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LANDFILLING OF SOLID & HAZARDOUS WASTE: FACING LONG-TERM LIABILITY

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ABSTRACT

In the past, the "cheapest" method available was used for the management of solid "non-hazardous" and "hazardous" waste. Now with "cradle-to-grave" liability, many companies are more critically evaluating the near-term and long-term liabilities and costs associated with various options for solid and liquid waste management. Recycle and reuse of wastes with residue management that eliminates long-term liability are the most desirable. However, most waste management programs involve some landfilling of wastes and/or treated residues. While claims are made about the environmental protection afforded by "modern" landfills of the type prescribed by the US EPA in Subtitles C and D for "hazardous" and "non-hazardous" wastes, the technical deficiencies in that "dry tomb" landfilling approach for the protection of groundwater quality for as long as the buried wastes represent a threat, are coming to be well-recognized in the technical community. The disposal of "hazardous" and "non-hazardous" wastes in such landfills carries a significant, perpetual liability for clean-up of contaminated groundwaters and eventual "Superfund"-like activities for waste removal and proper management. Recycling and reuse can reduce long-term liability but waste residues associated with recycling, reuse, and treatment can, if not properly managed, create other areas of long-term liability.

The inability of US EPA-prescribed Subtitle C and D landfills to prevent groundwater pollution by landfill leachate for as long as the wastes are a threat should be of significant concern to all waste generators. Solid and hazardous waste generators should critically evaluate the potential near-term and long-term liabilities associated with any particular approach for waste management, resource recovery (including fuel blending, solvent recovery, and reuse), and management of waste residues. This paper reviews why landfills of the type being developed today do not eliminate long-term liability associated with wastes and issues of long-term liability associated with alternative methods of waste management.

INADEQUACIES OF CURRENT LANDFILL DESIGN, OPERATION, CLOSURE AND POST-CLOSURE MAINTENANCE

In the early 1980's the US EPA adopted the "dry tomb" landfilling approach for what it classifies as "hazardous" waste (Subtitle C). It officially adopted the "dry tomb" landfilling approach for municipal solid waste (MSW) management (Subtitle D) in October 1991. While the Agency has not yet promulgated

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