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January 9, 2002

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

Subject: Catawba Nuclear Station, Units 1 and 2  
Docket Nos. 50-413 and 50-414  
Request for Inservice Testing (IST) Program  
Relief 02-001

Pursuant to 10 CFR 50.55a and 10 CFR 50.4, Duke Energy Corporation requests relief from certain ASME Section XI Code requirements as described in the enclosed Relief Request No. 02-001.

As detailed in the attachments to this letter, the subject request for relief requests the following:

1. Catawba is requesting approval to partially implement the 1995 ASME Code Edition (ISTC, OMa-1996) for selected IST program check valves in order to allow the adoption of Condition Monitoring for these valves. This request is being made pursuant to 10 CFR 50.55a(f)(4)(iv) and is similar to requests made by other utilities and approved by the NRC.
2. Catawba is requesting approval to continue testing the Auxiliary Feedwater System and Containment Spray System pumps at 40% and 25% flow, respectively, rather than the 80% of design flow required by the 1995 ASME Code Edition. Catawba does not have a means of testing these pumps at design flow rates without either adding test loops (Containment Spray System) or requiring extensive rebalancing of flow rates following testing (Auxiliary Feedwater System). Requiring full flow testing of these pumps would result in a significant cost incursion with

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no corresponding increase in plant safety. This request is being made pursuant to 10 CFR 50.55a(f)(5)(iii).

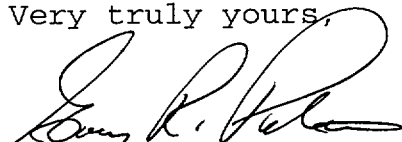
Note that although Items 1 and 2 above constitute technically separate issues, for convenience, they are being submitted under common cover letter as Relief Request No. 02-001.

Catawba is requesting NRC approval of this relief request by April 30, 2002 so that Item 1 above can be implemented beginning in the Spring 2002 End-of-Cycle 13 Refueling Outage for Unit 1. The implementation period is two years for Condition Monitoring beginning in 2002 and completing in 2004. The balance of the IST components will transition to the 1995 ASME Code over the three-year period beginning in 2002 and completing by the next 120-month update due in June 2005.

There are no regulatory commitments contained in this letter or its attachments.

Should you have any questions on this matter, please contact L.J. Rudy at (803) 831-3084.

Very truly yours,



Gary R. Peterson

Attachments

LJR/s

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xc (with attachments):

L.A. Reyes, Regional Administrator, Region II  
U.S. Nuclear Regulatory Commission  
Atlanta Federal Center, Suite 23 T 85  
61 Forsyth Street, SW  
Atlanta, GA 30303-3415

C.P. Patel, Project Manager (addressee only)  
Office of Nuclear Reactor Regulation  
U.S. Nuclear Regulatory Commission  
One White Flint North, Mail Stop 08-H12  
Rockville, MD 20852-2738

D.J. Roberts, Senior NRC Resident Inspector  
Catawba Nuclear Station

### Generic Relief Request

Item Number: CN-GRV-04

Component Number(s): All check valves in the IST Program

Flow Diagram(s): All applicable

Function(s): All active functions

Test Requirement: OM-10 (OMa-1988), Sections 4.2 - Inservice Test for Category A and B Valves, along with Section 4.3.2 - Exercising Tests for Check Valves.

Basis for Relief: In order to take advantage of the American Society of Mechanical Engineer's (ASME) and Nuclear Regulatory Commission's (NRC) improvement efforts in developing a performance-based code (versus the current prescriptive code requirements), relief is being requested to implement the Appendix II, "Check Valve Condition Monitoring Program," per ASME OM Code-1995 Edition through 1996 Addenda. This is an approved and acceptable ASME Code alternative to testing check valves as set forth in ASME/ANSI OMa-1988, Part 10 Section 4.3.2, "Exercising Tests for Check Valves." Relief is being requested in accordance with 10 CFR 50.55a(f)(4)(iv).

Check Valves will be monitored by the condition monitoring approach

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adopting the requirements of Appendix II, "Check Valve Condition Monitoring Program," in the ASME OM Code-1995 Edition through 1996 Addenda, subject to the three modifications found in 10 CFR 50.55a(b)(3)(iv).

