

TABLE 7A.—EMISSION GUIDELINES FOR EXISTING MWC'S: EMISSION REDUCTIONS AND ANNUALIZED COSTS OF THE REGULATORY ALTERNATIVES <sup>a</sup>—Continued

Pollutant category (Mg/yr)/annualized cost (\$1990 10 <sup>6</sup> /yr)	Regulatory alternative				
	Reg. alt. I	Reg. alt. II-A	Reg. alt. II-B	Reg. alt. III	Mact floor
Annualized cost (\$1990 10 <sup>6</sup> /yr) .....	412	443	448	487	425

Source: This table is an extract of tables 5–14 and 5–21 of the document entitled "Economic Impact Analysis for Proposed Emission Standards and Guidelines for Municipal Waste Combustors," EPA-450/3-91-029, March 1994. See **SUPPLEMENTARY INFORMATION** for information on obtaining this document.

<sup>a</sup> The MWC regulation does not mandate a specific type of control equipment. The MWC owner/operator may use any control equipment that meets the emission standards. The control technologies are the projected compliance strategies used as the basis for computing costs. If the MWC has equipment that is meeting or exceeding the control requirements, no additional costs are incurred.

<sup>b</sup> The MACT floor is regulatory alternative II-A without carbon injection for mercury and dioxin/furan control. The majority of the dioxin/furan emission control is achieved by acid gas controls included in alternative II-A and the floor. It is assumed that adding mercury control (carbon injection) to acid gas control reduces dioxin/furan emissions by at least an additional 50 percent. The dioxin/furan emission reduction estimate for the MACT floor is not provided in the "Economic Impacts Analysis."

The regulatory alternatives represent alternative levels of control considered by the EPA, whereas the compliance scenarios represent potential alternative responses by the MWC owners and operators to the emission requirements. Generally speaking, the EPA assumed that MWC owners and operators will choose the minimum-cost control technology that will meet the emission requirements. However, where there is uncertainty regarding the actual emission limits that a particular control technology will achieve in practice, owners may choose a more conservative (and potentially more costly) compliance strategy to reduce the risk of noncompliance. A conservative investment decision is particularly likely when the investment decision affects the facility's ability to remain in operation (e.g., noncompliance results in plant shutdown), is a long-term decision, or involves a significant capital outlay. Consequently, we evaluate two compliance scenarios for meeting the acid gas, PM, and metals control requirements for existing plants subject to guidelines.

A more detailed discussion of the regulatory alternatives EPA considered may be found in the "Economic Impact Analysis for Proposed Emission Standards and Guidelines for Municipal Waste Combustors," EPA-450/3-91-029, March 1994 (see **SUPPLEMENTARY INFORMATION** for information on

obtaining this document). Control alternatives were also developed for NO<sub>x</sub> control and Hg control. Discussion of these alternatives can be found in the following memos that may be obtained from the EPA's Air Docket, as specified in the **SUPPLEMENTARY INFORMATION** section of this preamble: (1) "Update Report on Mercury Control Technologies for Municipal Waste Combustors" prepared by K. Nebel and D. White, Radian Corporation, for W. Stevenson, U.S. Environmental Protection Agency, July 1993; (2) "NO<sub>x</sub> Control on Existing MWC's," prepared by E. Soderberg et al., Radian Corporation, for W. Stevenson, U.S. Environmental Protection Agency, August 23, 1991; (3) "Wet Scrubbing Systems Performance and Cost," prepared by K. Nebel, et al., Radian Corporation, for W. Stevenson, U.S. Environmental Protection Agency, June 22, 1994; and (4) "A Summary of Mercury Emissions and Applicable Control Technologies for Municipal Waste Combustors," prepared by K. Nebel and D. White, Radian Corporation, for W. Stevenson, U.S. Environmental Protection Agency, September 1991.

c. *Social Costs.* The regulatory compliance costs of reducing air emissions from MWC's include the total and annualized capital costs; operating and maintenance costs; monitoring, inspection, recordkeeping, and

reporting costs; and total annual costs. The annualized capital cost is calculated using a 4-percent discount rate for publicly-owned MWC's and an 8-percent discount rate for privately-owned MWC's. The total annual cost is calculated as the sum of the annualized capital cost; operating and maintenance costs; and the monitoring, inspection, recordkeeping, and reporting costs. There are no Federal funds available to assist State and local governments in meeting these costs.

Table 8 provides the estimated compliance costs for the final regulations and their distribution across public and private MWC's. As shown, the national annual compliance costs for existing MWC's total \$405.5 million, with publicly-owned facilities incurring \$229.9 million. This total both represents 56.7 percent of the estimated national compliance costs and forms the basis for allocating benefits to publicly-owned MWC's. (The analysis has assumed that benefits are linear with emission reductions). The level of compliance costs depends not only on the absolute number of facilities, but also on the baseline level of pollution control. It is assumed that higher compliance costs are associated with higher emission reductions and are, thus, appropriate for allocating the benefits associated with the reduced emissions.

TABLE 8.—SUMMARY OF REGULATORY COMPLIANCE COSTS FOR EXISTING MWC'S BY OWNERSHIP (\$1990, 10<sup>3</sup>)

Ownership category	Annual capital costs	Annual operating and maintenance costs	Annual MIRR costs <sup>a</sup>	Total annual costs
Public .....	67,625	154,163	8,092	229,881
Private .....	83,936	87,161	4,575	175,672
Total .....	151,561	241,325	12,667	405,553

<sup>a</sup> MIRR=Monitoring, inspection, reporting, and recordkeeping.