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DOCKET #
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 05000270
 05000287

AUTH. NAME AUTHOR AFFILIATION
 ERNST, M.L. Region 2, Ofc of the Director
 RECIP. NAME RECIPIENT AFFILIATION
 TUCKER, H.B. Duke Power Co.

SUBJECT: Discusses violations noted in Insp Repts 50-269/88-25,
 50-270/88-25 & 50-287/88-25 on 880801-15 & forwards notice
 of violation & proposed imposition of civil penalty. W/o
 notice.

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REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

SESSION NBR. 8812200307 DOC. DATE 12/12/88 NOTARIZED: NO
 ACTL 50-269 Oconee Nuclear Station, Unit 1, Duke Power Co.
 50-270 Oconee Nuclear Station, Unit 2, Duke Power Co.
 50-287 Oconee Nuclear Station, Unit 3, Duke Power Co.
 AUTH. NAME REGIONAL DIRECTOR REGIONAL OFFICE
 REGIONAL DIRECTOR REGIONAL OFFICE
 REGIONAL DIRECTOR REGIONAL OFFICE
 REGIONAL DIRECTOR REGIONAL OFFICE

SUBJECT: Distribution of violation notice to Regs 50-269/88-25
 50-270/88-25 & 50-287/88-25 on 12/12/88. Forwarding of
 violation & proposed imposition of civil penalty was
 notice

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 TITLE: Enforcement Action No. 2 TRO-Licensee Response

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	NRR/DREP/EPB 10	1 1	NRR/PMAS/ILRB12	1 1
	NUDDOS-ABSTRACT	1 1	OE FILE 01	1 1
	OE LIEBERMAN, J	1 1	REG FILE 02	1 1
	RGN2 FILE 03	1 1	RGN2/DRSS/EPRPB	1 1
INTERNAL	LPDR	1 1	NRC PDR	1 1
	NSIC	1 1		



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

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Docket Nos. 50-269, 50-270, and 50-287
License Nos. DPR-38, DPR-47, and DPR-55
EA 88-228

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

Gentlemen:

SUBJECT: NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY
(INSPECTION REPORT NOS. 50-269/88-25, 50-270/88-25 AND 50-287/88-25)

This refers to the Nuclear Regulatory Commission (NRC) inspection conducted on August 1-15 1988, at the Oconee Nuclear Station. The inspection included a review of the circumstances surrounding the licensee's identification on May 19, 1988 of the inadequate design analysis of the high pressure injection (HPI) system in the emergency core cooling system (ECCS) sump recirculation mode, commonly referred to as the "piggyback mode". The report documenting this inspection was sent to you by letter dated August 22, 1988. As a result of this inspection, a significant failure to comply with NRC regulatory requirements was identified, and accordingly, NRC concerns relative to the inspection findings were discussed in an Enforcement Conference held on September 12, 1988. The letter summarizing this conference was sent to you on October 3, 1988.

The violation described in the enclosed Notice of Violation and Proposed Imposition of Civil Penalty (Notice) involved a significant failure to provide adequate procedural guidance to ensure the HPI system would remain operable for all required accident conditions. The root cause of this violation was inadequate documentation for the original design assumptions and system performance requirements for the HPI piggyback mode of operation. As a result, HPI pump net positive suction head (NPSH) requirements during all operating scenarios were not adequately addressed during the original system analysis, and Oconee operating procedures did not provide precautions or limitations regarding the concern that pressure drops through the piping and components utilized in the HPI piggyback mode could deprive the HPI pumps of adequate NPSH during high flow conditions. Specifically, the operating procedures permitted the low pressure injection (LPI) and HPI system to both be injecting water simultaneously into the reactor coolant system without the necessary flow limitations. In addition, there was no guidance concerning the use of the reactor building spray pumps which can also be aligned to the piggyback flowpath. Also, there were no precautions to prevent throttling of valves LP-12 and LP-14 which are upstream of the HPI piggyback line (at discharge of the LPI coolers). Furthermore, because of the lack of sufficient procedural attention to the operation of the LPI/HPI crossover valves, LP-15 and LP-16, adequate time may not have been available for the required manual-local operation of these valves without interrupting HPI flow.

