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50-270 Oconee Nuclear Station, Unit 2, Duke Power Co. 05000270
50-287 Oconee Nuclear Station, Unit 3, Duke Power Co. 05000287
AUTH.NAME AUTHOR AFFILIATION
MCCOLLUM,W.R. Duke Power Co.
RECIP.NAME RECIPIENT AFFILIATION
Records Management Branch (Document Control Desk)

SUBJECT: Forwards response to violations noted in insp repts 50-269/98-09,50-270/98-09 & 50-287/98-09.Corrective actions: pum vendor has already provided informal info that pumps will work & will be providing supporting QA documentation.

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December 14, 1998

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

Subject: Oconee Nuclear Site
Docket Nos. 50-269, -270, -287
Inspection Report 50-269, -270, -287/98-09
Reply to Notice of Violation

Gentlemen:

By letter dated November 13, 1998, the NRC issued a Notice of Violation as described in Inspection Report No. 50-269/98-09, 50-270/98-09, and 50-287/98-09.

Duke Energy Corporation (Duke) accepts Violation 98-09-02. Duke's proposed corrective actions to address this violation are described in Attachment 1.

Pursuant to the provisions of 10 CFR 2.201, the attachment provides a written response to the subject violation as identified in the subject Inspection Report.

Corrective actions in Section 3 of the response are the only regulatory commitments in this submittal.

Very truly yours,

W. R. McCollum, Jr.
Site Vice President
Oconee Nuclear Site

Attachment

IE01

cc: Mr. L. A. Reyes, Regional Administrator
U. S. Nuclear Regulatory Commission, Region II

Mr. D. E. LaBarge, Project Manager
Office of Nuclear Reactor Regulation

Mr. M. A. Scott
Senior Resident Inspector
Oconee Nuclear Site

Attachment 1
Reply to Notice of Violation (Reply)
Violation 98-09-02

Restatement of the Violation

10 CFR 50, Appendix B, Criterion III, Design Control, requires that measures be established for the review for suitability of application of equipment that is essential to the safety-related functions of the systems and components. Criterion III further requires that design control measures shall provide for the verifying or checking the adequacy of design, such as by a suitable testing program.

10 CFR 50, Appendix B, Criterion XVII, Quality Assurance Records, requires that sufficient records shall be maintained to furnish evidence of activities affecting quality.

Licensee Event Report 50-269,270,287/86-10, Potential for Loss of Emergency Feedwater Due to Pump Runout for Certain Transients, dated September 29, 1986, described a licensee reliance on the ability of the emergency feedwater (EFW) pumps to operate at runout conditions for less than 10 minutes to mitigate a design basis main steam line break event.

Contrary to the above, the licensee did not maintain sufficient records to furnish evidence of activities affecting quality, including the review for suitability of application of equipment and the verifying or checking of the adequacy of design. On October 8, 1998, the licensee had no quality assurance (QA) records to assure or verify the ability of the EFW pumps to operate at runout conditions as relied upon to mitigate a design basis event since 1986.

Reply to the Notice of Violation

Duke Power admits the violation.

1. The reason for the violation:

   In 1986, the issue of EFW pump runout was identified to the NRC in LER 269/86-10. In this LER, Duke stated that in all design basis transients, with the exception of a main steam line break, operator action would prevent a runout condition from developing. For the main steam line break, EFW pump runout conditions could develop in less than a minute. With the single failure of the remaining pump, the EFW pumps on the affected unit could be lost. Duke stated that the EFW pumps would continue to function in runout for at least 10 minutes, however, pump degradation could occur. The EFW pump flow capacity could drop from 10% to 50% in 10 minutes depending on SG pressure and corresponding EFW flow.

The LER stated that, based on operator training and simulator experience, operator action would be prompt such that pump runout would occur only briefly–for much less than 10 minutes. The LER also stated that actual length of time [runout would occur] and the specific amount of associated pump damage are difficult to quantify. The LER concluded that operator action would likely occur in time to preclude loss of EFW function.

As stated in the LER, the potential loss of EFW system function would likely be precluded by prompt operator action. However, in the event EFW was lost during a design basis transient, other means of providing secondary-side cooling would be available depending on the scenario, including the low-head Auxiliary Service Water System, HPI, feed and bleed, a Condensate Booster pump/Hotwell pump combination, re-establishment of Main Feedwater, SSF Auxiliary Service Water pump, and cross-connecting EFW between units.

The EFW design relies on diverse means to assure that the EFW function is met. This is a historical issue and the reason why a QA calculation was not developed could not be determined. However, based on the LER that documented the issue, it can be inferred that a QA calculation was not developed because 1)the safety related EFW function would not be lost in the event of pump failure due to runout and, 2)the pump vendor could not quantify the amount of damage that could occur during runout.

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

   The pump vendor has already provided informal information that the pumps will work and will be providing the supporting QA documentation.

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

   a) The documentation provided by the pump vendor will be placed in the Oconee document management system.

b) Data from a test to determine the potential for EFW pump runout will be factored into the EFW hydraulic flow model and will document the actual flow rate achieved. This test is planned for the next Unit 1 refueling outage in mid-1999.

c) A review of other safety-related pumps that rely on test data will be performed to assure documentation is in compliance with 10 CFR 50, Appendix B, Criterion III.

4. The date when full compliance will be achieved:

Duke will be in full compliance September 1, 1999.