

One method of solid waste disposal resulting in a useful end product is composting. This method has received publicity during recent years—some good and some bad. Some plants were built to receive the municipal wastes of a municipality and closed their doors within a year while some have operated for years. We too wonder what the true story of composting as a solid waste disposal process in this country is. What are its technological requirements? What are its economic considerations? What is its likely future as a major method of disposal of solid waste? To answer these and other questions a study in depth of composting was undertaken jointly with the Tennessee Valley Authority. This Joint PHS-TVA Composting Project at Johnson City, Tennessee will evaluate composting of municipal solid waste as well as a mixture of municipal solid waste and sewage sludge. The plant has been completed and is now operating. Studies will be made to determine: (1) Potential agricultural use of the product; (2) The Marketing potential of the compost including geographic limits of the marketing area, and (3) Public Health hazards involved in the use of this product. Operating guidelines will be developed to assure maximum efficiency and plant environmental conditions will be evaluated. At the conclusion of this project the data gathered should permit a thorough and unbiased evaluation of this practice. The evaluation will include net cost figures and likely estimates of the market one might expect. There seems to be few neutral parties concerned with learning the whole story about this controversial method of solid waste disposal. We hope to shed much insight into this important matter.

The protection of the Nation's health is a primary responsibility of the Public Health Service. Consideration of the health hazards involved in solid waste management is no exception. The health hazards associated with air pollution from improper burning of solid wastes is well known as are the hazards from flies and rats which frequent open dumps and areas where improper collection and storage of solid waste is practiced. Not so well known, however, are health hazards involved in the collection of wastes. Those who perform this task are engaging in one of the most dangerous jobs in existence. Through the contract mechanism a study was made of the relationship between disease and solid waste. The research staff of the Solid Wastes Program are evaluating current solid waste handling practices and will evaluate new methods as they are developed to assure the public health is being properly protected as scientific technology advances.

Our research studies include investigation of the hazardous materials in refuse, pathogens associated with incineration processes and occupational hazards in solid waste handling. One might assume that the residue following incineration would be almost sterile. Preliminary investigation by our staff has discovered this is not necessarily true and surveys at several plants indicate gross contamination of this material with pathogenic organisms. Further investigation will determine the magnitude and applicability of this finding and hopefully develop an effective way of using this technique to determine the effectiveness of incinerator operation.

The studies of the occupational hazard of solid waste handling are being jointly undertaken by the research staffs at the Occupational Health Program and the Solid Wastes Program of the National Center for Urban and Industrial Health, and will be devoted to reducing the accident and disease rate by pointing out defects in present technology which contribute to these rates and develop technology which is both effective, economic, and safe.

The most advanced technology can be used to develop a magnificent incinerator or sanitary landfill or compost plant capable of doing the job economically and effectively, but if it isn't operated properly you haven't accomplished a thing. In our rapidly changing world great stress is placed upon new technology and scientific achievement many times of a very sophisticated nature but woefully little attention is given to teaching the man who must operate the facility how to run it and making sure he does a good job. New technology is needed in this area just as much as in those areas normally considered scientific. How do we assure proper operation of multi-million dollar structures?

The American Public Works Association is developing for the Public Health Service a comprehensive blueprint for the training of operating personnel in the field of solid waste disposal. This project supported by a Public Health Service contract will also identify and measure training needs to help guide those who will carry out such training. The technical staff of the Public Health Service's Solid Wastes Program are currently developing guidelines for the operation of sanitary landfills and incinerators using well known authorities in these areas as consultants. Both reports are due to be completed this year.