrial and utility boilers. Currently, there are 159 BIFs, of which some 34 are commercial facilities accepting wastes from other generators. BIFs are subject to comprehensive EPA RCRA regulations that were promulgated on December 31, 1990 (56 *Fed. Reg.* 7134, Feb. 21, 1991). Among other key features, these regulations contain controls on metals, PICs, and HCl being emitted from BIF facilities. At the present time, these controls are imposed as interim status standards. No BIFs have yet received final permits although a number of permit applications have been recently filed.

EPA's Objectives

In taking these actions, EPA has articulated several goals that will guide its future actions and will provide the framework for debate on EPA's draft strategy. These goals are:

- To establish a strong preference for source reduction over waste management, and thereby reduce the long-term demand for combustion and other waste management facilities.

- To better address public participation in setting a national source reduction agenda, in evaluating technical combustion issues, and in reaching site-specific decisions during the waste combustion permitting process.

- To develop and impose implementable and rigorous state-of-the-art safety controls on hazardous waste combustion facilities by using the best available technologies and the most current science.

- To ensure that combustion facilities do not pose an unacceptable risk, and use the full extent of legal authorities in permitting and enforcement.

- To continue to advance scientific understanding with regard to waste combustion issues.

The Process for Pursuing a National Strategy

Under RCRA, EPA and the States are partners and co-regulators of the generation, transportation, treatment, storage, and disposal of hazardous waste. EPA is firmly committed to the view that any evaluation of the role of hazardous waste combustion in the hazardous waste management system must be undertaken as a joint federal and state effort. To that end, an EPA-State Committee on Hazardous Waste Management has been formed to further develop the national strategy. The initial charge to this Committee includes focusing on aggressive source reduction measures, improvements to technical and permitting standards, facilitation of alternative treatment technologies, and developing a better scientific foundation for decision making.

Furthermore, EPA intends to involve all stakeholders in this dialogue. EPA is issuing a draft combustion strategy as a starting point for debate on needed source reduction actions and regulatory changes that must be pursued, and will engage the widest range of interested parties in this debate. In particular, EPA is emphasizing aggressive use of source reduction as the first and primary goal to be pursued with respect to the generation of combustible wastes. However, EPA will immediately pursue a number of actions to ensure that existing combustion facilities are operated safely and without unacceptable risks to human health and the environment while the discussions on the source reduction and the national waste management strategy are taking place.

Actions Being Taken

While the national dialogue on source reduction and hazardous waste combustion is taking place, EPA has issued a directive to its Regional Offices that, effective immediately, calls for a series of actions to be taken in connection with making permit decisions on incinerators and BIFs. These actions include:

- aggressive use of waste minimization measures as part of permitting and enforcement efforts involving generators of combustible waste as well as incinerators and BIFs,

- ensuring that a comprehensive risk assessment, including indirect exposures, is conducted at each facility site,

- use of omnibus permit authority to include, where necessary to protect human health and the environment, dioxin/furan emission limits and a stringent particulate matter standard in new permits,

- providing for earlier and more effective public participation, and

- giving low management priority to permitting any new incinerator and BIF capacity over the next 18 months unless the new facilities would replace and be a significant improvement over existing capacity.

In addition, the directive targets incinerators and BIFs for enhanced inspection and enforcement efforts regarding compliance with EPA's regulations and with individual facility permit conditions. These enhanced inspection and enforcement activities will also include use of waste minimization requirements as part of compliance actions.

With respect to source reduction, EPA is also issuing interim final guidelines on the elements of a sound waste minimization program. These elements, which span administrative, financial, and technical areas, should be contained in a generator's waste minimization program in order for that generator to make a proper certification under RCRA. The RCRA statute requires that each generator of hazardous waste make such a certification.

On a broader scale, the Administrator is convening a task force of EPA and state officials to undertake a broad evaluation of source reduction and waste combustion as integral components of the national waste management strategy. Concurrently, EPA is issuing a draft combustion strategy as a starting point for discussion on source reduction and waste combustion.

EPA is committed to ensure that all waste management technologies are fully protective of human health and the environment. EPA will not tolerate operation of waste management facilities that present unacceptable risks to human health and the environment. The series of short and longer-term actions set forth in the Administrator's directive to the Regions and proposed for discussion in the draft combustion strategy are designed to achieve this end. These actions will ensure that EPA doing what it can to pursue aggressive source reduction, to enhance controls on existing combustion facilities, and to promote public participation in permitting and source reduction efforts.

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