

December 14, 1993

Docket Nos. 50-390
and 50-391

Tennessee Valley Authority
ATTN: Dr. Mark O. Medford, Vice President
Technical Support
3B Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Dr. Medford:

SUBJECT: EXTENSION OF CONSTRUCTION COMPLETION DATES - WATTS BAR NUCLEAR
PLANT, UNITS 1 AND 2 (TAC NOS. M88220 AND M88221)

In response to TVA's letter dated November 10, 1993, requesting an extension of the completion dates for the Watts Bar Nuclear Plant, Units 1 and 2, the Nuclear Regulatory Commission has issued an order extending the construction completion dates. In lieu of the latest completion date of December 31, 1993, the construction completion date of Construction Permit No. CPPR-91 (Unit 1) has been extended to December 31, 1994. In addition, the Unit 2 completion date of June 30, 1997, as specified in Construction Permit No. CPPR-92, has been extended to December 31, 1999.

Copies of the Order and the 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 (58FR65423, 12/14/93).

Sincerely,

Peter S. Tam

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

Enclosures:

- Order Extending Construction Completion Dates
- Safety Evaluation

cc w/enclosures:
See next page

PDII-4/LA	PDII-4/PM	PDII-4/D	OGC	ADRII	DRPE:D
BClayton	PTam	FHebdon		G.Lamas	Sfarga
12/1/93	12/1/93	12/1/93	12/1/93	12/1/93	12/1/93
DOCUMENT NAME: G:\WBN.ORD			ADP JCalton 12/10/93	DRR:DD F.Miraglia 12/10/93	DRR:D T.Murley 12/13/93

170081

9312220097 931214
PDR ADOCK 05000390
A PDR

NRC FILE CENTER COPY

CP-3

DF01

111

**SUBJECT: EXTENSION OF CONSTRUCTION COMPLETION DATES - WATTS BAR NUCLEAR
PLANT, UNITS 1 AND 2 (TAC NOS. M88220 AND M88221)**

Distribution

**Docket Files
NRC & Local PDRs
WBN Reading
T. Murley/F. Miraglia
L. J. Callan, Acting
E. Rossi
J. Lieberman
S. Varga
G. Lainas
L. Dodley
F. Hebdon
B. Clayton
P. Tam
C. Jackson
OGC
E. Jordan
G. Hill (4)
ACRS (10)
OPA
SECY
OC/LFDCB
EDO Contact, Region II Plants
E. Merschoff, RII
P. Fredrickson, RII
J. Crlenjak, RII**

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matters of)
TENNESSEE VALLEY AUTHORITY)
(Watts Bar Nuclear Plant,) Docket Nos. 50-390
Units 1 and 2) 50-391

ORDER

Tennessee Valley Authority (the permittee) is the current holder of Construction Permit Nos. CPPR-91 and CPPR-92, issued by the Atomic Energy Commission on January 23, 1973, for construction of the Watts Bar Nuclear Plant, Units 1 and 2. These facilities are currently under construction at the permittee's site on the west branch of the Tennessee River approximately 50 miles northeast of Chattanooga, Tennessee.

On November 10, 1993, the Tennessee Valley Authority filed a request pursuant to 10 CFR 50.55(b) for an extension of the completion dates. The permittee requested this extension for Unit 1 because, at the time the last extension was requested, the permittee could only make a best estimate of the extra time needed to complete construction and modification, and underestimated. Furthermore, to ensure that Unit 1 has been properly constructed, the permittee is performing a comprehensive Preoperational Testing Program, instead of relying on preoperational test results obtained a few years ago.

The permittee requested extension for Unit 2 because it plans to complete Unit 2 only after Unit 1 enters operation successfully.

The NRC staff has concluded that good cause has been shown for the delays, the extension is for a reasonable period, and that this action

involves no significant hazards consideration, the basis for which are set forth in the staff's evaluation.

The NRC staff has prepared an environmental assessment and finding of no significant impact which was published in the FEDERAL REGISTER on December 14, 1993.

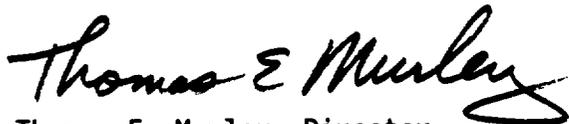
Pursuant to 10 CFR 51.32, the Commission has determined that extending the construction completion dates will have no significant impact on the environment.

