

July 7, 2008

Mr. Ashok Bhatnagar  
Senior Vice President  
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Tennessee Valley Authority  
6A Lookout Place  
1101 Market Street  
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SUBJECT: WATTS BAR NUCLEAR PLANT, UNIT 2 – ORDER FOR EXTENSION OF  
CONSTRUCTION PERMIT (TAC NO. MD8389)

Dear Mr. Bhatnagar:

The U.S. Nuclear Regulatory Commission (NRC) has issued an Order extending the construction completion date of Construction Permit No. CPPR-92 for the Watts Bar Nuclear Plant, Unit 2, from December 31, 2010, to March 31, 2013. This extension is in response to your request in a letter dated May 8, 2008, which superseded a letter dated March 6, 2008.

Copies of the Order and the NRC staff's safety evaluation of your request are enclosed for your information. The Order has been sent to the Office of the Federal Register for publication. The Environmental Assessment and Finding of No Significant Impact were published in the *Federal Register* on June 27, 2008 (73 FR 36577).

Sincerely,

**/RA/**

Joseph F. Williams, Senior Project Manager  
Watts Bar Special Projects Branch  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-391

Enclosures: 1. Order  
2. Safety evaluation

cc w/encls: See next page

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Ashok S. Bhatnagar  
Tennessee Valley Authority

**WATTS BAR NUCLEAR PLANT  
UNIT 2**

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UNITED STATES OF AMERICA  
 NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
TENNESSEE VALLEY AUTHORITY	)	
	)	Docket No. 50-391
(Watts Bar Nuclear Plant, Unit 2)	)	

ORDER

Tennessee Valley Authority (TVA, the permittee) is the current holder of Construction Permit No. CPPR-92, issued by the Atomic Energy Commission on January 23, 1973, for construction of the Watts Bar Nuclear Plant (WBN), Unit 2. Construction Permit CPPR-91 for construction of WBN Unit 1 was also issued on January 23, 1973, and Facility Operating License NPF-90 was issued for operation of Unit 1 on February 7, 1996. WBN Unit 2 is currently partially completed. These facilities are at the permittee's site on the west branch of the Tennessee River, approximately 50 miles northeast of Chattanooga, Tennessee.

On May 8, 2008, TVA filed a request pursuant to Section 50.55(b) of Title 10 of the *Code of Federal Regulations* (10 CFR 50.55(b)) for an extension of the construction permit completion date for WBN Unit 2 to March 31, 2013. This request superseded an earlier letter dated March 6, 2008. TVA requested this extension to the WBN Unit 2 construction permit for the following reasons, as stated in its application:

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.

The NRC staff has prepared an Environmental Assessment and Finding of No Significant Impact, which was published in the *Federal Register* on June 27, 2008 (73 FR 36577). Pursuant to 10 CFR 51.32, the Commission has determined that extending the construction completion date will have not significant impact on the environment.

For further details regarding this action, see TVA's May 8, 2008, application, and the NRC staff's letter and safety evaluation of the requested extension dated July 7, 2008. Documents may be examined and/or copied for a fee at the NRC's Public Document Room, located at One White Flint North, 11555 Rockville Pike (first floor), and are accessible through the ADAMS Electronic Reading Room link at the NRC web site, [www.nrc.gov](http://www.nrc.gov).

Any person adversely affected by this Order may request a hearing on this Order within 60 days of its issuance. Where good cause is shown, consideration will be given to extending the time to answer or request a hearing. A request for an extension of time must be directed to the Director, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, and must include a statement of good cause for the extension. Requirements for hearing requests are found in 10 CFR 2.309.

All documents filed in NRC adjudicatory proceedings, including a request for hearing, any motion or other document filed in the proceeding prior to the submission of a request for hearing, and documents filed by interested governmental entities participating under 10 CFR 2.315(c), must be filed in accordance with the NRC E-Filing rule, which the NRC promulgated in August 2007, 72 Fed. Reg. 49139 (Aug. 28, 2007). The E-Filing process requires participants to submit and serve all adjudicatory documents over the internet, or in some cases to mail copies on electronic storage media. Participants may not submit paper

copies of their filings unless they seek a waiver in accordance with the procedures described below.

