

Charles R. Pierce
Regulatory Affairs Director

Southern Nuclear
Operating Company, Inc.
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, AL 35242

Tel 205.992.7872
Fax 205.992.7601



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

Edwin I. Hatch Nuclear Plant – Units 1 and 2
10 CFR 50.55a Request No. HNP-ISI-ALT-5-01
Proposed Alternative in Accordance With 10 CFR 50.55a(z)(1)
Maintaining ISI/CII Related Activities on the 2001E/2003A ASME Section XI Code

Ladies and Gentlemen:

In accordance with 10 CFR 50.55a(z)(1), Southern Nuclear Operating Company (SNC) proposes an alternative to the requirements of 10 CFR 50.55a(b)(2), 10 CFR 50.55a(g)(4) and 10 CFR 50.55a(g)(4)(ii). Specifically, SNC proposes to update the Edwin I. Hatch Nuclear Plant (HNP) Units 1 and 2 Inservice Inspection (ISI) and Containment Inservice Inspection (CII) programs to the 2007 Edition with the 2008 Addenda while maintaining and performing ISI/CII related activities such as Repair/Replacements (R/R), Pressure Testing (PT), and Nondestructive Examination (NDE) to the current ASME Section XI 2001 Edition through the 2003 Addenda requirements. Proposed Alternative HNP-ISI-ALT-5-01 is provided in the Enclosure. The proposed ASME Section XI Code of Record for the HNP ISI Fifth 10-Year ISI/CII Interval is provided as the Attachment.

The Fifth 10-Year ISI/CII Interval at HNP begins on December 31, 2015 and ends on December 30, 2025. However, with four other SNC nuclear operating plants starting new 10-year ISI/CII inspection intervals May and November of 2017, SNC proposes to maintain standardization of the R/R, PT and NDE programs across its entire nuclear fleet with the 2001 Edition through 2003 Addenda through November 2017. Therefore, the proposed duration of this alternative is from December 31, 2015 through November 30, 2017.

SNC requests approval no later than January 8, 2016.

This letter contains no NRC commitments. If you have any questions, please contact Ken McElroy at (205) 992-7369.

Respectfully submitted,



C. R. Pierce
Regulatory Affairs Director

CRP/RMJ

Enclosure: 10 CFR 50.55a Request No. HNP-ISI-ALT-5-01
Attachment: Proposed ASME Section XI Code of Record for the HNP ISI Fifth
10-Year ISI/CII Interval

cc: Southern Nuclear Operating Company
Mr. S. E. Kuczynski, Chairman, President & CEO
Mr. D. G. Bost, Executive Vice President & Chief Nuclear Officer
Mr. D. R. Vineyard, Vice President – Hatch
Mr. M. D. Meier, Vice President – Regulatory Affairs
Mr. D. R. Madison, Vice President – Fleet Operations
Mr. B. J. Adams, Vice President – Engineering
Mr. G. L. Johnson, Regulatory Affairs Manager - Hatch
RTYPE: CHA02.004

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Regional Administrator
Mr. R. E. Martin, NRR Senior Project Manager - Hatch
Mr. D. H. Hardage, Senior Resident Inspector – Hatch

**Edwin I. Hatch Nuclear Plant – Units 1 and 2
10 CFR 50.55a Request No. HNP-ISI-ALT-5-01
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Enclosure

10 CFR 50.55a Request No. HNP-ISI-ALT-5-01

1. ASME Code Component(s) Affected

Code Class:	ASME Section XI Code Class 1, 2, 3 components and component supports
Component Numbers:	Various
Code References:	ASME Section XI, 2007 Edition with 2008 Addenda ASME Section XI, 2001 Edition with 2003 Addenda
Examination Category:	Various
Item Number(s):	Various
Unit/Inspection Interval	Hatch Units 1 and 2 / Fifth 10-Year ISI Interval December 31, 2015 – December 30, 2025

2. Requested Date for Approval

Approval is requested by January 8, 2016.

