

HOW IMPLEMENTATION OF RETROFITS REQUIRED BY THE CLEAN AIR ACT AMENDMENTS OF 1990 AFFECTS WASTE-TO-ENERGY FACILITY OPERATIONS, PLANT EFFICIENCY AND FINANCES

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ABSTRACT

This paper considers the direct and indirect impacts on facility operations and financial performance resulting from the retrofits required to comply with the tighter emissions standards and more stringent operating requirements imposed by the Clean Air Act Amendments of 1990 (CAAA). While all large municipal waste combustors (>250 tons per day) and many smaller units (<250 TPD) have already made the initial financial and operational adjustments required by CAAA-induced changes, many small combustors preparing to comply with the Subpart BBBB requirements, have yet to experience these changes. Since most large WTE facilities only began operating under the new CAAA scenario during or shortly before December 2000, the long-term cost impacts of these changes are only now becoming clear. The Subpart BBBB standards are nearly identical to the standards imposed on large combustors. Each existing WTE facility operator affected by Subpart BBBB must determine whether the standards can be met with existing air pollution control devices and existing emission monitoring equipment, or if a facility retrofit is required. If a facility retrofit is required, the economics of continued operation as compared to alternative disposal options must be considered.

REGULATORY BACKGROUND

By the time the December 19, 2000 deadline for final compliance with the December, 1995 final "Standards of Performance and Emission Guidelines for (Large) Municipal Waste combustors took full effect, the waste to energy industry (WTE) had had nearly a decade to prepare for implementing the changes engendered by the CAAA of 1990. As long ago as the mid 1980's the industry had been grappling with the need to install air pollution control devices that would remove acid gases and control particulate emissions to well below the relatively modest emission standards then existing under 40 CFR 60, subpart Db and Subpart E. The December 19,

1995 "Standards of Performance for Municipal Waste Combustors and Emission Guidelines; Final Rules, Proposed Rule and Notice" covered existing MWC units located at plants with an aggregate plant combustion capacity greater than 35 megagrams per day (approximately 39 tons per day) of municipal solid waste.

In the give and take between permittees and regulatory agencies, air permits and regulations were issued with limits that were sometimes even more restrictive than Federal guidelines (e.g., mercury standards in Florida, New Jersey, and Massachusetts, among other States) and sometimes exceeded the detection limits of USEPA test methods. Vendors began