The schedule for implementing the Appendix II Condition Monitoring Program allows a time period for one complete refuel cycle to be completed, to test valves that can only be safely tested during a refueling outage, which is the case for some of the check valves not currently bi-directionally tested. It will also allow sufficient time to establish the process and procedures, and evaluate groupings, which are necessary to implement the Appendix II Condition Monitoring Program requirements. The implementation period requested is approximately two years.

There are 192 Unit 1 and 212 Unit 2 check valves that are not currently tested in both the open and close directions, but will be bi-directionally tested based on approval of this request. The initial evaluations performed will include those valves not currently bi-directionally tested. Bi-directional testing improves the capability to detect failures. This code update for check valves only, is in advance of the June 2005 required 10-year IST Program Code update. This proposed

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alternative provides an acceptable level of quality and safety.

Code Alternative:

As an alternative to the testing or examination requirements of OM-10 (OMa-1988), Sections 4.2 - Inservice Test for Category A and B Valves, along with Section 4.3.2 - Exercising Tests for Check Valves, the Owner may establish a Condition Monitoring Program. The purpose of this program is both to improve check valve performance and to optimize testing, examination, and preventive maintenance activities in order to maintain the continued acceptable performance of a select group of check valves. The Owner may implement this program on a valve or a group of similar valves. The program shall be implemented in accordance with ASME OM Code-1995 Edition through 1996 Addenda, Appendix II, Check Valve Condition Monitoring Program. If the Appendix II program is discontinued for a valve or group of valves, the requirements of all applicable check valve portions of ASME OM Code-1995 Edition through 1996 Addenda will be implemented.

**ADDITIONAL INFORMATION:**

**ACCEPTANCE CRITERIA:**

Disassembly and inspection, non-intrusive test, and surveillance test acceptance criteria will be in accordance with station procedures.

**REFERENCES:**

Part 50 - Statements of Consideration for the Final Rule  
Effective November 22, 1999.

**APPROVAL REFERENCES:**

This request needs to be submitted and approved pursuant to 10 CFR 50.55a(f)(4)(iv) because it allows a period of time for implementing bi-directional testing of check valves currently tested in one direction only.

**Specific Relief Request**

Item Number: CN-SRP-CA-01

Component: TDAFWP #1  
TDAFWP #2

Flow Diagrams: CN-1592-1.0  
CN-2592-1.0

Function: Provide Auxiliary Feedwater to steam generators as required to maintain secondary side level, at times when normal feedwater is not available.

Current Test Requirement(s): ASME OMa-1988 Part 6, Sections 4 - Testing Requirements, Section 5 - Testing Methods, and Section 6 - Analysis and Evaluation

Future Test Requirement(s): ASME OMa-1996 Subsection ISTB, ISTB 5.2.3 - Comprehensive Test

Basis for Relief: As full flow testing for the biennial comprehensive test is part of the 1995 ASME Section XI Code (which is being implemented) and not part of the code in effect, the benefit of expending significant financial resources to add a full flow loop is not warranted. Throttle valves can be repositioned for full flow, however subsequent flow balance consumes considerable time and resources. Pumps do not operate except for testing with no apparent failure/deterioration mechanism.

Test Alternative: Continue testing at 40% full flow, monitoring differential pressure, flow rate, and vibration per Group B quarterly testing requirements.



**Specific Relief Request**

Item Number: CN-SRP-NS-01

Component: NS Pump 1A, NS Pump 1B  
NS Pump 2A, NS Pump 2B

Flow Diagrams: CN-1562-1.1, CN1562-1.1  
CN-2562-1.1, CN2562-1.1

Function: Provide Containment Spray as required  
for containment heat removal.

Current Test  
Requirement(s): ASME OMa-1988 Part 6, Sections 4 -  
Testing Requirements, Section 5 -  
Testing Methods, and Section 6 -  
Analysis and Evaluation

Future Test  
Requirement(s): ASME OMa-1996 Subsection ISTB, ISTB  
5.2.3 - Comprehensive Test

Basis for Relief: As full flow testing for the biennial  
comprehensive test is part of the 1995  
ASME Section XI Code (which is being  
implemented) and not part of the code  
in effect, the benefit of expending  
significant financial resources to add  
a full flow loop is not warranted.  
Pumps do not operate except for  
testing with no apparent  
failure/deterioration mechanism.

Test Alternative: Continue testing at 25% full flow,  
monitoring differential pressure, flow  
rate, and vibration per Group B  
quarterly testing requirements.