

*Official*

FEB 03 1992

Docket No. 50-269  
License No. DPR-38  
EA 91-167

Duke Power Company  
ATTN: Mr. J. W. Hampton  
Vice President  
Oconee Nuclear Station  
Post Office Box 1439  
Seneca, South Carolina 29679

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTIES -  
\$125,000 (INSPECTION REPORT NO. 50-269/91-32)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted by Mr. R. Crlenjak on November 5-7, 1991, at the Oconee Nuclear Station. This was a followup inspection to the Augmented Inspection Team (AIT) inspections conducted at the Oconee Nuclear Station during the period September 9-13, 1991, which reviewed the facts and circumstances associated with the degradation of decay heat removal on September 7, 1991, and during the period September 20-25, 1991, which reviewed the facts and circumstances associated with the over-pressurization of the Low Pressure Injection (LPI) System piping on September 19-20, 1991.

The AIT was chartered on September 9, 1991, and subsequently updated on September 20, 1991, to develop and validate the sequence of events associated with both the degradation of decay heat removal and the over-pressurization of LPI system piping. A Confirmation of Action Letter dated September 20, 1991, was forwarded to you which discussed certain actions you agreed to take as a result of the events. In addition, a management meeting with your staff was conducted in the Region II office on September 25, 1991, to discuss the events and on September 27, 1991, you satisfied those portions of the Confirmation of Action letter necessary to restart Unit 1. The report documenting the AIT inspection was sent to you by letter dated October 30, 1991. The followup inspection report was sent to you by letter dated December 6, 1991. As a result of inspection activities associated with these two events, significant failures to comply with NRC regulatory requirements were identified. On December 18, 1991, an enforcement conference was held to discuss the violations, their cause, and your corrective actions to preclude recurrence. A summary of this conference was sent to you by letter dated December 20, 1991.

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The first event involves the degradation of decay heat removal that occurred on September 7, 1991, while unit 1 was in a refueling outage. A non-licensed operator reported from the reactor building to the control room that he observed a significant amount of steam coming from the reactor vessel area and that the water in the reactor vessel was churning. The operators in the control room subsequently noted that the LPI pump suction temperature was indicating abnormally high at 187 degrees F. They also noted that the Low Pressure Service Water flow to the decay heat cooler was indicating zero flow. The other LPI system train was immediately aligned and decay heat cooling was restored. Apparently, the "A" flow control valve controller on the Low Pressure Service Water system had been improperly set and this resulted in decay heat not being removed over a period of approximately four hours. Items A and B of the enclosed Notice of Violation and Proposed Imposition of Civil Penalties (Notice) are related to this event.

The second event involves the over-pressurization of LPI system piping that occurred on September 19-20, 1991, while unit 1 was in a refueling outage. Control room personnel failed to follow the start-up procedure which resulted in the over-pressurization of portions of the LPI system and the subsequent loss of approximately 12,400 gallons of reactor coolant to the auxiliary building floor. Items C and D of the enclosed Notice are associated with this event.

Item A involves five violations of failure to follow procedures and inadequate procedures that contributed to the September 7, 1991 loss of decay heat removal event. These violations include: 1) the inadequacy of an operating procedure for the LPI system that did not contain guidance for aligning the LPI system in the decay heat removal mode, 2) the inadequacy of a periodic instrument surveillance procedure that did not prescribe an adequate frequency for the recording of reactor coolant temperature to ensure that reactor coolant temperature was being maintained in accordance with all requirements (the requirement to record reactor coolant temperature every 12 hours contributed to the failure to detect reactor coolant temperature increase (110 degrees F to 187 degrees F) during a four-hour period), 3) the failure to follow temporary test procedure requirements not to exceed 140 degrees F maximum reactor coolant temperature during valve operation test and evaluation system (VOTES) testing which resulted in the temperature requirements being exceeded by 47 degrees F, 4) the failure to follow operational procedures that required control room personnel to ensure continuous safe shutdown conditions and maintenance of critical safety parameters which resulted in reactor coolant temperature increasing 77 degrees F above the expected temperature of 110 degrees F, and 5) the failure to follow procedures that required the utilization of effective communications during normal and abnormal plant operations and resulted in the Train A LPI system being placed in operation without coordination with VOTES testing personnel.

Item B involves the failure to identify the non-operational status of a nuclear safety-related system, specifically Train A of the LPI system. Consequently, when Train A of the LPI system was called into service to respond to an elevated Reactor Coolant System (RCS) temperature during the degradation of decay heat removal event, the system was lost because VOTES testing personnel,

who had cycled one of the system valves closed interrupting the system flow, had not been informed by control room operators that testing should be stopped and that the system was being placed into service.

Item C involves three violations of failure to follow procedures that contributed to the September 19-20, 1991 LPI system piping over-pressurization event. These violations include: 1) the failure to follow an operational procedure which required the LPI system to be aligned in the "switchover" mode of operation prior to exceeding 125 psig RCS pressure, 2) the failure to follow operational procedures which required control room personnel to ensure continuous safe shutdown conditions and resulted in RCS pressure being increased above 125 psig which over-pressurized the LPI system causing a spill of 12,400 gallons of primary coolant to the auxiliary building floor, and 3) the failure to follow procedures that required the use of effective communications that resulted in a unit supervisor by-passing the control room senior reactor operator and directing a reactor operator to raise RCS pressure.

