

Introduction

In the current public concern about the environment and the spate of laws passed to reduce pollution of air and water, a third major problem has been largely overlooked: the proper disposal of solid waste. The per capita volume of waste is increasing. Time-honored disposal methods become less effective as ground suitable for landfill becomes building lots. Deteriorating waste contaminates ground water. Efforts to recover something useful from the waste are being made in several ways: recycling, to reduce dependence on original, virgin raw materials; incineration, with production of saleable steam or other energy; pyrolysis to produce non-polluting fuel; or all of these methods combined with improved collection and classification. In 1971, ASTM Committee G-3, Deterioration of Non-metallic Materials, decided that at some future time these various waste disposal methods would need to be standardized, preferably by voluntary consensus. In June of that year, Subcommittee 5 of G-3 was established to study ASTM's proper place in this important field, with the name "Non-metallic Solids in Waste Management."

The methods of managing solid waste just outlined are not developed to the point where standards would be appropriate. That is for the future. Meanwhile, certain types of containers which contribute to convenient living have incurred environmentalists' ire because of their durability. Containers of aluminum and of most plastics do not disappear when buried. Obsolete incinerators cannot handle them. In the newer European designs, the heat from burning plastics offsets the cooling effect of moisture in the waste, but only a few correctly designed incinerators exist in the United States. The subcommittee concluded that the time was ripe, for a first public effort, to look at the problem of plastic containers in mixed solid waste. Persons with expert knowledge of how to reduce the volume of plastics in solid waste totally or partially prior to final disposal were invited to speak at a symposium at ASTM, 25 Oct. 1972. The aim was threefold: to get wider public attention to the current efforts to reconcile convenient living with concern for ecology; to present the state of the art on beneficial recycling and incineration of plastics, with some of the problems; and to stress that progress is made by patient hard work, not by hysterical clamor. With properly supported and directed research, we can have both convenient living and a clean environment. The papers show some of the directions for future work.

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H. W. Mackinney

Chairman, Subcommittee
G03.05, 1971–1973;
symposium chairman.