

August 31, 2004

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

ATTN: Document Control Desk

SUBJECT: Duke Energy Corporation
Catawba Nuclear Station, Units 1 and 2
Docket Nos. 50-413 and 50-414

McGuire Nuclear Station, Units 1 and 2
Docket Nos. 50-369 and 50-370

Oconee Nuclear Station, Units 1, 2, and 3
Docket Nos. 50-269, 50-270, and 50-287

Amendment to Relief Request 03-GO-010
Request to use Subsequent Edition and Addenda of the
ASME Code for Class MC and CC Components

In a letter dated June 17, 2003, Duke Energy Corporation (Duke) submitted a request to use an alternative to the requirements of the ASME Boiler and Pressure Vessel Code, Section XI, pursuant to 10 CFR 50.55a(a)(3)(i). By letter dated June 8, 2004, the Nuclear Regulatory Commission indicated that review of this request would be deferred until the beginning of fiscal year 2005 that starts October 1, 2004.

As a result of this deferred review, Duke has decided to amend Relief Request 03-GO-010. The original submittal has been amended as follows: (1) the alternative to IWE-2500(b) and Table IWE-2500-1 is no longer needed and has been deleted, (2) the alternative requested to IWL-2421 for sites with multiple plants has been revised, and (3) the submittal has been reformatted into multiple attachments to facilitate review. The attachments are as follows: (1) Attachment 1, Adjustment of ISI Interval, (2) Attachment 2, Alternative to the Requirements of IWE-5240, (3) Attachment 3, Alternative to the Requirements of IWL-2421, and (4) Attachment 4, Alternative to the Requirements of 10 CFR 50.55a(g)(4).

Duke requests approval of this relief request by January 17, 2005 so that inservice inspection plans for the containment

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second inservice inspection interval may be completed and issued prior to July 15, 2005.

In addition, for the remainder of Containment Inspection Interval 1, pursuant to 10 CFR 50.55a(g)(4)(iv), Duke requests NRC approval to use the 1998 Edition with the 1999 and 2000 Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI for inservice inspection and repair/replacement activities for Concrete Containments, Metal Containments and Metallic Shell and Penetration Liners of Concrete Containments. The modifications and limitations specified in 10 CFR 50.55a (b) (2) shall be met. This approval will allow Code editions and addenda consistent with those in the subject relief request to be used during Duke's spring 2005 outages. Because this edition and addenda of the Code have been incorporated by reference in 10 CFR 50.55a, Duke plans to begin using this edition and addenda of the Code after January 17, 2005 unless otherwise directed by the NRC. This request to use a later edition and addenda is being submitted using the guidance provided in Regulatory Issue Summary 2004-12.

If you have any questions or require additional information, please contact Mary Hazeltine at (704) 382-5880.

Very truly yours,



William R. McCollum, Jr.

Enclosures

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Attachment

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Piedmont Municipal Power Agency
North Carolina Electric Membership Corporation
MNS MasterFile MC-801.01 (MG01DM)
CNS MasterFile CN-801.01 (CN04DM)
ONS MasterFile ON-801.01 (ON03DM)
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ATTACHMENT 1

DUKE ENERGY CORPORATION

Oconee Nuclear Station Units 1, 2 and 3
McGuire Nuclear Station Units 1 and 2
Catawba Nuclear Station Units 1 and 2

Request For Alternative to the Requirements of the ASME Boiler
and Pressure Vessel Code, Section XI
Relief Request 03-GO-010

Adjustment of ISI Interval

1. ASME Code Component(s) Affected

- 1.1 Class MC metal containment pressure retaining components and their integral attachments.
- 1.2 Metallic shell and penetration liners which are pressure retaining components and their integral attachments in Class CC concrete containments.
- 1.3 Class CC concrete containment pressure retaining components and their integral attachments, and the post-tensioning systems of concrete containments.

2. Applicable Code Edition and Addenda

- 2.1 1992 Edition with the 1992 Addenda, applicable to the containment first inservice inspection interval.
- 2.2 1998 Edition with the 1999 Addenda and the 2000 Addenda, which is proposed for the containment second inservice inspection interval.