The applicant's letter dated November 10, 1993, and the NRC staff's letter and Safety Evaluation of the request for extension of the construction permits, dated December 14, 1993, are available for public inspection at the Commission's Public Document Room, Gelman Building, 2120 L Street, NW., Washington, D.C. 20555 and at the Chattanooga-County Library, 1001 Broad Street, Chattanooga, Tennessee 37402.

IT IS HEREBY ORDERED THAT the latest completion dated for Construction Permit No. CPPR-91 is extended from December 31, 1993 to December 31, 1994 and the latest completion date for Construction Permit No. CPPR-92 is extended from June 30, 1997 to December 31, 1999.

Dated at Rockville, Maryland, this 14th day of December 1993.

FOR THE NUCLEAR REGULATORY COMMISSION



Thomas E. Murley, Director
Office of Nuclear Reactor Regulation



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

ENCLOSURE 2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATING TO REQUEST FOR EXTENSION
OF CONSTRUCTION PERMIT NOS. CPPR-91 AND CPPR-92
WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-390 AND 50-391

1.0 INTRODUCTION

Two construction permits were issued to Tennessee Valley Authority (TVA or permittee) on January 23, 1973, authorizing construction of the Watts Bar Nuclear (WBN) Plant, Units 1 and 2 (the facility), in Rhea County, Tennessee. Currently, Construction Permit CPPR-91 specified December 31, 1993, as the latest date for completion of Unit 1. Construction Permit CPPR-92 specifies June 30, 1997, as the latest date for completion of construction for Unit 2.

Pursuant to 10 CFR 50.55(b), the permittee requested that these dates be extended to December 31, 1994 for Unit 1 and December 31, 1999, for Unit 2. The permittee's request for these construction permit extensions is contained in its letter dated November 10, 1993.

2.0 DISCUSSION

The permittee's letter of November 10, 1993, states that the delay in the completion of construction of the Watts Bar Nuclear Plant, Units 1 and 2, is due to the following factors:

TVA was conducting an extensive review of its construction work practices and the scope of work required to complete WBN when it last requested extensions of the construction permits. The requested extension were based on the best estimate then available of the time that would be required to complete the units. Limited work activities resumed at the plant in late November 1991. Full scope work activities resumed in June 1992, after TVA management had concluded, and NRC agreed, that management control of field work was ensuring quality.

TVA has continued to exercise control over completion activities as necessary to ensure quality, accuracy, and completeness, even if this meant delays in schedule. TVA has expanded the scope of work that must be accomplished where such expansion was necessary to ensure the job is performed correctly. The most visible such expansion was the decision to perform a comprehensive Preoperational Testing Program, to ensure that equipment/systems will perform as designed. This replaced a more limited-scope Prestart Testing Corrective Action Program Plan that would have relied, to some extent, on preoperational testing done several years previously. The current effort requires more time, but will ensure that the plant has been properly completed. The delays

9312220109 931214
PDR ADOCK 05000390
A PDR

associated with this deliberate program to complete construction provide good cause for extending the construction permit for WBN Unit 1.

TVA is completing the two WBN units sequentially. Work is progressing on Unit 1 and those common systems necessary to support Unit 1 operations. Active work directed toward completion of Unit 2 will not start until Unit 1 has entered operation successfully. The additional period required to complete Unit 1 therefore necessitates extension of the completion schedule for Unit 2. TVA will complete Unit 2 in a measured and deliberate manner, based upon the experience gained on Unit 1. Thus, good cause also exists for extending the construction permit for WBN Unit 2.

The design and construction of WBN, Unit 1, was completed in March 1985. At that time, the NRC staff had completed its review of the WBN Final Safety Analysis Report (FSAR) and documented its evaluation in the Safety Evaluation Report, NUREG-0847 and its Supplements 1 through 4. However, several nonconforming issues have been raised since then by the NRC, as a result of TVA employees concerns, and many internal and external TVA audits and reviews. In response to recognition of these problems and nonconforming issues, TVA undertook a vigorous recovery program at WBN beginning in 1986 which included many significant programs to identify root causes for these issues and develop and implement programs for their resolution. A number of these programs have been completed and are in various stages of implementation. In June 1990, the staff reactivated the licensing activities, resulting in issuance of Safety Evaluation Report Supplements 5 through 12 (NUREG-0847) since that date.

On November 4, 1987, TVA established an independent team to perform an integrated systematic evaluation of WBN and make recommendations regarding the adequacy of WBN design and construction. This team developed a Watts Bar Program Plan (WBPP) which was submitted to the NRC on May 27, 1988. According to TVA, the WBPP provides in-depth review of the issues and programs which when implemented, will provide the basis for determining with reasonable assurance that WBN is designed and built in conformance with licensing requirements. The WBPP has been approved by the staff in safety evaluation reports (NUREG-1232, Vol. 3; NUREG-0847, Supplements 5 through 12).

