



Tom Simril
Vice President
Catawba Nuclear Station
Duke Energy
CN01VP | 4800 Concord Road
York, SC 29745
o: 803.701.3340
f: 803.701.3221

CNS-17-020

10 CFR 50.55a

April 11, 2017

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Catawba Nuclear Station, Units 1 and 2
Docket Nos.50-413 and 50-414
Renewed License Nos.NPF-35 and NPF-52

Subject: Application to Adopt ASME Code Case OMN-20 (CN-GRR-01) for Pump and Valve Inservice Testing

Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(z)(2), Duke Energy Carolinas, LLC, collectively referred to henceforth as "Duke Energy," requests an alternative to the testing frequencies in the American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code, by adoption of approved Code Case OMN-20, "Inservice Test Frequency," for the current ten-year Inservice Testing (IST) interval for the Catawba Nuclear Stations (CNS) Units 1 and 2. Section IST of Division 1 of the OM Code, which is incorporated by reference in 10 CFR 50.55(a), specifies component test frequencies based either on elapsed time periods (e.g., quarterly, two years) or on the occurrence of a plant condition or event (e.g., cold shutdown, refueling outage).

ASME OM committee has approved ASME Code Case OMN-20 as an alternative to the test frequencies for pumps and valves specified in ASME OM Division 1, Section IST 2009 Edition through OMa-2011 Addenda and all earlier editions and addenda of ASME OM Code. The latest revision of Regulatory Guide (RG) 1.192 (August 2014) does not reference Code Case OMN-20 as an acceptable OM Code Case to comply with 10 CFR 50.55a(f) requirements as allowed by 10 CFR 50.55a(b)(6). The proposed alternative is to use Code Case OMN-20 to extend or reduce the IST frequency requirements for the current fourth ten-year IST interval or until Code Case OMN-20 is incorporated into the next revision of RG 1.192.

To support routine scheduling of pump and valve testing, without reliance on Technical Specification section 5.5.8, "Inservice Testing Program," provisions that permit similar scheduling flexibility, and upcoming Unit 1 refueling outage, Duke Energy requests approval of the relief request prior to April 21 2017.

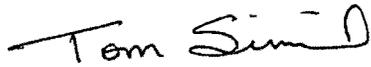
There are no regulatory commitments contained in this letter.

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If you have any questions regarding this submittal, please contact Tolani E. Owusu at
(803) 701-5385.

Sincerely,

A handwritten signature in black ink that reads "Tom Simril". The signature is written in a cursive style with a horizontal line underlining the name.

Tom Simril
Vice President, Catawba Nuclear Station

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cc: (Enclosure)

C. Haney,
Regional Administrator
U.S. Nuclear Regulatory Commission - Region II
Marquis One Tower
245 Peachtree Center Ave., NE Suite 1200
Atlanta, GA 30303-1257

J. D. Austin,
Senior Resident Inspector
U.S. Nuclear Regulatory Commission
Catawba Nuclear Station

M. Mahoney,
NRC Project Manager (Catawba)
U.S. Nuclear Regulatory Commission
11555 Rockville Pike
Mailstop O-8H4A
Rockville, MD 20852-2738

S. E. Jenkins
Manager
Radioactive & Infectious Waste Management
Division of Waste Management
South Carolina Department of Health and Environmental Control
260 Bull St.
Columbia, SC 29201

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Enclosure

**Catawba Nuclear Station,
Units 1 and 2**

Generic Relief Request CN-GRR-01

**Alternative Due To Hardship Without a Compensating Increase in Quality and Safety in
Accordance with 10 CFR 50.55a(z)(2)**

1.0 DESCRIPTION

The request is to adopt a proposed alternative to the American Society of Mechanical Engineers (ASME) Operation and Maintenance (OM) Code by adoption of approved Code Case OMN-20, "Inservice Test Frequency."

2.0 ASSESSMENT

Technical Evaluation of the Proposed Alternative to the OM Code

Section IST of Division 1 of the OM Code, which is incorporated by reference in 10 CFR 50.55a(a), specifies component test frequencies based either on elapsed time periods (e.g., quarterly, 2 years) or on the occurrence of a plant condition or event (e.g., cold shutdown, refueling outage).

ASME Code Case OMN-20, "Inservice Test Frequency," has been approved for use by the ASME OM committee as an alternative to the test frequencies for pumps and valves specified in ASME OM Division, 1 Section IST 2009 Edition through OMa-2011 Addenda, and all earlier editions and addenda of ASME OM Code.

Code Case OMN-20 is not referenced in the latest revision of Regulatory Guide 1.192 (August 2014) as an acceptable OM Code Case to comply with 10 CFR 50.55a(f) requirements as allowed by 10 CFR 50.55a(b)(6). The proposed alternative is to use Code Case OMN-20 to extend or reduce the IST frequency requirements for the fourth ten-year IST interval or until OMN-20 is incorporated into the next revision of Regulatory Guide 1.192.

ASME Code Components Affected

The Code Case applies to pumps and valves specified in ASME OM Division 1, Section IST 2009 Edition through OMa-2011 Addenda and all earlier editions and addenda of ASME OM Code. Frequency extensions may also be applied to accelerated test frequencies (e.g., pumps in Alert Range) as specified in OMN-20.

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For pumps and valves with test periods of two years or less, the test frequency allowed by OMN-20 and the current TS Inservice Testing Program [as modified by TS Surveillance Requirement (SR) 3.0.2 and Enforcement Guidance Memorandum (EGM) 2012-001] are the same. For pumps and valves with test frequencies greater than two years, OMN-20 allows the test frequency to be extended by six months. The current TS Inservice Testing Program does not allow extension of inservice testing intervals that are greater than two years.

