

NUCLEAR REGULATORY COMMISSION
TENNESSEE VALLEY AUTHORITY
DOCKET NOS. 50-390 AND 50-391
WATTS BAR NUCLEAR PLANT, UNITS 1 AND 2
EXEMPTION
[NRC-2010-0019]

1.0 BACKGROUND

Tennessee Valley Authority (TVA, the licensee) is the holder of Facility Operating License Number NPF-90, which authorizes operation of the Watts Bar Nuclear Plant (WBN), Unit 1. TVA obtained construction permit for Unit 2 that is currently being reviewed for a requested operating licensing process; Unit 2 must meet the same requirements as a licensed plant per Title 10 of the *Code of Federal Regulations* (10 CFR) Part 73, "Physical protection of plants and materials," Section 73.55(a)(5).

The facility consists of two Westinghouse pressurized-water reactors (Unit 1 in operation and Unit 2 under construction), located in Rhea County, Tennessee.

2.0 REQUEST/ACTION

Section 73.55, "Requirements for physical protection of licensed activities in nuclear power reactors against radiological sabotage," of 10 CFR Part 73, published March 27, 2009, effective May 6, 2009, with a full implementation date of March 1, 2010, requires licensees to protect, with high assurance, against radiological sabotage by designing and implementing comprehensive site security programs. The amendments to 10 CFR 73.55 published on March 27, 2009, establish and update generically applicable security requirements similar to those previously imposed by Commission orders issued after the terrorist attacks of

September 11, 2001, and implemented by licensees. In addition, the amendments to 10 CFR 73.55 include additional requirements to further enhance site security based upon insights gained from implementation of the post September 11, 2001, security orders. It is from three of these new requirements that WBN, Units 1 and 2 now seeks an exemption from the March 31, 2010, implementation date. All other physical security requirements established by this recent rulemaking have already been or will be implemented by the licensee by March 31, 2010.

By letter dated November 6, 2009, as supplemented by letter dated January 11, 2010, the licensee requested an exemption in accordance with 10 CFR 73.5, "Specific exemptions." Portions of the licensee's November 6, 2009, letter contain safeguards and security sensitive information and, accordingly, are not available to the public. The January 11, 2010, letter is publicly available (Agencywide Documents Access and Management System Accession No. ML100130167). The licensee has requested an exemption from the March 31, 2010, compliance date stating that it must complete a number of significant modifications to the current site security configuration before all requirements can be met. Specifically, the request is for three specific 10 CFR 73.55 requirements that would be in place by September 24, 2012, versus the March 31, 2010, deadline. Being granted this exemption for the three items would allow the licensee to complete the modifications designed to update aging equipment and incorporate state-of-the-art technology to meet or exceed regulatory requirements.

3.0 DISCUSSION OF PART 73 SCHEDULE EXEMPTIONS FROM THE MARCH 31, 2010, FULL IMPLEMENTATION DATE

Pursuant to 10 CFR 73.55(a)(1), "By March 31, 2010, each nuclear power reactor licensee, licensed under 10 CFR Part 50, shall implement the requirements of this section through its Commission-approved Physical Security Plan, Training and Qualification Plan, Safeguards Contingency Plan, and Cyber Security Plan referred to collectively hereafter as

‘security plans.’” Pursuant to 10 CFR 73.55(a)(5), the date applies to Unit 2 as well. Pursuant to 10 CFR 73.5, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 73 when the exemptions are authorized by law, and will not endanger life or property or the common defense and security, and are otherwise in the public interest.

NRC approval of this exemption, as noted above, would allow an extension from March 31, 2010, until September 24, 2012. As stated above, 10 CFR 73.5 allows the NRC to grant exemptions from the requirements of 10 CFR Part 73. The NRC staff has determined that granting of the licensee’s proposed exemption would not result in a violation of the Atomic Energy Act of 1954, as amended, or the Commission’s regulations. Therefore, NRC approval of the licensee’s exemption request is authorized by law.

In the draft final rule provided to the Commission, the NRC staff proposed that the requirements of the new regulation be met within 180 days. The Commission directed a change from 180 days to approximately 1 year for licensees to fully implement the new requirements. This change was incorporated into the final rule (74 FR 13926, March 27, 2009). From this, it is clear that the Commission wanted to provide a reasonable timeframe for licensees to achieve full compliance.

As noted in the final power reactor security rule, the Commission also anticipated that licensees would have to conduct site-specific analyses to determine what changes were necessary to implement the rule’s requirements, and that these changes could be accomplished through a variety of licensing mechanisms, including exemptions. Since issuance of the final rule, the Commission has rejected generic industry requests to extend the rule’s compliance date for all operating nuclear power plants, but noted that the Commission’s regulations provide mechanisms for individual licensees, with good cause, to apply for relief from the compliance date (Reference: June 4, 2009, letter from R. W. Borchardt, NRC, to M. S. Fertel, Nuclear

Energy Institute). The licensee's request for an exemption is, therefore, consistent with the approach set forth by the Commission and discussed in the June 4, 2009, letter.

