



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

July 30, 2010

Mr. Ashok S. Bhatnagar  
Senior Vice President  
Nuclear Generation Development  
and Construction  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – REQUEST FOR ADDITIONAL  
INFORMATION REGARDING FINAL SAFETY ANALYSIS REPORT  
AMENDMENT RELATED SECTION 3.11 (TAC NO. ME2731)

Dear Mr. Bhatnagar:

By letters dated November 24, 2009, and January 11, 2010 (Agencywide Documents Access and Management System Accession Nos. ML093370275 and ML100191426), the Tennessee Valley Authority (TVA) submitted Final Safety Analysis Report (FSAR) Amendments 95 and 97 for Watts Bar Nuclear Plant (WBN), Unit 2. The U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the information provided by TVA in FSAR Amendments 95 and 97, respectively.

In an effort to complete the NRC staff review, enclosed is a request for additional information (RAI) regarding Section 3.11 "Environmental Qualification of Mechanical and Electrical Equipment." The NRC staff's RAI seeks information on WBN Unit 2 as it relates to dual operation of the facility.

A response is required within 30 days of receipt of this letter.

If you should have any questions, please contact me at 301-415-2048.

Sincerely,

A handwritten signature in black ink, appearing to read "Justin C. Poole", is located below the word "Sincerely,".

Justin C. Poole, Project Manager  
Watts Bar Special Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosure:  
Request for Additional Information

cc w/encl: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION  
WATTS BAR NUCLEAR PLANT, UNIT 2  
FINAL SAFETY ANALYSIS REPORT AMENDMENTS 95 AND 97  
TENNESSEE VALLEY AUTHORITY  
DOCKET NO. 50-391

Section 3.11- Environmental Qualification of Mechanical and Electrical Equipment

1. On Page 3.11-1 of the Final Safety Analysis Report (FSAR), the licensee stated the following:

Two programs are in place to environmentally qualify safety-related electrical equipment (including cable) and active safety-related mechanical equipment to function or not fail for event mitigation. These programs involve:

- (1) Safety-related electrical equipment within the scope of 10 CFR 50.49.
- (2) Active, safety-related mechanical equipment located in a harsh environment.

Confirm that the Environmental Qualification program for Watts Bar Nuclear Plant, Unit 2 includes guidance for qualifying (1) nonsafety-related electric equipment whose failure under postulated environmental conditions could prevent satisfactory accomplishment of safety functions identified in 10 CFR 50.49 and (2) required post-accident monitoring equipment.

2. Confirm that equipment being replaced or refurbished will be qualified as Category 1 as required by 10 CFR 50.49.
3. On Page 3.11-1 of the FSAR, the licensee stated the following:

A mild environment is defined as a room or building zone where,  
(3) the event radiation is less than or equal to 1E4 rad.

Clarify that a mild environment for electronic components such as semiconductors or electronic components containing organic material is a total integrated dose less than 1E3 rad, and a mild radiation environment for other equipment is less than 1E4 rad.

ENCLOSURE

4. On page 3.11-2 of the FSAR, the licensee stated the following:

Abnormal operating conditions – The environmental service conditions which result from outside temperature excursions, temporary greater than design heat loads, or degraded environmental control operations. This condition can exist for up to 12 hours per excursion for non-reactor building spaces and will occur less than 1% of the plant life, unless alternate times and %0+ plant life conditions are specifically approved in reference [4] and its associated environmental data drawings.

- a. Explain the basis for increasing the time from 8 to 12 hours.
  - b. Clarify what is meant by “%0+ plant life conditions.”
5. Explain the basis for removing the Boron Injection Tank from the list in FSAR Section 3.11.7.1.
6. On page 3.11-5 of the FSAR, the licensee stated the following:

Doses were integrated to determine a equipment exposure for a 100-day period after the accident.

Explain the basis for reducing the period of exposure after an accident from 1 year to 100 days.

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**/RA PMilano for/**  
Justin C. Poole, Project Manager  
Watts Bar Special Projects Branch  
Division of Operating Reactor Licensing  
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ADAMS Accession No. ML102020281

\*via memo dated May 27, 2010

OFFICE	LPWB/PM	LPWB/LA	EEEB/BC	OGC	LPWB/BC
NAME	JPoole	BClayton	RMathew*	DRoth nlo	SCampbell
DATE	07/22/10	07/29/10	05/27/10	07/29/10	07/30/10

OFFICIAL AGENCY RECORD