

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9403170198      DOC. DATE: 94/03/10      NOTARIZED: NO      DOCKET #  
 FACIL: 50-269 Oconee Nuclear Station, Unit 1, Duke Power Co.      05000269  
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 RECIPIENT NAME      RECIPIENT AFFILIATION  
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*See Drawings*

SUBJECT: Forwards second 10-yr ISI interval Request for Relief 94-03 for exposed portions of Unit 1 emergency discharge header for condenser circulating water sys. W/five oversized drawings.

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*Drawings located in Central files*

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**DUKE POWER**

March 10, 1994

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

Subject: Duke Power Company  
Oconee Nuclear Station, Unit 1  
Docket No. 50-269  
Second Ten Year Inservice Inspection Interval  
Request for Relief No. 94-03

Pursuant to 10CFR50, 50.55a, please find the subject Request for Relief from ASME Section XI, 1980 Edition through the Winter 1980 Addenda. This Relief Request is needed due to the impracticality of meeting the Code requirements for hydrostatic testing. The alternate examinations will be performed during Unit 1 EOC 15 refueling outage currently scheduled to be completed in June 1994.

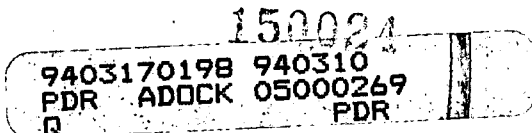
The upcoming EOC 15 refueling outage for Unit 1 is the last scheduled outage for the Second Inservice Inspection Interval for this Unit. In order to support this outage these requests need to be reviewed and approved by May 20, 1994.

If there are any questions or further information is needed you may contact D. W. Dalton at (803) 885-3372.

Very truly yours,

J. W. Hampton  
Site Vice President

Attachment



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*ADHM*  
*Drawings located in Central files*

U. S. Nuclear Regulatory Commission  
Page 2

xc w Drawings: Mr. L. A. Wiens  
Office of Nuclear Reactor Regulation  
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xc wo Drawings: Mr. S. D. Ebnetter  
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U. S. Nuclear Regulatory Commission

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2600 Bull St.  
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OCONEE NUCLEAR STATION

Unit-1

Second Ten Year Interval

Request # 94-03

1. Component for which relief is requested:

(a) Name and Number:

This request is for the exposed (not embedded nor buried) portions of the Unit-1 Emergency Discharge header for the Condenser Circulating Water System (CCW), from valves 1CCW-1, 2, 3, 4, 5, and 6 to valve CCW-8. The exposed piping is marked on the attached Oconee Flow Drawings (OFDs).

(b) Function:

The emergency discharge header provides a path for CCW to be discharged back to the intake canal or to the Keowee tailrace. The purpose of the discharge path back to the intake canal is to mitigate the results of a Keowee Dam break (a weir is provided in the intake canal to assure that a sufficient amount of water is retained for CCW operation). The purpose of the path to the Keowee tailrace is to mitigate the results from losing the CCW pumps (an unassisted siphon is formed establishing a supply of cooling water through the condenser in order to remove decay heat).

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

(d) IWV-2000 Valve Category:

Valves CCW-8, CCW-9, 1CCW-1, 1CCW-2, 1CCW-3, 1CCW-4, 1CCW-5, 1CCW-6, and 2CCW-7 would be boundary valves for the Unit-1 CCW emergency discharge header provided this header could be hydrostatic pressure tested. These valves are Category B valves.

(e) Reference documents (drawings, manuals):

- o Design Basic Specification for the CCW System  
Spec. OSS-254.00-00-1003
- o Oconee Technical Specifications, Table 4.1-2
- o OFD-133A 1.2
- o OFD-133A 1.5
- o OFD-133A 2.2
- o OFD-133A 3.2
- o OFD-133A 3.4

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 an interval.

3. Basis for requesting relief:

Isolating the Unit-1 CCW Emergency discharge header would make the Emergency CCW inoperable for all three units. This would incur a seven day LCO (the emergency discharge header must be operable anytime the reactor coolant system temperature is above 250 °F). The impracticality of hydrostatically testing the CCW emergency header is due to difficulty of supplying the amount of makeup water needed to overcome the bypass seat leakage of several large butterfly valves. These valves were not intended to function as hydrostatic pressure test boundary valves. If the hydrostatic pressure test could be performed, the pressurized boundary valves would be:

**UNIT-1:** 1CCW-1, 2, 3, 4, 5, 6 and 240; IV-176, 191, 193 and 195

**UNIT-2:** 2CCW-7

**UNIT-3:** 3CCW-93

**UNIT-1,2 & 3:** CCW-8 and 9 (generic to all 3 units)

Of the above listed valves, there are six 12", two 30", and one 48" butterfly valves. During testing (tests used to verify surveillance tests) on the CCW system, the total bypass seat leakage attributed to valves 1CCW-1 through 6 and CCW-9 was an estimated 930 gpm (which is much less than one percent of the CCW that normally discharges back to the lake). Since the safety related function of these valves is to open and a certain amount of bypass seat leakage is acceptable, it would be illogical to expect these valves to function as hydrostatic pressure test boundaries. This would mean in order to perform the hydrostatic pressure test, Oconee would have to 1) weld a large tap to the CCW piping for a high volume hydro pump connection and 2) replace most of these valves with valves designed for minimal bypass seat leakage.

4. Alternate Examination:

The Oconee Technical Specifications (Table 4.1-2, "Minimum Equipment Test Frequency") requires the Condenser Cooling Water System Gravity Flow Test to be performed each refueling outage. Performance Test Procedure PT/1/A/0261/07 accomplishes this Technical Specification requirement for the Unit-1 CCW emergency header. This performance Test demonstrates 1) the Emergency Condenser Circulating Water System gravity flow can be maintained and 2) the intake Canal recirculation flow path can be established (in the event of dam failure). This test verifies acceptable flow through CCW-8 and CCW-9. Flow is verified through CCW-8 after securing the CCW pumps and actuating the emergency header. Flow through CCW-9 after the emergency header is placed in the "CCW Dam Failure" mode and a CCW pump is manually restarted. This test assures sufficient flow is available for the Low Pressure Supply Water system during emergency conditions.

A VT-2 examination on the exposed portions of the CCW emergency header was performed January 1993 during the Unit-1 CCW emergency header 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 VT-2 examinations at normal operating pressure will substantiate the ability of the welds to maintain leak tightness for the conditions they were designed for. The performance test will also demonstrate that the piping will function as designed. Additionally, from a statistical bases, Oconee has a greater than a 95-95 confidence level for acceptable hydro tests.

The alternate examinations, the performance test and Oconee's excellent welding record provides an acceptable level of assurance for the quality of these welds and the health and safety of the general public will not be diminished.

6. Implementation Schedule:

The Condenser Cooling Water System Gravity Flow Test will be performed every refueling outage. This test is next scheduled for June 1994.

Requested By: Tich B. Dylon Date: 3-7-94  
Reviewed By: Ted K. Royal Date: 3/8/94  
QA Reviewed: D. S. Mason Date: 3-9-94  
Approved By: B. S. Tulsogi Date: 3-9-94

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