Watts Bar Schedule Exemption Request

The licensee provided detailed information in its November 6, 2009, letter, as supplemented by letter dated January 11, 2010, requesting an exemption. The NRC staff finds that the licensee has provided an adequate basis for the exemption request as well as appropriate detailed justification that describes the reason additional time is needed. Specifically, the WBN, Units 1 and 2 will be undertaking multiple large scope modifications to the physical protection program through four interrelated projects that require multiple supporting sub-tasks. These sub-tasks must be completed in sequence due to the complex interconnectivity of each project to other program components. The licensee has provided sufficiently detailed technical information that supports the described solution for meeting the identified requirements. Because of the large scope of the proposed modifications and upgrades, significant engineering analysis, design, and planning are required to ensure system effectiveness upon completion of the four projects. In addition to project-specific tasks and procurement details, the TVA has also identified a variety of site-specific considerations that will impact the final completion date, such as refueling outages, manpower resources, engineering/design changes during construction, and/or weather conditions that may impact completion milestones. As with all construction activities, the licensee must also account for site-specific safety and construction methods regarding the areas in which work is to be performed, the location of existing infrastructure such as buried power lines, and/or unanticipated delays that could significantly impact the project schedules. These site-specific safety and construction methods must be accounted for in the proposed schedule that, in turn, impacts the final compliance date requested. The TVA has contracted a common provider to perform design work at two other TVA sites concurrently with work required at the WBN, Units 1

and 2. The licensee has provided a coordinated/combined schedule for all four projects at WBN, Units 1 and 2 that outlines the sequence in which work must be conducted to ensure effective system connectivity. The required tasks/changes must be completed in sequence at each site to support all program upgrades being performed and to ensure effective connectivity of each project.

The upgrades that the licensee identified within their exemption request support their solution for meeting the three specified requirements, and the proposed schedule is supported by the complexity and scope of the projects described to include tasks and sub-tasks, timing issues, and potential delays.

The proposed implementation schedule depicts the critical activity milestones of the security system upgrades; is consistent with the licensee's solution for meeting the requirements; is consistent with the scope of the modifications and the issues and challenges identified; and is consistent with the licensee's requested compliance date.

Notwithstanding the schedular exemptions for these limited requirements, the licensee will continue to be in compliance with all other applicable physical security requirements as described in 10 CFR 73.55 and reflected in its current NRC approved physical security program. By September 24, 2012, WBN, Units 1 and 2 will be in full compliance with all the regulatory requirements of 10 CFR 73.55, as issued on March 27, 2009.

4.0 CONCLUSION FOR PART 73 SCHEDULE EXEMPTION REQUEST

The staff has reviewed the licensee's submittals and concludes that the licensee has provided adequate justification for its request for an extension of the compliance date to September 24, 2012, with regard to three specified requirements of 10 CFR 73.55.

Accordingly, the Commission has determined that pursuant to 10 CFR 73.5, "Specific exemptions," exemption from the March 31, 2010, compliance date is authorized by law and will

not endanger life or property or the common defense and security, and is otherwise in the public interest. Therefore, the Commission hereby grants the requested exemption.

The NRC staff has determined that the long-term benefits that will be realized when the security system upgrades are complete justify exceeding the full compliance date and the proposed implementation schedule is consistent with the scope of the modifications in the case of this particular licensee. The security measures WBN, Units 1 and 2 needs additional time to implement are new requirements imposed by March 27, 2009, amendments to 10 CFR 73.55, and are in addition to those required by the security orders issued in response to the events of September 11, 2001. Therefore, the NRC staff concludes that the licensee's actions are in the best interest of protecting the public health and safety through the security changes that will result from granting this exemption.

As per the licensee's request and the NRC's regulatory authority to grant an exemption from the March 31, 2010, implementation deadline for the three items specified in Enclosure 1 of the TVA letter dated November 6, 2009, as supplemented by letter dated January 11, 2010, the licensee is required to be in full compliance by September 24, 2012. In achieving compliance, the licensee is reminded that it is responsible for determining the appropriate licensing mechanism (i.e., 10 CFR 50.54(p) or 10 CFR 50.90) for incorporation of all necessary changes to its security plans.

Pursuant to 10 CFR 51.32, "Finding of no significant impact," the Commission has previously determined that the granting of this exemption will not have a significant effect on the quality of the human environment (75 FR 3945, dated January 25, 2010).

This exemption is effective upon issuance.

Dated at Rockville, Maryland, this 9th day of March 2010.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

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