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March 11, 2005

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

SUBJECT: Duke Energy Corporation

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

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

Catawba Nuclear Station, Units 1 and 2
Docket Numbers 50-413 and 50-414

Request to use an Alternative to the ASME Boiler and Pressure Vessel Code, Section XI and 10 CFR 50.55a(g)(4)(ii) in accordance with 10 CFR 50.55a(a)(3)(i)
Relief Request 05-GO-001

Pursuant to 10 CFR 50.55a(a)(3)(i), Duke Energy Corporation (Duke) requests NRC approval of an alternative to the requirements of the 1998 Edition through the 2000 Addenda of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI for the following inservice inspection intervals:

Oconee Nuclear Station, Units 1, 2, and 3: 4th Inservice Inspection Interval for Class 1, 2, and 3 Components

McGuire Nuclear Station, Units 1 and 2: 3rd Inservice Inspection Interval for Class 1, 2, and 3 Components

Catawba Nuclear Station, Units 1 and 2: 3rd Inservice Inspection Interval for Class 1, 2, and 3 Components

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Pursuant to 10 CFR 50.55a(a)(3)(i), Duke also requests NRC approval of an alternative to the requirements of 10 CFR 50.55a(g)(4)(ii) for the Catawba Nuclear Station, Unit 2 3rd Inservice Inspection Interval.

Details of the above alternatives are enclosed in Attachment 1.

Pursuant to 10 CFR 50.55a(a)(3)(i), Duke also requests NRC approval of an alternative to the requirements of 10 CFR 50.55a(g)(4)(ii) for the following inservice inspection intervals:

Oconee Nuclear Station, Units 1, 2, and 3: 5th Inservice Inspection Interval (and subsequent inspection intervals) for Class 1, 2, and 3 Components

Oconee Nuclear Station, Units 1, 2, and 3: 3rd Inservice Inspection Interval (and subsequent inspection intervals) for Class CC Components and metallic shell and penetration liners of Class CC Components

McGuire Nuclear Station, Units 1 and 2: 4th Inservice Inspection Interval (and subsequent inspection intervals) for Class 1, 2, and 3 Components

McGuire Nuclear Station, Units 1 and 2: 3rd Inservice Inspection Interval (and subsequent inspection intervals) for Class MC Components

Catawba Nuclear Station, Units 1 and 2: 4th Inservice Inspection Interval (and subsequent inspection intervals) for Class 1, 2, and 3 Components

Catawba Nuclear Station, Units 1 and 2: 3rd Inservice Inspection Interval (and subsequent inspection intervals) for Class MC Components

Details of the above alternative are enclosed in Attachment 2.

The proposed alternatives in this request will allow the use of a common edition and addenda of the ASME Boiler and Pressure Vessel Code, Section XI for inservice inspection of Class 1, 2, 3, MC, and CC components at Oconee, McGuire, and Catawba Nuclear Stations and will enable Duke to establish a common date to be used for future inservice inspection intervals. Approval of this request will also facilitate the development and

implementation of inservice inspection plans, schedules, and procedures for future common inservice inspection intervals.

Duke requests approval of this alternative by December 21, 2005 to allow sufficient time to revise the affected inservice inspection plans.

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

Sincerely,

James R. Morris

Attachments

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G. J. Underwood (EC05A)
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P. A. Wells (ON03CV)
J. M. Ferguson (CN01SA)
North Carolina Municipal Power Agency Number 1
Saluda River Electric Cooperative, Inc.
Piedmont Municipal Power Agency
North Carolina Electric Membership Corporation
NRIA File/ELL (EC05O)
ONS Master File ON03DM
MNS Master File MG01DM
CNS Master File CN04DM

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

Relief Request Serial Number 05-GO-001

Adjustment of ISI Intervals for Class 1, 2, and 3 Components

## 1. ASME Code Component(s) Affected

Class 1, 2, and 3 pressure retaining components and their welded attachments, and Class 1, 2, and 3 component supports.