3. Applicable Requirements for Which Alternatives are Requested

- 3.1 An alternative is requested for the following requirements of the ASME Boiler and Pressure Vessel Code, Section XI, 1992 Edition with the 1992 Addenda, applicable to the containment first inservice inspection interval:
 - 3.1.1 IWA-2430(a) requires that IWE inservice examinations be performed in accordance with Inspection Program A of IWA-2431 or Inspection Program B of IWA-2432.
 - 3.1.2 IWA-2430(b) requires that the Inspection Interval be determined by calendar years following placement of the plant into commercial service.
 - 3.1.3 IWA-2430(d) requires that for components inspected under Program B, the inspection intervals may be extended or decreased by as much as 1 year, provided successive intervals are not altered by more than 1 year from the original pattern of intervals.
 - 3.1.4 IWA-2432 requires that the first inspection interval consist of ten years following start of

plant commercial service and that subsequent inspection intervals consist of ten years following previous inspection intervals, except as modified by IWA-2430(d).

3.1.5 IWE-2410 requires that the requirements of either Inspection Program A or B shall be met.

3.1.6 IWE-2412 requires that inservice examinations comply with the requirements of Table IWE-2412-1, and that the inspection periods may be decreased or extended by as much as 1 year to enable an inspection to coincide with a plant outage, within the limitations of IWA-2430(d).

3.2 An alternative is requested for the following requirements of the ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition with the 1999 Addenda and the 2000 Addenda, which is proposed for the containment second inservice inspection interval:

3.2.1 IWE-2420(a) requires that the sequence of component examinations established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical.

4. Reason for Request

The alternatives in this request are proposed to allow adjustment of the inservice inspection intervals for metal and concrete containments so that the intervals may be more closely aligned with inservice inspection intervals for ASME Class 1, 2, and 3 components at Oconee, McGuire, and Catawba Nuclear Stations.

5. Proposed Alternatives

5.1 In lieu of the ASME Boiler and Pressure Vessel Code, Section XI, 1992 Edition with the 1992 Addenda requirements listed in 3.1, the following alternatives are proposed for the containment first inservice inspection interval:

5.1.1 The first containment inservice inspection interval shall end no later than September 9, 2006. For metal containments and metallic shell and penetration liners of concrete containments, the first inspection interval shall comply with

requirements of Inspection Program B, except as follows:

- 5.1.1.1 The first inspection interval shall consist of inspection periods 1 and 2 only.
 - 5.1.1.2 Examinations currently scheduled for Period 3 of the first inspection interval are not required to be performed.
 - 5.1.1.3 Examinations permitted to be deferred until the end of the first inspection interval in accordance with Table IWE-2500-1 shall not be deferred, and examinations shall be performed in accordance with the percentages listed in Table IWE-2412-1, Inspection Program B for periods 1 and 2.
- 5.2 In lieu of the ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition with the 1999 Addenda and the 2000 Addenda requirements listed in 3.2, the following alternatives are proposed for the containment second inservice inspection interval:
- 5.2.1 The start date for the second inspection interval shall be July 15, 2004, but may be extended to July 15, 2005 in accordance with the requirements of IWA-2430(d)(1).
 - 5.2.2 Those bolted connections required to be examined during period 3 of the first inspection interval in accordance with Table IWE-2500-1, Category E-G, Item E8.10 (1992 Edition with the 1992 Addenda), shall be examined during period 1 of the second inspection interval. These examinations shall comply with the requirement of 10 CFR 50.55a(b)(2)(ix)(G) and 10 CFR 50.55a(b)(2)(ix)(H), except as noted in Attachment #4.
 - 5.2.3 Metal containment supports (Personnel Airlock Barrel Supports) at Catawba and McGuire Nuclear Stations that are currently scheduled to be examined during period 3 of the first inspection interval shall be examined in accordance with IWF-2500, Table IWF-2500-1, Category F-A, Item F1.40 during period 1 of the second inspection interval.
 - 5.2.4 The sequence of examinations established during periods 1 and 2 of the first inspection interval

shall be repeated during periods 2 and 3 of the second inspection interval, to the extent practical.