To comply with the procedural requirements associated with E-Filing, at least ten (10) days prior to the filing deadline the requestor should contact the Office of the Secretary by e-mail at [HEARINGDOCKET@NRC.GOV](mailto:HEARINGDOCKET@NRC.GOV), or by calling (301) 415-1677, to request (1) a digital ID certificate, which allows the participant (or its counsel or representative) to digitally sign documents and access the E-Submittal server for any NRC proceeding in which it is participating; and/or (2) creation of an electronic docket for the proceeding (even in instances when the requestor (or its counsel or representative) already holds an NRC-issued digital ID certificate). Each requestor will need to download the Workplace Forms Viewer™ to access the Electronic Information Exchange (EIE), a component of the E-Filing system. The Workplace Forms Viewer™ is free and is available at <http://www.nrc.gov/site-help/e-submittals/install-viewer.html>. Information about applying for a digital ID certificate also is available on NRC's public website at <http://www.nrc.gov/site-help/e-submittals/apply-certificates.html>.

Once a requestor has obtained a digital ID certificate, had a docket created, and downloaded the EIE viewer, it can then submit a request for a hearing through EIE. Submissions should be in Portable Document Format (PDF) in accordance with NRC guidance available on the NRC public website at <http://www.nrc.gov/site-help/e-submittals.html>. A filing is considered complete at the time the filer submits its document through EIE. To be timely, electronic filings must be submitted to the EIE system no later than 11:59 p.m. Eastern Time on the due date. Upon receipt of a transmission, the E-Filing system time-stamps the document and sends the submitter an e-mail notice confirming receipt of the document. The EIE system also distributes an e-mail notice that provides access to the document to the NRC Office of the General Counsel and any others who have advised the Office of the Secretary that they wish to participate in the proceeding, so that the filer need not serve the document on those participants

separately. Therefore, any others who wish to participate in the proceeding (or their counsel or representative) must apply for and receive a digital ID certificate before a hearing request is filed so that they may obtain access to the document via the E-Filing system.

A person filing electronically may seek assistance through the "Contact Us" link located on the NRC website at <http://www.nrc.gov/site-help/e-submittals.html> or by calling the NRC technical help line, which is available between 8:30 a.m. and 4:15 p.m., Eastern Time, Monday through Friday. The help line number is (800) 397-4209 or locally, (301) 415-4737.

Participants who believe that they have good cause for not submitting documents electronically must file an exemption request, in accordance with 10 C.F.R. 2.302(g), with their initial paper filing requesting authorization to continue to submit documents in paper format. Such filings must be submitted by (1) first class mail addressed to the Office of the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attention: Rulemaking and Adjudications Staff; or (2) courier, express mail, or expedited delivery service to the Office of the Secretary, Sixteenth Floor, One White Flint North, 11555 Rockville Pike, Rockville, Maryland, 20852, Attention: Rulemaking and Adjudications Staff. Participants filing a document in this manner are responsible for serving the document on all other participants. Filing is considered complete by first-class mail as of the time of deposit in the mail, or by courier, express mail, or expedited delivery service upon depositing the document with the provider of the service.

Documents submitted in adjudicatory proceedings will appear in NRC's electronic hearing docket which is available to the public at [http://ehd.nrc.gov/EHD\\_Proceeding/home.asp](http://ehd.nrc.gov/EHD_Proceeding/home.asp), unless excluded pursuant to an order of the Commission, the Atomic Safety and Licensing Board, or a Presiding Officer. Participants are requested not to include personal privacy information, such as social security numbers, home addresses, or home phone numbers in their filings. With respect to copyrighted works, except for limited excerpts that serve the purpose of

the adjudicatory filings and would constitute a Fair Use application, Participants are requested not to include copyrighted materials in their submission.

If a person requests a hearing, that person shall set forth with particularity the manner in which his interest is adversely affected by this Order and shall address the criteria set forth in 10 C.F.R. 2.309(d).

The scope of this order extending the construction completion date and any proceeding hereunder is limited to direct challenges to the permit holder's asserted reasons that show good cause justification for the extension.

Attorney for the permit holder: Maureen H. Dunn, Executive Vice President and General Counsel, Tennessee Valley Authority, 400 West Summit Hill Drive, Knoxville, TN 37902.

IT IS HEREBY ORDERED THAT the latest completion date for Construction Permit No. CPPR-92 is extended from December 31, 2010, to March 31, 2013.

