November 8, 2001

Mr. J. A. Scalice
Chief Nuclear Officer and
Executive Vice President
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 - REQUEST FOR ADDITIONAL INFORMATION RE: TRITIUM PRODUCTION PROGRAM INTERFACE ISSUES 14 AND 15 (TAC NO. MB1884)

Dear Mr. Scalice:

The Nuclear Regulatory Commission staff has reviewed your application of August 20, 2001, for Watts Bar's Tritium Program. We need additional information to complete our review. I discussed the enclosed Request for Additional Information with Mr. Chardos, Tennessee Valley Authority's Tritium Program Manger, and he agreed to respond to this request by December 7, 2001. Please contact me if you have any questions.

Sincerely,

/RA/

L. Mark Padovan, Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosure: Request for Additional Information

cc w/ enclosure: See next page

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Request for Additional Information

Tritium Production Program Interface Issues 14 and 15

Watts Bar Nuclear Plant, Unit 1

Docket No. 50-390

Interface Issue 14 — Liquid Waste Management Systems

1. Section 1.5.14 of Westinghouse Report NDP-00-0344, Rev. 1, "Implementation and Utilization of Tritium Producing Burnable Absorber Rods (TPBARS) In Watts Bar Unit 1," states that if increased feed and bleed is necessary to reduce the tritium concentration in the reactor coolant system (RCS), Tennessee Valley Authority (TVA) will temporarily store tritiated liquids onsite. Please explain what is meant by "temporary onsite storage." Are there other potential existing storage tanks onsite other than the liquid waste storage tank (i.e., monitoring or discharge tanks)? If so, what is their capacity and how are they factored into the liquid waste storage capacity?

2. Section 2.11.3 states that current monitoring programs are adequate, but did not address the adequacy of existing waste holdup tank capacity. What is the existing capacity of the liquid waste holdup tank and is it adequate to obtain the necessary dilution for liquid tritium discharges to the environment? Additionally, are the floor drains that could potentially be tritiated (i.e., auxiliary building floor drains) from RCS fluid carrying auxiliary systems (chemical and volume control system) or fuel pool cooling system, connected directly to the liquid waste holdup tank? If so, was this additional volume from normal leakages factored into the liquid waste storage tank capacity determination?

Interface Issue 15 — Process and Effluent Radiological Monitoring and Sampling System

1. Section 2.9.6, Table 2.9.6-1 states that for a tritium production core (TPC), TVA will sample the RCS three times a week. Section 1.5.15 states that the only modifications for a TPC from the non-TPC monitoring program will be enhanced tritium sampling of the auxiliary and shield building heating, ventilation and air conditioning (HVAC) exhaust. Additionally, in the accident analysis, failure of two TPBARS was assumed, which increases the RCS tritium activity. Given these statements:

   a) Has TVA examined the need to perform tritium monitoring at the air ejector, given the possibility of 2.5 days of "allowable (TS) [technical specifications] primary/secondary leakage?" Could this constitute an unmonitored release point since most air ejector monitoring at commercial plants involves a gamma guard, so any tritium beta activity would not be identified?

   b) Does the assumption of all tritium remaining in the form of tritiated water apply to potential accidents external to the containment and involving RCS temperatures above 212 ^{0}F (i.e., steam generator tube rupture or emergency core cooling system line break in the auxiliary building)?

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2. Section 1.5.15 states that the only modifications for a TPC from the non-TPC monitoring program will be enhanced tritium sampling of the auxiliary and shield building exhaust.

   a) Are there any interconnections on the air supply from these two HVAC systems to the supply of the control room normal HVAC system?

   b) How will TVA perform enhanced tritium monitoring of these two systems? Does the monitoring only involve liquid sampling? If so, why is there a discussion on air sampling for tritium in this section? Are there any potential gaseous tritium release points to be monitored in the plant? If so, what are the monitoring locations?

   c) The auxiliary building HVAC also services the fuel building and only the system exhaust is monitored. Therefore, will TVA have airborne monitoring (and associated operating procedures) for TPBAR consolidation activities in the fuel building?

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