## 2. Applicable Code Edition and Addenda

The ASME Boiler and Pressure Vessel Code, Section XI, Division 1, 1998 Edition through the 2000 Addenda is applicable to the following inservice inspection intervals for which this request applies:

a) Oconee Nuclear Station, Units 1, 2, and 3: 4th Inservice Inspection Interval for Class 1, 2, and 3 Components

b) McGuire Nuclear Station, Units 1 and 2: 3rd Inservice Inspection Interval for Class 1, 2, and 3 Components

c) Catawba Nuclear Station, Units 1 and 2: 3rd Inservice Inspection Interval for Class 1, 2, and 3 Components (See Note below)

Note: Applicability of the ASME Code, Section XI, 1998 Edition through the 2000 Addenda for Catawba Unit 2 3rd Inspection Interval is contingent on NRC approval of the alternative proposed in Section 5.3 of this attachment. Otherwise, the ASME Code, Section XI, Division 1, Edition and Addenda incorporated by reference in 10 CFR 50.55a(b) on August 19, 2005 will apply (12 months prior to the start of the 3rd Inspection Interval).

## 3. Applicable Requirements for Which Alternatives are Requested

### 3.1 Requirements of the ASME Code, Section XI, Division 1:

Note: All paragraph references are to the 1998 Edition through the 2000 Addenda.

3.1.1 IWA-2430(a)

The above paragraph requires, in part, that "The inspections shall be performed in accordance with the schedule of Inspection Program A of IWA-2431, or optionally, Inspection Program B of IWA-2432."

3.1.2 IWA-2430(b)

The above paragraph requires that "The inspection interval shall be determined by calendar years following placement of the plant into commercial service."

3.1.3 IWA-2430(d)(1)

The above paragraph requires that "Each inspection interval may be reduced or extended by as much as one year. Adjustments shall not cause successive intervals to be altered by more than one year from the original pattern of intervals. If an inspection interval is extended, neither the start and end dates nor the inservice inspection program for the successive interval need be revised."

3.1.4 IWA-2430(d)(3)

The above paragraph requires that "That portion of an inspection interval described as an inspection period may be reduced or extended by as much as one year to enable an inspection to coincide with a plant outage. This adjustment shall not alter the requirements for scheduling inspection intervals."

3.1.5 IWA-2432

The above paragraph requires that "The inspection intervals shall comply with the following, except as modified by IWA-2430(d):

*1st Inspection Interval* - 10 years following initial start of plant commercial service

*Successive Inspection Intervals* - 10 years following the previous inspection interval"

3.1.6 IWB-2412(a), IWC-2412(a), IWD-2412(a), and IWF-2410(b)

The above paragraphs specify requirements for scheduling examinations in accordance with Inspection Program B, and IWF-2410(b) specifies requirements for scheduling examinations in accordance with Inspection Program A or B.

3.1.7 IWB-2412(b)(3), IWC-2412(b)(3), IWD-2412(b)(3), and IWF-2410(c)(3)

The above paragraphs specify requirements for scheduling examinations of items when items are

added during the third period of an inspection interval.

3.1.8 IWB-2420(a), IWC-2420(a), IWD-2420(a), and IWF-2420(a)

The above paragraphs specify requirements for scheduling examinations during successive inspection intervals.

**3.2 Requirements of 10 CFR 50.55a(g)(4)(ii):**

An alternative to the requirement of 10CFR50.55a(g)(4)(ii) is requested for Catawba Unit 2, 3rd Inservice Inspection Interval for Class 1, 2, and 3 Components.

The requirement of 10CFR50.55a(g)(4)(ii) is as follows:

"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 prior to the start of the 120-month inspection interval, subject to the limitations and modifications listed in paragraph (b) of this section."

**4. Reason for Request**

The alternatives in this request are proposed for the following reasons:

4.1 To allow adjustment of the inservice inspection intervals for Class 1, 2, and 3 components and their supports so that a common inspection interval may be established on July 15, 2014 for all units at Oconee, McGuire, and Catawba Nuclear Stations. Subsequent inspection intervals will then be able to use a common edition and addenda of the ASME Boiler and Pressure Vessel Code, Section XI, Division 1 for inservice inspection and repair/replacement activities without requiring additional regulatory approval.

4.2 To allow use of the ASME Boiler and Pressure Vessel Code, Section XI, Division 1, 1998 Edition through the 2000 Addenda for the Catawba Unit 2 3rd Inservice Inspection Interval for Class 1, 2, and 3 components and their supports. This will allow a common edition and addenda

of the Code to be used at Oconee, McGuire, and Catawba Nuclear Stations until the proposed common Inservice Inspection Interval is established on July 15, 2014.

