



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

April 5, 2010

10 CFR 73.55

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555-0001

Watts Bar Nuclear Plant, Unit 2  
NRC Docket No. 50-391

Subject: **Watts Bar Nuclear Plant (WBN) Unit 2 - Response to U.S. Nuclear Regulatory Commission Request for Additional Information Regarding Physical Security Plan**

- References:
1. NRC letter to TVA dated February 18, 2010, "Watts Bar Nuclear Plant, Unit 2 – Request for Additional Information Regarding Physical Security Plan (TAC No. ME0853)"
  2. TVA letter to NRC dated March 4, 2009, "Watts Bar Nuclear Plant (WBN) - Unit 2 - Operating License Application Update"
  3. NRC letter to TVA dated March 8, 2010, "Watts Bar Nuclear Plant, Units 1 and 2 – Exemption from the Schedule Requirements of 10 CFR Part 73, Section 73.55 (TAC NOS. ME2601 and ME2602)"

The purpose of this letter is to submit the Tennessee Valley Authority (TVA) response to the U.S. Nuclear Regulatory Commission (NRC) Request for Additional Information (RAI) (Reference 1) regarding Revision 9 to the Watts Bar Nuclear Plant Physical Security Plan.

The Watts Bar Nuclear Plant Physical Security Plan and Safeguards Contingency Plan were incorporated by reference in the March 4, 2009, operating license application update submittal for WBN Unit 2 (Reference 2). The enclosure to this letter lists the individual questions posed in the NRC RAI and TVA responses to those questions.

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In accordance with 10 CFR 73.55, TVA completed implementation of the required changes on March 31, 2010, with the exception of those exempted by Reference 3. TVA has incorporated the changes noted in the enclosure in Revision 10 of the Watts Bar Nuclear Plant Physical Security Plan. A report containing a description of these changes will be submitted in accordance with 10 CFR 50.54(p)(2) by May 28, 2010.

Regulatory commitments associated with this submittal are contained in Enclosure 2. If you have any questions, please contact Gordon Arent at (423) 365-2004.

Sincerely,



Masoud Bajestani  
Watts Bar Unit 2 Vice President

Enclosures:

1. Response to NRC Request for Additional Information Regarding Physical Security Plan
2. List of Regulatory Commitments

cc (Enclosures):

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Enclosure 1

Response to NRC Request for Additional Information Regarding  
Physical Security Plan

Tennessee Valley Authority  
Watts Bar Nuclear Plant - Unit 2, Docket No. 50-391

Note: Responses to this Request for Additional Information are based on the Physical Security Template, NEI [Nuclear Energy Institute] 03-12, Revision 6. Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan, Safeguards Contingency Plan, and Training and Qualification Plan adopts the guidance provided in NEI 03-12, Revision 6. In accordance with 10 CFR 73.55, TVA completed implementation of the required changes through the issuance of Revision 10 on March 31, 2010, with the exception of those exempted by Reference 3 of the cover letter.

1. NRC Request

*Watts Bar Physical Security Plan, Revision 9, Dated October 1, 2009. The licensee's Revision 9 does not address the revised requirements of Title 10, Code of Federal Regulations (10 CFR) Section 73.55 (a) through (r). What method or process for implementation of the revised requirements of 10 CFR 73.55 (a) through (r) will be used to update the security plan?*

TVA Response

The revised requirements of 10 CFR 73.55 (a) through (r) have been implemented by TVA through the adoption of Revision 6 to NEI 03-12, Physical Security Plan Template, as the basis for Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan, Safeguards Contingency Plan, and Training and Qualification Plan.

2. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 1.1, page 7, does not provide a complete description of the physical structures and their location on site. Adding Unit 1 and Unit 2, explain current operational status for each reactor and identify Reactor Buildings. Add and highlight this detail to Protected Area Map (Figure 2).*

TVA Response

The current status of the WBN units is: Unit 1 in operation, Unit 2 under construction. The physical structures (auxiliary building, turbine building, reactor buildings, etc.) for both units are complete. The reactor building for Unit 2 has been devitalized in support of construction activities. This description has been added to Section 1.1 as part of Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan.

The reactor buildings have been highlighted on the corresponding figure as requested.

