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SUBJECT: Responds to NRC 961104 ltr re violations noted in insp rept
50-269/96-13, 50-270/96-13 & 50-287/96-13. Duke will perform a
comprehensive review of QA Topical Report.

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DUKE POWER

December 4, 1996

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, -287/96-13
Reply to Notices of Violation

Gentlemen:

By letter dated November 4, 1996, the NRC issued three Notices of Violation as described in Inspection Report No. 50-269/96-13, 50-270/96-13, and 50-287/96-13.

Violation A involves a situation in which a testing procedure did not sufficiently include information as required by the Duke Quality Assurance Topical Report. Violation B identifies a 10CFR50.59 evaluation as being inadequate in that the evaluation did not adequately evaluate potential fatigue effects of a modification on the Reactor Coolant System. Violation C addresses the closure of several service water system issues identified in Inspection Reports issued in 1993 and 1994. Inspection Report 96-13 only requires a response to Violations A and B.

Duke Power acknowledges these three violations. Accordingly, Duke is proposing several corrective actions, as described in the attachments, to address the root causes of these violations.

Regarding Violation C, Duke has identified the causes for this violation in previous correspondence and in two meetings with the NRC. These communications culminated in the submittal of a letter dated December 28, 1995, which described an extensive Service Water System upgrade plan that addresses the root causes of Violation C.

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The purpose of the December 28th letter was to provide your staff with a detailed, preliminary, conceptual design description of the proposed Service Water System modifications to assist in the evaluation and closure of open items associated with the Oconee Service Water Systems. During the development of the design details of this extensive series of modifications, some differences from this preliminary design description have occurred.

Once the Service Water System upgrade design work is completed, a final description of the new Service Water System will be provided which will further clarify the design and licensing basis. This information will be incorporated into the UFSAR as appropriate. This approach of continuous communication on the development of a major project, concurrent with followup NRC inspection activities, is consistent with Duke's approach in the past for major projects such as the Standby Shutdown Facility and Emergency Feedwater System improvements.

Pursuant to the provisions of 10 CFR 2.201, Attachment 1 provides a written response to Violation A identified in the subject Inspection Report. Likewise, Attachment 2 provides a written response to Violation B. Since the Service Water System upgrade addresses the root causes of Violation C, Duke agrees that no further response is warranted for this violation.

Very truly yours,

 for
J. W. Hampton

Attachments

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cc: Mr. S. D. Ebnetter, 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 A
Violation 96-13-08, Severity Level IV

VIOLATION:

10 CFR 50, Appendix B, Criterion V, "Instructions, Procedures, and Drawings", and the attendant licensee Quality Assurance Program (Final Safety Analysis Report, Topical Report, Duke-1-A, Sections 17.3.2.8, Test Control, and 17.3.2.12, Inspection) require in part that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings of a type appropriate to the circumstances which include appropriate quantitative or qualitative acceptance criteria.

Contrary to the above, on September 23, 1996, an inservice pressure test of Unit 2 reactor coolant system piping was inadequately written in Minor Modification Package ONOE-9496, in that it did not contain or reference appropriate acceptance criteria. Specifically, the package did not contain an exact test pressure range or prerequisite conditions.

RESPONSE:

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

Duke Power Company acknowledges this violation.

Oconee Temporary (TN) procedure TN/2/A/OE9496/00 was used to provide instructions and documentation for deletion of valves 2HP-490, 2HP-491, 2HP-492, 2HP-493, 2HP-497, 2HP-498, 2HP-499, and 2HP-500, and capping of the associated 1" High Pressure Injection lines. This activity was performed to resolve a leak at valve 2HP-491, and to eliminate the potential for leaks in other similar piping configurations. The procedure also required demonstration of weld integrity by inservice leakage inspection.

Duke acknowledges that the TN procedure did not provide adequate documentation of the required test pressure range

or prerequisite plant conditions during conduct of the test. Leakage testing for 1" or less piping is not required by ASME Section XI. A conservative decision was made by Modification Engineering to perform this leakage testing. If the leakage testing had been required by the ASME code, the programs in place at Oconee would have ensured adequate documentation of required test pressure range and prerequisite plant conditions during the conduct of the test. However, with no code requirements for this test, programmatic provisions which existed in the implementing procedures did not provide sufficient clarity to describe how the testing should be adequately documented per the Duke Power Company Quality Assurance (QA) Topical Report.

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

Upon recognition that procedure TN/2/A/OE9496/00 contained inadequate documentation of allowed test pressure range and plant conditions during the conduct of the test, a Problem Investigation Process (PIP) report was generated. Immediate investigations determined that the actual conditions under which the test had been performed were per Performance Test (PT) procedure PT/0/A/200/46; prior discussions between Modification Engineering and Operations had confirmed that the Operations procedure would document that Reactor Coolant System (RCS) temperature was greater than the minimum temperature required by Technical Specification 3.1.2 for an RCS pressure of 2250 psig, following completion of TN/2/A/OE9496/00. Therefore, the test pressure and temperature were properly documented in the TN procedure using information from the PT procedure. As part of the PIP, an investigation was initiated to determine the root cause for this event.

