

50-390



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

March 8, 1995

Mr. Oliver D. Kingsley, Jr.
President, TVA Nuclear and
Chief Nuclear Officer
Tennessee Valley Authority
6A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION - WATTS BAR UNIT 1 -
FLOW MEASUREMENT UNCERTAINTY (TAC M91682)

Dear Mr. Kingsley:

By letters dated July 9, 1991, and July 20, 1988, TVA stated that a "preliminary" flow measurement uncertainty (FMU) of 1.8% of rated flow was used in applicable safety analyses. In Watts Bar Safety Evaluation Report (NUREG-0847), Supplement 8, the staff stated that it will track TVA's commitment to revalidate the flow measurement analysis. In a letter dated July 29, 1994, submitting "Westinghouse Methodology for Protection Systems, Watts Bar Units 1 and 2, Eagle 21 Version," WCAP-12096, Revision 6, the FMU was changed to 1.5%.

The staff has reviewed the FMU information in WCAP-12096, Revision 6, and determined that additional information is needed to complete its review:

1. Other than stating that the final FMU is 1.5%, no analysis was provided. Please provide such analysis to justify the number.
2. The value of 1.5% appears low compared to previous FMU values used in other nuclear plants. TVA analysis should include details to specifically justify this low value, indicating what parameters, compared to previous analyses, were improved so that such a low FMU value is achieved.
3. The FMU analysis needs to include the elbow tap uncertainty in addition to the loop uncertainty. Also, the applied FMU uncertainty needs to include a 1% fouling penalty due to possible feedwater venturi fouling. The basis section of the Watts Bar Technical Specifications should include a discussion on the examination of the feedwater venturis for each cycle to assure they are clean at each refueling.

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The staff estimates that TVA's submittal is needed April 15, 1995, in order for the staff to complete its review to support the currently projected fuel load date. This requirement affects nine or fewer respondents and, therefore, is not subject to Office of Management and Budget review under P.L. 96-511.

Sincerely,

Original signed by

Peter S. Tam, Senior Project Manager
Project Directorate II-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-390

cc: See next page

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Mr. Oliver D. Kingsley, Jr.
Tennessee Valley Authority

WATTS BAR NUCLEAR PLANT

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