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#### 3. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 1.1, page 7. Provide a description for main and alternate entry routes for local law enforcement agencies. Particular emphasis should be placed on main and alternate entry routes. Add and highlight this detail to Site Map (Figure 1).*

#### TVA Response

A description of the main and alternate entry routes for local law enforcement agencies has been added to the appropriate section of the Physical Security Plan in accordance with the guidance provided by NEI 03-12, Revision 6. The main and alternate entry routes are described as emergency routes in Section 1.1 of the Physical Security Plan and have been identified on the applicable figure in Revision 10 of the Watts Bar Physical Security Plan.

#### 4. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 1.1, page 7, does not describe or confirm that consideration was given to railroad /spur, airports, pipelines, hazardous material facilities, and pertinent environmental features (i.e., flat or mountainous topography, wooded or grassland) that may have effect upon coordination of response activities. Describe how these features are considered. Add and highlight this detail information to Figures 1 and 2.*

#### TVA Response

Section 1.1 of the Watts Bar Physical Security Plan has been revised in accordance with the guidance provided by NEI 03-12, Revision 6, and includes a description of the site in relation to nearby towns, roads and other environmental features important to the effective coordination of response operations, and site jurisdictional boundaries, including reference to prominent terrain features using distances and acreage estimates. Section 11.3 discusses the measures established for railroad spurs.

#### 5. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Protected Area Map (Figure 2). The description for the following areas is inconsistent between the Physical Security Plan and Figure 2. Example: Figure 2, references the North Security Portal, PSP; Section 6.2, bullets three and four reference North Access Control Portal; Figure 2 references the West Security Portal, PSP; Section 6.2, bullet six references the West Access Control Portal.*

#### TVA Response

The wording in Section 11.3 of Revision 10 to the Physical Security Plan has been corrected to eliminate the inconsistencies in the building descriptions. The buildings in question are now referenced in the text and figures as the North Access Control Portal

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and West Access Control Portal. Where acronyms are used, these have been changed to NACP and WACP respectively.

#### 6. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 6.1.2, page 14, and Section 9.6, page 25. Describe the process used to evaluate vital areas and equipment to support Unit 2 target sets. This description must also include analysis data for vehicle barrier system standoff distance against the vehicle bomb threat.*

#### TVA Response

TVA will utilize the expert panel methodology, as described in Appendix C of the NEI 03-12 template, when evaluating vital areas and equipment in support of Unit 2 target sets. Target sets for WBN Unit 2 will be developed by August 20, 2010.

The vehicle barrier system requirements are described in Section 11.2 of Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan.

#### 7. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 6.3, page 17. Provide additional details explaining how the exception referred to in paragraph 5 meets the vital area barrier requirements or describe the compensatory measures implemented.*

#### TVA Response

The staff approved the exceptions to the "two-barrier requirement" in Supplement 15 to the Watts Bar Nuclear Plant Safety Evaluation Report (NUREG-0847) in June 1995. Specifically, Section 13.6.2.1 states:

*"The appendix (the section of the SER protected under 10 CFR 73.21) identifies those areas determined to be vital for protection purposes. Vital equipment is located within vital areas which are located within the protected area and which require passage through at least two barriers as defined in 10 CFR 73.2, definitions for "Physical Barriers," with certain exceptions, to gain access to vital equipment. The staff has reviewed those exceptions and has determined that the barriers are sufficiently substantial to meet the intent of the two-barrier requirement."*

#### 8. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 9.6, page 25. The 10<sup>th</sup> bullet makes reference to a Reactor Building and containment. This reference should be plural to represent Unit 1 and Unit 2. Consider formatting Vital Areas listing as contained in the TVA Fleet Security Plans of Browns Ferry, Revision 6, October 1, 2009, and Sequoyah, Revision 7, July 10, 2009.*

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TVA Response

Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan has designated multiple similar physical structures with an "s". The formatting in this portion of the plan is similar to that found in the Sequoyah and Browns Ferry Plans.

9. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 11.2, page 31, refers to the duty positions of Sergeants and Lieutenants. These positions are not identified in Section 4.1. Clarification is requested as to what position (Armed Responder, Armed Security Officer, or Response Team Leader) do Sergeants and Lieutenants fulfill.*

TVA Response

The Watts Bar Physical Security Plan Revision 10 follows the NEI 03-12 template, which is endorsed by the NRC. Guidance of what position, including Lieutenants, fills the role of Response Team Leader is stated in Appendix C. The template is prescriptive in the management positions that it describes, and the role of Sergeant is not specifically described in Appendix C. Appendix A to the Physical Security Plan does discuss the role of Sergeant as part of facility supervision.

10. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 13, page 33. Describe the methodology used in determining the staffing requirements for armed responders and armed security officers based on the development of Unit 2 Vital areas, target sets and timelines. Confirm/describe the types of armed personnel that will comprise the armed response force for the additional Unit 2 vital areas/equipment. The description should include how this process was used as a basis for establishing the Unit 2 target sets and calculating responders' timelines.*

TVA Response

As noted in response to Question 6, target sets for WBN Unit 2 have not been developed at this time. TVA will utilize the expert panel methodology in determining the staffing requirements for armed responders and armed security officers based on the development of Unit 2 Vital areas, target sets and timelines. Appendix B of Revision 10 of the Physical Security Plan contains the types of armed responders and their training and qualification. Target sets for WBN Unit 2 will be developed by August 20, 2010.

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11. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 14.2, page 33, does not contain any information pertaining to the status of Unit 2. Provide an Implementation Schedule.*

TVA Response

Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan has updated this section of the plan to reflect the WBN Unit 2 reactor building in the devitalized status.

"The reactor building for Unit 2 has been devitalized in support of construction activities. Following completion of work activities, the Unit 2 reactor building will be re-vitalized in accordance with security implementing procedures."

Current plans are to complete the construction work activities in the reactor building between the 4<sup>th</sup> calendar quarter of 2010 and the 1<sup>st</sup> calendar quarter of 2011. TVA will inform the NRC when the reactor building has been re-vitalized.

12. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 15.2.1, page 34. Clarify how the current tamper and line supervision alarm testing requirements meet the acceptance criteria of Regulatory Guide 5.44.*

TVA Response

The site procedure (SSI 15.1, Testing and Maintenance) for current tamper and alarm supervision testing has been developed using the criteria found in Regulatory Guide 5.44, Sections 1.4 and 1.5. No exceptions were taken from these sections. The procedure is available at WBN for audit.

13. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, appendix B, page B14, Table 1 task 15 is identified as being performed by watchpersons. Clarify how this requirement meets the intent of appendix C, Section 7, page C-43.*

TVA Response

The referenced task has been corrected by Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan such that it meets the intent of the requirements reflected in Appendix C, Section 7, page C-43, of Revision 9 to the Watts Bar Physical Security Plan.

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14. NRC Request

*Watts Bar Physical Security Plan, Revision 9, dated October 1, 2009, Section 5.4 indicates security officer contingency requirement. Explain why Page B15, appendix. B, Table 1 task 26, Critical Task Area remains a brackets TEXT item.*

TVA Response

TVA does not utilize the option listed on Page B15, Appendix B, Table 1, Task 26, of Revision 9 to the Watts Bar Physical Security Plan. Task 26 has been removed from the table by Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan.

15. NRC Request

*Watts Bar Physical Security Plan, revision 9, Dated October 1, 2009, appendix C, page C-37, contains no comment for armed responders being assigned other duties that would impede effective response as described in the Physical Security Plan Template, NEI [Nuclear Energy Institute] 03-12, Revision 5 or 6.*

TVA Response

Revision 10 to the Watts Bar Nuclear Plant Physical Security Plan has been revised and adopts the guidance provided in Revision 6 to the Physical Security Plan Template, NEI 03-12. Revision 10 addresses the armed responders being assigned other duties as described by Revision 6 to the Physical Security Template.

## Enclosure 2

### List of Regulatory Commitments

1. WBN Unit 2 Target Sets will be developed on or before August 20, 2010.
2. TVA will inform the NRC when the WBN Unit 2 Reactor Building is re-vitalized.
3. TVA has incorporated the changes noted in the enclosure in Revision 10 of the Watts Bar Nuclear Plant Physical Security Plan. A report containing a description of these changes will be submitted in accordance with 10 CFR 50.54(p)(2) by May 28, 2010.