6. Bases for use of the Proposed Alternatives

The first inservice inspection interval for metal and concrete containments began on September 9, 1998 and is currently scheduled to end on September 9, 2008 for Oconee Units 1,2,and 3, McGuire Units 1 and 2 and Catawba Units 1 and 2. This inspection interval was established in order to implement the Expedited Examination requirements for metal and concrete containments imposed by 10CFR50.55a following September 9, 1996. Duke chose to establish a new inspection interval for metal and concrete containments so that the end of the first period of the first inspection interval (for IWE) coincided with the end of the Expedited Examination Period on September 9, 2001.

As a result, the inspection interval does not coincide with inspection intervals for ASME Class 1, 2, and 3 components. Because of this, different editions and addenda of Section XI are required for inservice inspection and repair/replacement activities for Class 1, 2, and 3 components, and for Class MC and CC components.

The proposed alternatives herein will allow closer alignment of the containment inservice inspection intervals Class 1, 2, and 3 components at Oconee, McGuire, and Catawba Nuclear Stations. This has distinct advantages in that there will be fewer procedures to maintain, and procedures will meet the requirements of one edition/addenda of the Code, instead of multiple editions/addenda. This also reduces the chance of applying incorrect ISI requirements for specific component examinations. Common procedures and documents can be used that will reduce the administrative burden of complying with ISI requirements without a reduction in the quality of the ISI Program.

IWA-2430 does not address requirements for establishing inservice inspection intervals for Subsection IWL examinations. However, Duke Energy Corporation intends to establish a 120 month inspection interval for IWL for purposes of complying with the 120 month interval update requirements of 10 CFR 50.55a(b)(2)(vi) and 10 CFR 50.55a(g)(4)(ii).

The alternatives proposed in 5.1 and 5.2 will provide an equivalent level of quality and safety.

Originated By: W.J. Felt

Date: 8-26-04

Approved By: C. L. Alford

Date: 08-26-04

ATTACHMENT 2

DUKE ENERGY CORPORATION

Oconee Nuclear Station Units 1, 2 and 3
McGuire Nuclear Station Units 1 and 2
Catawba Nuclear Station Units 1 and 2

Request for Alternative to the Requirements of the ASME Boiler
and Pressure Vessel Code, Section XI
Relief Request 03-GO-010

Alternative to the Requirements of IWE-5240

1. ASME Code Component(s) Affected

- 1.1 Class MC metal containment pressure retaining components and their integral attachments.
- 1.2 Metallic shell and penetration liners which are pressure retaining components and their integral attachments in Class CC concrete containments.
- 1.3 Class CC concrete containment pressure retaining components and their integral attachments, and the post-tensioning systems of concrete containments.

2. Applicable Code Edition and Addenda

1998 Edition with the 1999 Addenda and the 2000 Addenda, which is proposed for the containment second inservice inspection interval.

3. Applicable Requirements for Which Alternatives are Requested

IWE-5240 requires that, during the pressure test required by IWE-5220, a detailed visual examination be performed on areas affected by repair/replacement activities.

4. Reason for Request

To allow use of an acceptable alternative to the requirement of IWE-5240 during the containment second inservice inspection interval.

5. Proposed Alternative

In lieu of the requirements of IWE-5240, the following alternative is proposed:

- 5.1 Applicable nondestructive examination shall be performed in accordance with Construction Code and IWA-4000; and
- 5.2 A leakage test shall be performed in accordance with IWE-5221; and
- 5.3 A visual, VT-1 examination shall be performed on affected surface areas following repair/replacement activities. For repair/replacement activities other than those minor repair/replacement activities identified in IWE-5222, this visual, VT-1 examination

shall be performed either during or upon completion of the pneumatic leakage test required by IWE-5221.

6. Basis for use of the Proposed Alternative

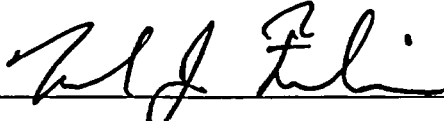
The proposed alternative for the second containment in-service inspection interval is essentially identical to the alternative documented in Duke Energy Corporation Request for Relief 00-GO-001 dated November 21, 2000 and approved by the NRC for use during the first containment in-service inspection interval (letter dated May 17, 2001 to Mr. M. S. Tuckman, Executive Vice President, Nuclear Generation, Duke Energy Corporation).

The justification for the proposed alternative is essentially identical to that documented in the Safety Evaluation Report referenced above.


