



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

June 18, 2012

Mr. Joseph W. Shea  
Vice President, Nuclear Licensing  
Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR STATION, UNIT 1 - REQUEST FOR ADDITIONAL INFORMATION RELATED TO LICENSE AMENDMENT REQUEST TO CHANGE DOSE EQUIVALENT IODINE SPIKE LIMIT AND ALLOWABLE VALUE (TAC NO. ME8156)

Dear Mr. Shea:

By application dated March 8, 2012, to the U.S. Nuclear Regulatory Commission (NRC), the Tennessee Valley Authority submitted a license amendment request for Watts Bar Nuclear Plant, Unit 1. The proposed change would revise (1) Technical Specification (TS) 3.3.7, "Control Room Emergency Ventilation System (CREVS) Actuation Instrumentation," by changing the Allowable Value for the main control room air intake radiation monitoring instrumentation in Table 3.3.7-1 from  $\leq 9.45E-05$  micro-Curie/cubic centimeter ( $\mu\text{Ci/cc}$ ) (3,308 counts per minute (cpm)) to  $\leq 1.647E-04$   $\mu\text{Ci/cc}$  (3,308 cpm); and (2) TS 3.4.16, "RCS [reactor coolant system] Specific Activity," by lowering the DOSE EQUIVALENT 1-131 spike limit from 21 micro-Curie/gram ( $\mu\text{Ci/gm}$ ) to 14  $\mu\text{Ci/gm}$  in Required Action A.1 and Condition C.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete its review. The specific information requested is addressed in the enclosure to this letter. The enclosed questions were provided to you on June 14, 2012. Please provide a response by 30 days from the date of this request for additional information.

J. Shea

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The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at (301) 415-2296 or at Fred.Lyon@nrc.gov.

Sincerely,

A handwritten signature in black ink that reads "CF Lyon". The letters are cursive and somewhat stylized.

Carl F. Lyon, Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosure:  
Request for Additional Information

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REQUEST FOR ADDITIONAL INFORMATION  
LICENSE AMENDMENT REQUEST TO  
CHANGE DOSE EQUIVALENT IODINE SPIKE LIMIT AND ALLOWABLE VALUE  
TENNESSEE VALLEY AUTHORITY  
WATTS BAR NUCLEAR PLANT, UNIT 1  
DOCKET NO. 50-390

By application dated March 8, 2012, to the U.S. Nuclear Regulatory Commission (NRC), the Tennessee Valley Authority submitted a license amendment request for Watts Bar Nuclear Plant, Unit 1. The proposed change would revise (1) Technical Specification (TS) 3.3.7, "Control Room Emergency Ventilation System (CREVS) Actuation Instrumentation," by changing the Allowable Value for the main control room air intake radiation monitoring instrumentation in Table 3.3.7-1 from  $\leq 9.45\text{E-}05$  micro-Curie/cubic centimeter ( $\mu\text{Ci/cc}$ ) (3,308 counts per minute (cpm)) to  $\leq 1.647\text{E-}04$   $\mu\text{Ci/cc}$  (3,308 cpm); and (2) TS 3.4.16, "RCS [reactor coolant system] Specific Activity," by lowering the DOSE EQUIVALENT I-131 spike limit from 21 micro-Curie/gram ( $\mu\text{Ci/gm}$ ) to 14  $\mu\text{Ci/gm}$  in Required Action A.1 and Condition C.

The NRC staff is reviewing your submittal and has determined that additional information is required to complete its review.

1. The March 8, 2012, application to change the dose equivalent I-131 spike limit and allowable value for the control room (CR) air intake radiation monitors (Agencywide Documents Access and Management System (ADAMS) Accession Number ML12072A205) presents applicable atmospheric dispersion factors ( $\chi/Q$  values) in Table 1 of the Enclosure. Please confirm that the release height of the Watts Bar, Unit 1, exhaust stacks is 23.0 meters and the other Unit 1 exhaust stacks inputs to the CR  $\chi/Q$  values listed in Table 1 are those previously provided as items 5 and 6 on page 5 of Attachment 11 (ADAMS Accession Number ML102290332) to TVA's July 31, 2010, letter (ADAMS Accession Number ML102290258) regarding Watts Bar, Unit 2.
2. Section 3.2.2.3, "Changes to Atmospheric Dispersion Factors," of the Enclosure to the March 8, 2012, application briefly discusses the Watts Bar, Unit 1, onsite and offsite  $\chi/Q$  values utilized in the dose analyses associated with the current license amendment request (LAR). This section asserts that the new  $\chi/Q$  values are calculated consistent with the current licensing basis (CLB) methodology using meteorological data from the more recent 20-year time period of 1991 through 2010, in place of the 1974 through 1993 data that were used to generate the CLB  $\chi/Q$  values. Please discuss any changes in the CR unfiltered inleakage  $\chi/Q$  values associated with the changes proposed in the current LAR.

Enclosure

J. Shea

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Sincerely,

/RA/

Carl F. Lyon, Project Manager  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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**ADAMS Accession No. ML12166A544**

\*Email dated

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