

PPC 9554.1995(02)

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

September 19, 1995

Mr. Kevin J. Igli
Vice President, Environment, Health & Safety
Chemical Waste Management, Inc.
3001 Sutterfield Road
Oak Brook, Illinois 60521 .

Dear Mr. Igli:

Thank you for your letter of June 15, 1995, regarding macroencapsulation of hazardous debris. You referred to an interpretive guidance memorandum sent by EPA's Office of Solid waste to EPA Region VIII on February 16, 1994 regarding the macroencapsulation of mixed hazardous/radioactive debris waste, and requested clarification on the memorandum's applicability. Specifically, you requested EPA's determination on whether CWM's macroencapsulation process addresses the requirements of 40 CFR 268.45, Table 1.

As your letter pointed out, EPA has specified two definitions of macroencapsulation: a specified technology for D008 radioactive lead solids, and one for hazardous debris. In 40 CFR 268.42, Table 3, EPA specified for D008 radioactive lead solids a required method of treatment, macroencapsulation. Macroencapsulation is defined in 268.42, Table 1 as:

Macroencapsulation with surface coating materials such as polymeric organics (e.g., resins and plastics) or with a jacket of inert inorganic materials to substantially reduce surface exposure to potential leaching media. Macroencapsulation specifically does not include any material that would be classified as a tank or container according to 40 CFR 260.10.

EPA defined macroencapsulation for hazardous debris at 268.45 as:

Application of surface coating materials such as polymeric organics (e.g., resins and plastics) or of a jacket of inert inorganic materials to substantially reduce surface exposure

to potential leaching media.

Obviously the only difference between the definitions is that the prohibition against using tanks and containers was not included in the definition of macroencapsulation for treating hazardous debris. Thus, the Agency provided more flexibility in treatment for hazardous debris by not specifically prohibiting the use of tanks and containers.

Your letter describes CWM's macroencapsulation process. A jacket of inert inorganic material is placed around the hazardous debris as the encapsulating agent in a high density polyethylene vault. The lid of the vault is secured and the unit is disposed in a subtitle C (hazardous waste) landfill.

It is EPA's determination that your treatment process meets the definition of macroencapsulation for hazardous debris, subject to an evaluation that the tank or container is structurally sound and resistant to degradation, in order to substantially reduce exposure to potential leaching media. As you allude to in your letter, merely placing hazardous debris in a tank or container, except under special circumstances where the container is made of noncorroding materials (e.g., stainless steel), would not fulfill the macroencapsulation treatment standard. State or EPA Regional authorities can best evaluate if the design criteria and operation procedures are sufficient.

EPA does not view this as a reversal of its previous position in its memorandum of February 18, 1994. Rather, it is clarifying that for the treatment of hazardous debris, the definition of macroencapsulation in 268.45 should be used, and for the treatment of D008 radioactive lead solids, the definition in 268.42 should be used.

Hopefully, this response addresses your concerns. If you have further questions, do not hesitate to give me a call on (703) 308-8434.

Sincerely,

Richard Kinch
Chief
Waste Treatment Branch

cc: Fredrick Moore, Oregon DEQ
Bruce Long, Region X, Oregon Operations Office