The construction delay described above is the result of concerns raised by NRC, TVA employees or TVA contractors. These concerns must be resolved satisfactorily prior to issuance of the operating license to ensure the safe operation of the facility. Therefore, good cause has been shown for the extension requested by the permittee.

3.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.21, 51.32, and 51.35, an environmental assessment and finding of no significant impact have been prepared and published in the Federal Register on December 14, 1993 (58 FR 65423). 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.

Based on the review of the permittee's request, the NRC staff concludes that the factors discussed above constitute good cause for the delay in the completion of construction under 10 CFR 50.55(b). The permittee, as stated above, is in the process of implementing the programs described in the WBPP. This may result in revising the design and construction of the facility to correct design deficiencies and to make plant improvements which are needed to enhance plant safety. The staff believes that the requested extension periods are acceptable.

As a result of the staff's review of the Watts Bar Final Safety Analysis Report to date and considering the nature of the delay, the staff has identified no area of significant safety considerations resulting directly from the extension of the construction completion dates. In addition, the staff finds that the only modification proposed by the permittee to the existing construction permits is an extension of the latest completion dates. This extension does not allow any work to be performed of the type not previously authorized by the existing construction permits.

4.0 CONCLUSION

The staff finds that (1) this action does not involve a significant increase in the probability or consequences of an accident previously evaluated, (2) this action does not create the possibility of a new or different kind of accident from any previously evaluated and does not involve a significant reduction in a margin of safety; (3) there is reasonable assurance that the health and safety of the public will not be endangered by extension of the construction completion dates. Good cause exists for issuance of an order extending the completion dates. Accordingly, the staff has concluded that the action does not involve a significant hazards consideration and that based upon the foregoing evaluation, issuance of an order extending the latest completion dates for construction of the Watts Bar Nuclear Plant is reasonable and should be authorized. The latest completion date for Unit 1 should be extended to December 31, 1994 and the latest completion date for Unit 2 should be extended to December 31, 1999.

Principal Contributor: Peter S. Tam

Dated: December 14, 1993

Tennessee Valley Authority
ATTN: Dr. Mark O. Medford

cc:

Mr. Craven Crowell, Chairman
Tennessee Valley Authority
ET 12A
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. W. H. Kennoy, Director
Tennessee Valley Authority
ET 12A
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. Johnny H. Hayes, Director
Tennessee Valley Authority
ET 12A
400 West Summit Hill Drive
Knoxville, TN 37902

Mr. D. E. Nunn, Vice President
Tennessee Valley Authority
3B Lookout Place
1101 Market Street
Chattanooga 37402-2801

Mr. W. J. Museler, Vice President
Watts Bar Nuclear Plant
Tennessee Valley Authority
Route 2, P.O. Box 800
Spring City, TN 37381

Mr. B. S. Schofield, Manager
Nuclear Licensing and Regulatory Affairs
Tennessee Valley Authority
4G Blue Ridge
1101 Market Street
Chattanooga, TN 37402-2801

Mr. G. L. Pannell
Site Licensing Manager
Watts Bar Nuclear Plant
Tennessee Valley Authority
Route 2, P.O. Box 800
Spring City, TN 37381

TVA Representative
Tennessee Valley Authority
11921 Rockville Pike
Suite 402
Rockville, MD 20852

WATTS BAR NUCLEAR PLANT

General Counsel
Tennessee Valley Authority
ET 11H
400 West Summit Hill Drive
Knoxville, TN 37902

The Honorable Robert Aikman
County Executive
Rhea County Courthouse
Dayton, TN 37321

The Honorable Garland Lanksford
County Executive
Meigs County Courthouse
Decatur, TN 37322

Mr. Michael H. Mobley, Director
Division of Radiological Health
3rd Floor, L and C Annex
401 Church Street
Nashville, TN 37243-1532

Regional Administrator
U.S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW., Suite 2900
Atlanta, GA 30323

Senior Resident Inspector
Watts Bar Nuclear Plant
U.S. Nuclear Regulatory Commission
Route 2, Box 700
Spring City, TN 37381

Ms. Danielle Droitsch
Energy Project
The Foundation for
Global Sustainability
P.O. Box 1101
Knoxville, TN 37901

Mr. Bill Harris
Route 1, Box 26
Ten Mile, TN 37880