**5. Proposed Alternatives**

5.1 In lieu of the requirements listed in Sections 3.1.1 through 3.1.5 above, the following alternatives are proposed:

5.1.1 In lieu of the requirements of IWA-2430(a) and IWA-2430(b), the following alternatives are proposed:

(a) The requirement of IWA-2430(a) shall be met, except that inspections shall be performed in accordance with the schedule of Inspection Program B, as modified by Sections 5.1.1(b), 5.1.2, and 5.1.3.

(b) Inspection intervals for IWB, IWC, IWD, and IWF shall comply with Table B. Successive inspection intervals shall be determined by calendar years following July 15, 2014.

5.1.2 In lieu of the requirements of IWA-2430(d)(1) and IWA-2430(d)(3), the following alternatives are proposed:

(d) For components inspected under Program B, the following shall apply:

(1) The inspection interval may be reduced or extended by as much as one year, except as noted in (d)(3). Successive intervals may be reduced or extended by as much as one year, provided the adjustment does not cause the successive intervals to be altered by more than one year from the pattern of intervals established on July 15, 2014. If an inspection interval is extended, neither the start and end dates nor the inservice inspection program for the successive interval need be revised.

(3) That portion of an inspection interval described as an inspection period may be reduced or extended by as much as one year to enable an inspection to coincide with a plant outage, except as noted in Section 5.2.3. This

adjustment shall not alter the requirements for scheduling inspection intervals.

5.1.3 In lieu of the requirements of IWA-2432, the following alternative is proposed:

The inspection intervals shall comply with the following, except as modified by IWA-2430(d):

*1st Inspection Interval* - 10 years following initial start of plant commercial service

*Successive Inspection Intervals* - 10 years following the previous inspection interval, except as modified by Section 5.1.1(b).

5.2 In lieu of the requirements listed in Sections 3.1.6 through 3.1.8 above, the following alternatives are proposed for the McGuire Unit 1 3rd inspection interval:

5.2.1 In lieu of the requirements of IWB-2412(a), IWC-2412(a), IWD-2412(a), IWF-2410(b), the following alternatives are proposed:

(a) The required percentage of examinations in each Examination Category shall be completed in accordance with Table 1, with the following exceptions:

(1) Examination Categories B-N-1, B-P, and B-Q;

(2) examinations partially deferred to the end of an inspection interval (third period), as allowed by Examination Categories B-A, B-D, and B-F shall be performed no later than the end of the first refueling outage in the fourth period;

(3) examinations deferred until the end of an inspection interval (third period), as allowed by Examination Categories B-A, B-L-1, B-M-1, B-N-2, B-N-3, and B-O shall be performed no later than the end of the first refueling outage in the fourth period;

(4) examinations deferred until disassembly of a component for maintenance, repair/replacement activity, or volumetric examination, as allowed by Examination Categories B-G-1, B-G-2, B-L-2, and B-M-2, except that all examinations required to be performed by the end of the interval shall be performed no later than

the end of the first refueling outage in the fourth period;

(5) welded attachments examined as a result of component support deformation under Examination Category B-K, C-C, and D-A.

(6) If there are less than three items or welds to be examined in an Examination Category, the items or welds shall be examined in any of two of the first three periods, or in any one of the first three periods if there is only one item or weld, in lieu of the percentage requirements of Table 1.

5.2.2 In lieu of the requirements of IWB-2412(b)(3), IWC-2412(b)(3), IWD-2412(b)(3), and IWF-2410(c)(3), the following alternatives are proposed:

(a) When items (including component supports) or welds are added during the third period of an interval, at least 25% of the examinations required by the applicable Examination Category and Item Number for the added items or welds shall be performed during the fourth period of that interval;

(b) When items (including component supports) or welds are added during the fourth period of an interval, examinations shall be scheduled in accordance with IWB-2412(a), IWC-2412(a), IWD-2412(a), or IWF-2410(b), as applicable, for successive intervals.

5.2.3 In lieu of the requirements of IWB-2420(a), IWC-2420(a), IWD-2420(a), and IWF-2420(a), the following alternatives are proposed:

(a) The sequence of component (and component support) examinations which was established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical, except as follows:

(1) The sequence of examinations established during the McGuire Unit 1 2$^{nd}$ inspection interval shall be repeated during the first three periods of the 3$^{rd}$ inspection interval shown in Table 1, to the extent practical.

