

9554.1990(07)

SUBMARINE REACTOR COMPARTMENTS - LAND DISPOSAL  
RESTRICTIONS

OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

JUL 30 1990

Richard A. Guida  
Associate Director  
Naval Nuclear Propulsion Program  
Department of the Navy  
Naval Sea Systems Command  
Washington, D.C. 20362-5101

Dear Mr. Guida:

This letter is in response to your letter dated May 24, 1990, concerning the Land Disposal Restrictions for defueled submarine reactor compartments. In this letter, your primary question was whether the Navy's program for disposal of these reactor compartments falls within the "Macroencapsulation" standard for these wastes as promulgated on May 8, 1990 as part of the Land Disposal Restrictions Rule for Third Third Wastes.

EPA points out that while EPA concurred on this disposal practice as part of an extensive Environmental Impact Statement issued in May of 1984, the Hazardous and Solid Waste Amendments of November, 1984, required EPA to establish treatment standards for all hazardous wastes prior to land disposal. Thus, EPA promulgated regulations covering such wastes on May 8, 1990. While the June 1, 1990 Federal Register Notice which listed these regulations did not provide a specific response to your comments, your questions were answered in the administrative record for the rule in a document entitled the "Response to BDAT Related Comments Document, Volume I-J", (as comment number 15-A-1).

In summary, EPA determined that the practice of direct land disposal of these compartments may meet the "Macroencapsulation" BDAT treatment standard for D008 radioactive lead solids. The key to assuring compliance with the standard is the stipulation in the regulatory language that the "jacket of inert inorganic materials" (i.e., the steel surrounding the lead) "substantially

reduce(s) surface exposure to potential leaching media". Since the information in your letter and your comments appears to indicate that this is true, the Agency believes that the practice probably complies with the BDAT standard for D008 radioactive lead solids. The compartments probably are considered to meet BDAT "as generated", because the lead shielding (as originally constructed) is surrounded in a thick, sealed steel jacket. The key to this decision is whether the steel is indeed sealed and thereby minimizing potential exposure to any leaching material.

EPA chose to establish "Macroencapsulation" as BDAT for D008 radioactive lead solids in order to reduce the potential for radiation exposure during both treatment and testing. It is important to point out that because the standard is a technology-based standard (i.e., specified technology), compliance does not require that the waste undergo a TCLP analysis for lead. The TCLP analysis would have required crushing or grinding of the material in order to verify compliance and would have gone against the whole purpose of establishing this standard.

EPA purposely modified the proposed standard for D008 radioactive lead solids to include "jackets of inorganic materials" in order to specifically account for the submarine reactor compartments. However, EPA felt that it was necessary to add the language to the definition of macroencapsulation to prevent the "jacket of inorganic material" from being interpreted as including materials that are merely containers or drums. Thus, we concur with your interpretation that the submarine compartment does not meet the definition of either a drum or a container.

I hope that this information clarifies your concerns as well as any potential concerns that may arise with the State of Washington over the applicability of "Macroencapsulation" as BDAT for your decommissioned reactor compartments. If you, or the State of Washington, need further clarification or if you feel a meeting is necessary, please call Richard Kinch, Chief of the Waste Treatment Branch, at (202) 382-7917. Thank you for your patience in receiving your response. The Third Third Land Disposal Restrictions Rule has generated a significant amount of questions. For your information, we will be reiterating the above discussion concerning your situation in a Federal Register Notice covering corrections to the rule. This notice should be out by early fall.

Sincerely,

Original Document signed

Sylvia K. Lowrance  
Director  
Office of Solid Waste