

**CASE HISTORY OF A 240 TON/DAY
RESOURCE RECOVERY PROJECT: PART II
The Pittsfield, Massachusetts, Resource Recovery Facility**

Fifteen years later with a new air pollution control system, a new owner/operator, and new challenges.

LLEWELLYN E. CLARK
Energy Answers Corporation
Pittsfield, Massachusetts

I ABSTRACT

This paper discusses the fifteen year operating history of a resource recovery project in a small city. It is the sequel to a paper published during the first year of operation of the project (Clark, L.E., 1982a). It discusses mechanical problems and solutions, availability, and the economics of a modular combustion system generating steam for sale to an adjacent paper mill. The air pollution control retrofit and performance of a wet scrubber system for acid gas control is highlighted. The experience of co-combustion of paper mill sludge is also reported. With the decision of the City to close the landfill by 1998, ash processing is under development. The goal is to prepare aggregate for beneficial use and reduce the weight of the portion requiring disposal to less than 20% of the total residue. This would reduce the weight of material requiring final disposal to less than 5% of the weight of the incoming material. The feasibility of installing a turbine generator and increasing plant capacity is under evaluation.

II INTRODUCTION

Project Review

The previous paper (Clark, L.E., 1982a) discussed the history of the Pittsfield, Massachusetts, Resource Recovery Project commencing with the initial feasibility study in 1975. It explained the role of the consultant, the energy customer, the negotiated procurement process, financing, the permitting process, the design of the facility and equipment, and ended with project start-up in 1981. The

discussion paper (Clark, L.E., 1982b) outlined experiences and plant performance through the first year of operation.

The facility is rated at 240 tons per day (t/d) while operating two of the three 120 t/d modular furnaces designed by Enercon. These ram fed, refractory lined units handle mass fired waste with few size limitations. The City of Pittsfield pays a base service fee for all waste generated in the city and city haulers pay a tipping fee established by contract; one-third of the waste comes from area towns and commercial spot market.

Superheated steam is generated at 240 psi in two Bigelow heat recovery boilers and delivered to Crane and Company (Crane) a local paper manufacturer. The price paid for steam is linked to the cost of number six oil.

Project Update

This paper attempts to summarize the facility performance, describe problems, solutions and experiences with various equipment components, and explain how new air pollution control regulations were addressed. Whereas the facility was originally constructed with a redundant furnace, planning is under way to increase plant capacity by fifty percent by adding a third heat recovery/air pollution control (APC) train. In the spring of 1995, the City of Pittsfield was faced with a DEP consent order to close the residue landfill by 1998. Because the economics of the project cannot support disposal at a remote site, an alternate means of disposal must be developed. Residue processing is discussed; this includes ferrous removal, separation of unburned carbon, washing the bottom ash to produce a usable aggregate, and stabilizing the mixture of fly ash and bottom ash fines prior to disposal.