

December 22, 2005

Mr. David Wilson, Jr.
Assistant Bureau Chief
Bureau of Land and Waste Management
South Carolina Department of Health
and Environmental Control
2600 Bull Street
Columbia, SC 29201

Dear Mr. Wilson:

The purpose of this letter is to respond to the November 23, 2005, letter from the South Carolina Department of Health and Environmental Control (SCDHEC), which provided comments as part of the scoping process for development of a Standard Review Plan (SRP) for Nuclear Regulatory Commission (NRC) review of Department of Energy (DOE) incidental waste determinations. The SRP is a technical document that will provide guidance to NRC staff to ensure that staff reviews are consistent and complete. Although many of the comments in your letter are outside the scope of the SRP process itself, your comments are important and warrant a response. The discussion below serves to document and expand upon some of the points I noted to you during our telephone conversation on December 15, 2005, in which we discussed SCDHEC's concerns as expressed in the subject letter.

The NRC agrees that the radioactive waste stored by DOE in the tank farms at the Savannah River Site (SRS) should be dispositioned in a safe and timely manner. To that end, NRC has and will continue to work closely with DOE to ensure that the process outlined in Section 3116 of the Ronald Reagan National Defense Authorization Act for Fiscal Year 2005 (NDAA) is as efficient and effective as possible. As you know, Section 3116 establishes a process that allows DOE to determine that some waste resulting from the reprocessing of spent nuclear fuel is not HLW. Section 3116 includes specific criteria that DOE must meet to demonstrate that such waste is not HLW and DOE performs a complex technical evaluation, known as a "waste determination", to determine whether its waste management strategy will satisfy these criteria.

DOE's waste determinations are based upon many years of research and analysis of the natural environment and engineered systems, and include complex performance assessment (PA) models that evaluate the release and transport of radionuclides from the disposal system to potential receptors over very long time periods. The NRC fulfills its consultative responsibilities under Section 3116 by reviewing DOE's waste determination and, based on NRC's technical expertise, providing its views as to whether DOE's waste management strategy meets the Section 3116 criteria. NRC's technical reviews are highly complex and include an assessment of not only the waste determination itself, but also DOE's supporting materials such as background references, PA model support, and other supporting analyses. Some of the technical areas reviewed by NRC include the following:

- estimated radionuclide inventory
- technology alternatives for waste removal

- disposal site characteristics (e.g., hydrology, geology, geochemistry)
- waste form characteristics and durability
- DOE's performance assessment methodology
- engineered system performance
- infiltration, release, and transport parameters
- receptor scenarios and assumptions
- uncertainty and sensitivity analyses

NRC does not perform a regulatory review, but instead performs a technical review to reach an independent conclusion as to whether DOE's waste management strategy meets the criteria in Section 3116.

As I emphasized in our conversation on December 15, NRC continues to believe that the nine month timeframe for our waste determination reviews is appropriate given the complexity of the reviews and NRC's role as established in Section 3116, which includes not only consultation with DOE but also monitoring to assess DOE's compliance with the performance objectives in 10 CFR Part 61, Subpart C once the technical review is completed. As a point of reference, similar waste-incident-to-reprocessing (WIR) reviews that NRC has performed in the past have typically taken nine to 15 months to complete.

In June 2005, the Commission approved the NRC staff's proposed approach for carrying out its responsibilities under the NDAA via a Staff Requirements Memorandum (SRM), SECY-05-0073. In this SRM, the Commission directed the staff to "take the time necessary to complete its reviews to ensure the protection of the public health and safety" and to "ensure that the technical basis for our decisions are transparent, traceable, complete, and as open to the public and interested stakeholders as possible." The NRC staff is conducting its reviews as expeditiously as possible, consistent with this direction from the Commission. The NRC firmly believes that a rigorous technical review of DOE's waste determinations, conducted in an open manner, will result in conclusions that can withstand scientific scrutiny and that will be of value to DOE, SCDHEC, and other stakeholders.

One of the issues noted in your November 23 letter was that NRC should work with DOE to clarify how to determine whether waste is Class C or greater-than-Class C. NRC met with DOE in July 2005 for a technical exchange regarding this topic and provided verbal guidance on waste classification that was based on the principles established in NRC's 1995 Branch Technical Position on Concentration Averaging and Encapsulation. However, in recent waste determination submittals, including the submittal for Tanks 18/19 at SRS, DOE did not specify whether the residual waste was within or exceeded Class C limits. On December 16, 2005, NRC staff published a Federal Register Notice that provided draft interim guidance on the application of concentration averaging principles to the types of situations typically evaluated in DOE waste determinations. This guidance, which was forwarded to you under separate cover, will be part of the SRP and was released early because of the high interest of various stakeholders as well as DOE's stated need for the guidance. The public comment period for the draft interim guidance is open until January 31, 2006.

NRC will continue to seek opportunities to improve the effectiveness and efficiency of the Section 3116 process. The initial quality and completeness of DOE submittals is a key factor that influences NRC's review schedule. NRC is fully supportive of holding discussions with DOE earlier in the waste determination review process to address key technical issues. We are working with DOE to establish a series of open meetings to discuss technical issues applicable to the SRS Tank 18/19 determination as well as future waste determinations. Such discussions should help to facilitate the consultation process. NRC has a team of experienced technical staff working on SRS waste determinations who are very familiar with the SRS site and key DOE staff. In addition, NRC's development of an SRP to guide staff reviews of future waste determinations will help to ensure that NRC continues to have a stable, predictable review process.

NRC and DOE are planning to hold a "lessons learned" discussion in early 2006 regarding the waste determination for salt waste disposal at SRS, which was the first review conducted under Section 3116. I look forward to SCDHEC's participation in this important meeting and to future discussions with SCDHEC regarding the Section 3116 process.

Sincerely,

/RA/

Larry W. Camper, Director
Division of Waste Management
and Environmental Protection
Office of Nuclear Material Safety
and Safeguards

cc: Ms. Jean Sule, Chairman, SRS Citizens Advisory Board
Mr. Robert Meisenheimer, WM Committee Chair, SRS Citizens Advisory Board
Mr. Mark Gilbertson, Deputy Assistant Secretary, U.S. Department Of Energy
Mr. Ben Rusche, Chair, S.C. Gov't Nuclear Advisory Committee

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Larry W. Camper, Director
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 Mr. Robert Meisenheimer, WM Committee Chair, SRS Citizens Advisory Board
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