

MUNICIPAL WASTE COMBUSTION, DISPOSAL OF RESIDUAL ASH

APR 8 1987

Honorable Robert Walker  
U.S. House of Representatives  
Washington, D.C. 20515

Dear Mr. Walker:

Thank you for your March 5, 1987 letter regarding your constituents' Carol and Richard Kushner concern about incineration. Generally speaking, EPA considers combustion to be a viable alternative to direct landfilling as a means of managing municipal waste. We recognize, however, that concerns have been raised about certain aspects of combustion facilities, including the disposal of residual ash.

The solid residues from municipal waste combustion consist of bottom ash, fly ash from air pollution control equipment, and miscellaneous debris from incombustible materials. Because these residues can contain potentially toxic metals, proper disposal practices are important.

The presence of large amounts of such metals could cause ash to be classified as a hazardous waste. One way to determine whether a waste must be managed as a hazardous waste is to perform what is referred to as the "extraction procedure (EP) toxicity test", which determines the concentrations of metals that are likely to leach out of the waste when placed in the type of weakly acidic environment typical of a landfill accepting (unincinerated) municipal garbage.

In 1986, EPA performed a search for published reports of the results of EP tests on ash to see what the results of those tests typically showed. These tests had not been scientifically reviewed, and some of the results were several years old. The results indicated that fly ash may exhibit the EP toxicity hazardous waste characteristic, however, when combined fly and bottom ash was tested. This combined ash frequently did not

exhibit a hazardous waste characteristic. EPA recently initiated a study of the characteristics and leachability of ash from municipal waste combustion to address these issues in a  
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more complete and careful fashion. Following EPA's evaluation of ash characteristics, the Agency will be in a position to evaluate what types of management practices are most appropriate for ash residues.

If ash residues are found to routinely contain sufficient amounts of metals to be of concern, there are a number of technical measures that may be appropriate for their disposal. First, basic housekeeping practices can be used to cut down on the wind dispersal of ash. Second, the common approach of mixing the acidic fly ash with the alkaline bottom ash to achieve a buffering effect will decrease the tendency of the ash to leach metals. (Acidic conditions tend to enhance the leachability of metals). Third, some design and location practices can reduce the tendency of ash to leach or limit the

extent to which leachate would affect groundwater. Monofilling, which is the disposal of ash in a landfill that accepts nothing else, can keep the ash segregated from acids or materials which produce mild acids when they decay. Also, covers can be designed to minimize rainwater infiltration and proper siting of ash landfills can limit contact of the landfill with groundwater.

EPA is also evaluating other aspects of municipal solid waste management. Later this spring, EPA will submit to Congress a report on air emissions from municipal waste combustion facilities. Additionally, EPA is reviewing its program in the general area of solid waste disposal, and will be proposing rules, sometime in 1988 to improve disposal of solid waste at municipal landfills to protect health and the environment.

If I can be of any further assistance, please let me know.

Sincerely,

J. Winston Porter

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