

December 27, 1988

Docket Nos. 50-390/391

Mr. Oliver D. Kingsley, Jr.
Senior Vice President, Nuclear Power
Tennessee Valley Authority
6N 38A Lookout Place
1101 Market Street
Chattanooga, Tennessee 37402-2801

Dear Mr. Kingsley:

SUBJECT: EXTENSION OF CONSTRUCTION COMPLETION DATES - WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2

In response to TVA's letter dated June 29, 1988, 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 September 1, 1988, the construction completion date of Construction Permit No. CPPR-91 (Unit 1) has been extended to July 1, 1991. In addition, the Unit 2 completion date of January 1, 1990, as specified in Construction Permit No. CPPR-92, has been extended to December 31, 1992. The staff believes that the requested construction completion dates are achievable and the requested extension period as stated in TVA's letter dated June 29, 1988 is acceptable.

Copies of the Order and the staff's Safety Evaluation of your request are enclosed for your information. The Order has been forwarded to the Office of the Federal Register for publication. The Environmental Assessment and Finding of No Significant Impact was published in the Federal Register on December 16, 1988.

Sincerely,

Original Signed by

Suzanne Black, Assistant Director
for Projects
Division of TVA Projects
Office of Special Projects

Enclosures:

1. Order Extending Construction Completion Dates
2. Safety Evaluation

cc w/enclosures:

OFC	:OSP:TVA/LA	:OSP:TVA/PM	:TVA:AD/P	:TVA:D/P	:OGC	:OSP
NAME	:MSimms	:RAdams	:SBlack	:SRichardson	:BBarberich	:JGPartlow:sam
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cc

Mr. Oliver D. Kingsley, Jr.

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Watts Bar Nuclear Plant

cc:

General Counsel
Tennessee Valley Authority
400 West Summit Hill Drive
E11 B33
Knoxville, Tennessee 37902

Regional Administrator, Region II
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Mr. R. L. Gridley
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Resident Inspector/Watts Bar NP
c/o U. S. Nuclear Regulatory Commission
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Spring City, Tennessee 37381

Mr. R. A. Pedde
Tennessee Valley Authority
Watts Bar Nuclear Plant
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Spring City, Tennessee 37381

Dr. Henry Myers, Science Advisor
Committee on Interior
and Insular Affairs
U.S. House of Representatives
Washington, D.C. 20515

Mr. D. McCloud
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Watts Bar Nuclear Plant
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Mr. D. L. Williams
Tennessee Valley Authority
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Knoxville, Tennessee 37902

Honorable Johnny Powell
County Judge
Meigs County Courthouse
Route 2
Decatur, Tennessee 37322

Tennessee Department of Health
and Environment
ATTN: Director, Bureau of Environment
T.E.R.R.A. Building, 1st Floor
150 9th Avenue North
Nashville, Tennessee 37219-5404

Honorable Robert Aikman
County Judge
Rhea County Courthouse
Dayton, Tennessee 37321

SUBJECT: Extension of Construction and Completion Dates
Watts Bar Nuclear Plants, Units 1 and 2

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of
TENNESSEE VALLEY AUTHORITY
(Watts Bar Nuclear Plant,
Units 1 and 2)

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Docket No. 50-390
50-391

ORDER

Tennessee Valley Authority 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 presently under construction at the applicant's site on the west branch of the Tennessee River approximately 50 miles northeast of Chattanooga, Tennessee.

On June 29, 1988 the Tennessee Valley Authority (the applicant) filed a request pursuant to 10 CFR 50.55(b) for an extension of the completion dates. The extension has been requested because construction has been delayed by the following events:

1. Delays resulting from the review and implementation of several key issues/programs, such as the Vertical Slice Program and the Watts Bar Program Plan. These corrective action programs address the outstanding issues and confirm the design and construction of the Watts Bar plant.
2. Delays resulting from the reallocation of certain resources to the restart programs for TVA's Sequoyah and Browns Ferry Nuclear Plants.

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

*Effective January 19, 1975, the Atomic Energy Commission became the Nuclear Regulatory Commission and permits in effect on that day were continued under the authority of the Nuclear Regulatory Commission.

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involves no significant hazards consideration, the bases for which are set forth in the staff's evaluation of the request for extension dated June 29, 1988.