Item D involves the failure to implement adequate corrective action in that the corrective actions for the September 7, 1991, event were not effectively implemented to ensure that deficiencies in supervisor and operator responsibilities were corrected. Continuing lapses in the effective oversight of shift operations directly resulted in the September 19-20, 1991 event.

As to the first event, the NRC is concerned with the significant implications of Items A and B particularly when they are considered collectively. Considering the root causes of inadequate management oversight of shutdown operations, inappropriate execution of operator responsibilities, failure to follow procedures, and inadequate procedures, the overall implication is that operational discipline and protocol were neglected causing a fundamental lack of attention to shutdown operations. This is a significant safety concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations in Items A and B are classified in the aggregate as a Severity Level III problem.

As to the second event, Items C and D are of concern to the NRC because they reflect a continuing failure to establish adequate management oversight of shutdown operations and appropriate execution of operator responsibilities during shutdown operations. The repeated failures to follow procedures and the failure to implement corrective action to prevent recurrence of these failures collectively represent a significant safety concern. Therefore, in accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," (Enforcement Policy) 10 CFR Part 2, Appendix C (1991), the violations in Items C and D are classified in the aggregate as a Severity Level III problem.

To emphasize the importance of maintaining an appropriate safety perspective, continued awareness and control of critical plant operations in the shutdown configuration, adequate management oversight of shutdown configuration management activities, and the implementation of adequate corrective action, I have

been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Nuclear Reactor Regulation, Regional Operations and Research, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalties in the amount of \$125,000 for the two Severity Level III problems. The base value of a civil penalty for a Severity Level III problem is \$50,000.

The escalation and mitigation factors in the Enforcement Policy were considered for each Severity Level III problem.

With respect to the violations for the first event, neither mitigation nor escalation is considered appropriate for identification because although you eventually identified the event, it was of a self-disclosing nature and more importantly, you missed the opportunity to identify the reactor coolant temperature increase on September 7, 1991, which resulted from the inadequate monitoring of critical plant parameters while in a shutdown configuration. Neither mitigation nor escalation is considered appropriate for corrective action because your immediate corrective action to restore decay heat removal was rendered ineffective by the violations associated with the VOTES testing and mitigation for your corrective action to prevent recurrence is not appropriate because of the event of September 19, 1991, which was similar and therefore evidence of ineffective corrective action. Escalation of 50 percent is appropriate for past performance because of previous problems associated with outage activities. For example, a Notice of Violation (EA 91-049) was issued on June 4, 1991, for an event which occurred on March 8, 1991. Unit 3 was in a refueling outage when the Decay Heat Removal system was lost for approximately 18 minutes due to cavitation of the operating LPI pump caused by a rapid primary system water loss. This resulted because a blank flange had been erroneously installed on an LPI system emergency sump suction line. The other factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty is considered appropriate. Therefore, based on the above, the base civil penalty for this problem has been increased by 50 percent.

With respect to the violations for the second event, neither mitigation nor escalation is considered appropriate for identification based on the self-disclosing nature of the violations. Mitigation of the base civil penalty by 50 percent is appropriate for your corrective actions following this event. Those actions to prevent recurrence included the revision of management directives defining the roles and responsibilities of operations personnel and the supplemental training to licensed operators for procedures used during shutdown, startup, and prolonged operation at cold shutdown. Escalation of the base civil penalty by 50 percent is appropriate for past performance based on the continuing nature of problems in outage activities and for previous problems associated with corrective action. For example, a Notice of Violation and Proposed Civil Penalty (EA 90-119) was issued on August 16, 1990, for failure to correct a deficiency in the Penetration Room Ventilation System. The other factors in the Enforcement Policy were considered and no further adjustment to the base civil penalty is considered appropriate. Therefore, based on the above, a base civil penalty for this problem is being proposed.

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During the enforcement conference there were discussions regarding an apparent violation concerning your Emergency Implementing Procedures. The specific issue was whether an Unusual Event should have been declared when it was discovered that the decay heat removal capability was degraded. After considering all the available information, we have decided that no Notice of Violation will be issued.

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.

To emphasize the critical importance of licensed operator responsibilities inherent in 10 CFR Part 55 licenses, it is my intent to meet with the licensed operators at the Oconee Nuclear Station. I have directed my staff to make the appropriate arrangements for such a meeting.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and the enclosed Notice are not subject to the clearance procedures of the Office of Management and Budget as required by the Paperwork Reduction Act of 1980, Pub. L. No. 96-511.

Should you have any questions concerning this letter, please contact us.

Sincerely,

**Original Signed By:**  
Stewart D. Ebnetter

Stewart D. Ebnetter  
Regional Administrator

Enclosure:  
Notice of Violation and Proposed  
Imposition of Civil Penalty

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