



## Project Summary

# Capital and O&M Cost Relationships for Hazardous Waste Incineration: Addendum No. 1—Ionizing Wet Scrubber Costs

R. McCormick and H. Lips

The report summarized herein is an addendum to a more comprehensive report, *Capital and O&M Cost Relationships for Hazardous Waste Incineration*, which developed parametric methods for estimating capital and annual costs for incinerators as a function of waste characteristics and quantities, facility capacity, type, and location. The earlier study assumed that particulate/HCl emissions were controlled using venturi scrubber/packed bed absorber systems. This addendum includes ionizing wet scrubber (IWS) systems as a design alternative. It provides, for IWS systems, a methodology to estimate capital cost vs. capacity/particulate efficiency and operating (primarily power and makeup water) requirements. These can be used with the earlier study to project overall capital and O&M costs for incineration facilities using IWSs.

*This Project Summary was developed by EPA's Hazardous Waste Engineering Research Laboratory, Cincinnati, OH, to announce key findings of the research project that is fully documented in a separate report of the same title (see Project Report ordering information at back).*

### Introduction

The U.S. Environmental Protection Agency, Office of Solid Waste, is currently conducting a Regulatory Impact Analysis (RIA) of performance standards for haz-

ardous waste incinerators. This RIA is intended to determine both the costs and benefits of various regulatory standards. The benefits of hazardous waste incinerator regulations are being evaluated through risk assessment studies conducted by other investigators. The study summarized herein addresses certain cost aspects of hazardous waste incineration, specifically capital and operating costs for ionizing wet scrubber (IWS) systems used to control air emissions in some incineration facilities and provides a methodology for estimating these costs. It is an addendum to *Capital and O&M Cost Relationships for Hazardous Waste Incineration*, a report that resulted from a two-year study to develop parametric cost estimating methods for hazardous waste incineration that would enable the user to project potential economic impacts of regulation over various segments of the incineration industry. The parametric relationships developed in that study allow capital and annual operating costs for incineration facilities to be estimated as a function of waste characteristics and quantities, facility size or capacity, generic incinerator system design, energy recovery utilization, air pollution control requirements, facility operating schedule, and facility location in the United States.

The capital cost relationships in the original study encompass all facets of hazardous waste incineration facilities, including waste storage and handling equipment, combustion equipment and

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The complete report, entitled "Capital and O&M Cost Relationships for Hazardous Waste Incineration: Addendum No. 1—Ionizing Wet Scrubber Costs," (Order No. PB 85-153 559/AS; Cost: \$7.00, subject to change) will be available only from:

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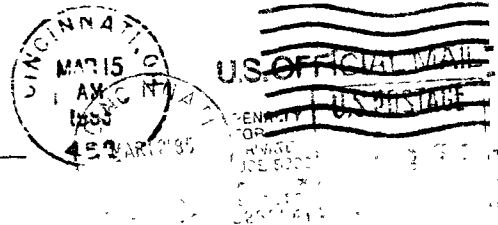
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