Applicable Code Edition and Addenda

ASME Code Case OMN-20 applies to ASME OM Division, 1 Section IST 2009 Edition through OMa-2011 Addenda and all earlier editions and addenda of ASME OM Code.

The CNS Units 1 and 2, Code Edition and Addenda that are applicable to the program interval are ASME OM Code 2004 Edition with 2006 Addenda. The CNS Units 1 and 2 current interval ends August 19, 2025.

Applicable Code Requirement

This request is made in accordance with 10 CFR 50.55a(z)(2), and proposes an alternative to the requirements of 10 CFR 50.55a(f), which requires pumps and valves to meet the test requirements set forth in specific documents incorporated by reference in 10 CFR 50.55a(a). ASME Code Case OMN-20 applies to Division 1, Section IST of the ASME OM Code and associated addenda incorporated by reference in 10 CFR 50.55a(a).

Reason for Request

The IST Program controls specified in Section 5.5 of TS provide: a) a table specifying certain IST frequencies; b) an allowance to apply SR 3.0.2 to inservice tests required by the OM Code and with frequencies of two years or less; c) an allowance to apply SR 3.0.3 to inservice tests required by the OM Code; and d) a statement that, "Nothing in the ASME OM Code shall be construed to supersede the requirements of any TS." In Regulatory Issue Summary (RIS) 2012-10, "NRC Staff Position on Applying Surveillance Requirement 3.0.2 and 3.0.3 to Administrative Controls Program Tests," and EGM 2012-001, "Dispositioning Noncompliance with Administrative Controls Technical Specifications Programmatic Requirements that Extend Test Frequencies and Allow Performance of Missed Tests," the NRC stated that items b, c, and d of the TS IST Program were inappropriately added to the TS and may not be applied (although the EGM allows licensees to continue to apply those paragraphs pending a generic resolution of the issue).

In RIS 2012-10 and EGM 2012-001, the NRC stated that the current TS allowance to apply SR 3.0.2 and SR 3.0.3 to the Inservice Testing Program would no longer be permitted. In response, OMN-20, which provides allowances similar to SR 3.0.2, was approved and is proposed to be used as an alternative to the test periods specified in the OM code. The proposed alternative substitutes an approved Code Case for the existing TS requirements that the NRC has determined are not legally acceptable as a TS allowance. This proposed alternative provides an equivalent level of safety as the existing TS allowance, while maintaining consistency with 10 CFR 50.55a and the ASME OM Code.

Proposed Alternative and Basis for Use

The proposed alternative is OMN-20, "Inservice Test Frequency," which addresses testing periods for pumps and valves specified in ASME OM Division 1, Section IST, 2009 Edition through OMa-2011 Addenda and all earlier editions and addenda of ASME OM Code.

This request is being made in accordance with 10 CFR 50.55a(z)(2), in that the existing requirements are considered a hardship without a compensating increase in quality and safety for the following reasons:

- 1) For IST testing periods up to and including two years, Code Case OMN-20 provides an allowance to extend the IST testing periods by up to 25%. The period extension is to facilitate test scheduling and considers plant operating conditions that may not be suitable for performance of the required testing (e.g., performance of the test would cause an unacceptable increase in the plant risk profile due to transient conditions or other ongoing surveillance, test or maintenance activities). Period extensions are not intended to be used repeatedly merely as an operational convenience to extend test intervals beyond those specified. The test period extension and the statements regarding the appropriate use of the period extension are equivalent to the existing TS SR 3.0.2 allowance and the statements regarding its use in the SR 3.0.2 Bases. Use of the SR 3.0.2 period extension has been a practice in the nuclear industry for many decades and elimination of this allowance would place a hardship on CNS when there is no evidence that the period extensions affect component reliability.
- 2) For IST testing periods of greater than 2 years, OMN-20 allows an extension of up to six months. The ASME OM Committee determined that such an extension is appropriate. The six-month extension will have a minimal impact on component reliability considering that the most probable result of performing any inservice test is satisfactory verification of the test acceptance criteria. As such, pumps and valves will continue to be adequately assessed for operational readiness when tested in accordance with the requirements specified in 10 CFR 50.55a(f) with the frequency extensions allowed by Code Case OMN-20.
- 3) As stated in EGM 2012-001, if an Inservice Test is not performed within its frequency, SR 3.0.3 will not be applied. The effect of a missed Inservice Test on the Operability of TS equipment will be assessed under the licensee's Operability Determination Program.

Duration of Proposed Alternative

The proposed alternative is requested for the current 10 year IST interval or until Code Case OMN-20 is incorporated into a future revision of Regulatory Guide 1.192, referenced by a future revision of 10 CFR 50.55a, whichever occurs first.

Precedents

- The NRC approved the use of OMN-20 for North Anna on March 27, 2014 (NRC ADAMS Accession Number ML14084A407).

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- The NRC approved the use of OMN-20 for Duane Arnold on June 9, 2014 (NRC ADAMS Accession Number ML14144A002).
- The NRC approved the use of OMN-20 for Oconee Nuclear Station on March 1, 2016 (NRC ADAMS Accession Number ML16053A501).
- The NRC approved the use of OMN-20 for Point Beach, Seabrook, St. Lucie, and Turkey Point on December 15, 2016 (NRC ADAMS Accession Number ML16330A118).
- The NRC approved the use of OMN-20 for Sequoyah Nuclear Plant on March 2, 2017 (NRC ADAMS Accession Number ML17059B791).
- The NRC approved the use of OMN-20 for Palo Verde Nuclear Generating Station on March 16, 2017 (NRC ADAMS Accession Number ML17074A209).