(2) The sequence of examinations established during the first period of the McGuire Unit 1 3rd inspection interval (see Table 1) shall be repeated during the fourth period of the 3rd inspection interval, to the extent practical.

(3) The sequence of examinations established for the second, third, and fourth periods of the McGuire Unit 1 3rd inspection interval (see Table 1) shall be repeated during the first, second, and third periods of the subsequent inspection interval, to the extent practical.

**TABLE 1**
**McGuire Nuclear Station, Unit 1**
**3rd Inspection Interval (Proposed)**

| Inspection Interval[5] | Inspection Period Within the Interval[5] | Minimum Examinations Completed, % | Maximum Examinations Credited, % |
|---|---|---|---|
| 3rd (12/01/01 - 07/14/14) | 1st (12/01/01 - 11/30/04)[1] | 16 | 50 |
| | 2nd (12/01/04 - 11/30/07)[2] | 50[3] | 75 |
| | 3rd (12/01/07 - 11/30/10)[2] | 100 | 100 |
| | 4th (12/01/10 - 07/14/14)[2] | 16[4] | 50[4] |

Notes:

(1) Examinations conducted in the first inspection period were performed in accordance with the requirements of the ASME Code, Section XI, 1995 Edition with the 1996 Addenda.

(2) Examinations conducted in the second, third, and fourth periods are to be performed in accordance with the requirements of the ASME Code, Section XI, 1998 Edition through the 2000 Addenda.

(3) If the first period completion percentage for any examination category exceeds 34%, at least 16% of the required examinations shall be performed in the second period.

(4) Items to be examined during the fourth period shall consist of those items required to be examined during the first period, to the extent practical.

(5) The duration of the Inspection Interval and Inspection Periods may be adjusted in accordance with the requirements of Section 5.1.2.

5.3 In lieu of the requirement of 10 CFR 50.55a(g)(4)(ii), as listed in Section 3.2, the following alternative is proposed for the Catawba Unit 2, 3rd Inservice Inspection Interval for Class 1, 2, and 3 Components:

Inservice examination of components and system pressure tests conducted during the Catawba Unit 2, 3rd Inservice Inspection Interval commencing on March 1, 2006 shall comply with the requirements of the 1998 Edition through the 2000 Addenda of the ASME Boiler and Pressure Vessel Code, Section XI, Division 1, subject to the limitations and modifications listed in 10 CFR 50.55a(b).

## 6. Bases for Use of the Proposed Alternatives

The dates for the initial inservice inspection intervals were established based on the commercial operation date for each unit. Because each unit has a different commercial operation date, the inspection intervals for ASME Class 1, 2, and 3 components and their supports are different for each unit. Subsequent inspection intervals are based on the dates established for preceding intervals, so the dates for subsequent inspection intervals are also different for each unit. Because the ASME Boiler and Pressure Vessel Code, Section XI, Division 1, 1998 Edition through the 2000 Addenda allows inspection intervals to be adjusted by no more than one year from the pattern of intervals established for the initial inspection interval, it is not possible to align inspection intervals for different units whose inspection interval dates are more than one year apart.

The requested alternatives will allow Duke to make a one time adjustment of the inspection intervals at Oconee, McGuire, and Catawba Nuclear Stations to allow future inspection intervals to be permanently aligned. This will allow a common edition and addenda of the ASME Code, Section XI to be used for inservice inspection and repair/replacement activities for all future inservice inspection intervals at all three sites. In addition, the alternative proposed in Section 5.3 will allow a common edition and addenda of the ASME Code, Section XI to be used at Oconee, McGuire, and Catawba until inservice inspection intervals can be aligned after July 14, 2014.

Table A details the inservice inspection intervals (including applicable ASME Code, Section XI editions and addenda) at

Oconee, McGuire, and Catawba Nuclear Stations for which this request applies.

Table B details the proposed inservice inspection intervals (including applicable ASME Code, Section XI editions and addenda to be used) at Oconee, McGuire, and Catawba Nuclear Stations, adjusted in accordance with the provisions of this request.

By comparing Tables A and B, it is possible to determine the impact of this request on the inservice inspection program, as detailed below:

Oconee Unit 1: Interval 4 (Class 1,2,3) and the original pattern of inspection intervals has been extended by 12 months.

Oconee Unit 2: Interval 4 (Class 1,2,3) and the original pattern of inspection intervals has been reduced by approximately 2 months.

