



Tennessee Valley Authority, Post Office Box 2000, Spring City, Tennessee 37381-2000

May 8, 2008

10 CFR 50.55(b)

U.S. Nuclear Regulatory Commission
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Washington, D.C. 20555-0001

Gentlemen:

In the Matter of)
Tennessee Valley Authority)

Docket No. 50-391

WATTS BAR NUCLEAR PLANT (WBN) - UNIT 2 – REQUEST FOR EXTENSION OF CONSTRUCTION PERMIT CPPR-92

The purpose of this letter is to provide additional information in support of TVA's request to extend the expiration date for the WBN Unit 2 Construction Permit (see TVA's original request dated March 6, 2008 [Reference 1]). This letter replaces and supersedes TVA's original request (Reference 1) in its entirety.

By order dated October 24, 2000 (Reference 2), NRC extended the expiration date for Construction Permit CPPR-92 (WBN Unit 2) to December 31, 2010. TVA respectfully requests that NRC further extend the construction permit expiration date to March 31, 2013. This additional time would allow TVA to complete the engineering, construction and testing necessary to support a request for an operating license for WBN Unit 2.

At the time the current extension was requested and approved, WBN Unit 2 was being maintained in a deferred status pending TVA's determination of generation needs to meet future electric power demands. No significant safety-related construction has been conducted at WBN Unit 2 from the time of the last extension request to date.

In response to increasing demands for bulk power, TVA seeks to use existing facilities to the greatest extent possible. This approach has three-fold benefits of ensuring future power supplies, avoiding the large capital outlays associated with new construction, and avoiding the environmental impacts resulting from siting and constructing new power generating facilities at greenfield sites. Consistent with this

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approach, in May 2002 the TVA Board of Directors authorized a five-year program to refurbish and restart Unit 1 of the Browns Ferry Nuclear Plant and to proceed with license extensions for all three Browns Ferry units. Given the operating license status of the three units and the regulatory framework which had been successfully applied to the recovery of Units 2 and 3, focusing on expanding and extending the generating capacity of Browns Ferry constituted the best use of TVA's resources to meet existing and future power demands. NRC approved twenty year license extensions for all three Browns Ferry units in 2006, and after extensive review of TVA's refurbishment activities and satisfactory inspection results, NRC approved the restart of Unit 1 in May 2007.

Once again, consistent with TVA's objective to use its existing facilities to the greatest extent possible to meet future electric power demands, TVA notified NRC on November 14, 2006, of its intent to perform a study of the feasibility of completing WBN Unit 2 under the existing Unit 2 construction permit (Reference 3). TVA described its plans to prepare a Detailed Scoping Estimating and Planning (DSEP) document, which would provide cost estimates and engineering, construction and potential startup schedules for TVA's use in making an informed decision on whether to complete WBN Unit 2. Concurrent with preparation of the DSEP, TVA began its preparation of a Supplemental Environmental Impact Statement (SEIS) for the completion and operation of WBN Unit 2. This SEIS would supplement the original 1972 Environmental Impact Statement (EIS) titled "Final Environmental Statement, Watts Bar Nuclear Plants Units 1 and 2" and NRC's "Final Statement Related to the Operation of Watts Bar Nuclear Plant Units 1 and 2, Supplement No. 1, NUREG-0498" (NRC 1995b), which TVA adopted on July 10, 1995.

In a letter to the NRC dated April 3, 2007, TVA outlined the key regulatory assumptions underlying the possible reactivation and completion of construction at WBN Unit 2 (Reference 4). In a June 7, 2007, memorandum to the Commission (SECY-07-0096) the NRC's Executive Director for Operations (EDO) sought the Commission's approval of the NRC staff's approach for the possible reactivation of construction, licensing, and inspection activities for WBN Unit 2. In a July 25, 2007, Staff Requirements Memorandum to the EDO, the Commission approved the Staff's recommendation for the licensing and inspection program to be used for WBN Unit 2.

The environmental analyses conducted for TVA's Final Supplemental Environmental Impact Statement (FSEIS) indicated that no significant impacts would be expected as a result of completing and operating WBN Unit 2. Based upon the results of these reviews and other studies that examined future power needs, cost and schedule, and financing and risks, TVA's Board of Directors authorized completion of WBN Unit 2 on August 1, 2007. In a Record of Decision published in the Federal Register on August 15, 2007 (72 Fed. Reg. 45859), TVA stated that proceeding with the completion and operation of WBN Unit 2 is the best decision for TVA and the Tennessee Valley in terms of power supply, power price, generation mix, return on investment, use of existing assets, and avoidance of environmental impacts. TVA's Record of Decision explained, as mentioned above, the three-fold benefits of assuring future power supplies without environmental effects resulting from operation of fossil fuel generating plants (including increased emissions), avoiding even larger capital

outlays associated with totally new construction, and avoiding the environmental impacts resulting from siting and constructing new power generating facilities elsewhere.

