

Duke Energy Corporation
Relief Request Serial #03-GO-010

Table 1 identifies the significant differences between inservice inspection requirements for Inspection Intervals 1 and 2 for the Containment ISI Program.

TABLE 1
Comparison of Inspection Intervals 1 and 2 for Implementation of ASME Section XI, IWE/IWL Requirements

Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
Accessible Surface Areas	Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-A, Item E1.12 (Accessible Surface Areas). A VT-3 visual examination is required at the "End of Interval". During Interval 1, accessible surface areas are scheduled to be examined during Period 3. However, if Relief Request Serial #03-GO-010 is approved, the VT-3 visual examination will not be performed because Interval 1 shall only include Periods 1 and 2.	Code Requirement: None. Item E1.12 (VT-3 visual exams of accessible surface areas) has been deleted from Table IWE-2500-1, Category E-A. During Interval 2, this VT-3 visual examination is not required. However, a General Visual examination shall be performed once each Period in accordance with IWE-2500, Table IWE-2500-1, Examination Category E-A, Item E1.11.

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Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
Augmented Examination – Visual Examinations	<p>Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-C, Item E4.11 (visible surfaces).</p> <p>During Interval 1, accessible surfaces required to be examined (IWE-1240) were visually examined using a VT-1 visual examination method each Inspection Period in accordance with Table IWE-2500-1, Examination Category E-C, footnote 2. Examination is required during each Inspection Period until the area remains essentially unchanged for 3 consecutive periods.</p> <p>Note that relief was granted in accordance with Relief Request Serial #98-GO-003 (SER dated 10/01/1998) to clarify examination requirements for visual examination of areas accessible for visual examination.</p>	<p>Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-C, Item E4.11 (visible surfaces). A Detailed Visual Examination is required during each Inspection Period until the area remains essentially unchanged for 2 consecutive periods.</p> <p>Regulatory Requirements: 10CFR50.55a(b)(2)(ix)(G) requires, in part, that these examinations be conducted using the VT-1 visual examination method.</p> <p>During Interval 2, a VT-1 visual examination method shall be used when conducting the Item E4.11 examinations. Areas that have been visually examined for 2 periods during Inspection Interval 1 (and have remained essentially unchanged) may be removed from Category E-C, Item E4.11 during Interval 2.</p> <p>If, during any future inspection period or interval, Duke determines that conditions warrant augmented examination, the affected areas will be added into Category E-C, Item E4.11 for augmented examination.</p>

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Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
Augmented Examination – Volumetric Examinations	Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-C, Item E4.12 (surface area grid). During Interval 1, a UT sampling plan was used to examine areas from the opposite side when such areas were inaccessible for visual examination on the side subject to conditions which warranted augmented examination. These UT examinations were performed in accordance with Relief Request Serial #98-GO-007 (SER dated 03/04/1999). Examination is required during each Inspection Period until the area remains essentially unchanged for 3 consecutive periods.	Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-C, Item E4.12 (surface area grid). During Interval 2, it is Duke Energy's intent to use ASME Code Case N-647 (Conditionally accepted per R.G. 1.147). Paragraph (b) of this Code Case allows for use of a sampling plan for performing these UT examinations. The acceptance criteria and statistical confidence levels are consistent with the UT sampling plans used during Interval 1. For this reason, relief is not necessary for Interval 2. Areas that have been examined for 2 periods during Inspection Interval 1 (and have remained essentially unchanged) may be removed from Category E-C, Item E4.12 during Interval 2. If, during any future inspection period or interval, Duke determines that conditions warrant augmented examination, the affected areas will be added into Category E-C, Item E4.12 for augmented examination.

