

June 18, 1998

EA 98-207

Tennessee Valley Authority  
ATTN: Mr. J. A. Scalice  
Chief Nuclear Officer and  
Executive Vice President  
6A Lookout Place  
1101 Market Street  
Chattanooga, TN 37402-2801

SUBJECT: NOTICE OF VIOLATION (NRC INSPECTION REPORT NO. 50-390/98-03)

Dear Mr. Scalice:

This refers to the inspection conducted on March 23-25, 1998, at the Watts Bar Nuclear Plant. The inspection included a review of the physical security program at the Watts Bar facility. The results of the inspection were discussed with members of your staff at the exit meetings conducted on March 25 and April 8, 1998, and formally transmitted to you by letter dated April 15, 1998. A closed, predecisional enforcement conference was conducted in the Region II office on May 11, 1998, with you and members of your staff to discuss the apparent violations, the root causes, and corrective actions to preclude recurrence. A list of conference attendees and copies of the Nuclear Regulatory Commission's (NRC's) slides are enclosed. On May 13, 1998, you provided by facsimile supplemental information to address issues raised at the conference related to the NRC's testing methodology of microwave equipment, and use of pan/tilt/zoom cameras for assessment. This information consisted of copies of plant security logs, security alarm printouts, and affidavits from Tennessee Valley Authority (TVA) employees who observed microwave equipment testing. You formally provided this information on the NRC's docket on May 26, 1998. This information is included as Enclosure 4.

Based on the information developed during the inspection and the information you provided during and after the conference, the NRC has determined that three violations of regulatory requirements occurred. The violations are cited in the enclosed Notice of Violation (Notice), and the circumstances surrounding them are described in detail in the subject inspection report.

The first violation is associated with two metal detectors that failed on nine occasions to detect a test weapon during a test, conducted as part of the NRC's inspection. Paragraph 5.5 of the Commission-approved Watts Bar Physical Security Plan (PSP), states that metal detectors used for personnel search are capable of detecting a source located on an individual. The second violation is associated with closed circuit television (CCTV) cameras. When tested as part of the NRC inspection, CCTV cameras failed in nine zones to provide adequate visual surveillance of the perimeter barrier, the perimeter intrusion detection system, and those portions of the isolation zones necessary to enable assessment of alarm stimuli in accordance with Paragraph 6.2A of the PSP. The third violation is associated with microwave equipment. The PSP

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states that each zone of microwave equipment is designed to detect an individual weighing a minimum of 35 kilograms crawling, jumping, walking, or running between the transmitter and receiver, or in front of the transmitter. When various zones were penetrated on March 24, 1998, as part of the NRC inspection, microwave equipment failed to detect an individual jumping over the transmitter/receiver microwave field six times in five locations. The NRC tested approximately half of the microwave zones before testing was discontinued, because the failures caused the licensee to implement extended compensatory measures.

At the predecisional enforcement conference, you disagreed with the NRC's characterization of the three issues as violations of regulatory requirements, but rather stated the issues were indicative of needed improvements in the security program for which appropriate corrective action has and/or would be taken. The supplemental information you provided on May 13, 1998, addressed the violations associated with microwave equipment capability and CCTV camera capability. The four affidavits from TVA employees, which describe their observation of microwave testing, appear reasonable given the way the testing was conducted or may have appeared to be conducted. Notwithstanding these affidavits or the specific testing methodologies employed, the NRC has concluded that violations occurred as stated in the Notice in that assessment and detection capabilities were tested within the scope of your PSP. A summary of your position on each issue, including consideration of the information you presented at the predecisional enforcement conference, the supplemental information provided after the conference, and the basis for the NRC's conclusions, are included as Enclosure 2.

The violations identified during the inspection indicate significant deficiencies in TVA's detection and assessment capability which are integral to the effective implementation of your PSP. Although there was no actual safety consequence associated with these violations, the violations are of significant regulatory concern because they are indicative of a programmatic failure to assure that security equipment was properly maintained. The failures in the performance of the CCTV and microwave systems are particularly significant given that the deficiencies resulted from testing a sampling of the total number of cameras and zones. Since similar testing was conducted at Watts Bar prior to its being granted an operating license in February 1996 with no failures observed, there appears to have been changes to your program. Based on TVA's presentation at the conference, the equipment related nature of the corrective actions that were necessary to address the deficiencies indicate the root cause of the violations to be attributable, in part, to less than adequate maintenance and surveillance of security equipment. Multiple failures of these systems when challenged within the bounds of the Commission approved PSP indicate significant weaknesses in the security program. Therefore, these violations have been classified in the aggregate in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-16000, as a Severity Level III problem.

In accordance with the Enforcement Policy, a base civil penalty in the amount of \$55,000 is considered for a Severity Level III problem. Because your facility has not been the subject of escalated enforcement action within the

Last two years or two inspections, the NRC considered whether credit was warranted for Corrective Action in accordance with the civil penalty assessment process described in Section VI.B.2 of the Enforcement Policy. Your corrective actions were prompt and comprehensive, and included: (1) replacement of a failed metal detector; (2) metal detector sensitivity optimization; (3) the placement of a visual sign on the detector floor for personnel to stop inside the metal detector to enhance security guard observation and improve detector functionality; (4) immediate CCTV cleaning and fine tuning; (5) an enhancement of the preventive maintenance program to include routine CCTV cleaning; (6) reinforcement of management expectations for security officers regarding tuning CCTV monitors due to changing environmental conditions; (7) contractor review and testing of security equipment, which resulted in the addition of physical barriers where necessary; (8) implementation of a new method for testing microwave equipment, along with hardware adjustments and training for instrument mechanics; (9) establishment of acceptance criteria for microwave fields; (10) enhancements to the preventive maintenance program to address additional vendor recommended maintenance; (11) strengthening the tracking and trending of security equipment performance; and (12) obstacles were added to enhance microwave fields. Based on this, the NRC concluded that credit is warranted for Corrective Action.

Therefore, to encourage prompt and comprehensive correction of violations and in recognition of the absence of previous escalated enforcement, I have been authorized, after consultation with the Director, Office of Enforcement, not to propose a civil penalty in this case. However, significant violations in the future could result in a civil penalty.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. In your response, you should document the specific actions taken and any additional actions you plan to prevent recurrence. After reviewing your response to this Notice, including your proposed corrective actions and the results of future inspections, the NRC will determine whether further NRC enforcement action is necessary to ensure compliance with NRC regulatory requirements.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and any response will be placed in the NRC Public Document Room (PDR). To the extent possible, your response should not include any personal privacy, proprietary, or safeguards information so that it can be placed in the PDR without redaction.

TVA

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If you have any questions regarding this letter, please contact Johns Jaudon, Director, Division of Reactor Safety, at (404) 562-4600.

Sincerely,

original signed by JRJ for

Luis A. Reyes  
Regional Administrator

Docket Nos. 50-390  
License Nos. NPF-90

Enclosures:

1. Notice of Violation
2. Summary of Licensee's Position on  
the Violations and Bases for  
NRC Conclusions
3. List of Attendees
4. Supplemental information provided  
by TVA

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cc w/encls continued:  
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County Executive  
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Anne Boland  
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NRC Resident Inspector  
 U.S. Nuclear Regulatory Commission  
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*Hebden concurred per discussion with Lusher*

*\* Previous concurrence provided 05/29/98*

\*\*\*END\*\*\*