



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

April 22, 2011

Mr. R. M. Krich  
Vice President, Nuclear Licensing  
Tennessee Valley Authority  
3R Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 1 – REQUEST FOR ADDITIONAL  
INFORMATION REGARDING LICENSE AMENDMENT REQUEST FOR  
CARBON DIOXIDE FIRE SUPPRESSION SYSTEM INSTALLED IN  
AUXILIARY INSTRUMENT ROOM (TAC NO. ME2532)

Dear Mr. Krich:

By letter dated October 30, 2009 (Agencywide Documents Access and Management System Accession No. ML093080377), Tennessee Valley Authority (TVA) requested a license amendment concerning a change to the Watts Bar Nuclear Plant, Unit 1 fire protection program requirements. Specifically, this involves changing the design basis of the total flooding automatic carbon dioxide (CO<sub>2</sub>) fire suppression system in the Auxiliary Instrument Room from a 50-percent CO<sub>2</sub> concentration to a 45-percent concentration, retaining the currently required 15-minute hold time to suppression a fire.

In order to complete its review, the U.S. Nuclear Regulatory Commission (NRC) requires additional information. Enclosed is the NRC staff's request for additional information (RAI). Based on discussions with your staff on April 22, 2011, we understand that you plan to respond to the enclosed RAI by May 24, 2011.

If you have any questions regarding this issue, please feel free to contact me at (301) 415-3100.

Sincerely,

A handwritten signature in black ink, appearing to read "John G. Lamb".

John G. Lamb, Senior Project Manager  
Watts Bar Special Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-390

Enclosure: RAI

cc: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION  
REGARDING THE LICENSE AMENDMENT REQUEST FOR  
THE CARBON DIOXIDE FIRE SUPPRESSION SYSTEM  
INSTALLED IN THE AUXILIARY INSTRUMENT ROOM  
WATTS BAR NUCLEAR PLANT, UNIT 1  
TENNESSEE VALLEY AUTHORITY  
DOCKET NO. 50-390

By letter dated October 30, 2009 (Agencywide Documents Access and Management System Accession No. ML093080377), Tennessee Valley Authority requested a license amendment concerning a change to the Watts Bar Nuclear Plant (WBN), Unit 1 fire protection program requirements. Specifically, this involves changing the design basis of the total flooding automatic carbon dioxide (CO<sub>2</sub>) fire suppression system in the Auxiliary Instrument Room from a 50-percent CO<sub>2</sub> concentration to a 45-percent concentration, retaining the currently required 15-minute hold time to suppression a fire.

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RAI

The National Fire Protection Association 12, 1973 Edition, Section 2421 (Code of Record) for WBN Unit 1 installation, Table 6, "Flooding Factors for Specific Hazards," specifies flooding factors for specific hazards. Confirm the flooding factor (12 cubic feet per pound (ft<sup>3</sup>/lb) CO<sub>2</sub> or 0.083 lb CO<sub>2</sub>/ft<sup>3</sup>) used to calculate the quantity of the CO<sub>2</sub> to protect the Auxiliary Instrument Room. Provide the calculated quantity in pounds of CO<sub>2</sub> to be injected into WBN Unit 1 Auxiliary Instrument Room.

April 22, 2011

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*/RA by PMilano for/*

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Watts Bar Special Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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\*via memorandum \*\* by phone

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