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Status of Municipal Waste Combustion (MWC) Ash

In 1990, the United States generated approximately 196 million tons of municipal solid waste. Sixteen percent of this waste, over 31 million tons, was managed in about 150 municipal waste combustion (MWC) facilities which burned the waste for destruction or energy recovery. These facilities generate ash, which weighs approximately 25% of the weight of the original solid waste (59 FR 29372, 29373; June 7, 1994). This ash is primarily landfilled, with less than 10% used in building materials. How does EPA regulate the management of this MWC ash?

The regulatory history of MWC ash is complex. EPA first promulgated hazardous waste regulations under RCRA in May 1980. These regulations included an exemption from all RCRA Subtitle C hazardous waste regulations for household waste (40 CFR 261.4(b)(1)). In the preamble to this rule, EPA interpreted this provision to exempt all residues resulting from the treatment of household hazardous waste, such as MWC ash, from hazardous waste regulations (45 FR 33084, 33099; May 19, 1980). The preamble, however, did not address ash from the combined combustion of household hazardous waste and non-hazardous commercial or industrial waste.

In 1984, Congress amended RCRA by adding 3001(i), which states that a resource recovery facility recovering energy from the mass burning of municipal solid waste and non-hazardous commercial or industrial waste shall not be deemed to be treating, storing, disposing, or otherwise managing hazardous waste under certain circumstances. In 1985, EPA interpreted this provision to exempt certain municipal resource recovery facilities from RCRA permitting requirements but not to exempt MWC ash from RCRA regulation (50 FR 28702, 28725; July 15, 1985). In November 1990, Congress enacted an amendment to the Clean Air Act prohibiting EPA from regulating ash as a hazardous waste under 3001 of RCRA for a period of two years. On September 18, 1992, EPA Administrator William K. Reilly announced in a memorandum that EPA had reinterpreted 3001(i) to include an exemption for MWC ash.

The Environmental Defense Fund filed citizen suits to enforce the EPAfls 1985 interpretation of the statute in two U.S. District Courts. On May 2, 1994, after a series of appeals, the Supreme Court ruled in the case of City of Chicago, et al. v. Environmental Defense Fund, et al., No. 92-1639 (__ U.S. __), that MWC ash is not exempt from RCRA regulation. The Court stated that 3001(i) only exempts

resource recovery facilities from RCRA treatment, storage, and disposal facility (TSDF) regulations; it does not exempt the ash, nor does it exempt the facility from regulation as a generator of hazardous waste. The Supreme Court opinion makes ash generated at resource recovery facilities, whether generated from only household waste or a mixture of household and non-hazardous industrial or commercial solid waste, subject to RCRA regulation if the ash is found to be a hazardous waste. Therefore, facilities generating hazardous MWC ash are fully subject to the RCRA Subtitle C generator regulations, and facilities managing hazardous ash are subject to the RCRA TSDF regulations of Parts 264 and 265.

Although no hazardous waste listing applies to MWC ash, the ash would be a hazardous waste if it were to exhibit a characteristic of hazardous waste as defined in 261.20-261.24. MWC facilities generally produce two kinds of ash: bottom ash and fly ash. Bottom ash is collected at the base of the combustion unit and generally accounts for 75 to 80% of ash generated at a facility. Fly ash is collected in air pollution control devices and accounts for the remaining 20 to 25% of ash at a facility. Studies have shown that fly ash, more than bottom ash, can exhibit the toxicity characteristic of a hazardous waste, typically for lead and cadmium.

The Agency recognizes that immediate compliance with the Supreme Court's decision may be difficult because many facilities have been operating consistent with the Agency's previous interpretation that MWC ash was excluded from regulation under Subtitle C and because of the financial investment required for full compliance with RCRA Subtitle C. Therefore, on May 27, 1994, the Agency issued an implementation strategy memorandum (Herman and Laws to Regional Administrators) outlining EPA's strategy for implementing the court's decision. In addition to the implementation strategy, the Agency has made available two other documents relevant to implementation of the court's decision.

On May 24, 1994, EPA began distributing copies of its draft guidance Sampling and Analysis of Municipal Refuse Incineration Ash (EPA530-R-94-020). This guidance includes recommended procedures for MWC facility owners and operators to follow for ash sampling and analysis. The Agency also published a Federal Register notice on June 23, 1994 (59 FR 32427), requesting comment on the draft guidance. The comment period ended on September 21, 1994. On June 7, 1994, the Agency published a Federal Register notice (59 FR 29372) that: (1) extends the deadline within which owners and operators of facilities that treat, store, or dispose of ash determined to be a hazardous waste can file their hazardous waste Part A permit applications; and (2) interprets ash from waste-to-energy facilities as a "newly identified" waste for the purposes of the RCRA land disposal restrictions (LDR), thereby delaying the application of these requirements for facilities that generate a hazardous ash.