Subsequently, TVA informed the NRC of its intention to reactivate and complete construction activities at WBN Unit 2 (Reference 4). TVA also completed and submitted an FSEIS, "Completion and Operation of Watts Bar Nuclear Plant Unit 2" (Reference 5). By letter dated March 13, 2008 (Reference 6), TVA provided a description of the regulatory framework for the completion of construction and licensing activities for Watts Bar Unit 2. This framework includes the Corrective Action Programs and Special Programs for correcting the construction deficiencies identified in TVA's "Nuclear Performance Plan, Watts Bar Nuclear Plant, Volume 4" (Reference 7). These Corrective Action Programs and Special Programs were previously completed for WBN Unit 1 and provide assurance that WBN Unit 2 is designed and constructed in accordance with regulatory requirements and TVA commitments.

By letter dated February 8, 2008 (Reference 8), TVA provided a "red-line" Final Safety Evaluation Report (FSAR) for WBN Unit 2 to demonstrate its view of how the Unit 2 FSAR will appear at fuel load and also indicated its plans to request that WBN Unit 2 be licensed at the current WBN Unit 1 licensed power level (3,459 MWt). After further consideration, TVA now plans to complete the construction of WBN Unit 2 at the current construction permit power level (3,411 MWt).

TVA has commenced the detailed scheduling, walkdowns, and engineering necessary to complete the construction of WBN Unit 2. TVA will conduct all completion activities in a deliberate and careful manner, mindful and taking full account of those measures necessary to ensure the continued safe operation of WBN Unit 1. TVA expects to complete construction and request an operating license prior to April 1, 2012. TVA's completion schedule supports full power operation by October 2012. The requested extension also includes a reasonable amount of contingency in case any adjustments to the schedule are necessary.

The only modification requested to the existing Construction Permit, CPPR-92, is the extension of the latest completion date. The extension would only allow TVA more time to complete the construction and testing of WBN Unit 2 already authorized under the Construction Permit. The extension would not allow any work of a type not previously authorized by the existing Construction Permit to be performed. As TVA is not seeking authorization for activities not previously authorized, this request does not involve a significant increase in the probability or consequences of an accident previously evaluated, create the possibility of a new or different kind of accident from any accident previously evaluated, or involve a significant reduction in a margin of safety.

Recent energy demand in the Tennessee Valley has reinforced TVA's obligation to provide safe, economical, reliable, and environmentally responsible sources of electric power. In keeping with TVA's desire to use existing facilities to the greatest extent possible, TVA is requesting a realistic period of additional time to allow for completing the construction and testing necessary to obtain an operating license for WBN Unit 2. In view of the above, TVA submits that pursuant to the requirements of 10 CFR § 50.55(b), good cause exists for the

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extension of the WBN Unit 2 Construction Permit CPPR-92 and that the extension is for a reasonable period of time.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 8th day of May, 2008. If you have any questions, please contact me at (423) 365-2351.

Sincerely,



Masoud Bajestani
Watts Bar Unit 2 Vice President

cc: (see page 5)

- References:
1. TVA letter dated March 6, 2008, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Request for Extension of Construction Permit CPPR-92"
 2. NRC letter dated October 24, 2000, "Watts Bar Nuclear Plant, Unit 2 - Order Extending Construction Completion Date (TAC NO. MA6947)"
 3. TVA letter dated November 14, 2006, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Feasibility Study for the Completion of Construction Activities"
 4. TVA letter dated August 3, 2007, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Reactivation of Construction Activities"
 5. TVA letter dated February 15, 2008, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Final Supplemental Environmental Impact Statement for the Completion and Operation of Unit 2"
 6. TVA letter dated March 13, 2008, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Regulatory Framework for the Completion of Construction and Licensing Activities for Unit 2 - Restructured Tables"
 7. TVA letter dated September 6, 1991, "Watts Bar Nuclear Plant (WBN) - Nuclear Performance Plan, Volume 4, Revision 1"
 8. TVA letter dated February 8, 2008, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Final Safety Analysis Report (FSAR) Red-Line for Unit 2"

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