Dated at Rockville, Maryland, this 7th day of July 2008.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation



SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATING TO REQUEST FOR EXTENSION OF

CONSTRUCTION PERMIT NO. CPPR-92

WATTS BAR NUCLEAR PLANT, UNIT 2

DOCKET NO. 50-391

1.0 INTRODUCTION

Construction permits were issued to the Tennessee Valley Authority (TVA, or the permittee) on January 23, 1973, authorizing construction of the Watts Bar Nuclear Plant (WBN), Units 1 and 2, in Rhea County, Tennessee. Facility operating license NPF-90 was issued for the operation of WBN Unit 1 on February 7, 1996. Currently, Construction Permit (CP) CPPR-92 specifies December 31, 2010, as the latest completion date for WBN Unit 2.

In a May 8, 2008, letter, TVA requested that the latest completion date in CPPR-92 be extended to March 31, 2013, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55(b). The May 8, 2008 letter superseded a similar request dated March 6, 2008.

2.0 DISCUSSION

The completion date for the WBN Unit 2 CP was extended to December 31, 2010 by Order issued by the Nuclear Regulatory Commission (NRC) on October 24, 2000. TVA's May 8, 2008, letter states that since that time, no significant safety-related construction has been conducted. The letter also states that "TVA seeks to use existing facilities to the greatest extent possible." By keeping the WBN Unit 2 CP active, TVA has maintained the option to eventually complete the facility. The letter notes that,

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.

On August 1, 2007, the TVA Board of Directors authorized completion of WBN Unit 2. TVA's May 8, 2008, letter summarizes this action as follows:

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.

The letter also states:

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.

TVA's letter also states that "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."

The NRC can extend the completion date of a construction permit for a reasonable period of time upon good cause shown, in accordance with 10 CFR 50.55(b).

The staff finds that good cause has been shown for the requested extension. The scope of work necessary to complete WBN Unit 2 has not been reduced since the last CP extension on October 24, 2000. TVA has now determined that making use of existing facilities and completing WBN Unit 2 is necessary to fulfill future power demands. Therefore, good cause exists for the requested CP extension.

The NRC staff also finds that the extension period requested by TVA is reasonable. TVA does not propose to modify the terms of the CP other than to extend the completion time. Remaining WBN Unit 2 work will be completed in accordance with the other terms of the CP. Given the scope of work to be completed, the length of time requested is reasonable, as shown by a comparison to WBN Unit 1. When work on that unit was suspended in 1985, the plant was thought to be nearly complete. Once construction resumed in 1991, implementation of corrective actions to resolve deficiencies and other work took over 4 years to complete. Aside from shared systems, WBN Unit 2 is not as far along in construction as WBN Unit 1 was at the time construction was suspended. Therefore, the scope of work needed to complete WBN Unit 2 includes remaining initial construction scope, plus similar corrective actions to resolve deficiencies as was done for Unit 1 and replacement of equipment that TVA has removed for use in its other facilities. TVA expects to complete construction by April 1, 2012, but proposes to extend the construction permit until March 31, 2013, which provides margin over its projected schedule. The overall construction period is similar to the period of time needed to complete WBN Unit 1 once construction was resumed, and so the requested CP extension is found to be for a reasonable period.

The extension only increases the amount of time to complete construction, and does not authorize any new activities, and so does not result in any new impacts on public health and safety. The construction activities do not have any radiological consequences. Therefore, the staff finds that the requested extension does not involve a significant hazards consideration.

### 3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an Environmental Assessment and Finding of No Significant Impact has been prepared and published in the *Federal Register* on June 27, 2008 (73 FR 36577). Accordingly, based upon the environmental assessment, the staff has determined that extending the construction completion dates will not have a significant effect on the quality of the human environment.

### 4.0 CONCLUSION

The staff finds that there is reasonable assurance that the health and safety of the public will not be endangered by extension of the construction completion date, and that the requested period of time is reasonable. Good cause exists for issuance of an order extending the completion date. The staff has determined that the extension does not involve a significant hazards consideration and that, based upon the evaluation above, issuance of an order extending the latest completion date for construction of WBN Unit 2 is reasonable and should be authorized. The latest completion date for WBN Unit 2 should be extended to March 31, 2013.

Principal contributor: Joseph F. Williams

Date: July 7, 2008