3. Applicable ASME Code Requirements

Southern Nuclear Operating Company (SNC) is required to update the Hatch Nuclear Plant, Units 1 and 2 (hereinafter referred to as HNP) 120-month Inservice Inspection (ISI) and Containment Inservice Inspection (CII) programs to the latest Edition and Addenda of the ASME Boiler and Pressure Vessel (BPV) Code, Section XI, as approved by the NRC in 10 CFR 50.55a(b)(2), for the Fifth 10-Year ISI Interval. The applicable 10 CFR 50.55a and subsequent ASME Code requirements are as follows:

- Pursuant to 10 CFR 50.55a(b)(2), *Conditions on ASME BPV Code Section XI*. As used in this section, references to Section XI refer to Section XI, Division 1, of the ASME Boiler and Pressure Vessel Code, and include the 1970 Edition through the 1976 Winter Addenda and the 1977 Edition through the 2007 Edition with the 2008 Addenda, subject to the staff's conditions.
- Pursuant to 10 CFR 50.55a(g)(4), *Inservice inspection standards requirement for operating plants*. Throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) that are classified as ASME Code Class 1, Class 2 and Class 3 must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions and addenda of the ASME BPV Code (or ASME OM Code for snubber examination and testing) that become effective subsequent to editions specified in paragraphs (g)(2) and (g)(3) of this

section and that are incorporated by reference in paragraph (a)(1)(ii) or (iv) for snubber examination and testing of this section, to the extent practical within the limitations of design, geometry and materials of construction of the components.

Components that are classified as Class MC pressure retaining components and their integral attachments, and components that are classified as Class CC pressure retaining components and their integral attachments, must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of the ASME BPV Code and addenda that are incorporated by reference in paragraph (a)(1)(ii) of this section, subject to the condition listed in paragraph (b)(2)(vi) of this section and the conditions listed in paragraphs (b)(2)(viii) and (ix) of this section, to the extent practical within the limitation of design, geometry, and materials of construction of the components.

- Pursuant to 10 CFR 50.55a(g)(4)(ii), *Applicable ISI Code: Successive 120-month intervals*. 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 (a) 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 17, when using Section XI, or Regulatory Guide 1.192, Revision 1, when using the OM Code, that are incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section), subject to the conditions listed in paragraph (b) of this section. However, a licensee whose inservice inspection interval commences during the 12 through 18-month period after July 21, 2011 may delay the update of their Appendix VIII program by up to 18 months after July 21, 2011.

4. Reason for Request

SNC proposes an alternative to the requirements of 10 CFR 50.55a(b)(2), 10 CFR 50.55a(g)(4) and 10 CFR 50.55a(g)(4)(ii); specifically, to update the HNP ISI/CII programs to the 2007 Edition with the 2008 Addenda while maintaining and performing ISI/CII related activities such as Repair/Replacements (R/R), Pressure Testing (PT), and Nondestructive Examination (NDE) to the current ASME Section XI 2001 Edition through the 2003 Addenda requirements. With four other SNC nuclear operating plants starting new 10-year ISI/CII inspection intervals May and November of 2017, SNC proposes to maintain standardization of the R/R, PT and NDE programs across its entire nuclear fleet with the 2001 Edition through 2003 Addenda through November 2017.

5. Proposed Alternative and Basis for Use

Proposed Alternative:

Pursuant to 10 CFR 50.55a(z)(1), SNC requests authorization to maintain the current use of 2001 Edition through the 2003 Addenda for the performance of R/R, PT and NDE subject to the conditions contained in 10 CFR 50.55a. In implementing this proposal, SNC will continue to comply with all NRC conditions, limitations, and restrictions as specified in 10 CFR 50.55a for 2001 Edition with 2003 Addenda of ASME Section XI Code. Code Cases will also be adopted per RG 1.147 for those cases applicable to the 2001 Edition through the 2003 Addenda. Additionally, HNP requests that the 10 CFR 50.55a requests listed below and authorized for use during the Fourth Interval in accordance with 10 CFR 50.55a(a)(3)(i) or (ii), which is now 10 CFR 50.55a(z)(1) or (2), be extended for use per this request into the Fifth Interval for the time duration coinciding with the planned use of the 2001 Edition through the 2003 Addenda of Section XI. The requests to be extended are:

