



Department of Energy
National Nuclear Security Administration
Washington, DC 20585

October 8, 2003

Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Docket Number 070-03098
Duke Cogema Stone and Webster
Mixed Oxide Fuel Fabrication Facility
*Mixed Oxide Fuel Fabrication Facility Environmental Report, Request
for Additional Information*

References: 1) Scott C Flanders (NRC) letter to Peter S. Hastings (DCS), *Request
For Additional Information: Duke Cogema Stone & Webster
Environmental Report*, dated September 24, 2003

2) U.S. Department of Energy Inspector General Audit Report,
"Savannah River Site's Waste Solidification Building," DOE/IG-IG-
0618, dated September 4, 2003

Reference 1 requested additional information from Duke Cogema Stone and Webster (DCS) regarding the MOX Fuel Fabrication Facility (MFFF) Environmental Report (ER) in view of information presented in Reference 2. The information requested relates to the Waste Solidification Building (WSB) and the disposition of waste that is to be processed in the WSB.

On October 2, 2003, a conference call was held between the U.S. Department of Energy (DOE) Office of Fissile Materials Disposition (NA-26) and the U.S. Nuclear Regulatory Commission (NRC) staff. During this conference call, DOE indicated that the inquiries of Reference 1 address issues that are the responsibility of DOE rather than DCS. Accordingly, NA-26 is providing additional information as a matter of comity as set forth in the enclosure to this letter.

In general, it should be noted that although Reference 2 was released in September 2003, the information on the WSB in the IG report was based on the conceptual design of the building as it existed in July 2002. The information contained in the Mixed Oxide Fuel Fabrication Facility Environmental Report, Revision 4, August 13, 2003, is based on the current preliminary design of the WSB. As indicated during the October 2 conference

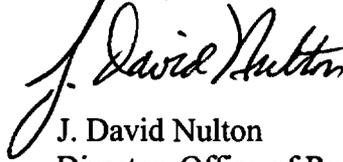


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call, NA-26 reaffirms the information contained in Revision 4 of the Environmental Report. If at a future time DOE proposes different waste disposition alternatives than currently addressed in its planning baseline, DOE will then perform the appropriate National Environmental Policy Act review. If you have any questions, please contact me at 202-586-4513.

Sincerely,



J. David Nulton
Director, Office of Reactors
Office of Fissile Materials Disposition

Enclosure

cc: (w/ enclosure)
Edward Siskin, NA-26
Joe Olencz, NA-261
James Johnson, NA-261
Patrick Rhoads, NA-261
David Alberstein, NA-261
Hitesh Nigam, NA-265
Sterling Franks, NA-266
Kathleen Martin, GC-52
Martin Virgilio, NRC/NMSS
Robert Pierson, NRC/NMSS/FCSS
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Edward Brabazon, Duke Cogema Stone & Webster
Peter Hastings, Duke Cogema Stone & Webster
Mary Birch, Duke Cogema Stone & Webster
Donald Silverman, Esq., Duke Cogema Stone & Webster

**Information Concerning September 24, 2003
NRC Request for Additional Information on the
DCS Environmental Report**

RAI No.1:

Reaffirm or provide additional information regarding the quantities of liquid low level waste, solid low level waste and solid transuranic (TRU) waste that the Waste Solidification Building (WSB) will produce over the life of the facility. Please also reaffirm the number of TRU waste shipments between the WSB and the Waste Isolation Pilot Plant (WIPP).

In its Audit Report, the DOE-IG cites specific values for amounts of waste produced at the WSB and the number of shipments required to transfer solidified TRU waste to the WIPP. For example, the total amount of liquid low level waste cited by the DOE-IG on page 1 of the report, and again on page 3, is 819,000 gallons. The value presented in the ER on page G-14 is 235,000 gallons per year. Over a 10 year facility life, staff have estimated the waste volume would be approximately 2,350,000 gallons, not 819,000 gallons.

Information Concerning RAI No.1:

Although the IG report is dated September 2003, the WSB data cited in the report are based on the conceptual design of the building as it existed in July 2002. The data presented in Revision 4 of the Environmental Report are based on the design of the building as it currently exists. The data in Revision 4 of the Environmental Report are hereby reaffirmed.

RAI No.2:

Reaffirm or provide additional information regarding the estimated life-cycle costs to ship WSB-treated TRU waste to WIPP.

