

January 21, 1998

EA 97-580

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

SUBJECT: NOTICE OF VIOLATION
(NRC INSPECTION REPORT NOS. 50-390/97-11, 50-391/97-11)

Dear Mr. Zeringue:

This letter refers to an inspection conducted on November 17-22, 1997, at your Watts Bar facility. The apparent violations identified were discussed with members of your staff during an inspection exit conducted by telephone on December 17, 1997. The results of the inspection were formally transmitted to you by letter dated December 19, 1997. An open predecisional enforcement conference was conducted in the Region II office on January 13, 1998, to discuss the apparent violations, the root causes, and your corrective actions to preclude recurrence. A list of conference attendees, Nuclear Regulatory Commission (NRC) slides, and a copy of Tennessee Valley Authority's (TVA) presentation materials are enclosed.

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

The cited violation involves the failure to follow procedures for retrieval of loose debris in the reactor cavity. The root cause of the violation was the failure of a radworker to adhere to procedures. The radworker failed to notify Radcon, which had the responsibility for determining the radiological condition of loose debris, prior to his picking up four pieces of highly radioactive debris in the reactor cavity. As a result of the failure to follow procedures, the radworker received a dose of approximately 3.6 Rem to his fingers. This exposure was approximately seven percent of the regulatory limit for exposure to the extremities. As discussed at the predecisional enforcement conference, the fact that the worker had been praised by management for retrieval of debris during an earlier work activity may have contributed to his mindset that the overriding consideration was to control foreign material rather than to take precautions against radiological exposure. The actual and potential safety consequences of this event were low

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due to the quick actions to stop the work by the Radcon specialist who was monitoring the work activity. Therefore, this violation has been categorized in accordance with the "General Statement of Policy and Procedures for NRC Enforcement Actions" (Enforcement Policy), NUREG-1600, as a Severity Level IV violation.

Since this violation was licensee-identified, the NRC considered whether discretion was warranted under Part VII.B.1 of the Enforcement Policy to not issue a Notice of Violation in this case. After review of TVA's implementation of corrective action for this event, the NRC concluded that initial actions appropriately included assessing the extent of the exposure to the individual and briefing your Radcon staff on the event and the precautionary steps to be taken. However, your corrective actions did not include prompt steps to fully investigate the event and to adequately warn other workers of the hazards of handling potentially highly radioactive debris. Although these corrective actions were taken several days later and additional measures have been taken to reinforce the Watts Bar staff's understanding of the consequences of handling potentially highly radioactive material, the NRC has concluded that discretion to refrain from issuing the violation is not warranted due to the failure to implement these actions promptly.

In addition, NRC Inspection Report No. 50-390, 50-391/97-11 discussed a September 10, 1997, work activity during which loose debris was removed from the cavity as an example of the aforementioned violation. At the conference, you stated that the work area in this case had been previously surveyed by Radcon and had been found to meet the requirements for an unrestricted area. In addition, the procedure that the worker was implementing included the removal of foreign material as a specific work activity. The NRC has concluded that this example does not represent a violation of regulatory requirements and will not be included in the Notice. The NRC was concerned that failure to provide for strict adherence to a direct survey policy in cases where work activities are performed in areas where potentially radioactive loose debris is found could lead to further events. However, after review of your corrective actions, the NRC concluded that this potential problem has been adequately addressed.

The NRC was also concerned that the radiation work permit (RWP), used for the September 20, 1997 work activity, failed to specifically caution the radworker about handling debris. During the predecisional enforcement conference, TVA stated that the RWP used in this work activity had been written to control the specific task of tightening the screws on the nuclear instrumentation covers and the RWP included all procedural requirements for this task. You further stated that in picking up the loose debris, the radworker performed an activity not authorized under the RWP. In addition, the overall controlling procedure for work in the cavity included precautions and the radworker had been previously briefed on the need to contact Radcon so that it could survey loose debris. Therefore, the NRC concludes that the RWP was adequate for the specified work and a violation of regulatory requirements did not occur. The

NRC agrees, however, that as you stated at the conference, precautions for the handling of foreign material should be included in RWPs of this type to provide additional assurance that workers are constantly made aware of the potential hazards of handling loose debris.

NRC Inspection Report No. 50-390, 50-391/97-11 included an apparent violation for the failure to include the latest radiation survey in the pre-job brief as required by procedure. TVA identified this issue during its investigation of the event. An issue of this type has not been the subject of a previous NRC violation or previous licensee finding. Moreover, you have completed corrective action to ensure that the violation will not recur. Therefore, in accordance with Part VII.B.1 of the Enforcement Policy, this violation has been categorized as a non-cited violation and is considered closed.

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. Your response should specifically address the actions taken to ensure that initial corrective actions include prompt initiation of a full investigation and notification of all impacted staff of potentially hazardous conditions. Your response may reference or include previously docketed correspondence, if the correspondence adequately addresses the required response. 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 your 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.

Sincerely,

(Original signed by B.S. Mallett for)

Luis A. Reyes
Regional Administrator

Docket Nos.: 50-390 and 50-391
License Nos.: NPF-90 and Construction Permit CPPR-92

Enclosures: 1. Notice of Violation
2. List of Attendees
3. NRC Slides
4. Licensee Presentation Material

cc w/encls:

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NRC Resident Inspector
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