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RECIP. NAME	RECIPIENT AFFILIATION
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SUBJECT: Responds to NRC 940805 ltr re violations noted in insp repts 50-269/94-15, 50-270/94-15 & 50-287/94-15. Corrective actions: investigation of valve failure to open & operator will be examined.

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DUKE POWER

September 06, 1994

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

Subject: Oconee Nuclear Site
Docket No. 50-269
Inspection Report 50-269, -270, -287/94-15
Reply to Notice of Violation

Dear Sir:

By letter dated August 05, 1994 the NRC issued a Notice of Violation as described in Inspection Report No. 50-269/94-15, 50-270/94-15, and 50-287/94-15.

By letter dated 01 September 1994, this response was delayed until 09 September 1994 pursuant to the provisions of 10 CFR 2.201. I am submitting a written response to the violation identified in the subject Inspection Report.

Very truly yours,


J. W. Hampton

cc: Mr. S. D. Ebnetter, Regional Administrator
U. S. Nuclear Regulatory Commission, Region II

Mr. L. A. Wiens, Project Manager
Office of Nuclear Reactor Regulation

Mr. P. E. Harmon
Senior Resident Inspector
Oconee Nuclear Site

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Attachment 1
Reply to Notice of Violation
Violation 269/94-15-01, Severity Level IV

10 CFR 50 Appendix B, Criterion V, as implemented by Duke Power Company Topical Report, Quality Assurance Program, Duke-1 requires that activities effecting quality shall be prescribed by documented instructions, procedures or drawings of a type appropriate to the circumstance and shall be accomplished in accordance with these instructions, procedures or drawings.

Contrary to the above, on June 21, 1994, while performing a ten year Inservice Inspection test, on Unit 1, Motor-Operated Valve LLP-103 was opened under conditions not established by documented instructions and not accomplished in accordance with appropriate procedures. Test instructions did not provide explicit guidance for the existing plant conditions. As a result, when the attempt was made to open the valve the motor and overload heaters were damaged requiring the valve to be operated by hand to conduct the test.

RESPONSE:

1. The reason for the violation, or if contested, the basis for disputing the violation:

Duke Power Company (DPC) denies this violation based on the following discussion:

The NRC interprets the test procedure MP/0/A/1720/016, "System/ Component Pressure Test Controlling Procedure", as inadequate due to not specifying; 1) the maximum operating pressure for the test and 2) the 400 PSIG differential pressure across valve LLP-103.

Duke Power contends that there was adequate control to assure that the maximum operating pressure for the test would not be exceeded. In this test procedure a specific 300 Degree fahrenheit temperature limit was established to initiate specific engineering evaluation if there was a desire to exceed this temperature limit. Associated with this temperature limit, and within the Operations startup/heatup procedure, a maximum pressure is specified for each operating temperature by use of pressure-temperature limit curves. Therefore the test procedure did identify a specific pressure above which the test would not be permitted unless further engineering evaluation was conducted to approve such testing at a higher pressure. The test was not completed prior to RCS temperature exceeding 300 degrees. Therefore the Pressure Test Engineer (the same engineer who had placed the 300 degree limit in the procedure originally) did an engineering evaluation and determined that the piping could withstand the normal operating pressure of the RCS and that the valve should be capable of opening with a 2150 PSID based on the original purchase specifications of

the valve assembly.

Duke Power contends that the 400 PSID (pounds differential pressure) criteria is not a criteria to restrict opening the valve at greater differential pressures, and therefore would not have required inclusion into the test procedure. Since the maximum differential pressure possible across the valve would have been RCS pressure, and since this variable was adequately controlled, it is Duke Power's position that specifying a 400 PSID limit in the procedure would have been redundant and thus not necessary. The 400 PSID criterion is based on the safety function (post-LOCA Boron dilution path); it is a design basis for the ability of the piping to perform its intended safety function, but is not intended to be used as a restriction for actuation of the valve. A review of the design specifications for the MOV indicates that the MOV should have been capable of operating at the RCS temperature and pressure under which it was stroked.

It is Duke Power's position that the valve did not fail due to the 770 PSID under which it was stroked. The valve failure is postulated to be an isolated occurrence of thermal binding or pressure locking. The deleterious effect of the temperature differential (which is postulated to have significantly contributed to this incident) is difficult to quantify using current industry data and methodologies. The effects of thermal binding and pressure locking are acknowledged industry and regulatory concerns. Further investigation of this valve's failure to open will continue. During the next scheduled refueling outage for Unit 1 (Unit 1 EOC 16), the valve and its operator will be closely examined.

2. The corrective steps that have been taken and the results achieved:

None

3. The corrective steps that will be taken to avoid further violations:

Although Duke's position is that no violation exists, further investigation of this valve's failure to open will continue. During the next scheduled refueling outage for Unit 1, the valve and its operator will be closely examined. The continued review of this incident, combined with industry-wide efforts directed at addressing thermal binding and pressure locking, should provide a means of significantly reducing further incidents of this nature.

4. The date when full compliance will be achieved:

Not applicable.