50-390/391

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

December 7, 1994

Ms. Debra Jackson
MTSU Box No. A040
Murfreesboro, Tennessee 37132

SUBJECT: ENVIRONMENTAL ISSUES ASSOCIATED WITH THE OPERATION OF WATTS BAR NUCLEAR PLANT

Dear Ms. Jackson:

Thank you for your letter concerning the environmental issues associated with the operation of the Watts Bar Nuclear (WBN) Plant. In particular, your letter identified concerns regarding the high probability of a core meltdown accident at the WBN plant and the impacts of radioactive waste generated from operation of the WBN plant.

The NRC's environmental review process includes issuing a draft supplement to the Watts Bar Final Environmental Statement (FES). You will be sent a copy of this draft supplement as soon as it is publicly available. The supplement will examine the changes in proposed plant operation and the environment since the FES was issued in 1978. The supplement will discuss the impact of operation of the WBN plant on the radioactive waste as well as the radiological risk to the public from a severe accident involving core melt.

With regard to the probability of a core melt accident, it is true that the original estimate of the frequency of core melt events at the WBN plant was among the highest in the country. However, that analysis was found to be overly conservative in that it did not properly credit successful operation of certain plant equipment. In addition, several improvements to plant operating procedures and operator training programs that have subsequently been implemented at Watts Bar were not considered in the original probability estimate. The probability of a core melt accident at Watts Bar has been updated to more realistically account for these factors. The updated core melt frequency is about a factor of five lower than the original probability estimates and is consistent with core melt probability estimates for other plants of similar design.

The NRC has determined that high-level radioactive waste, such as spent fuel, can be stored safely on site with minimal environmental impact, for at least 30 years beyond the licensed operating life of a nuclear power plant. Further, through the NRC's Waste Management Confidence Decision on August 31, 1984, and September 28, 1989, it was determined that radioactive waste will be handled and stored appropriately to protect public health and safety, and to minimize the impact on the environment.

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Low-level waste, which is generally defined as radioactive wastes other than high-level waste, are commonly buried in near surface shallow trenches, usually in the containers in which they are shipped. There is no intent to recover the wastes once they are buried. At the present time, low-level wastes generated at the WBN plant will be buried at the Barnwell, South Carolina site.

The staff is planning to hold a public meeting, sometime in early January 1995, after the issuance of the draft supplement. The proposed public meeting would provide an opportunity for the NRC to describe the environmental review contained in the draft supplement and allow the public to express their reviews about the draft supplement. Members of the public would also be able to raise new issues not discussed in the draft supplement.

If you have any questions or comments on this letter, please call Raj Anand at (301) 504-1146.

Sincerely,

/S/

Scott F. Newberry, Director
License Renewal and Environmental Review
Project Directorate
Associate Directorate for Advanced Reactors
and License Renewal
Office of Nuclear Reactor Regulation

Docket Nos: 50-390
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