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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JAN 20 1987

Dr. Suellen Pirages
Director
Institute of Chemical Waste
Management
1730 Rhode Island Avenue, N.W.
Suite 1000
Washington, D.C. 20036

Dear Dr. Pirages:

Thank you for your December 15, 1986, letter concerning the Institute's review of the Agency's guidelines developed for the management of bulk liquid hazardous wastes. You raise two specific concerns, and I will address them in the order in which they were presented.

A value of 50 pounds per square inch (psi) for the unconfined compressive strength test was selected for a number of reasons. A minimum allowable strength was needed as a measure of adequate bonding level in a chemically stabilized waste. Our analysis indicates that 50 psi is characteristic of a bonding level in excess of that achieved with only absorbents. As you know, the Resource Conservation and Recovery Act (RCRA) Section 3004(c)(1) prohibits disposal of bulk liquids treated with only absorbents. I have enclosed a copy of Exhibit 2 as it appears in our bulk liquid guidance document. As can be seen in Exhibit 2, stiff clays have an unconfined compressive strength of 14 to 28 psi, while very stiff clays are in the 28 to 57 psi range.

In your letter you state that currently available processes do not meet this high strength level (i.e., 50 psi). You reported that compressive strength data obtained from the Institute's members who solidify wastes and sludges indicate "a range from 10 to 45 psi depending on setting time."

Exhibit 3 (also attached) in our guidance document indicates the type of unconfined compressive strengths that can be achieved with the addition of 3 or 5% cement or lime

to a soil sample. Another Environmental Protection Agency (EPA) guidance document, "Guide to the Disposal of Chemically Stabilized and Solidified Wastes," indicates that unconfined compressive strength value above 50 psi can be achieved on actual wastes. Table 3-5 of the latter document shows that wastes treated with a lime-based pozzolan product yielded compressive strengths from 26.2 to 169 psi, with all but one value being above 50 psi. Table 4-1 of the same guidance lists results of physical properties achieved by sludge stabilization vendors; these values range from 0.014 psi to 3046 psi, with 6 of the 9 reported values greater than 50 psi. I believe that these data indicate that compressive strengths above 50 psi can be routinely achieved by conventional waste chemical stabilization technology.

In addition, moreover, I think it is important to remember the role of the unconfined compressive strength test as explained in the bulk liquid guidance. The unconfined compressive strength test is to be used when the regulatory agency is uncertain whether unacceptable treatment has occurred (i.e., solely by absorption) as opposed to an acceptable method (i.e., chemical stabilization). When a landfill owner or operator demonstrates to a permit writer that the treatment method for the bulk liquids is not solely by the addition of an absorbent but rather by a chemical stabilization method, the unconfined compressive strength test need not be used.

Your second concern deals with generator and landfill owner/operator responsibility/liability. You state that the "intent of RCRA clearly gives generators responsibility for the fate of their wastes." The bulk liquid management requirements are contained in the land disposal facility management standards section of RCRA (i.e., Section 3004). These standards are enforceable against only the owner or operator of the facility, and not against a waste generator who is a client of such a facility. Consequently, the owner or operator is responsible for ensuring that the treatment of bulk liquids does not occur solely by the use of absorbents. While commercial landfill owners or operators may have private contractual agreements with generators regarding the use of absorbents, such agreements in no way relieve the landfill owner or operator

from compliance with the facility management standards of RCRA.
if you should have any additional questions, please feel
free to contact Paul Cassidy, in our Land Disposal Branch,
at 382-4682.

Sincerely,

J. Winston Porter
Assistant Administrator