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

Duke will perform a comprehensive review of the QA Topical Report, along with the implementing procedures, such as the Nuclear Policy Manual (NPM), Nuclear System Directives (NSDs), and the Work Practices Manual (WPM), to assess the adequacy of these documents as they pertain to non Code-

required post modification functional verifications. This review will be used to determine what revisions are necessary to achieve better correlation between the implementing procedures and the QA Topical Report. As a result of this review, revisions will be made to these documents as necessary to clarify the disconnect between the documents regarding non Code-required types of functional verifications.

In the interim, until the disconnects between the QA Topical and the implementing procedures can be resolved, Modification Engineering will ensure that a clear understanding and communication of the post modification functional verification requirements are included with the TNs. The accountable engineer or implementer of the procedure will include in the TN (Temporary) Procedure a step to perform an inservice functional verification which will include: 1) when to perform the verification, 2) pressure and temperature requirements, and 3) duration of the verification or reference to an existing station procedure which would specify verification requirements.

4) The date when full compliance will be achieved:

Oconee is currently in full compliance.

Attachment 2
Reply to Notice of Violation B
Violation 96-13-10, Severity Level IV

VIOLATION:

10 CFR 50.59 (b)(1) requires the licensee to maintain records of changes in the facility made pursuant to this section to the extent that these changes constitute changes in the facility as described in the safety evaluation report. These records must include a written safety evaluation that provides the basis for the determination that the change, test, or experiment did not involve an unreviewed safety question.

Contrary to the above, on February 1, 1996, the written safety evaluation for a change to the facility as described in the safety evaluation report was not adequate. Specifically, the written safety evaluation for Modification 22975, Replace High Pressure Injection Check Valves 2HP-126, 2HP-127, 2HP-152, and 2HP-153, did not adequately evaluate potential fatigue effects of this modification on the reactor coolant system.

RESPONSE:

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

Duke Power Company acknowledges this violation.

Duke agrees that the 10CFR50.59 safety evaluation for Modification NSM-22975, "Replace Stop-Check Valves 2HP-126, 2HP-127, 2HP-152, and 2HP-153", did not adequately evaluate potential fatigue effects on the applicable Reactor Coolant System (RCS) branch connection piping. The safety evaluation correctly concluded that no unreviewed safety questions existed with NSM-22975. However, this conclusion was drawn from inadequate documentation of the fatigue effects resulting from the modification.

The detailed root cause analysis for this event has not yet been completed. However, the apparent causes of the

inadequate 10CFR50.59 documentation are, 1) inadequate guidance to support conservative 10CFR50.59 evaluations for situations in which the licensing basis includes a schedule to resolve a non-conforming condition in the UFSAR, and 2) omission of relevant information from the Oconee licensing basis.

In a letter dated July 10, 1995, the NRC agreed with the Duke schedule to complete a Class I fatigue analysis on certain RCS branch connection piping by August 31, 1999, to resolve a UFSAR non-conformance. The associated NRC/Duke correspondence did not specify any additional analyses that might be needed if modifications were performed on the subject piping during this time. The assumption made in the safety evaluation for the subject modification was that the existing Class II analysis methods for the RCS branch piping demonstrated adequate margin to justify not having this piping analyzed by Class I methods until the scheduled date for completing the Class I analysis. The interpretation of the commitment to perform the Class I fatigue analysis was therefore literally made that this analysis did not have to be performed or reviewed until the committed date. As a result, the safety evaluation did not adequately evaluate the impact of the modification on Class I analysis fatigue parameters. The development of this commitment is described in letters to the NRC dated June 26, 1995, and February 22, 1996.

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

Upon recognition that the 10CFR50.59 safety evaluation contained inadequate documentation to ensure that no unreviewed safety questions existed with Modification NSM-22975, a Problem Investigation Process (PIP) report was generated. Immediate corrective actions were taken to perform a comparative analysis to determine the effects of the modification on the Class I fatigue characteristics of the affected piping. In addition, the 10CFR50.59 safety evaluation was revised to include consideration of the results of this comparative analysis. The comparative analysis results supported the conclusion that no unreviewed safety question existed with NSM-22975. As part of the PIP,

an investigation was initiated to determine the root cause for this event.

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

- a) Review UFSAR Section 3.2.2.1 to determine what clarifications of the licensing basis are necessary to address any future modifications to the RCS branch connection piping until the Class I fatigue analyses are completed (August 31, 1999). Revise the UFSAR as necessary.
- b) Review the Civil Engineering piping analysis specification to determine if additional information is needed to provide guidance for analyzing the RCS branch connection piping. Revise this specification as necessary.
- c) Evaluate NSD 209, "10CFR50.59 Evaluations", to determine if a revision is necessary to clarify the policy for evaluation of situations in which the licensing basis includes a schedule to resolve a non-conforming condition in the UFSAR.
- d) Complete the detailed root cause analysis for this event.

Additional programmatic corrective actions may be taken pending the results of the ongoing detailed root cause investigation.

4) The date when full compliance will be achieved:

Oconee is currently in full compliance.