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**TABLE 1
Comparison of Inspection Intervals 1 and 2 for Implementation of ASME Section XI, IWE/IWL Requirements**

Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
Seals and Gaskets	Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-D, Items E5.10 (seals) and E5.20 (gaskets). During Interval 1, relief was granted in accordance with Relief Request Serial #98-GO-001 (SER dated 09/03/1998), so examination of seals and gaskets is not required for Interval 1.	Code Requirement: None. The 1998 Ed./2000 Add. no longer requires examination of seals and gaskets (Category E-D has been deleted). Relief is not needed for ISI Interval 2. During Interval 2, visual examination of seals and gaskets is not required.
Moisture Barriers	Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-D, Item E5.30 (moisture barriers). During Interval 1, Periods 1 and 2, these items received a VT-3 visual examination in accordance with Inspection Program B.	Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-A, Item E1.30 (moisture barriers). During Interval 2, these items shall receive a General Visual examination each Inspection Period (Inspection Program B).

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Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
<p>Pressure Retaining Bolted Connections – Visual Examination</p>	<p>Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-G, Item E8.10 (bolted connections). During Interval 1, Periods 1 and 2, these items received a VT-1 visual examination in accordance with Inspection Program B. Examinations were not deferred to the end of interval, as allowed by Table IWE-2500-1, Examination Category E-G, and examination percentages met the requirements of Table IWE-2412-1.</p>	<p>Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-A, Item E1.11, footnote 1(b). Bolted connections receive a General Visual examination once each Inspection Period as part of the containment accessible surface area (Item E1.11). Regulatory Requirements: 10CFR50.55a(b)(2)(ix)(G) requires, in part, that these bolted connections receive a VT-3 visual examination once each Inspection Interval (10 years). 10CFR50.55a(b)(2)(ix)(H) requires, in part, that these bolted connections be examined using a VT-3 visual examination method when disassembled during the performance of the Item E1.11 examinations. During Interval 2, these items shall receive a General Visual examination each Inspection Period (Inspection Program B) in accordance with IWE-2500, Table IWE-2500-1, Item E1.11. In addition, these bolted connections shall receive a VT-1 visual examination once each Inspection Interval, in accordance with the provisions of Relief Request Serial #03-GO-010, Attachment #4. Bolted connections scheduled to be examined during the 3rd period of Interval 1 are to be examined during Period 1 of Interval 2.</p>

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Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
<p>Pressure Retaining Bolted Connections – Bolt Torque or Tension Test</p>	<p>Code Requirement: IWE-2500, Table IWE-2500-1, Examination Category E-G, Item E8.20 (bolted connections). During Interval 1, relief was granted in accordance with Relief Request Serial #98-GO-002 (SER dated 11/24/1998), so bolt torque or tension tests are not required for Interval 1.</p>	<p>Code Requirement: None. The 1998 Ed./2000 Add. no longer requires bolt torque or tension tests on bolted connections (Category E-G has been deleted). Relief is not needed for ISI Interval 2. During Interval 2, bolt torque or tension tests are not required.</p>
<p>Visual Examination Associated with Coatings Removal and Reapplication (IWE)</p>	<p>Code Requirement: IWE-2200(g) requires a preservice examination after reapplication of paint or coatings. Code Requirement: IWE-2500(b) requires that paint or coatings be visually examined prior to removal. During Interval 1, relief was granted in accordance with Relief Request Serial #01-GO-003 (SER dated 12/13/2001). These visual examinations were not required after this relief request was approved.</p>	<p>Code Requirement: None. These examination requirements have been deleted from IWE. During Interval 2, these visual examinations are not required.</p>

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**TABLE 1
Comparison of Inspection Intervals 1 and 2 for Implementation of ASME Section XI, IWE/IWL Requirements**

Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
Visual Examination following Repair/Replacement activities	<p>Code Requirement: IWE-5240 requires that a VT-2 visual examination be performed during the leakage test following repair/replacement activities.</p> <p>During Interval 1, relief was granted in accordance with Relief Request Serial #00-GO-001 (SER dated 05/17/2001). A VT-1 visual examination is performed in lieu of the VT-2 examination. For minor repairs and replacements where the leakage test is deferred, this exam is not deferred and is performed upon completion of the repair/replacement activity.</p>	<p>Code Requirement: IWE-5240 requires that a Detailed Visual examination be performed during the leakage test following repair/replacement activities.</p> <p>During Interval 2, Duke proposes to use the provisions of Relief Request Serial #03-GO-010, Attachment 2. This relief Request will allow Duke to use identical provisions for both Interval 1 and Interval 2.</p>

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Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
<p>N/A – Lighting and Resolution Requirements for IWE/IWL examinations</p>	<p>Code Requirement: For VT-1, VT-2, VT-3, VT-1C, and VT-3C examinations, the requirements of IWA-2210 and IWL-2310(a) apply.</p> <p>During Interval 1, the alternatives documented in Relief Request Serial #98-GO-004 (SER dated 11/25/1998) were used. This Relief Request provided alternatives to procedure demonstration requirements, and lighting and resolution requirements. Use of an 18% neutral gray card with 1/32" and 1/64" black lines was approved.</p>	<p>Code Requirement: Subsections IWE and IWL no longer specify any VT-1, VT-2, VT-3, VT-1C, or VT-3C examinations. IWE-2100 and IWL-2100 specifically state that the requirements of IWA-2210 are either not mandatory or are not applicable. Therefore, relief from the requirements of IWA-2100 and IWL-2310(a) are not required.</p> <p>Regulatory Requirements: 10CFR50.55a(b)(2)(ix)(G) and (H) require that certain visual examinations be performed using either a VT-1 or VT-3 visual examination method.</p> <p>During Interval 2, whenever a VT-1 or VT-3 visual examination method is used to conduct IWE visual examinations, the requirements of IWA-2210 shall be met.</p> <p>For IWL General and Detailed visual examinations, the Responsible Individual (IWL-2320) shall be responsible for establishing lighting and resolution requirements. It is Duke's intent to continue using the procedure requirements for lighting and resolution used during Interval 1 during Interval 2.</p>

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Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)
N/A – Personnel qualifications	<p>Code Requirement: Personnel that perform VT-1, VT-2, VT-3, VT-1C, and VT-3C visual examinations must meet the requirements of IWA-2300.</p> <p>During Interval 1, this requirement was met for both IWE and IWL visual examinations.</p>	<p>Code Requirement: None. Because IWE and IWL have eliminated all VT-1, VT-2, VT-3, VT-1C, and VT-3C visual examination requirements, examination personnel need not meet the requirements of IWA-2300.</p> <p>Regulatory Requirement: 10CFR50.55a(b)(2)(ix)(G) and (H) require that certain visual examinations be performed using either a VT-1 or VT-3 visual examination method.</p> <p>Regulatory Requirement: 10CFR50.55a(b)(2)(viii)(F) requires that "Personnel that examine containment concrete surfaces and tendon hardware, wires, or strands must meet the qualification provisions in IWA-2300."</p> <p>During Interval 2, VT-1 and VT-3 visual examinations shall be performed by personnel that have met the qualification requirements of IWA-2300. Also, visual examinations required by IWL shall be performed by personnel that have met the qualification requirements of IWA-2300.</p>