Oconee Unit 3: Interval 4 (Class 1,2,3) and the original pattern of inspection intervals has been reduced by approximately 5 months.

McGuire Unit 1: Interval 3 (Class 1,2,3) and the original pattern of inspection intervals has been extended by approximately 31½ months. However, the original pattern of inspection periods has been reduced by approximately 4½ months.

McGuire Unit 2: Interval 3 (Class 1,2,3) and the original pattern of inspection intervals has been extended by approximately 4½ months.

Catawba Unit 1: Interval 3 (Class 1,2,3) and the original pattern of inspection intervals has been reduced by approximately 11½ months.

Catawba Unit 2: The length of Interval 3 (Class 1,2,3) is reduced by approximately 19½ months, and the original pattern of inspection intervals has been reduced by approximately 25 months.

The modified interval end date of July 14, 2014 for Oconee Units 1, 2, and 3; McGuire Unit 2; and Catawba Unit 1 is

within one year of the interval end date based on the original pattern of intervals that started on the Commercial Operation date for each unit. The ASME Code, Section XI allows inspection intervals to be adjusted by as much as 12 months. For this reason, the modified interval schedule dates are considered acceptable.

Because Catawba Unit 2 Interval 3 is being shortened by approximately 25 months from the originally scheduled sequence of inspection intervals, the examinations required for Interval 3 are being completed earlier than would have otherwise been required by the inspection interval specified in Table A. For this reason, the modified interval schedule dates for Catawba Unit 2 are considered acceptable.

Because the McGuire Unit 1 Interval 3 length is being extended to approximately 12½ years, an extra 4$^{th}$ period has been proposed for Interval 3. In order to accommodate a one time adjustment for those examinations deferred to the "end of interval" (period 3), the proposed alternative will allow those examinations to be deferred one refueling cycle so that they may be performed no later than the first refueling outage in period 4. This one time adjustment will help with rescheduling of examinations during the 3$^{rd}$ period of the subsequent inspection interval. This modified deferral provision is proposed only for McGuire Unit 1 and is considered acceptable.

Although the interval dates for Oconee Units 1, 2, and 3, McGuire Unit 2, and Catawba Unit 1 could have been adjusted in accordance with IWA-2430(d) without requesting NRC approval, these units are specifically included in this request so that future inspection intervals for all units at Oconee, McGuire, and Catawba may use the one year interval adjustment provisions of IWA-2430(d), starting with inspection intervals commencing on July 15, 2014.

For the above stated reasons, the proposed alternatives detailed in Sections 5.1, 5.2, and 5.3 are considered to provide an equivalent level of quality and safety. In addition, these alternatives will allow Duke to simplify our ISI and Repair/Replacement Programs, providing the following benefits:

1. There will be fewer procedures to maintain, and procedures will be meeting the requirements of one edition/addenda of the Code, instead of multiple editions/addenda.

2. Personnel qualification and certification programs may be simplified.

3. Common procedures may be developed for ISI and Repair/Replacement programs.

4. Common inspection plans may be developed for multiple units at each site.

5. Inservice inspection intervals for Class 1, 2, and 3 components and their supports may be aligned with inservice inspection intervals for Class MC and Class CC components. As a result, inservice inspection intervals for all ASME Code classes will be identical after July 14, 2014 at Oconee, McGuire, and Catawba Nuclear Stations.

