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August 30, 2010

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

Subject: Duke Energy Carolinas, LLC (Duke Energy)  
McGuire Nuclear Station, Unit 1  
Docket No. 50-369  
Relief Request Serial #10-MN-001

Pursuant to 10 CFR 50.55a(a)(3)(i), Duke Energy hereby submits Relief Request 10-MN-001 to delay updating the ASME Section XI Code of Record for the McGuire Unit 1 Fourth Inservice Inspection Interval.

The enclosure to this letter contains this relief request. If you have any questions or require additional information, please contact P.T. Vu at (980) 875-4302.

Sincerely,

Regis T. Repko

Enclosure

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**Enclosure**

**Duke Energy Carolinas, LLC  
McGuire Nuclear Station, Unit 1  
Relief Request Serial #10-MN-001**

**Request for Alternative in Accordance with 10 CFR 50.55a(a)(3)(i) to Delay the Update of  
the ASME Code of Record for the Fourth Inservice Inspection Interval**

## **1. ASME Code Component(s) Affected**

ASME Class 1, 2, and 3 components and component supports.

Note: This request specifically excludes ASME Class MC components at McGuire Unit 1. A separate inservice inspection (ISI) program has been established for Class MC components that uses the ASME Code, Section XI, 1998 Edition through the 2000 Addenda, and the Code of Record for this program will be updated to a later Code Edition and Addenda when the Class MC interval expires in 2014.

## **2. Applicable Requirements**

2.1. 10 CFR 50.55a(g)(4)(ii) states that "Inservice examination of components and system pressure tests conducted during successive 120-month inspection intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (b) of this section 12 months before the start of the 120-month inspection interval (or the optional ASME Code cases listed in NRC Regulatory Guide 1.147, Revision 15, that are incorporated by reference in paragraph (b) of this section), subject to the limitations and modifications listed in paragraph (b) of this section."

2.2. 10 CFR 50.55a(b)(2) states that "As used in this section, references to Section XI of the ASME Boiler and Pressure Vessel Code refer to Section XI, and include the 1970 Edition through the 1976 Winter Addenda, and the 1977 Edition (Division 1) through the 2004 Edition (Division 1), subject to the following limitations and modifications:"

Note: Unless 10 CFR 50.55a(b)(2) is amended to incorporate by reference a later Edition and Addenda of Section XI prior to December 1, 2010 (12 months before the start date of the McGuire Unit 1 fourth ISI interval), the ISI program for the fourth interval must be updated to comply with the 2004 Edition.

## **3. Proposed Alternative**

Pursuant to 10 CFR 50.55a(a)(3)(i), Duke Energy proposes the following alternative to the above requirements.

3.1. Duke Energy proposes to use the ASME Code, Section XI, 1998 Edition through the 2000 Addenda during the first period of the Unit 1 fourth ISI interval.

3.2. The ASME Section XI Code of Record for McGuire Unit 1 shall be updated by the end of the first period of the fourth ISI interval to the same Edition and Addenda required for the McGuire Unit 2 fourth ISI interval, which is currently scheduled to start on July 15, 2014. The updated Code of Record shall be used during the second and third periods of the Unit 1 fourth ISI interval, and shall comply with all applicable limitations and modifications specified in 10 CFR 50.55a(b)(2).

3.3. The proposed alternative also includes continued use of relief requests during the first period of the Unit 1 fourth ISI interval that were submitted pursuant to 10 CFR 50.55a(a)(3) and approved during the McGuire Unit 1 third ISI interval.

3.4. When implementing this alternative, the following requirements shall apply when using the ASME Code, Section XI, 1998 Edition with the 2000 Addenda:

3.4.1. Duke Energy shall comply with all NRC limitations and modifications specified in 10 CFR 50.55a applicable to the 1998 Edition through the 2000 Addenda.

- 3.4.2. Code Cases, if used, shall comply with the requirements specified in Regulatory Guide 1.147.
- 3.4.3. The provisions of IWA-4340, Mitigation of Defects by Modification, shall not be used, except when specifically authorized by the NRC in accordance with 10 CFR 50.55a(a)(3). This limitation is consistent with that specified in 10 CFR 50.55a(b)(2)(xxv).
- 3.4.4. The repair and replacement activity provisions in IWA-4540(c) of the 1998 Edition of Section XI for pressure testing Class 1, 2, and 3 mechanical joints shall be met when using the 1998 Edition through the 2000 Addenda. This limitation is consistent with that specified in 10 CFR 50.55a(b)(2)(xxvi).

#### **4. Basis for Use of Alternative**

- 4.1. ASME Section XI activities [e.g., ISI, repair/replacement, pressure testing, and Non-Destructive Examination (NDE)] at McGuire Units 1 and 2, Catawba Units 1 and 2, and Oconee Units 1, 2, and 3 are standardized and administered by a centralized organization at Duke Energy. Since 2005, Duke Energy's ASME Section XI Program has used a common Code of Record for our plants (1998 Edition through the 2000 Addenda), which simplifies program administration, requiring fewer programs and procedures than would otherwise be needed to implement requirements of different Code Editions and Addenda. Standardizing these programs using a common Code of Record also minimizes the risk that errors will occur during program development and implementation.
- 4.2. Because the 2004 Edition of the ASME Code, Section XI has been incorporated by reference in 10 CFR 50.55a, Duke Energy is required to update the McGuire Unit 1 ISI program to this edition of the Code, unless 10 CFR 50.55a is amended to incorporate by reference a later edition and addenda, prior to December 1, 2010. Consequently, the regulation will require Duke Energy to maintain ISI programs using an ASME Section XI Code for Unit 1 that is different from that in use at Unit 2 and the remaining plants within the Duke Energy fleet.
- 4.3. Duke Energy has reviewed the changes published in the 2004 Edition and believes that there are no new requirements that, in addition to the requirements of the proposed alternative, need to be implemented to maintain an acceptable level of quality and safety. This is supported by the fact that when 10 CFR 50.55a was revised to incorporate by reference the 2004 Edition, the regulation did not impose any new limitations or modifications applicable to the 2004 Edition on plants using the 1998 Edition with the 2000 Addenda.
- 4.4. All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in this relief request remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.
- 4.5. For the reasons stated above, Duke Energy believes that the proposed alternative provides an acceptable level of quality and safety.

#### **5. Duration of Proposed Alternative**

Use of the proposed alternative is requested for the duration of the first period of the McGuire Unit 1 fourth ISI interval (currently scheduled to start on December 1, 2011).

**6. Related Industry Relief Requests**

- 6.1. Entergy Operations, Inc., Arkansas Nuclear One Unit 2 Request for Relief No. ANO2-  
ISI-003, submitted June 8, 2009 (ML091600248), approved April 26, 2010  
(ML100970659).
- 6.2. Luminant Generation Company LLC, Comanche Peak Nuclear Power Plant Unit 1  
Request to Delay the Update of the Code of Record for Inservice Inspection Program,  
submitted July 14, 2009 (ML092030380), approved April 28, 2010 (ML100850122).