UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
245 PEACHTREE CENTER AVE., NE., SUITE 1200
ATLANTA, GEORGIA 30303-1257

March 4, 2011

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: END OF CYCLE ASSESSMENT LETTER – WATTS BAR NUCLEAR PLANT UNIT 2 (NRC INSPECTION REPORT 05000391/2011601)

Dear Mr. Bhatnagar:

On February 10, 2011, the NRC staff completed its performance review of the Watts Bar Nuclear Plant Unit 2 construction project. Our technical staff reviewed inspection results for the period from January 1, 2010 through December 31, 2010. The purpose of this letter is to inform you of our assessment of your safety performance during this period and our plans for future inspections at your facility.

Overall, Watts Bar Nuclear Plant Unit 2 construction activities were conducted in a manner that complied with the Commission's rules and regulations, the conditions of your construction permit, and the Unit 2 regulatory framework commitments. Our inspections indicated that your construction program and procedure development, along with project staffing, were sufficiently implemented to support ongoing construction activities. Overall, the corrective action program implementation activities, including initiation, classification, disposition, and trending were deemed satisfactory; however, our Problem Identification and Resolution inspection identified some concerns with the completeness and adequacy your corrective actions. In addition, for violation (VIO) 005000391/2010603-08, "Failure to Adequately Evaluate and Qualify Molded Case Circuit Breakers," your staff has not provided the NRC the corrective actions necessary to ensure the molded case circuit breakers are seismically qualified and would perform their safety-related function during a worst case design basis accident. The NRC staff will continue to inspect the implementation of your corrective action program to ensure problems are promptly identified and adequately resolved.

Our inspections of construction activities have identified several concerns with the cleanliness and material condition of components and systems. For both primary and secondary system piping, NRC inspectors questioned whether your plans were adequate to: 1) establish cleanliness to levels that TVA committed to, and 2) address the existing material condition of piping which included pitting, arc strikes, mechanical damage, and corrosion. In addition, debris your staff found in a steam generator raised concerns regarding extent of condition and safety consequence if the material had not been identified The NRC staff will continue to inspect this area to ensure that the quality requirements are met through the implementation of your refurbishment program.

We have increased our inspections to monitor the controls established to ensure Unit 2 construction activities do not adversely affect Unit 1 operations. These controls have become increasingly important as the pace of construction and testing activities on shared systems and in common areas of the plant have increased.

A cross-cutting theme was identified in the Work Practices component of the Human Performance cross-cutting area for the failure to effectively communicate expectations regarding procedural compliance and that personnel follow procedures. This cross-cutting theme was evaluated by the NRC staff to determine if a Substantive Cross-Cutting Issue existed. The evaluation considered whether your staff recognized the theme and initiated timely and effective corrective actions to prevent recurrence of the theme. It was noted that the four findings comprising the cross-cutting theme were from diverse areas within the construction project and the cross-cutting theme has been captured in your corrective action program. Because two of the four findings with Work Practices cross-cutting aspects were documented in last quarter's inspection report (05000391/2010605), our staff needs more time to assess the effectiveness of your corrective actions. Therefore, the NRC staff cannot make a determination on whether a Substantive Cross-Cutting Issue exists at this time. Our staff will revisit this issue once corrective actions have been implemented.

In conclusion, project performance for the most recent quarter, as well as for the previous three quarters of the assessment cycle, was acceptable based on the above inspection conclusions, the fact that all violations were classified as severity level IV or below, and that no substantive cross-cutting issues were identified. Therefore, we do not plan to expand our inspection activities beyond what is specified by Inspection Manual Chapter (IMC) 2517.

As you were previously notified by letters from Mr. Eric Leeds, Director, Nuclear Reactor Regulation, dated January 27, 2011, and Mr. Stephen J. Campbell, Chief, Watts Bar Special Projects Branch, dated July 28, 2010, the staff has identified the need to improve the timeliness and quality of your documentation submittals related to your operating license (OL) application. This concern has the potential to impact the timely completion of the NRC's licensing review program. In addition, timely completion of the NRC's construction inspection program for Watts Bar Unit 2 is highly dependent on quality support by your staff, which includes developing closure packages that document your actions related to the applicable area of inspection.

The enclosed inspection plan contains those major or infrequent projected inspection activities that we have currently identified, in part, by reviewing your project schedule. It is crucial that you keep us apprised of any project schedule changes as soon as they are identified, in order to maintain our inspection plan current. As additional details of your project schedule become available, we will plan other inspections specified in IMC 2517. Your staff will be informed of changes/ additions to our inspection plans. Routine inspections performed by the resident inspectors and regional staff on construction activities, Corrective Active Programs (CAPs), Special Programs (SPs), Generic Communications, historical open items, and construction deficiency reports (CDRs) are not listed on the inspection plan due to their ongoing and continuous nature. We plan to give your staff ample notification of specific upcoming inspection activities as their schedule becomes available in order to allow for the resolution of any scheduling conflicts and personnel availability issues.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Please contact me at (404) 997-4446 with any questions you may have regarding this letter or our planned inspections.

Sincerely,

/RA/

Robert C. Haag, Chief
Construction Projects Branch 3
Division of Construction Projects

Docket No. 50-391
Construction Permit No: CPPR-92

Enclosure

cc: (See next page)

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Letter to Ashok S. Bhatnagar from Robert C. Haag dated March 4, 2011.

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Inspection Plan

*Watts Bar Unit 2**

Inspection Activity	Calendar Quarter for Inspection
Integrated Design Inspection Program (IP 93814)	First Quarter 2011 Team Inspection
Hanger CAP Inspection (IP 50090)	First Quarter 2011 Team Inspection
Problem Identification and Resolution (IP 35007)	Second Quarter 2011 Team Inspection
Pre-operational Testing Inspection of the Emergency Raw Cooling Water system (IMC 2513)	Second Quarter 2011
EQ Inspection	Second Quarter 2011
Inspection / Audit of activities implemented per 10CFR 50.54(hh).2	Third Quarter 2011
Cyber Security Inspection (Temporary Instruction under development)	Fourth Quarter 2011
Construction Refurbishment Process (IP 37002)	Ongoing

* The inspections listed above are limited to major or infrequently performed inspections. They are in addition to routine inspections performed by the resident inspectors and regional staff such as inspections of routine construction activities, CAPs, SPs, Generic Communications and historical open items.

Enclosure