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 50-270 Dconee Nuclear Station, Unit 2, Duke Power Co. 05000270
 50-287 Dconee Nuclear Station, Unit 3, Duke Power Co. 05000287

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 Document Control Branch (Document Control Desk)

SUBJECT: Responds to NRC 871030 ltr re violations noted in Insp Repts
 50-269/87-30, 50-270/87-30 & 50-287/87-30. Corrective actions:
 LPI & reactor bldg cooling unit coolers cleaned, tested &
 evaluated for support of full power operation.

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November 9, 1987

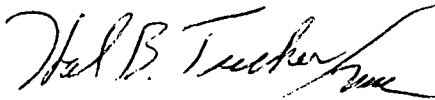
U. S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D. C. 20555

Subject: Oconee Nuclear Station
IE Inspection Report
50-269, -270, -287/87-30

Dear Sir:

Please find attached Duke Power Company's response to the violation contained in the subject inspection report. This violation involved the LPSW inlet temperature exceeding the design value of 75 degrees F. This response is being transmitted late as described in our October 30, 1987 letter.

Very truly yours,



Hal B. Tucker

WHM/126/sbn

Attachment

xc: Dr. J. Nelson Grace, Regional Administrator
U. S. Nuclear Regulatory Commission
Region II
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Mr. J. C. Bryant
NRC Resident Inspector
Oconee Nuclear Station

Ms. Helen Pastis
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VIOLATION:

10 CFR 50, Appendix B, Criterion III, requires in part that measures shall be established to assure that the design basis, as defined in 10 CFR 50.2 and as specified in the license application, for those structures, systems, and components to which Appendix B applies are correctly translated into procedures and instructions.

The Oconee FSAR states that the design value for the LPSW system inlet temperature is 75 degrees F. This value is also the maximum LPSW inlet temperature assumed in the Oconee design basis accident analyses for the Low Pressure Injection (LPI) coolers and Reactor Building Cooling Units (RBCU) coolers.

Contrary to the above, as of May 1, 1987, the LPSW inlet temperature had exceeded 75 degrees F for various lengths of time during nine of the past eleven years. An evaluation was not performed to determine the consequences of the higher LPSW temperature on the accident analyses; and there were no procedures to monitor or detect LPSW inlet temperature for compliance with the limit.

This is a Severity Level IV violation (Supplement I).

RESPONSE:

- (1) Admission or denial of the alleged violation:

Duke Power Company admits the violation occurred as stated.

- (2) Reason for the violation:

This violation occurred as a result of an oversight when a correlation was not made between the active LPSW inlet temperature and the design value of 75 degrees F.

- (3) The corrective steps which have been taken and the results achieved:

The FSAR for Oconee states in various data tables that a lake temperature of 75 degrees F was used for certain equipment design and analysis. Studies performed by Duke Power indicated that the LPSW inlet temperature had exceeded 75 degrees F in the past. The situation was evaluated per 10 CFR 50.59 to determine the impact on station systems and components for each unit. The 50.59 Evaluation was performed for all systems and components, safety and non-safety, which are serviced by lake water. This evaluation was completed in July, 1987 and demonstrated that all components, except the Unit 1 and 2 RBCU and LPI coolers, would perform as expected. The Unit 1 and 2 RBCU and LPI coolers did not meet the acceptance criteria due to fouling of the coolers.

An initial confirmatory order for Oconee was issued on April 10, 1987 which established new interim maximum allowable power levels based on the LPI and RBCU coolers degraded performance capabilities. Further Duke Power analyses indicated that the combination of elevated lake temperatures and fouled coolers on Units 1 and 2 required new interim maximum allowable power levels. The new confirmatory orders for Units 1 and 2 were issued on August

6 and August 19, 1987, respectively. Analyses demonstrated that Unit 3 could continue to operate safely at full power. Oconee has complied with the confirmatory orders which allow continued operation at reduced power levels.

During a recent Unit 1 outage, the LPI and RBCU coolers were cleaned and tested. The evaluation of the test results demonstrated that Unit 1 can be operated at full power with the lake water temperature up to 85 degrees F. This evaluation was completed and the NRC lifted the Unit 1 confirmatory order on November 5, 1987.

A procedure change has been incorporated to monitor the LPSW inlet temperature once per day, and the operator is to notify the appropriate personnel if the temperature exceeds 83 degrees F. This procedure change was effective August 21, 1987. As a result of the fouled cooler problem, Oconee has initiated a program to test and clean the coolers as necessary on a refueling frequency. With this program, the operability and fouling rate of the coolers can be determined to assure that plant operation remains within the design limitations. Further discussion of this can be found in IE Inspection Report 50-269, -270, -287/87-14.

(4) Corrective steps which will be taken to avoid further violations:

During the next Unit 2 refueling outage, the LPI and RBCU coolers will be cleaned, tested and evaluated for support of full power operation. Based on the Unit 1 and 3 experience, it is expected that the Unit 2 coolers will be able to support full power operation with the lake temperature at 85 degrees F. Also, the FSAR will be updated to reflect the new design value for LPSW inlet temperature in the next revision of the FSAR.

(5) Date of full compliance:

Oconee was in immediate compliance with the confirmatory orders which were issued to allow continued operation at reduced power levels for Units 1 and 2. The cooler cleaning program has been implemented as well as the procedure for monitoring LPSW inlet temperatures. Oconee will be in full compliance when the FSAR is updated and the Unit 2 refueling outage is completed.