**TABLE A**

**Inspection Intervals (Class 1, 2, and 3 Components) for Which this Request Applies**

| Station | Unit | Commercial Operation Date | Inspection Interval & Applicable Edition/Addenda of ASME Section XI | Inspection Periods |
|---|---|---|---|---|
| Oconee | 1 | 07/15/1973 | 4th (01/01/04 - 07/14/13)<br>1998 Edition w/2000 Addenda | 1st (01/01/04 - 12/31/06)<br>2nd (01/01/07 - 07/14/10)<br>3rd (07/15/10 - 07/14/13) |
| Oconee | 2 | 09/09/1974 | 4th (09/09/04 - 09/08/14)<br>1998 Edition w/2000 Addenda | 1st (09/09/04 - 09/08/07)<br>2nd (09/09/07 - 09/08/11)<br>3rd (09/09/11 - 09/08/14) |
| Oconee | 3 | 12/16/1974 | 4th (01/02/05 - 12/15/14)<br>1998 Edition w/2000 Addenda | 1st (01/02/05 - 12/15/07)<br>2nd (12/16/07 - 12/15/11)<br>3rd (12/16/11 - 12/15/14) |
| McGuire | 1 | 12/01/1981 | 3rd (12/01/01 - 11/30/11)<br>1998 Edition w/2000 Addenda[1] | 1st (12/01/01 - 11/30/04)<br>2nd (12/01/04 - 11/30/08)<br>3rd (12/01/08 - 11/30/11) |
| McGuire | 2 | 03/01/1984 | 3rd (03/01/04 - 02/28/14)<br>1998 Edition w/2000 Addenda | 1st (03/01/04 - 02/28/07)<br>2nd (03/01/07 - 02/28/11)<br>3rd (03/01/11 - 02/28/14) |
| Catawba | 1 | 06/29/1985 | 3rd (06/29/05 - 06/28/15)<br>1998 Edition w/2000 Addenda | 1st (06/29/05 - 06/28/08)<br>2nd (06/29/08 - 06/28/12)<br>3rd (06/29/12 - 06/28/15) |
| Catawba | 2 | 08/19/1986 | 3rd (08/19/06 - 08/18/16)<br>Edition and Addenda Unknown[2] | 1st (08/19/06 - 08/18/09)<br>2nd (08/19/09 - 08/18/13)<br>3rd (08/19/13 - 08/18/16) |

Notes:

(1) First Period examinations and system pressure tests were performed in accordance with the 1995 Edition with the 1996 Addenda.

(2) The applicable Edition and Addenda of the ASME Code, Section XI that would be required for the 3rd Inservice Inspection Interval cannot be determined until August 19, 2005. At that time, the applicable edition and addenda will be that incorporated by reference in 10 CFR 50.55a(b). If 10 CFR 50.55a(b) is not amended before August 19, 2005, the applicable edition and addenda would be the 2001 Edition through the 2003 Addenda.

**TABLE B**

**Proposed Inspection Intervals for Class 1, 2, and 3 Components[1]**

| Station | Unit | Class | Inspection Interval & Applicable Edition/Addenda of ASME Section XI | Inspection Periods |
|---|---|---|---|---|
| Oconee | 1 | 1,2,3 | 4th (01/01/04 - 07/14/14)<br>1998 Edition w/2000 Addenda | 1st (01/01/04 - 12/31/06)<br>2nd (01/01/07 - 12/31/10)<br>3rd (01/01/11 - 07/14/14) |
| Oconee | 2 | 1,2,3 | 4th (09/09/04 - 07/14/14)<br>1998 Edition w/2000 Addenda | 1st (09/09/04 - 09/08/07)<br>2nd (09/09/07 - 09/08/11)<br>3rd (09/09/11 - 07/14/14) |
| Oconee | 3 | 1,2,3 | 4th (01/02/05 - 07/14/14)<br>1998 Edition w/2000 Addenda | 1st (01/02/05 - 12/15/07)<br>2nd (12/16/07 - 12/15/11)<br>3rd (12/16/11 - 07/14/14) |
| Oconee | 1,2,3 | CC | 2nd (07/15/05 - 07/14/14)[1]<br>1998 Edition w/2000 Addenda | 1st (07/15/05 - 07/14/08)<br>2nd (07/15/08 - 07/14/11)<br>3rd (07/15/11 - 07/14/14) |
| McGuire | 1 | 1,2,3 | 3rd (12/01/01 - 07/14/14)<br>1998 Edition w/2000 Addenda | 1st (12/01/01 - 11/30/04)<br>2nd (12/01/04 - 11/30/07)<br>3rd (12/01/07 - 11/30/10)<br>4th (12/01/10 - 07/14/14) |
| McGuire | 2 | 1,2,3 | 3rd (03/01/04 - 07/14/14)<br>1998 Edition w/2000 Addenda | 1st (03/01/04 - 11/30/07)<br>2nd (12/01/07 - 11/30/10)<br>3rd (12/01/10 - 07/14/14) |
| McGuire | 1,2 | MC | 2nd (07/15/05 - 07/14/14)[1]<br>1998 Edition w/2000 Addenda | 1st (07/15/05 - 07/14/08)<br>2nd (07/15/08 - 07/14/11)<br>3rd (07/15/11 - 07/14/14) |
| Catawba | 1 | 1,2,3 | 3rd (06/29/05 - 07/14/14)<br>1998 Edition w/2000 Addenda | 1st (06/29/05 - 07/14/08)<br>2nd (07/15/08 - 07/14/11)<br>3rd (07/15/11 - 07/14/14) |
| Catawba | 2 | 1,2,3 | 3rd (03/01/06 - 07/14/14)[2]<br>1998 Edition w/2000 Addenda | 1st (03/01/06 - 02/28/10)[3]<br>2nd (07/15/08 - 07/14/11)[3]<br>3rd (07/15/11 - 07/14/14)[3] |
| Catawba | 1,2 | MC | 2nd (07/15/05 - 07/14/14)[1]<br>1998 Edition w/2000 Addenda | 1st (07/15/05 - 07/14/08)<br>2nd (07/15/08 - 07/14/11)<br>3rd (07/15/11 - 07/14/14) |

