



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
WASHINGTON, D.C. 20555-0001

September 13, 1996

**MEMORANDUM TO:** Chairman Jackson  
Commissioner Rogers  
Commissioner Dicus  
Commissioner Diaz  
Commissioner McGaffigan

**FROM:** James M. Taylor *James Taylor*  
Executive Director for Operations

**SUBJECT:** SAVANNAH RIVER SITE HIGH-LEVEL WASTE TANK CLOSURE:  
CLASSIFICATION OF RESIDUAL WASTE AS INCIDENTAL

In January of this year, the U.S. Department of Energy (DOE) initiated the process for retrieval, treatment, and vitrification of the defense high-level radioactive wastes (HLW) currently stored in 51 tanks at the Savannah River site in South Carolina. In relation to these activities, staff met with DOE representatives in April of this year to discuss DOE's plans for the closure of the tanks once they are emptied of their contents. Additional informal feedback on DOE's tank closure plans was provided by teleconference.

The key issue with respect to tank closure is whether DOE effectively removes essentially all of the HLW from the tanks such that the residual wastes in the tanks can be classified as "incidental." Wastes classified as "incidental" are not encompassed within the definition of "high-level radioactive waste" in Appendix F of 10 CFR Part 50 and, consistent with the requirements of Section 202 of the Energy Reorganization Act of 1974, the facilities (i.e., the tanks) to be used for disposal of these incidental wastes are not subject to U.S. Nuclear Regulatory Commission licensing authority under the Act. Criteria for distinguishing HLW from incidental wastes were clarified in the Commission's consideration, and subsequent denial in February 1993, of a petition for rulemaking, submitted by the States of Washington and Oregon, which dealt with the process and criteria for classification of radioactive waste materials at defense facilities as HLW or as non-HLW. In order to address issues related to Hanford tank wastes, the Commission's policy guidance on waste classification was explained to DOE in correspondence from the staff in March 1993 (letter from R. Bernero to J. Lytle). As noted in that letter, the Commission would regard the residual fraction as "incidental" waste if the tank waste: (1) has been processed (or will be further processed) to remove key radionuclides to the maximum extent that is technically and economically practical; (2) will be incorporated in a solid physical form at a concentration that does not exceed the applicable concentration limits for Class C low-level waste as set out in 10 CFR Part 61;

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and (3) will be managed, pursuant to the Atomic Energy Act, so that safety requirements comparable to the performance objectives set out in 10 CFR Part 61 are satisfied.

The staff plans to use the above criteria, as appropriate, to evaluate DOE's methodology for residual waste classification in the Savannah River tanks and, ultimately, whether disposal of these wastes is subject to NRC licensing authority. In particular, the Commission guidance issued in March 1993 mainly addressed classification of the radioactive wastes removed from the tanks at Hanford and other DOE facilities. Therefore, staff will need to consider whether modification of the criteria may be needed to address the tanks themselves after removal of the wastes.

DOE has also been working with the South Carolina Department of Health and Environmental Controls and the U.S. Environmental Protection Agency to determine acceptable closure criteria. Regulator approval of the closure plan is contingent on NRC acceptance of the incidental waste classification methodology. In light of this, DOE recently submitted a formal request (attached letter dated August 28, 1996, from M. Fiori to C. Paperiello) for the staff's expedited review of DOE's methodology for classification of residual tank waste as "incidental." The letter further requested NRC concurrence with DOE methodology by the end of September 1996.

Although the staff intends to give DOE's request high priority, the staff believes that DOE's desired schedule for the review is infeasible. It should also be noted that this activity was not included in DOE's April forecast of needs for NRC technical support and, presently, therefore, no funding has been allocated for this review. It is the staff's intent to establish a funding mechanism for this review before resources are committed to this effort. This issue will be addressed with DOE and, if feasible, a funding provision will be included in an Interagency Agreement with DOE, as was done for NRC's review of DOE's plans for excess weapons plutonium disposition. The staff's estimate is that a review of DOE's methodology for residual waste classification will necessitate approximately 1-1.5 full-time equivalents over a period of 6 to 7 months. This includes time allocated for Commission review of the results of the staff's evaluation of this methodology.

In response to the August 28, 1996, letter, the staff will advise DOE of the scope and schedule of the planned review, as well as the issue of funding before conducting this review. Mr. Fiori, DOE Manager of the Savannah River Operations Office, is concerned about the time required for NRC review and concurrence beyond September 1996. While he has stated to the Office of Nuclear Materials Safety and Safeguards management that he was informed by his staff that NRC had committed to perform this work verbally in an April meeting and subsequent phone calls, NRC staff involved stated that no such commitments have been made. Nevertheless, NRC staff plans to meet with DOE and discuss scope, funding and schedule on September 17, 1996.

The Commissioners

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The staff will keep the Commission informed of further developments in this matter.

Attachment: 8/28/96 ltr (DOE to NRC)

cc: OGC  
OPA  
OCA  
SECY