



Tennessee Valley Authority, 1101 Market Street, Chattanooga, Tennessee 37402-2801

Mark O. Medford  
Vice President, Engineering & Technical Services

June 28, 1995

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555

Gentlemen:

In the Matter of the Application of )  
Tennessee Valley Authority )

Docket Nos. 50-390  
50-391

WATTS BAR NUCLEAR PLANT (WBN) - REASONABLE ASSURANCE ASSESSMENT REPORT  
(RAAR) (TAC M9/559)

An important step in the process of licensing Watts Bar Nuclear Plant Unit 1 is the certification of Tennessee Valley Authority (TVA) senior management to the Nuclear Regulatory Commission (NRC) that WBN is ready to load fuel and begin operations. To assist management in its certification decision, in late January 1995 Nuclear Assurance and Licensing (NA&L) was directed to perform a reasonable assurance assessment of WBN's readiness. TVA briefed NRC in several public meetings regarding the assessment methodology and supporting analyses, and more recently on the preliminary conclusions. After the initial briefings, NRC requested a copy of the assessment. The assessment has been completed and the results are provided in the enclosed Reasonable Assurance Assessment Report. A supplement to this assessment will be provided to NRC after completion of the ongoing Independent Design Inspection (IDI) and the pending second Hot Function Test (HFT 2).

The assessment was conducted over a five month period and involved a number of personnel, including senior industry advisors who had conducted similar assessments in the past, a former NRC senior executive who provided guidance on scope and content, industry engineers who provided research assistance, as well as current and former TVA employees. To facilitate the assessment, relevant information and data were reviewed and consolidated in a form that could be more easily assessed. Information consolidated from this review effort was then analyzed from three perspectives and at multiple levels in order to more readily identify any major weakness in WBN's readiness to load fuel and begin operations.

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The three assessment perspectives are: (1) a regulatory completion review (a "horizontal" review of closure of the WBN-related activities necessary to load fuel and begin operations as described in Volumes 1 and 4 of TVA's Nuclear Performance Plan--discussed in Section III of the RAAR), (2) a major activity review (a "vertical" review of the five critical activities necessary to load fuel and begin operations: Design, Construction, Startup Testing, Operational Readiness, and Oversight--discussed in Section IV of the RAAR and its constituent Enclosures 1 through 5), and (3) a significant program/issue review (an examination of select generic programs/issues such as Employee Concerns and the Corrective Action Program--discussed in Section V of the RAAR and Enclosures 6 through 9). These three separate review perspectives are integrated to provide a comprehensive picture of WBN's readiness to load fuel and begin operations. In large measure, these reviews constitute an evaluation of the results of the quality programs at WBN.

In summary, the RAAR concludes that upon satisfactory completion of scheduled activities and associated corrective actions, there will be reasonable assurance that from a design, construction and operational perspective, WBN will be ready to load fuel and begin operations. In reaching this conclusion, the RAAR addresses the question of whether TVA has identified and corrected the fundamental problems that resulted in TVA's withdrawal of the WBN certification letter in 1985, and is ready to operate WBN with confidence that these significant problems will not recur. Support for this conclusion, as detailed in the RAAR is compelling, and includes the following significant observations:

- The extent and diversity of oversight scrutiny of WBN is unprecedented and has resulted in a multi-layered, fine-meshed net of "inspection" coverage. For example, since 1988, there have been at least 13 vertical slice reviews, conducted by six different organizations covering 12 different systems (not including the ongoing IDI). Based in large measure on the extent of this oversight coverage, TVA considers that upon completion of scheduled activities, problems that would preclude safe operation at WBN will have been detected and corrected.
- The quality of work at WBN has improved steadily and significantly since the withdrawal of TVA's 1985 certification letter for WBN. Fluctuations in performance have become narrower and less significant in scope. On a plant-wide scale, current performance (including the ability of TVA to identify its own problems) is acceptable and continues to improve.
- The transition from construction to operations is being accomplished using processes and procedures that have been followed before and proven to be effective at TVA. Managers who have effectively implemented an operational transition at other TVA sites using those processes and procedures are at WBN helping to ensure a smooth transition.

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- Further confirmation of WBN's readiness to load fuel will be provided by TVA's ongoing IDI and the pending HFT 2.

As previously noted, the assessment reflected in the RAAR will provide important input into TVA Senior Management's decision regarding certification of the readiness of WBN. The assessment does not establish any new commitments or provide alteration of any previous commitment. If you have any questions regarding the document please contact me.

Sincerely,



Mark O. Medford

Enclosure

cc (Enclosure):

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June 28, 1995

Those listed

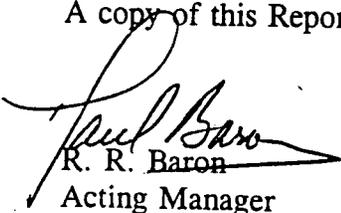
WATTS BAR NUCLEAR PLANT (WBN) - WATTS BAR REASONABLE ASSURANCE  
ASSESSMENT REPORT (RAAR)

In late January 1995, you directed that Nuclear Assurance and Licensing conduct an assessment of WBN's readiness to load fuel and begin operations. In accordance with your request, the assessment has been completed and the results are provided in the enclosed Reasonable Assurance Assessment Report (RAAR) for your review.

This assessment was conducted by a team of qualified industry experts with diverse backgrounds and fields of expertise, from within and outside TVA. In addition, a former NRC senior executive provided guidance on the scope and content of the effort. The RAAR Team conducted detailed assessments in key areas including design, construction, startup testing, operational readiness, oversight, employee concerns, and the corrective action program. The Team reached the conclusion that, contingent upon the completion of outstanding activities (e.g., closure of open Corrective Action Plans [CAPS]/Special Projects [SPs] and Deficiency Reports [DRs]), there is reasonable assurance that from a design, construction and operational perspective, WBN will be ready to load fuel and begin operations.

Although the RAAR Team reached this conclusion without reservation, they did make several recommendations for areas of further evaluation in the ongoing Integrated Design Inspection (IDI). Upon completion of the second Hot Functional Test and the IDI, Supplement 1 to the RAAR will be issued to address the results of these two activities.

A copy of this Report will be provided to the NRC, as requested.

  
R. R. Baron

Acting Manager

Watts Bar Nuclear Assurance & Licensing  
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RRB:LJM  
Attachment

cc (Attachment):

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