In its Audit Report, the DOE-IG estimates that shipments of WSB-treated TRU waste to WIPP will "cost the DOE at least \$5,000,000 above and beyond the Plutonium Disposition Program's projected life-cycle costs. . . ." On February 15, 2002, NNSA submitted a report to Congress titled, "Report to Congress: Disposition of Surplus Plutonium at Savannah River Site." The cost information in this 2002 report, which doesn't include a line item for WSB-treated TRU waste transportation, is the current basis for estimates provided in the NRC's Draft Environmental Impact Statement (DEIS).

Information Concerning RAI No.2:

The 2002 Report to Congress includes costs for disposition of wastes generated by plutonium disposition activities. The IG report raises the issue of a potential \$5 million

increment to the \$3.8 billion life cycle cost of the Plutonium Disposition Program. It should be noted that this potential cost increment is approximately 0.1% of the total plutonium disposition program life cycle cost, a magnitude well below the uncertainty in program costs. The cost information referred to in the Environmental Report is hereby reaffirmed.

RAI No.3:

Reaffirm or provide additional information regarding statements in the ER that WSB and MOX facility waste will be further treated, stored and shipped from supporting facilities at the Savannah River Site.

On page 3-19 of the ER, section 3.3.2.9, "Processing of Liquid High Alpha Activity Waste at the Waste Solidification Building," DCS states that "The high alpha waste volume is reduced by evaporation and the still bottoms neutralized with sodium hydroxide. The distillate is sent to the SRS ETF as LLW. The neutralized bottoms are blended with cement to produce a solid TRU waste matrix suitable for disposal at the Waste Isolation Pilot Plant (WIPP)." Similar statements appear throughout other sections of the ER.

In its Audit Report, the DOE-IG received statements from the Assistant Secretary for Environmental Management that "an existing Department Order and accompanying manual hold NNSA clearly responsible to plan for disposal of its newly generated nuclear waste.

Therefore, it was not necessary for NNSA to formally request Environmental Management acceptance of the WSB waste. Rather, NNSA alone should plan for the disposal of the waste." (DOE-IG Sept. 2003, p. 2). DOE-IG included in Appendix 3 of the audit report a letter to the DOE-IG from Michael C. Kane, Acting Associate Administrator for Management and Administration, NNSA, dated June 18, 2003. In the second paragraph of this letter, NNSA states, "Current NNSA plans do not depend on Savannah River Site support for the Waste Solidification Building. Consequently, there is no need for a plan and formal agreement with the Office of Environmental Management at this time for the transfer of waste." This statement is contrary to statements in the DCS ER, which indicate, for example, that NNSA will rely on the SRS Effluent Treatment Facility (Section G.1.2.3.4, DCS ER).

Information Concerning RAI No.3:

Regardless of which Office in the Department maintains responsibility for waste treatment, storage, transportation, and disposal operations, appropriate funding to conduct such activities will be allocated, subject to the availability of appropriated funds. Waste disposal costs were considered in the plutonium disposition program overall planning basis. The Department intends to continue with its current approach, which would make appropriate waste disposal capability and capacity at the Savannah River Site and the Waste Isolation Pilot Plant available to appropriately handle the program's waste disposal

responsibilities. Complying with waste disposal facility waste acceptance criteria is a matter of fact, in order for any waste to be accepted, handled, stored, and disposed. Nothing in the IG report should be taken to imply that any decision has been made to pursue a waste disposal alternative other than that of the current planning baseline presented in Revision 4 of the Environmental Report.

RAI No.4:

Identify and describe the other options under consideration by NNSA for treatment, storage or disposal of wastes produced by the WSB.

In its Audit Report, the DOE-IG finds that “NNSA is currently evaluating an option that would eliminate liquid wastes but significantly increase the amount of low-level solid wastes that would need to be dispositioned. This option would eliminate NNSA’s need to use the Office of Environmental Management’s Effluent Treatment Facility.” (DOE-IG Sept. 2003, p. 3).

NRC is performing an environmental review for construction and operation of the WSB as a connected action to the proposed action to approve construction and operation of the Mixed Oxide Fuel Fabrication Facility. DCS should provide additional information on the design alternatives under consideration by NNSA which might reduce the environmental impacts of connected waste management actions.

Information Concerning RAI No.4:

DOE maintains its support of the information contained in Revision 4 of the Environmental Report, and as such, it remains the Department’s planning baseline. If at a future time DOE proposes different waste disposition alternatives than currently addressed in its planning baseline, DOE will then perform the appropriate National Environmental Policy Act review. As stated above concerning RAI No.3, nothing in the IG report should be taken to imply that any decision has been made to pursue a waste disposal alternative other than that of the current planning baseline presented in Revision 4 of the Environmental Report.