

COMPLIANCE WITH THE NEW EMISSIONS GUIDELINES FOR EXISTING MUNICIPAL WASTE
COMBUSTION FACILITIES

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Abstract

The EPA proposed air emission guidelines for existing Municipal Waste Combustion (MWC) facilities on December 20, 1989. The regulation, 40 CFR Subpart Ca, was eventually issued on February 11, 1991, but Section 129 of the Clean Air Act Amendments of 1990 required the EPA to review and revise the regulations. On October 31, 1995, Subpart Ca was withdrawn and replaced by a more stringent regulation, 40 CFR Subpart Cb. The new guidelines apply to all existing MWC facilities for which construction began before September 20, 1994 and have a capacity to combust over 35 megagrams per day. Most facilities will be required to be in compliance with the new regulations four years from the date Subpart Cb was issued, or by December 19, 1999.

Subpart Cb requires significant capital expenditures and increases in operating costs. The major modifications EPA based the guidelines on are summarized below:

- Spray dryer and baghouse for reduction of sulfur dioxide, hydrochloric acid, dioxin/furans, metals, and particulate on those MWC plants that currently do not have such a system or a spray dryer electrostatic precipitator combination.

- Selective Non-Catalytic Reduction System to reduce nitrogen oxide emissions on nearly all large MWC plants.

- Continuous Emissions Monitoring Systems to monitor sulfur dioxide, nitrogen oxides, carbon monoxide, and opacity for all MWC plants.

- Implementation of good combustion practices to meet carbon monoxide and dioxin/furan emission limitations.

- Activated carbon injection system for most mass-burn MWC units to meet emissions limits of mercury and dioxin/furans.

Estimated capital and annualized costs required to meet these regulations are summarized along with the technologies available to meet these requirements.

INTRODUCTION

MWC facilities constructed during the 1980s were subjected to varying air emission limitations depending on the state in which the facility was constructed. The federal standards for Municipal Waste Combustors (MWC) that existed before 1990 (40 CFR Subparts E and Db) only limited particulate emissions. Therefore, emission limitations and monitoring requirements for other pollutants were established at the state level on a case-by-case basis as part of the New Source Review process. New Source Review requirements generally became very stringent beginning in the late 1980s. However, with the promulgation of the Emission Guidelines for existing MWC facilities, 40 CFR Part 60, Subpart Cb, on October 31, 1995, all existing MWC facilities in the United States will be required to meet similarly stringent emission standards and monitoring requirements. For many MWC facilities, particularly those constructed prior to 1990, compliance with the Emission Guidelines will require significant air pollution control system and emissions monitoring equipment improvements.