Notes:

(1) Inspection intervals for Class MC and CC components have been adjusted in accordance with the provisions of Duke Energy Corporation Relief Request Serial #03-GO-010. Inspection intervals for Class MC and CC components are shown here for information only.

(2) The Catawba Unit 2 2nd Inspection Interval for Class 1, 2, and 3 shall end on August 19, 2006. Where the 2nd and 3rd Inspection Intervals overlap between March 1, 2006 and August 19, 2006, examinations performed to satisfy the requirements of Interval 2 shall not be credited towards satisfying the requirements of

**TABLE B**

**Proposed Inspection Intervals for Class 1, 2, and 3 Components[1]**

Interval 3, except for Class 1 system pressure tests performed in accordance with IWB-2500, Table IWB-2500-1, Examination Category B-P. These Class 1 system pressure tests shall be performed in accordance with the requirements of either the 3rd Inspection Interval Plan or the 2nd Inspection Interval Plan, as amended by Duke Energy Corporation Relief Request Serial #94-GO-001 (The 2nd and 3rd Inspection Interval Class 1 system pressure testing requirements are essentially identical).

(3) The schedule dates and durations of Periods 1, 2, and 3 have been adjusted as shown to facilitate scheduling examinations during available refueling outages between March 1, 2006 and July 14, 2014. Where inspection periods 1 and 2 overlap, examinations performed to satisfy the requirements of Period 1 shall not be credited towards satisfying the requirements of Period 2.

Originated By: _____

Date: 3/10/05

Checked By: _____

Date: 3/10/05

Approved By: _____

Date: 3/11/05

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

Relief Request Serial Number 05-GO-001

Alternative to the Requirements of 10 CFR 50.55a(g)(4)(ii) for Inspection Intervals Commencing on July 15, 2014

## 1. ASME Code Component(s) Affected

1.1 Class 1, 2, and 3 pressure retaining components and their welded attachments, and Class 1, 2, and 3 component supports

1.2 Class MC metal containment pressure retaining components and their integral attachments

1.3 Metallic shell and penetration liners which are pressure retaining components and their integral attachments in Class CC concrete containments

1.4 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

The ASME Boiler and Pressure Vessel Code, Section XI, Division 1, Edition and Addenda incorporated by reference in 10 CFR 50.55a(b), as specified by 10 CFR 50.55a(g)(4)(ii), will be applicable to the following inservice inspection intervals for which this request applies:

2.1 Oconee Nuclear Station, Units 1, 2, and 3: 5$^{th}$ Inservice Inspection Interval (and subsequent intervals) for Class 1, 2, and 3 Components

2.2 Oconee Nuclear Station, Units 1, 2, and 3: 3$^{rd}$ Inservice Inspection Interval (and subsequent intervals) for Class CC Components and Metallic Shell and Penetration Liners of Class CC Components

2.3 McGuire Nuclear Station, Units 1 and 2: 4$^{th}$ Inservice Inspection Interval (and subsequent intervals) for Class 1, 2, and 3 Components

2.4 McGuire Nuclear Station, Units 1 and 2: 3$^{rd}$ Inservice Inspection Interval (and subsequent intervals) for Class MC Components

2.5 Catawba Nuclear Station, Units 1 and 2: 4$^{th}$ Inservice Inspection Interval (and subsequent intervals) for Class 1, 2, and 3 Components

2.6 Catawba Nuclear Stations, Units 1 and 2: 3rd Inservice Inspection Interval (and subsequent intervals) for Class MC Components

**3. Applicable Requirements for Which an Alternative is Requested**

An alternative to the requirement of 10 CFR 50.55a(g)(4)(ii) is requested. The requirement of 10 CFR 50.55a(g)(4)(ii) is as follows:

> "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 prior to the start of the 120-month inspection interval, subject to the limitations and modifications listed in paragraph (b) of this section."

