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SUBJECT: Forwards Request for Relief 89-02 from ASME Boiler & Pressure Vessel Code, Section XI.

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March 31, 1989

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

Subject: Oconee Nuclear Station
Docket Nos. 50-269, -270, -287
Second Ten Year Interval
Request for Relief No. 89-02

Gentlemen:

Pursuant to 10CFR 50, 50.55a, please find attached request for relief number 89-02 from the requirements of Section XI of the ASME Boiler and Pressure Vessel Code (with Addenda through Winter 1980). This request is being submitted due to the impracticality of pressure testing specific welds as required by the Code following repair. The attached request concerns the inservice inspection at Oconee Units 1, 2 and 3 being performed during the second ten year interval.

Very truly yours,

Hal B. Tucker

PJN/470

Attachment

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March 31, 1989
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xc: w/o diagrams

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Oconee Nuclear Station
Second Ten Year Interval
Request for Relief No. 89-02

I. Component for which relief is requested:

- (a) Name and Number: Emergency Feedwater System (EFW) seal injection piping. 2-inch weld at the 2-inch x 1-inch reducing insert (see attached flow diagram).
- (b) Function: NSM 2460 (Part AM1) installs a 2-inch x 1-inch reducing insert orifice into the turbine driven EFW seal injection line. These lines will be downgraded from Class F to Class G on the downstream side of the orifice. This line provides seal water for the turbine driven EFW pump. This orifice will prevent excessive EFW loss from the pump discharge in the event of a break in the Class G pipe.
- (c) ISI Class/Duke Class: ISI Class C/Duke Class F
- (d) IWV-2200 Valve Category: N/A
- (e) Materials: The piping is 2-inch carbon steel, schedule 80, A-106. The socket weld tee is 2-inch carbon steel, A-105, 3000#. The reducing insert is 2-inch x 1-inch carbon steel, A-105, 3000#.

II. Reference Code requirement that has been determined to be impractical:

ASME Boiler and Pressure Vessel Code Section XI, 1980 Edition (with Addenda through Winter 1980) paragraph IWA-4400(a), which states that after repairs by welding on the pressure retaining boundary, a system hydrostatic test shall be performed in accordance with IWA-5000.

III. Basis for requesting relief:

There is no practical way to isolate the affected 2-inch line from the turbine driven EFW pump and piping upstream. The required hydrostatic test could potentially overpressurize the EFW pump and upstream piping. Alternate methods of isolation were considered but were deemed impractical. The alternate methods considered were:

- 1) Disconnect and blank flange the discharge piping from the turbine driven EFW pump. This method was unacceptable because the flanges at the pump are not flexible enough to allow for the insertion of the blank flange.

- 2) Install a manual isolation valve on the discharge side of the turbine driven EFW pump. This method is unacceptable since an isolation valve of any type would be welded in place and the welds on the non-hydro side of the isolation valve would also require hydrostatic testing.
- 3) Perform a hydrostatic test through the turbine driven EFW pump to the first isolation valve on the intake side. Piping on the intake side of the pump has a design pressure of only 25 psig. Thus this would overpressurize the piping on the intake side of the pump.

IV. Alternate examination:

Welds will be examined with a liquid penetrant test and a VT-2 inspection will be performed at operating temperature and pressure.

V. Evaluation of acceptability of proposed alternate testing with respect to the level of quality and safety as well as public health and safety:

The specified method of hydrostatic testing verifies that there are no leaks at 1.25 times the design pressure. The alternate examination of a liquid penetrant test assures that no significant flaws are evident in the welds. Liquid penetrant testing reveals small surface weld defects. The VT-2 inspection indicates that no leaks are detectable when the system is at operating temperature and pressure.

The alternate tests provide an acceptable method to indicate a leak at the higher stress level which is normally verified by the specified method of hydrostatic testing. As such, the proposed alternate examinations provide a acceptable level of quality and safety and will not endanger the health and safety of the public.

VI. Implementation Schedule:

The liquid penetrant testing will be performed when welding is complete. The VT-2 inspection will be performed during the next scheduled inservice test per ASME Section XI paragraph IWP.

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