- Request ISI-ALT-1 (Units 1 and 2), authorized on January 3, 2006, and is associated with the NDE program for the use of ASME Section XI, Appendix VIII for the examination of the reactor Vessel Shell-to-Flange and Head-to-Flange Welds, [ADAMS Accession No. ML053470091]
- Request ISI-ALT-2 (Units 1 and 2), authorized on November 9, 2005, and is associated with the NDE program for weld reference system requirements, [ADAMS Accession No. ML052970008]
- Request ISI-ALT-4 (Units 1 and 2), authorized on November 9, 2005 and is associated with the NDE program for the use PDI as an alternate to ASME Section XI, Appendix VIII, Supplement 11, [ADAMS Accession No. ML052970008]
- Request ISI-ALT-6 (Units 1 and 2), authorized on November 9, 2005, and is associated with the NDE program for the use of PDI as an alternate to ASME Section XI, Appendix VIII, Supplement 10, Table VIII-S2-1, [ADAMS Accession No. ML052970008]
- Request ISI-ALT-GEN-08-01 (Unit 1), authorized on August 26, 2008 and is associated with the NDE program for the inservice examination of weld 1C11-1CRD-3-R-18A (control rod drive nozzle- to-cap weld overlay), [ADAMS Accession No. ML081680476]
- Request ISI-ALT-08-02 (Units 1 and 2), authorized on June 24, 2009 and is associated with the R/R program for preemptive overlays, [ADAMS Accession No. ML090340017]. Based on HNP comments, a revised SER was issued on May 26, 2011 [ADAMS Accession No. ML11139A438].

In accordance with 10 CFR 50.55a(g)(4)(ii), the Code of Record for the ISI/CII programs will be the 2007 Edition with 2008 Addenda with the selection, planning and scheduling of ISI/CII examinations and tests as defined in IWB-, IWC-, IWD- IWE- and IWF-2500 or NRC authorized ISI alternatives being performed accordingly.

SNC has proposed specific details in Attachment 1 regarding the use of or reference to "Articles" (e.g. IWA-4000, IWA-5000) from every "Subsection" (e.g. IWA, IWB, etc) of the 2001 Edition with 2003 Addenda for the performance of R/R, PT and NDE activities and the 2007 Edition through 2008 Addenda for the ISI/CII program selection, planning and scheduling of ISI/CII examinations and tests.

Basis for Use:

On December 31, 2015, the HNP ISI/CII programs will be updated to the Fifth Ten Year Interval in accordance with 10 CFR 50.55a(g)(4)(ii). While the ISI/CII related activities such as R/R, PT and NDE would normally be included as part of the update to the 2007 Edition and 2008 Addenda of ASME Section XI, the proposed alternative is to maintain these ISI/CII related activities in compliance with ASME Section XI, 2001 Edition through the 2003 Addenda, while conforming to all conditions of 10 CFR 50.55a.

SNC has standardized the performance of ISI/CII related activities such as R/R, PT and NDE across its entire nuclear fleet to the ASME Section XI, 2001 Edition through the 2003 Addenda. While ISI/CII program plans are controlled on a site-by-site basis, the R/R, PT and NDE programs are administered as common fleet procedures. With SNC being required to update the HNP ISI/CII, R/R, PT and NDE program activities to the 2007 Edition with the 2008 Addenda in accordance with 10 CFR 50.55a(b), this will require establishing and maintaining two different programs; one for HNP and one for the other four (4) SNC nuclear plants.

Although the 2007 Edition through the 2008 Addenda made changes to Section XI, these changes were not necessary to ensure an acceptable level of quality and safety. Nor were these changes made to address a deficiency in the Code that adversely impacted safety. In the latest revision to 10 CFR 50.55a, the NRC does not mandate that other plants that have adopted an earlier edition and addenda follow any of the new paragraphs in the 2007 Edition through the 2008 Addenda.

Pursuant to 10 CFR 50.55a(b)(3)(v), this request is not applicable to the snubber program because HNP will use the ASME Operation and Maintenance Code for snubber inservice inspection and testing.

SNC has process controls in place to track and monitor the implementation of the dual Code Editions/Addenda of ASME Section XI. These process controls, summarized below, need only be updated as they apply to the selection, planning and scheduling of ISI/CII examinations and tests.

- **HNP Inservice Inspection Plan:** This document implements the ASME Section XI inservice inspection program at HNP. It ensures that the selection, planning and scheduling of ISI/CII examinations and tests are performed in accordance with 2007 Edition/2008 Addenda of ASME Section XI as delineated in Attachment 1.

- **Administrative and Program Procedures:** These procedures establish requirements for implementing the ASME Section XI R/R, PT and NDE programs. These procedures also ensure that program requirements comply with applicable requirements in the 2001 Edition for Appendix VIII ultrasonic examination qualifications and the 2001 Edition through the 2003 Addenda of ASME Section XI as described in Attachment 1 for the performance of R/R, PT and NDE activities.

SNC believes that its existing processes will ensure that the use of dual Code Editions/Addenda at HNP are appropriately managed, tracked, and controlled.