**4. Reasons for Request**

To allow use of an acceptable alternative to the requirement of 10 CFR 50.55a(g)(4)(ii) when preparing inservice inspection plans for successive inspection intervals starting on July 15, 2014 for Class 1, 2, 3, MC and CC components for Oconee, McGuire, and Catawba Nuclear Stations.

**5. Proposed Alternatives**

In lieu of the requirement of 10 CFR 50.55a(g)(4)(ii), the following alternative is proposed for inspection intervals commencing on, or after, July 15, 2014 for Class 1, 2, 3, MC, and CC components:

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 no earlier than 48 months prior to the start of the 120-month inspection interval, subject to the limitations and modifications listed in paragraph (b) of 10 CFR 50.55a.

**6. Basis for Use of the Proposed Alternative**

For Duke's nuclear stations, the inspection interval dates for each unit do not coincide. Therefore, unless the interval

dates are within 12 months of each other, Duke will have approximately 12 months in which to prepare the inspection plan for the subsequent inspection interval for each unit. As the Owner of seven units that are proposing to use the same inspection interval date, Duke would have to prepare inspection plans simultaneously for seven units within this 12 month time frame. The proposed alternative to 10 CFR 50.55a(g)(4)(ii) would allow as much as 48 months in which to prepare these inspection plans, allowing this work to be performed by a single, dedicated staff of ISI Program specialists. Duke believes that 48 months will provide sufficient time for the development of inservice inspection plans without having to augment our existing staff, allowing more efficient use of personnel resources. The technical justification for this alternative is documented below.

If 10 CFR 50.55a is amended at least once every three years to incorporate by reference the latest edition and addenda of the Code, the edition and addenda of the Code in use at Duke's nuclear stations would likely be no more than one edition earlier than that otherwise required by 10 CFR 50.55a(g)(4)(ii). Use of this earlier edition and addenda of the Code, subject to the modifications and limitations specified in 10 CFR 50.55a, is considered acceptable and will most likely be in use by a number of licensees by the subsequent interval start date. Please note that there are licensees whose inservice inspection programs are using the 1989 Edition of the ASME Code, Section XI, Division 1. In fact, by the end of the Catawba Unit 2 2nd Inspection Interval on August 19, 2006, this edition of the ASME Code will have been approved by ASME for approximately 17 years.

For the above reason, Duke believes that the proposed alternative to 10 CFR 50.55a(g)(4)(ii) will provide an equivalent level of quality and safety. In addition, this alternative provides the following benefits:

1. Provides additional time for the following activities, allowing better utilization of personnel resources:

   a. Preparation of inservice inspection plans, drawings, databases, schedules, procedures, personnel qualification and certification procedures, and repair/replacement programs for subsequent inservice inspection intervals.

   b. Evaluation of applicable ASME Code and regulatory requirements, and to submit and receive NRC approval to

use proposed Relief Requests pursuant to 10 CFR 50.55a(a)(3), prior to the start of subsequent inservice inspection intervals. This will help to avoid having to request prompt NRC review of Relief Requests usually submitted within 12 months prior to the start of an inservice inspection interval.

c. Planning and scheduling examinations to be conducted during the first refueling outage of the inspection interval.

2. This proposal also has potential benefit for the NRC. Early review of the requirements of the ASME Code, Section XI and 10 CFR 50.55a well in advance of the start of subsequent inservice inspection intervals may allow the NRC to amend 10CFR50.55a to address potential concerns in advance of the subsequent common inspection interval, thereby reducing the number of Relief Requests that might otherwise be required by Duke.

The benefits described above will help Duke to maintain effective inservice inspection plans, schedules, and procedures that accurately implement the requirements of the ASME Code, Section XI and 10 CFR 50.55a.

Originated By: M J. Ellis

Date: 3/10/05

Checked By: R. Kevin Rhyne

Date: 3/10/05

Approved By: Shelvin L. Young, Jr.

Date: 3/11/05