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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

OCT 18 1985

SOLIDTEK LANDFILL/LINER DESIGN

Mr. W. Ernst Minor  
Vice President  
Government Affairs  
SolidTek Systems, Inc.  
4412 Aicholtz Road  
Cincinnati, Ohio 45245

Dear Ernie:

This is in response to your letter of October 3, 1985, as clarified by your telephone conversation with Bob Tonetti on October 15, 1985. Your letter requests our concurrence with the 3-foot thick compacted clay bottom liner that is a component of SolidTek's patented landfill design.

Consistent with the requirements of the Hazardous and Solid Waste Amendments of 1984 (HSWA), our regulations now require, under 40 CFR 264.301(c) and 265.301(a), the installation of two or more liners and a leachate collection system above and between the liners for new landfill units. The regulations state that the bottom liner requirements may be satisfied by a liner designed, operated, and constructed to prevent the migration of any constituent through such liner during the period such facility (or unit) remains in operation, including any post-closure care period. A 3-foot thick layer of compacted clay or other natural material with a permeability of no more than  $1 \times 10^{-7}$  centimeters per second has been deemed by HSWA, at least on an interim basis, to meet this bottom liner requirement. Our regulations reflect this provision of HSWA. Since the SolidTek design includes a bottom liner identical to that described in §264.301(c), this is an acceptable bottom liner design.

However, we do believe that other designs, such as a composite bottom liner consisting of a flexible membrane (synthetic) top component and a clay bottom component are more protective. Until such time as our regulations may be revised, however, a

3-foot recompacted clay bottom liner with a permeability of no more than  $1 \times 10^{-7}$  centimeters per second is acceptable.

As a point of further clarification, the tertiary leachate collection and removal system below the bottom liner in the SolidTek design is allowable by the new double liner system requirements in Parts 264 and 265.

If I can be of further assistance, please feel free to contact me.

Sincerely,

Original Document signed

John P. Lehman  
Director  
Waste Management and  
Economics Division