

DCS



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

DEC 15 1987

Docket Nos. 50-269, 50-270, 50-287
License Nos. DPR-38, DPR-47, DPR-55
EA 87-14

Duke Power Company
ATTN: Mr. H. B. Tucker, Vice President
Nuclear Production Department
422 South Church Street
Charlotte, NC 28242

Gentlemen:

SUBJECT: NRC RESPONSE TO DUKE DENIAL OF VIOLATION
(NRC INSPECTION REPORTS NOS. 50-269/86-16, 50-270/86-16, AND
50-28786-16)

This refers to your April 13, 1987 response to the Notice of Violation and Proposed Imposition of Civil Penalty (Notice) transmitted to you by letter dated March 12, 1987. The Notice described three violations identified during an NRC inspection at the Oconee Nuclear Station on May 5 - June 11, 1986. A civil penalty in the amount of Twenty-five Thousand Dollars was proposed for Violation I.

While admitting the occurrence of the other violations, you have denied the occurrence of Violation I and have requested mitigation of the proposed civil penalty. After consideration of your response, we have concluded for the reasons given in the enclosure to this letter that the violation, as stated, did not occur. Therefore, this violation has been deleted from our records and the proposed civil penalty has been withdrawn. However, while withdrawing this violation, the NRC still remains concerned that your design control process was weak in this instance. The design process could have been better performed had there been communications with the pump vendor at the time of the modification to ensure that the pumps would meet all expected demand situations and to determine if either short-term or long-term operation at pump runout conditions would be detrimental to system or component performance. We understand that your planned hardware modifications will alleviate the potential problems, and we request that you notify NRC Region II of your plans and schedule for the modifications.

With regard to the violations in Section II of the Notice, we have evaluated your response and have found that it meets the requirements of 10 CFR 2.201. We will examine the implementation of your corrective actions during a future inspection.

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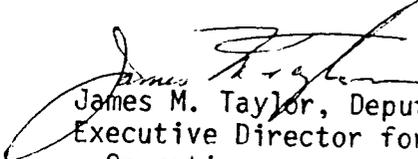
Duke Power Company

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In accordance with Section 2.790 of the NRC's "Rule of Practice", Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosure will be placed in the NRC's Public Document Room.

We regret our delay in this matter.

Sincerely,


James M. Taylor, Deputy
Executive Director for
Operations

Enclosure:
Evaluations and Conclusions

cc (w/encl):
M. S. Tuckman, Station Manager

ENCLOSURE

EVALUATIONS AND CONCLUSIONS

On March 12, 1987, a Notice of Violation and Proposed Imposition of Civil Penalty (Notice) was issued for violations identified during an NRC Safety System Functional Inspection (SSFI). Duke Power Company (DPC or licensee) responded to the Notice on April 13, 1987. DPC denied Violation I and requested withdrawal of the proposed civil penalty. The NRC evaluation and conclusion regarding the licensee's arguments are as follows:

Restatement of Violation I

10 CFR 50, Appendix B, Criterion III, requires that measures be established to assure that applicable regulatory requirements and the design basis, as defined in §50.2 and as specified in the licensee application for those structures, systems, and components to which this appendix applies, are correctly translated into specifications, drawings, procedures, and instructions.

Contrary to the above, measures had not been established to assure the regulatory requirements and design basis were correctly translated into specifications, drawings, procedures, and instructions in that the design changes for the installation of the motor driven emergency feedwater (EFW) pumps in 1979 did not document and account for pump runout or adequate net positive suction head (NPSH) which were part of the design basis of the equipment. This lack of pump runout/NPSH protection in the EFW system design could result in the loss of EFW function during design basis transients.

This is a Severity Level III violation (Supplement I).
Civil Penalty - \$25,000.

Summary of Licensee's Response

In the licensee's April 13, 1987 response, the licensee denies Violation I and states that the design control process in place for the modification, which added motor driven EFW pumps, assured that the new EFW system design and analysis were commensurate with the original design. The licensee contends that specific protection for EFW pump runout to guard against postulated short-term bearing failure was not a criterion of the original nor modified EFW design and that runout was only determined to be a problem after the pump vendor, at the licensee's request, reviewed the capability of the pump bearings to withstand vibration associated with low net positive suction head (NPSH) and high flow. The motor driven EFW pumps were considered capable of withstanding the wear due to cavitation throughout any design basis scenario.

The licensee also contends that no credit was given for its identifying the undesirably high EFW flow rates and the fact that remedial calculations had already been initiated. In this regard, the licensee asserts that an analysis was in progress while the NRC SSFI was being performed.

The licensee further contends that the NRC has misunderstood the licensee's written response of July 23, 1982 to IE Bulletin 80-04. The licensee clarifies this response by explaining that the impact to the containment pressure response due to EFW runout flow following a steam line break was not explicitly considered. The licensee also explains that the ability of the EFW level control system to preclude the occurrence of the EFW system operating at runout flow rates was limited to the main steam line break inside containment transient. For other transients, the level control system with operator action was considered adequate in precluding pump damage, predicated on what was known at the time about the pump behavior at runout conditions. In an October 14, 1982 letter to DPC, the NRC had acknowledged that DPC would rely on operator action to prevent pump damage for the postulated pump runout conditions. The licensee contends that it was not known at that time that pump damage could occur in the short-term due to bearing failure.

In May 1986, DPC determined that the runout flow conditions were more extensive than had earlier been postulated. DPC advised the pump vendor of this problem, but the vendor was unable to assure that some damage would not occur during pump runout.

NRC Evaluation of Licensee's Response

The NRC staff agrees with the licensee's contention that the design change process which added the motor driven EFW pumps were commensurate with the original design and that pump runout and net positive suction head analysis were part of the design basis of the EFW system when the motor driven EFW pumps were added to the system. While the licensee appears to not have considered all potential system demand situations in both the original design and design change, the licensee was not aware of the potential short term damage to the pump bearings that could be caused by pump runout until later. Therefore, based on this information the NRC staff agrees that the violation did not occur as stated and withdraws the violation and proposed civil penalty.

As mitigation of the civil penalty for this violation, the licensee asserts that it had identified this problem and was addressing the concerns prior to the NRC inspection. The NRC staff recognizes that Duke personnel had noted concerns in this area in January 1986, which could be considered for mitigation of the civil penalty. Because the violation has been withdrawn, consideration of arguments for mitigation of the civil penalty is not necessary.

While the violation cited the licensee for not assuring the design basis (which the NRC previously had assumed fully accounted for pump runout) was correctly translated into specifications, drawings, procedures, and instructions, it now appears that the licensee applied design control measures which were commensurate with the original design. Although this original design had some problems, given that planned hardware modifications will alleviate any further problems in this area and the time that has passed, further enforcement action on this matter is not warranted.

Enclosure

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NRC Conclusion

The NRC concludes that the violation, as stated, did not occur. Therefore, the violation has been deleted from our records, and the proposed civil penalty has been withdrawn.

DEC 15 1987

Duke Power Company

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Package delayed due to additional comments.

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