The following minor changes to the previously approved alternative have been made due to changes in the Code requirements and terminology:

1. The proposed alternative is to be used in lieu of the detailed visual examination required by IWE-5240 of the ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition with the 1999 Addenda and the 2000 Addenda. During the containment first in-service inspection interval, this alternative was approved for use in lieu of the VT-2 visual examination required by IWE-5240 of the ASME Boiler and Pressure Vessel Code, Section XI, 1992 Edition with the 1992 Addenda.
2. The proposed alternative now refers to "repair/replacement activities" in lieu of "repairs, replacements, or modifications" due to a change in terminology from that used in the 1992 Edition with the 1992 Addenda.

Because the alternative referenced above is essentially identical to that previously approved by the NRC for use during the first containment in-service inspection interval, this alternative is considered acceptable for use during the second containment in-service inspection interval and will provide an equivalent level of quality and safety.

Originated By: 

Date: 8-26-04

Approved By: 

Date: 08-26-04

ATTACHMENT 3

DUKE ENERGY CORPORATION

Oconee Nuclear Station Units 1, 2 and 3

Request for Alternative to the Requirements of the ASME Boiler
and Pressure Vessel Code, Section XI
Relief Request 03-GO-010

Alternative to the Requirements of IWL-2421

1. ASME Code Component(s) Affected

Oconee Units 1,2,and 3 Class CC concrete containment pressure retaining components and their integral attachments, and the post-tensioning systems of concrete containments.

2. Applicable Code Edition and Addenda

1998 Edition with the 1999 Addenda and the 2000 Addenda, which is proposed for the containment second inservice inspection interval.

3. Applicable Requirements for Which an Alternative is Requested

IWL-2421 provides alternative examination requirements for sites with multiple plants that meet the conditions identified in IWL-2421(a).

4. Reason for Request

To allow use of an acceptable alternative to the requirements of IWL-2421(b) during the containment second inservice inspection interval.

5. Proposed Alternative

In lieu of the requirements of IWL-2421(b) (1) and IWL-2421(b) (2), the following alternative is proposed for the containment second inservice inspection interval at Oconee Nuclear Station, Units 1, 2, and 3:

Alternative to IWL-2421(b) (1) and IWL-2421(b) (2):

(b) When the conditions of IWL-2421(a) are met, the examination requirements and schedules may be modified for examinations commencing 10 years following completion of the containment Structural Integrity Test, and for subsequent examinations, as follows:

(1) The examinations required by IWL-2522 need only be performed at 10 years and every ten years thereafter. Alternatively, an equivalent number of IWL-2522 examinations may be distributed among and performed during two consecutive 5 year examinations (in accordance with IWL-

2420) every 10 years, except that common tendons need only be examined at 10 years and every ten years thereafter.

(2) The examinations required by IWL-2523 need only be performed at 10 years and every 10 years thereafter.

(3) The examinations required by IWL-2524 and IWL-2525 shall be performed at 10 years and every 5 years thereafter.

6. Basis for use of the Proposed Alternative

The alternative will require examination of an equivalent number of tendons as that required by IWL-2421, but will allow these examinations to be distributed among consecutive 5 year examinations, rather than requiring certain examinations to be performed on a 10 year schedule. As such, this alternative provides an equivalent level of quality and safety.

Originated By: W. J. Flinn

Date: 8-26-04

Approved By: C. L. Alley

Date: 09-26-04

ATTACHMENT 4

DUKE ENERGY CORPORATION

Oconee Nuclear Station Units 1, 2 and 3
McGuire Nuclear Station Units 1 and 2
Catawba Nuclear Station Units 1 and 2

Request for Alternative to the Requirements of the ASME Boiler
and Pressure Vessel Code, Section XI
Relief Request 03-GO-010

Alternative to the Requirements of 10 CFR 50.55a(g) (4)

1. ASME Code Component(s) Affected

- 1.1 Class MC metal containment pressure retaining components and their integral attachments.
- 1.2 Metallic shell and penetration liners which are pressure retaining components and their integral attachments in Class CC concrete containments.
- 1.3 Class CC concrete containment pressure retaining components and their integral attachments, and the post-tensioning systems of concrete containments.

2. Applicable Code Edition and Addenda

1998 Edition with the 1999 Addenda and the 2000 Addenda as modified by 10 CFR 50.55a(b) (2) (ix) (G) and 10 CFR 50.55a(b) (2) (ix) (H), which is proposed for the containment second inservice inspection interval.