The NRC staff has prepared an environmental assessment and finding of no significant impact which was published in the FEDERAL REGISTER on December 16, 1988. 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 June 29, 1988, and the NRC staff's letter and Safety Evaluation of the request for extension of the construction permits, dated December 27, 1988 is available for public inspection at the Commission's Public Document Room, Gelman Building, 2120 L Street, N.W., Washington, D.C. 20555 and the Chattanooga-Hamilton County Library, 1001 Broad Street, Chattanooga, Tennessee 37402.

IT IS HEREBY ORDERED THAT the latest completion date for Construction Permit No. CPPR-91 is extended from September 1, 1988 to July 1, 1991, and the latest completion date for the Construction Permit No. CPPR-92 is extended from January 1, 1990 to December 31, 1992.

Dated at Rockville, Maryland, this 27th day of December, 1988.

FOR THE NUCLEAR REGULATORY COMMISSION


James G. Partlow, Director
Office of Special Projects



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

SAFETY EVALUATION BY THE OFFICE OF SPECIAL PROJECTS

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. Construction Permit CPPR-91 specifies September 1, 1988, as the latest date for completion of Unit 1. Construction Permit CPPR-92 specifies January 1, 1990, 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 July 1, 1991 for Unit 1 and December 31, 1992 for Unit 2. The permittee's request for these construction permit extensions is contained in its letter dated June 29, 1988.

2.0 DISCUSSION

The permittee's letter of June 29, 1988, 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:

1. Delays resulting from the review and implementation of key issues/programs, such as the Vertical Slice Program and the Watts Bar Program Plan. These corrective action programs address the outstanding issues and confirm the design and construction of the Watts Bar plant.
2. Delays resulting from the reallocation of certain resources to the restart programs for TVA's Sequoyah and Browns Ferry Nuclear Plants.

3.0 EVALUATION

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-0845 and its Supplements 1 through 4. However, several nonconforming issues have been raised since then by the NRC, as a result of TVA

employee 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 the others are in various stages of review and implementation.

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. TVA will document these activities in WBN Nuclear Performance Plan (NPP), Volume 4 for NRC staff's review and approval. In a letter dated June 27, 1988, NRC approved the overall approach delineated in the plan and provided staff comments.

At present, TVA is performing a Vertical Slice Review (VSR) of two selected systems in addition to the ongoing work in certain other corrective action programs (CAPs). This VSR will either verify the adequacy of plant systems, components, and structures, or identify the nonconforming conditions. These nonconforming conditions may result in new CAPs. These additional activities have resulted in substantial work which must be satisfactorily completed prior to licensing of Unit 1.

In November 1986, TVA announced its priorities for its nuclear facilities as follows: Sequoyah, Browns Ferry, Watts Bar, and Bellefonte. As a result of this order of priorities, certain engineering and construction resources originally allocated for the fuel load of Watts Bar have been diverted to the restart programs for Sequoyah and Browns Ferry Nuclear Plants. This allocation of resources has impacted the Watts Bar fuel load schedule.

The construction delays listed above are 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. The staff believes that the requested construction completion dates are achievable and the requested extension period as stated in TVA's letter dated June 29, 1988 is acceptable.

4.0 ENVIRONMENTAL CONSIDERATION

Pursuant to 10 CFR 51.32, the Commission has determined that extending the construction completion dates will have no significant impact on the environment (53 FR 50606, December 16, 1988).

5.0 CONCLUSIONS

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 construction completion dates are achievable and the requested extension period is acceptable.

As a result of our review of the Watts Bar Final Safety Analysis Report to date and considering the nature of the delays, the staff has identified no area of significant safety considerations resulting directly from the extension of the construction completion dates. In addition, we find 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 permit. Therefore, we find that (1) this action does not involve a significant increase in the probability or consequences of an accident previously evaluated, 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; (2) there is reasonable assurance that the health and safety of the public will not be endangered by extension of the construction completion dates, and (3) good cause exists for issuance of an order extending the completion dates. Accordingly, the NRC 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 July 1, 1991, and the latest completion date for Unit 2 should be extended to December 31, 1992.

Principal Contributor: Rajender Auluck, OSP

Date of Issuance: December 27, 1988