

LONG-TERM OPERATING RESULTS - ASH MONOFILL

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ABSTRACT

An ash monofill was studied from 1997 to 2001. Monitoring results of the lined landfill showed viability of liner since groundwater standards were not exceeded. Raw leachate of RCRA heavy metal leachate results show Chromium reaching groundwater standards while Lead, Cadmium and Zinc slightly exceed these standards. An upset incident of premature set-up of lime-laden ash caused a back-up and overflow condition in 1994. Adding water of solubilization and field compaction achieves optimal geo-technical properties and reduces heavy metal leachate. This water addition would have also reduced fugitive dust concerns. These principles of sound engineering management of MWC residues were well-known and widely publicized. If the landfill operator had applied these principles the upset incident could have been avoided. Long-term trends of RCRA heavy metal leachate results show compliance with groundwater standards, although Lead, Cadmium and Zinc exceed these standards. Application of sound engineering placement practice would have reduced these long-term trends. USA Regulatory officials should consider incorporating these principles into residue management recommendations, following Environment Canada's example. Recognition and implementation of these principles would confirm that incinerator ash can be properly managed - to alleviate concerns - justifying their beneficial reuse.

INTRODUCTION

The non-empirically based environmental rhetoric claiming Municipal Waste Combustion [MWC] is hazardous and poses a threat to groundwater parallels the 16 years odyssey of the residue loaded on board the cargo ship Khian Sea (1). From 1986 to 2001, this material generated at Philadelphia returned to Pennsylvania - resulting in needless costs and wasted efforts. The controversy surrounding MWC residue abated with a Supreme Court decision, requiring its testing as a hazardous waste; i.e., so-called Resource Conservation and Recovery Act [RCRA] testing protocol. The author has