



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

MAY 25 2000

10 CFR 50.55a

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

Gentlemen:

In the Matter of ) Docket No. 50-390  
Tennessee Valley Authority )

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1 - AMERICAN SOCIETY OF  
MECHANICAL ENGINEERS (ASME) SECTION XI INSERVICE TESTING PROGRAM  
RELIEF REQUESTS - PV-10, REVISION 1 AND PV-17

The purpose of this letter is to request relief from ASME Section  
XI Code requirements, OM Standard, Part 10, Paragraph 4.3.2.4(c).

Relief Request PV-10 was originally approved by NRC in NUREG-0847,  
WBN Supplemental Safety Evaluation Report 14 under 10 CFR  
50.55a(f)(6)(i). The purpose of this revision is to alter the  
stated time at which the valves are disassembled and inspected  
from "during refueling outages" to "once per fuel cycle." This  
would allow online disassembly and inspection of these valves.  
Justification for the revised relief request is provided in  
Enclosure 1 and annotated for your convenience. The revision also  
deletes valves 1-CKV-67-513-A-A, 1-CKV-67-513-B-B, 2-CKV-67-513-A-  
A, and 2-CKV-67-513-B-B from the relief request. These four  
valves are normally in the closed position and the open function  
can be tested. Therefore, a relief request for these four valves  
is not required to meet the Code requirements.

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Enclosure 2 provides justification for a new relief request PV-17 to also alter the stated time at which certain valves in the containment spray system are disassembled and inspected from "during refueling outages" to "once per fuel cycle." This would allow online disassembly and inspection of these valves. No other relief is requested for these valves as the valves are from different manufacturers, and therefore, sampling is not an option.

The Enclosures provide the relief requests. TVA requests that NRC review and approve these requests by September 1, 2000. These relief requests are needed before the third refueling outage which is scheduled to begin mid-September 2000. If you should have any questions concerning this matter, please contact me at (423) 365-1824.

Sincerely,



P. L. Pace  
Manager, Site Licensing  
and Industry Affairs

Enclosures

cc (Enclosures):

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ENCLOSURE 1

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1  
REQUEST FOR RELIEF PV-10 REVISION 1

I. **Relief Request Number** - PV-10, Revision 1

**Executive Summary** - Relief Request PV-10 documented a request to utilize disassembly and inspection on a sampling basis in lieu of full stroke exercising each check valve. This request applied to certain check valves that do not have adequate test connections to allow full stroke exercising to the closed position. That relief request was approved in WBN Supplemental Safety Evaluation Report (SSER) 14.

PV-10 originally included valves 1-CKV-67-513A-A, 1-CKV-67-513B-B, 2-CKV-67-513A-A, and 2-CKV-67-513B-B. These four valves are normally closed valves in the backup cooling water supply to the emergency diesel generators that must open to fulfill their specific function. These valves are each installed in series with the backup cooling water supply motor-operated-valve and have no specific, safety-related closing function. Open testing of these four valves can and is being accomplished quarterly in accordance with the requirements of OM-10. Therefore, these four valves are not required to be included in Relief Request PV-10.

This revision to PV-10 deletes the above four valves and requests authorization to perform the disassembly and inspection at the same frequency [every eighteen months, which corresponds to once per refueling cycle] but on-line rather than during the refueling outages. This allows the disassembly and inspection to be conducted in conjunction with other diesel generator maintenance and eases the man-power loading on skilled valve workers during refueling outages.

In accordance with 10 CFR 50.55a(a)(3)(ii), relief is requested to allow disassembly and inspection in any reactor mode on a sampling basis, with one valve disassembled and inspected every 18 months (not every refueling outage). Relief is requested because the code requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

II. **Affected System(s)** - Essential Raw Cooling Water (ERCW).

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REQUEST FOR RELIEF PV-10 REVISION 1

- III. **Affected Component(s)** - 1-CKV-67-508A-A  
1-CKV-67-508B-B  
2-CKV-67-508A-A  
2-CKV-67-508B-B
- IV. **ASME Code Class** - 3
- V. **Category** - C-Active
- VI. **Function of Affected Component(s)** - These valves open to pass cooling water flow to its respective diesel generator, and close to provide flow boundary isolation when the backup train cooling water is used to cool the diesels.
- VII. **Impractical Requirement** - OM Standard, Part 10, Paragraph 4.3.2.4(c) - *"As an alternative to the testing in (a) or (b) above, disassembly every refueling outage to verify operability of check valves may be used."*
- VIII. **Basis for Granting Relief** - The installed configuration of these valves does not provide for any type of testing of the back seat or closing function. Disassembling all four valves imposes an unreasonable burden. During refueling outages, skilled valve workers are a limited resource. Therefore, restricting disassembly and inspection to refueling outage conditions imposes an impact on outage schedule, duration, and cost. The disassembly and inspection can be performed with the unit on-line, in conjunction with other diesel generator maintenance that is also performed on-line, without increasing unavailability time and without increasing the duration of or frequency with which the applicable limiting conditions for operation (LCO) are entered. The proposed 18 month frequency corresponds to one fuel cycle and meets the frequency requirements of Generic Letter 89-04, Regulatory Position 2, without adversely impacting skilled craft availability during a refueling outage.
- IX. **Proposed Alternative** - Group the valves into groups of not more than four valves with all valves in each group being identical in design, material and manufacture; environmental (including physical orientation) and radiological conditions; and function. Disassemble and

