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SUBJECT: Forwards request for relief from ASME Section XI, 1980
 Edition, including Winter 1980 Addenda. Request needs to be
 reviewed & approved by 940715. S

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DUKE POWER

June 6, 1994

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

Subject: Duke Power Company
Oconee Nuclear Station, Units 1 & 2
Docket No. 50-269,270
Second Ten Year Inservice Inspection Interval
Request for Relief No. 94-04

Pursuant to 10 CFR 50.55a, attached is a Request for Relief from ASME Section XI, 1980 Edition, including the Winter 1980 Addenda. This request is to allow Duke Power to use a System Performance Test on portions of the Low Pressure Service Water System that is shared by Oconee Units 1 and 2 in lieu of the required Hydrostatic Test. The performance of the Hydrostatic Test will create an undue burden without a compensating increase in the level of quality or safety. The proposed alternate test will be equivalent to the Code required test.

This request needs to be reviewed and approved by July 15, 1994 at which time Oconee Unit 1 will end its Second Ten Year Inservice Inspection Interval.

If there are any questions or further information is needed you may contact D. A. Nix at (803) 885-3634.

Very truly yours,

J. W. Hampton
Site Vice President

9406080289 940606
PDR ADDCK 05000269
Q PDR

ADH

U. S. Nuclear Regulatory Commission
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xc (w/drwgs): Mr. L. A. Wiens
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2600 Bull St.
Columbia, SC 29201

OCONEE NUCLEAR STATION

Units- 1 and 2

Second Ten Year Interval

Request # 94-04

1. Component for which relief is requested:

(a) Name and Number:

This request is for the Low Pressure Service Water (LPSW) piping downstream of the LPSW pumps serving both Unit-1 and Unit-2. The specific boundary is marked on the attached Oconee Flow Diagrams (OFDs).

(b) Function:

This LPSW piping provides the cooling water from the three LPSW Pumps to various normal and emergency equipment throughout the plant for Units 1 and 2.

(c) ASME Class/Duke Class: ASME Class 3 / Duke Class F

(d) IWV-2000 Valve Category: N/A

(e) Reference documents (drawings, manuals):

- Design Basic Specification for the LPSW System
Spec. OSS-254.00-00-1039
- OFD-124A 1.1
- OFD-124A 1.3
- OFD-124A 2.3
- OFD-124B 1.1
- OFD-124B 1.2
- OFD-124B-1.4
- OFD-124B-1.5
- OFD-124B-2.1

2. Reference Code Requirement that has been determined to be impractical:

The code requirement is from ASME Boiler and Pressure Vessel Code Section XI, 1980 Edition (with addenda through Winter 1980) Paragraph IWD-2610 and Table IWD-2500-1, Examination Category D-B, Item number D2.10. This section requires a hydrostatic pressure test once each inspection interval.

3. Basis for requesting relief:

In order to perform the Hydrostatic Test both Units 1 and 2 must be in, as a minimum, Hot Shutdown conditions. The preferred configuration would be one Unit in Cold Shutdown and defueled with the other at least in Hot Shutdown to further reduce LPSW loads. This is necessary due to the system configuration and the sharing of the LPSW System on Units 1 and 2. Up until February 9, 1994 the Oconee Technical Specifications only allowed one train of the LPSW system to be out of service for maintenance or testing for 24 hours which was not an adequate amount of time to perform this test. The current Technical Specifications allow one train of the LPSW system to be out of service for maintenance or testing for 72 hours. It is anticipated the hydrostatic test would take approximately 46 hours to perform assuming no problems are encountered. This creates a challenge and pressure on the operations and test personnel to perform this test and restore the system to operable status within this time frame.

There has not been an opportunity, nor are there any current plans to create an opportunity to have the units in a condition to perform this test during the Third Inservice Inspection Period of the Second Inservice Inspection Interval when this test is required to be performed.

To bring one Unit down to coincide with a scheduled or unscheduled outage of the other unit in order to perform the Hydrostatic Test would cost Duke Power approximately \$650,000 dollars in lost revenues. This includes such items as:

- 1) Approximately .5 Hours to bring the unit down to Hot Shutdown conditions from when the Electric Generator must be taken off line and approximately 13 Hours to get the unit from Hot Shutdown back to where the Electric Generator can be placed back on line.

- 2) Approximately 32 Hours to prepare the system for the tests and then restore it afterwards. The test would have to be performed in two parts to maintain one train operable.
- 3) Approximately 14 Hours to pressurize and hold pressure prior to the VT-2 Examination and perform the examination for both test.

The performance of the hydrostatic test would result in an excessive burden without a compensating increase in the level of quality or safety. The VT-2 examination during the system performance test, at the elevated pressure, will provide the equivalent assurance of a hydrostatic test of the structural integrity, functionality, and leak tightness of the portion of the system addressed in this relief request.

4. Alternate Examination:

A VT-2 examination will be performed during the System Performance Test. This LPSW piping will be pressure tested to an elevated pressure above the Design pressure, but approximately 2 to 5 PSIG below the required hydrostatic pressure. Normally only two LPSW pumps are running at one time, but all three LPSW pumps will be operating during this Performance Test.

5. Acceptability of proposed alternate testing with respect to the level of quality and safety as well as public health and safety:

The LPSW System has redundant paths to provide cooling water to the various safety related equipment required to mitigate accidents. In addition the High Pressure Service Water System serves as a back-up cooling water supply should the loss of the LPSW occur. The potential loss of portions of the LPSW system has been evaluated and procedures have been developed to safely recover from this situation during those events described in the Oconee FSAR Chapter 15, Accident Analyses.

The proposed pressure test, while not reaching the required hydrostatic test pressure of 110 PSIG, will create a pressure of approximately 106 PSIG which is very close to the required hydrostatic test pressure and above the normal system operating pressure of 85 - 95 PSIG.

Oconee Relief Request

94-04

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It is also our understanding ASME has recently approved Code Case N-498-1, but has not as yet issued it for usage. This Code Case would allow the use of a System Pressure Test as an alternate to the 10 Year Hydrostatic Test for Class 3 Systems. By approval of this Code Case, ASME has confirmed this process is an acceptable alternative to the existing Code requirements. The alternate pressure test we are proposing will exceed the requirements of Code Case N-498-1 thereby going beyond what has been determined to be an already acceptable examination alternative.

The VT-2 examinations at the elevated pressure will substantiate the ability of the piping to maintain leak tightness at conditions above the system operating pressure. Although the test pressure is slightly lower than the required hydrostatic test pressure, the flow dynamics, additional vibrations, and other operational loads of this dynamic test make this pressure test an acceptable substitute for a static hydrostatic pressure test. The performance test will also demonstrate that the piping will perform its safety function as designed.

The VT-2 during the system performance test, at the elevated pressure, provides an acceptable level of assurance of the structural integrity, functionality, and leak tightness of the piping and that the health and safety of the general public will not be diminished by this deviation from Code requirements.

6. Implementation Schedule:

The System Performance Test, with the associated VT-2 examination, is to be performed during the Unit 1 EOC 14 refueling outage scheduled to end June 22, 1994.

Requested By: DW Dalton Date: 6/3/94

Reviewed By: Dick Baliga Date: 6/3/94

QA Reviewed: Wm McClure Date: 6/3/94

Approved By: Benny Trullinger Date: 6/6/94

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