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Code Item	Containment ISI Interval 1 Code/Regulatory Requirements (ASME XI, 1992 Ed/1992 Add.)	Containment ISI Interval 2 Code/Regulatory Requirements (ASME XI, 1998 Ed/2000 Add.)																
<p>Examination Requirements for Post-tensioning Systems of Concrete Containments at Sites with Multiple Plants</p>	<p>Code Requirement: IWL-2421 provides alternative requirements for performing post-tensioning system examinations at sites with multiple plants. The 1992 Edition w/1992 Addenda did not address sites with more than 2 plants, so it was unclear how to apply these alternative provisions to a 3-unit site like Oconee.</p> <p>During Interval 1, relief was granted in accordance with Relief Request Serial #98-ONS-0002. The following is a summary of the required total number of examinations (all 3 Oconee units) to be performed during the first 2 surveillances during Interval 1:</p> <p>Examination</p> <table border="0"> <tr> <td style="padding-right: 20px;">IWL-2522 (Tendon Force):</td> <td style="text-align: right;">96</td> </tr> <tr> <td>IWL-2523 (Detension/Wire Exam):</td> <td style="text-align: right;">18</td> </tr> <tr> <td>IWL-2524 (Anchorage Exams):</td> <td style="text-align: right;">146</td> </tr> <tr> <td>IWL-2525 (Grease/Free Water):</td> <td style="text-align: right;">146</td> </tr> </table> <p>Please note that Oconee has selected a 4% sample size in accordance with Table IWL-2521-1 for Interval 1. The number of tendons listed above is based on using this 4% sample size.</p>	IWL-2522 (Tendon Force):	96	IWL-2523 (Detension/Wire Exam):	18	IWL-2524 (Anchorage Exams):	146	IWL-2525 (Grease/Free Water):	146	<p>Code Requirement: IWL-2421 has been revised to include provisions for sites with multiple plants. The following is a summary of the required total number of examinations (all 3 Oconee units) that are required to be performed during 2 consecutive surveillances in accordance with the 1998 Edition with the 2000 Addenda, using the provisions of IWL-2421:</p> <p>Examination</p> <table border="0"> <tr> <td style="padding-right: 20px;">IWL-2522 (Tendon Force):</td> <td style="text-align: right;">73</td> </tr> <tr> <td>IWL-2523 (Detension/Wire Exam):</td> <td style="text-align: right;">9</td> </tr> <tr> <td>IWL-2524 (Anchorage Exams):</td> <td style="text-align: right;">146</td> </tr> <tr> <td>IWL-2525 (Grease/Free Water):</td> <td style="text-align: right;">146</td> </tr> </table> <p>Please note that Oconee has selected a 4% sample size in accordance with Table IWL-2521-1 until 3 consecutive surveillances have been completed and the examination results satisfy the requirement of Table IWL-2521-1, footnote (2). The number of tendons listed above is based on using this 4% sample size.</p> <p>During Interval 2, relief is requested in accordance with Relief Request Serial #03-GO-010, Attachment 3. This relief will allow Duke to perform the same total number of post-tensioning system examinations/tests as that required above using the 1998 Edition with the 2000 Addenda, but will allow Duke to distribute these examinations approximately equally among each unit every 5 years, instead of using the schedule imposed by IWL-2421.</p>	IWL-2522 (Tendon Force):	73	IWL-2523 (Detension/Wire Exam):	9	IWL-2524 (Anchorage Exams):	146	IWL-2525 (Grease/Free Water):	146
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IWL-2525 (Grease/Free Water):	146																	

From: Robert L Gill Jr <rlgill@duke-energy.com>
To: <LNO@nrc.gov>
Date: 9/28/04 1:34PM
Subject: Relief Request #03-GO-010 - Additional Information to be Docketed

As requested.

----- Forwarded by Robert L Gill Jr/Gen/DukePower on 09/28/2004 01:32 PM

Mark J Ferlisi

To: Robert L Gill Jr/Gen/DukePower@DukePower
09/28/2004 01:31 PM cc:
Subject: Relief Request #03-GO-010- Additional Information to be

Docketed

Bob: Hans Ashar asked me to clarify one item listed in the following attachment, prior to this information being docketed. This change has been made and the attached file is ready for submittal to the NRC. Please forward to Hans.

Thanks.

(See attached file: Table of Comparisons 1992 to 1998 Editions 09-28-04.PDF)

Mark J. Ferlisi, P.E.
Duke Energy Corp.
(704) 382-3923
(704) 382-4360 FAX

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