3. Applicable Requirements for Which an Alternative is Requested

An alternative is requested for the following requirement of 10CFR50.55a(g) (4) for the containment second inservice inspection interval for Oconee Nuclear Station Units 1, 2 and 3, McGuire Nuclear Station Units 1 and 2, and Catawba Nuclear Station Units 1 and 2:

10CFR50.55a(g) (4) requires, in part, that the modifications listed in paragraph (b) (2) (ix) apply to components classified as Class MC and metallic shell and penetration liners of Class CC components.

- 3.1. 10CFR50.55a(b) (2) (ix) (G) requires, in part, that "An examination of the pressure-retaining bolted connections in Item E1.11 of Table IWE-2500-1 using the VT-3 examination method must be conducted once each interval"
- 3.2. 10CFR50.55a(b) (2) (ix) (H) requires, in part, that "Containment bolted connections that are disassembled during the scheduled performance of the examinations in Item E1.11 of Table IWE-2500-1 must be examined using the VT-3 examination method".

An alternative is requested to the requirement of 10 CFR 50.55a(g) (4) that the modifications in 10 CFR 50.55a(b) (2) (ix) (G) and 10 CFR 50.55a(b) (2) (ix) (H)

listed in 3.1 and 3.2 above apply to components classified as Class MC and metallic shell and penetration liners of Class CC components.

4. Reason for Request

To allow use of an acceptable alternative to selected requirements of 10 CFR 50.55a(b) (2) (ix) (G) and 10 CFR 50.55a(b) (2) (ix) (H) [as required by 10 CFR 50.55a(g) (4)] during the containment second inservice inspection interval.

5. Proposed Alternative

In lieu of the requirement of 10 CFR 50.55a(g) (4) to apply the modifications in 10 CFR 50.55a(b) (2) (ix) (G) and 10 CFR 50.55a(b) (2) (ix) (H) when using the 1998 Edition with the 1999 Addenda and 2000 Addenda, the following alternative is proposed:

The requirements of 10 CFR 50.55a(b) (2) (ix) shall be met, except that the following requirements may be used in lieu of the requirements of 10 CFR 50.55a(b) (2) (ix) (G) and 10 CFR 50.55a(b) (2) (ix) (H) :

(G) The VT-3 examination method must be used to conduct the examinations in Items E1.12 and E1.20 of Table IWE-2500-1, and the VT-1 examination method must be used to conduct the examination in Item E4.11 of Table IWE-2500-1. An examination of the pressure-retaining bolted connections in Item E1.11 of Table IWE-2500-1 using the VT-1 examination method must be conducted once each interval and may be performed with the connection assembled and bolting in place under tension, provided the connection is not disassembled during the interval. If the bolted connection is disassembled for any reason during the interval, the VT-1 examination shall be performed with the connection disassembled. The "owner-defined" visual examination provisions in IWE-2310(a) are not approved for use for VT-1 and VT-3 examinations.

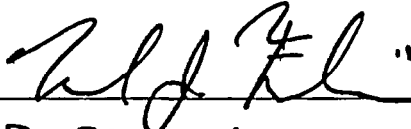
(H) The criteria in the material specification or IWB-3517.1 must be used to evaluate containment bolting flaws or degradation.


6. Bases for use of the Proposed Alternative

The justification for the proposed alternative is as follows:

1. A VT-1 visual examination method is more detailed and is conducted at higher resolution than a VT-3 examination method.
2. 10 CFR 50.55a(b) (2) (ix) (H) does not require that a bolted connection be visually examined when it is disassembled, if the connection is disassembled at times other than during the performance of Item E1.11 examinations. The proposed alternative is acceptable because it will require that a visual examination be performed with the connection disassembled, if the connection is disassembled for any reason during the interval.
3. General visual examinations required by Table IWE-2500-1, Item E1.11 every period, and VT-1 visual examinations proposed by this alternative, are essentially identical to those examinations required by the ASME Code, Section XI, 1992 Edition with the 1992 Addenda.

The proposed alternative provides an equivalent level of quality and safety, for the reasons stated above.

Originated By: 
Date: 8-26-04

Approved By: 
Date: 08-26-04