

GUEST EDITORIAL

Finding environmentally sound ways to dispose of hazardous wastes is an increasingly more difficult problem. Methods that were once thought to be acceptable are now known to exacerbate rather than alleviate the problem. Many landfills requiring emergency remedial action today are the result of past random dumping which was once thought to be an acceptable practice. People simply did not realize that the environment could not absorb the amounts of contaminants that were being introduced.

Today things are changing. Incineration, co-firing in high temperature industrial processes and other thermal treatment means are taking the place of random dumping. Thermal treatment seems to be doing a good job of destroying the organic compounds that caused so much trouble when land-disposed in the past. Further, thermal treatment, when properly controlled, can destroy these wastes without giving rise to air pollution from the release of toxic byproducts from stack gases.

The problem still remains, however, of cleaning up the environmental contamination from old dumpsites that over the years have turned into public health hazards. The thermal treatment means described above are not necessarily applicable to those situations for three reasons.

1. Much of the problem at these sites is in the form of contaminated runoff and wastewaters or soils which are inherently difficult to burn.
2. These aqueous wastes and soils occur in high volumes. As such, the logistics of transporting them to a disposal site and treating them at a fixed location make using conventional means for the treatment of these wastes undesirable at best.
3. There is a risk of accidental spills during transportation to the disposal site. The risk to the public health resulting from environmental contamination from these spills is another disincentive to treating wastes by conventional means.

The treatment methods described in this edition of the *Journal of Hazardous Materials* are capable of providing remedial treatment to environmentally contaminated areas in ways that can be efficient and effective and avoid the three problems cited above. One of the main features of these processes is that they are mobile, could be made mobile, or afford *in situ* treatment of the waste problem. By bringing the process to the waste instead of the waste to the process, logistical and economic problems associated with the transportation of large volumes of waste cross-country are avoided.

Additionally, many of these processes emphasize chemical reactions at relatively low temperatures rather than relying on energy intensive incineration. This is much more efficient for wastes that are relatively non-combustible.

Other processes for treating hazardous wastes are under development at EPA and elsewhere. For various reasons many of them could not be in-

cluded in this edition of the *Journal of Hazardous Materials*. The articles contained within this issue of the journal should be considered a sampling of and not an exhaustive account of the innovative processes being developed for treating hazardous wastes.

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