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REQUEST FOR RELIEF PV-10 REVISION 1

inspect one valve from each group once per eighteen months, but not necessarily during a refueling outage, in accordance with the provisions of Generic Letter 89-04, Position 2. If any single valve is found unacceptable, all valves in the associated group will then be disassembled and inspected.

- X. **Frequency of Proposed Alternative** - Disassemble and inspect one valve per group every eighteen months, but not necessarily during a refueling outage, in accordance with Generic Letter 89-04, Position 2 to verify the backseating function.
- XI. **Implementation Schedule** - This request for relief is applicable to the first Inservice interval.

ENCLOSURE 2

WATTS BAR NUCLEAR PLANT (WBN) UNIT 1  
REQUEST FOR RELIEF PV-17

I. Relief Request - PV-17

**Executive Summary** - PV-17 documents a request for relief to utilize disassembly and inspection during on-line maintenance for certain containment spray system check valves that cannot be full stroke exercised to the open position. Authorization is requested to perform the disassembly and inspection at the frequency provided by OM-10 (i.e., every eighteen months which corresponds to once per refueling cycle) but may be performed on-line rather than during refueling outages. This allows the disassembly and inspection to be conducted in conjunction with other containment spray system maintenance and eases the man-power loading on skilled valve workers during refueling outages.

In accordance with 10 CFR 50.55a(a)(3)(ii), relief is requested to allow disassembly and inspection in any reactor mode, with each valve disassembled and inspected every 18 months. Relief is requested because the code requirement would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety

- II. Affected System(s) - Containment Spray
- III. Affected Component(s) - 1-CKV-72-507-B  
1-CKV-72-525-B
- IV. ASME Code Class - 2
- V. Category - C-Active
- VI. Function of Affected Component(s) - Valve 1-CKV-72-507-B opens to pass water either from the refueling water storage tank (RWST) or the containment sump to the 1B-B containment spray pump. Valve 1-CKV-72-507-B also closes to provide a flow boundary when the suction supply is from the containment sump.
- Valve 1-CKV-72-525-B opens to pass water from the 1B-B containment spray pump to the containment spray ring headers.
- VII. Impractical Requirement - OM Standard, Part 10, paragraph 4.3.2.4(c) - "As an alternative to the testing

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*in (a) or (b) above, disassembly every refueling outage to verify operability of check valves may be used."*

VIII. **Basis for Granting Relief** - Valves 1-CKV-72-507-B and 1-CKV-72-525-B cannot be full stroke exercised open because the largest flow path available outside containment, a 6-inch line back to the RWST, will not pass the required accident flow (maximum recirculation flow available of approximately 3850 gpm versus a required accident flow of 4000 gpm). Therefore, there is not a flow path available outside containment that allows full stroke exercising these Train B valves to the open position. Flowing through the containment spray ring headers would result in deluging containment with water from the RWST, causing potential damage to equipment inside containment as well as spreading contamination. The valves are from different manufacturers, so sampling is not an option. Disassembly and inspection is allowed by OM Standard, Part 10 as an alternate to testing as stated in the requirement above.

OM-10 also requires the disassembly to be performed every refueling outage. During refueling outages, skilled valve workers are a limited resource. Therefore, restricting disassembly and inspection to refueling outage conditions imposes an impact on outage schedule, duration, and cost. The disassembly and inspection can be performed with the unit on-line, in conjunction with other containment spray system maintenance that is also performed on-line, without increasing unavailability time, and without increasing the duration of or frequency with which the applicable limiting condition for operation (LCO) is entered. The proposed 18 month frequency corresponds to one fuel cycle and meets the frequency requirements of OM-10 without adversely impacting skilled craft availability during a refueling outage.

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- IX. **Proposed Alternative** - OM-10 requires disassembly every refueling outage to verify operability of check valves. The proposed alternative to this requirement is to disassemble and inspect once per eighteen months, but not necessarily during a refueling outage. This would allow this function to be performed on-line in conjunction with other maintenance work on this system.
- X. **Frequency of Proposed Alternative** - Disassemble and inspect each valve once per eighteen months to verify its continued operability.
- XI. **Implementation Schedule** - This request for relief is applicable to the first inservice interval.