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RCRA HAZARDOUS WASTE DETERMINATION OF SPENT NUCLEAR REACTOR  
FUELS

United States Environmental Protection Agency  
Washington, D.C. 20460  
Office of Solid Waste and Emergency Response

November 22, 1993

Mr. Richard A. Guida  
Associate Director for Regulatory Affairs  
Office of Naval Reactors  
Department of Energy  
Washington, D.C. 20585

Mr. Guida:

Thank you for the opportunity to review the reports which you recently subrouted to me regarding the Naval Nuclear Propulsion Program's (NNPP) spent nuclear reactor fuels and the RCRA hazardous waste determination. In these reports, the NNPP detailed its efforts at characterizing the Program's spent fuels based both on "process knowledge" and actual analyses conducted in hot cells in accordance with the Toxicity Characteristic Leachate Procedure (TCLP).

First, I want to commend your staff for the extraordinary efforts undertaken to characterize actual samples of irradiated fuel for the Toxicity Characteristic. I recognize that it is a fairly daunting task to sample and analyze these highly radioactive materials, and I believe your Program's efforts are unprecedented in this respect. I also would like to thank Mark Neblett of your staff for his efforts to clarify for my staff portions of the draft report that accompanied your September 20, 1993 letter to EPA, and to hand deliver additional materials to assist the Office of Solid Waste (OSW) in its review.

The entire report was reviewed by both EPA mixed waste policy staff in the Permits and State Programs Division, and RCRA testing methods experts in our Characterization and Assessment Division. Based on my staff's review, the Office of Solid Waste concurs with the reports' conclusion that the NNPP's spent reactor fuels and

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assemblies should not present any of the characteristics that identify RCRA hazardous wastes. Our concurrence is based on our review and agreement with the NNPP's "process knowledge" analysis, the TCLP analytical procedures used, and the TCLP/quality control measures described in your report. We also believe, given the conservative assumptions which the NNPP employed in selecting representative spent fuel samples (i.e., selecting samples that contained the highest possible concentrations of RCRA hazardous metals), that the reports support a general determination that none of the Program's spent reactor fuels would be classified as RCRA hazardous waste. This latter conclusion is, of course, conditioned on the completeness and accuracy of the information shared with EPA on the Program's "process knowledge," particularly with regard to projecting the TCLP test results obtained to other fuels than those that were actually involved in the testing.

As you are aware, EPA delegates the authority to implement the Subtitle C RCRA program to the States. Currently, 35 States and one territory have received from EPA the approval to regulate RCRA mixed waste. We recommend that you share your results with the appropriate hazardous waste personnel in those States where the spent reactor fuel is managed.

Again, we appreciate the opportunity to evaluate the results of the spent fuel "process knowledge" analysis and CLP test. If you have any questions on EPA's review, please contact Susan Jones, at (703) 308-8762.

Sincerely,  
Michael Shapiro, Director  
Office of Solid Waste