DESIGNATED ORIGINAL

Certified By

Carlton B. Scott

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An additional factor associated with the violation and an issue of concern to the NRC staff was the breakdown of communication between the various professional staff disciplines involved. Although the licensee's Design Engineering Group (DEG) identified the inadequate design analysis on May 19, 1988 and was aware of the significance of the issue, due to a communication failure, the onsite operations personnel misunderstood the importance of the HPI piggyback mode to mitigate certain small break loss-of-coolant accidents (LOCAs). Operations personnel incorrectly understood the piggyback mode to be one of several options available, rather than as a required mode under certain scenarios, for small break LOCA mitigation. Because station operations personnel were not aware of the importance of operation in this mode, the Oconee emergency operating procedures were only partially modified in June to include some additional guidance on HPI piggyback operation. While these modifications provided guidance regarding the NPSH aspects of operation in the piggyback mode, they still did not provide sufficient guidance to fully assure operation of the HPI system. Notwithstanding your issuance of an LER, it was not until early August, when questions were raised by the NRC, that DEG and operations staff finally communicated and the safety-related nature of the piggyback mode of operation was accepted by the operations staff. Procedures were then revised to provide specific provisions, such as operation of the LPI/HPI crossover valves, to assure operability of the safety-related requirement of the piggyback mode of operation.

The NRC considers the violation to be of significant safety concern because, as a result of the inadequate procedural guidance, there was a lack of reasonable assurance that the ECCS would have remained operable for the entire spectrum of all loss-of-coolant accidents. Therefore, the staff considers this to be a Severity Level III violation.

To emphasize the need for thorough problem recognition and resolution and the need for close and extensive interdisciplinary communications with regard to ECCS and other safety system issues, I have been authorized, after consultation with the Director, Office of Enforcement, and the Deputy Executive Director for Regional Operations, to issue the enclosed Notice of Violation and Proposed Imposition of Civil Penalty in the amount of Twenty-Five Thousand Dollars (\$25,000) for the violation described in the enclosed Notice. In accordance with the "General Statement of Policy and Procedure for NRC Enforcement Actions," 10 CFR Part 2, Appendix C (1988) (Enforcement Policy), the violation described in the enclosed Notice has been categorized as a Severity Level III violation. The base value of a civil penalty for a Severity Level III violation or problem is \$50,000. The NRC Enforcement Policy allows for adjustment of a civil penalty under certain circumstances. The escalation and mitigation factors in the Enforcement Policy were evaluated as follows. Although your commitment to verify all safety-related calculations led to your initial discovery concerning the inadequate NPSH for HPI pumps on May 19, 1988, it was not until early August 1988 (after discussions with the NRC Resident Inspector) that your DEG and your onsite operations personnel understood that the piggyback mode of operation of the HPI system was a requirement of the ECCS. Once your staff fully recognized the extent of the problem in early August, extensive corrective action was taken. However, because of the initial failure to fully comprehend the extent and safety significance of the problem, there was a delay in taking the appropriate corrective action. Therefore, only 25% mitigation was warranted

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for each of the factors of identification and corrective action. The staff considered your prior performance and decided that the generally favorable SALP ratings in Plant Operations (1) and Engineering Support (2) were offset by the enforcement history in the area of Operations and Engineering at the facility since January 1987. Therefore, neither escalation nor mitigation was considered warranted for the factor of past performance. Finally, the staff considered the prior notice of similar events and multiple occurrences factors and concluded that they were not applicable. Therefore, based on all the considerations, mitigation by 50% of the base civil penalty was considered appropriate.

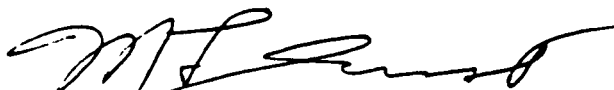
The NRC is encouraged, however, by your commitment to review all safety-related calculations at Oconee. The staff is also encouraged by your initiative to staff an on-site design engineering group to provide more timely response to an understanding of engineering issues.

You are required to respond to this letter and the enclosed Notice and should follow the instructions specified therein 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 Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosure will be placed in the NRC Public Document Room.

The responses directed by this letter and its enclosure 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.

Sincerely,



Malcolm L. Ernst
Acting Regional Administrator

Enclosure:
Notice of Violation and Proposed
Imposition of Civil Penalty

cc w/encl:
M. S. Tuckman, Station Manager
State of South Carolina

DEC 13 1988

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