SNC believes that maintaining the HNP ISI/CII related activities to the 2001 Edition through the 2003 Addenda standard with the other SNC plants provides an acceptable level of quality and safety at HNP. This allows leveraging the knowledge from the four other SNC nuclear plants of ISI/CII related activities to provide HNP with a wealth of experience to draw on as well as minimizing the time spent on developing and maintaining procedures that are different from the rest of the SNC fleet. Therefore, this proposed alternative provides an acceptable level of quality and safety, commensurate with the provisions of 10 CFR 50.55a(z)(1).

6. Duration of Proposed Alternative

The Fifth 10-Year ISI/CII Interval at HNP begins on December 31, 2015 and ends on December 30, 2025. However, with four other SNC nuclear operating plants starting new 10-year ISI/CII inspection intervals May and November of 2017, SNC proposes to maintain standardization of the R/R, PT and NDE programs across its entire nuclear fleet with the 2001 Edition through 2003 Addenda through November 2017. Prior to November 30, 2017, SNC will therefore be required to request NRC approval to update these ASME Section XI activities to the latest ASME Code edition incorporated by reference in 10 CFR 50.55a for the entire fleet. Therefore, the proposed duration of this alternative is from December 31, 2015 through November 30, 2017.

7. Precedents

This request is similar in nature to the following requests for alternatives, in that, Entergy nuclear plants were granted use of 2001 Edition through 2003 Addenda for ISI related activities such as R/R, PT and NDE with the Code of Record for the ISI program being a different Code edition.

- "Relief Request ISI-2008-1, Use of Later Edition and Addenda of ASME Code, Section XI for Repair and Replacement, Pressure Testing, and Non-Destructive Testing Activities -Vermont Yankee Nuclear Power Station (TAC NO. ME0239)," dated April 30, 2009 [ADAMS Accession No. ML091170111]

- “Relief Request ISI-2008-1, Use of Later edition and addenda of ASME Code, Section XI for Repair and Replacement, Pressure testing, and Non-Destructive Testing Activities - Pilgrim nuclear power station (TAC NO. ME0238),” dated April 30, 2009 [ADAMS Accession No. ML091130456]
- “Arkansas Nuclear One, Unit 2 - ISI-2007-1, Request to Use a Later Edition and Addenda of American Society of Mechanical Engineers Boiler and Pressure Vessel Code (TAC NO. MD6603,” dated December 20, 2007 [ADAMS Accession No. ML073390442]
- “Vermont Yankee Relief Request ISI-05, Maintaining Certain ISI Related Activities on Current 2001 Edition through 2003 Addenda of ASME Code Section XI,” dated March 27, 2013 [ADAMS Accession No. ML13092A204], supplemented June 12, 2013 [ADAMS Accession No. ML1301692A057], and August 7, 2013 [ADAMS Accession No. ML13224A243] and approved August 22, 2013 (TAC NO. MF1194), [ADAMS Accession No. ML13228A197]

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Attachment

**Proposed ASME Section XI Code of Record for the HNP ISI Fifth 10-Year ISI/CII
Interval**

PROPOSED ASME SECTION XI CODE OF RECORD FOR HNP

ASME Section XI Code Provision		ASME Section XI Code Edition/Addenda ¹		
Sub-section	Article	2001 Edition/ No Addenda	2001 Edition/ 2003 Addenda	2007 Edition/ 2008 Addenda
IWA-General Requirements	IWA-1000		X	
	IWA-2000		X ²	X ²
	IWA-3000		X	
	IWA-4000		X ³	
	IWA-5000		X	
	IWA-6000		X	
	IWA-9000		X	
IWB-Req'ts for Class 1 Components	IWB-1000			X ⁴
	IWB-2000			X ⁴
	IWB-3000		X ⁵	
	IWB-5000		X	
IWC-Req'ts for Class 2 Components	IWC-1000			X ⁴
	IWC-2000			X ⁴
	IWC-3000		X	
	IWC-5000		X	
IWD-Req'ts for Class 3 Components	IWD-1000			X ⁴
	IWD-2000			X ⁴
	IWD-3000		X	
	IWD-5000		X	
IWE-Req'ts for Class MC Components	IWE-1000			X ⁴
	IWE-2000			X ⁴
	IWE-3000		X	
	IWE-5000		X	
IWF-Req'ts for Class 1, 2, 3, and MC Supports	IWF-1000			X ⁴
	IWF-2000			X ⁴
	IWF-3000		X	
	IWF-5000		X ⁶	
Mandatory Appendices	I		X	
	II		X	
	III		X	
	IV		X	
	V		x	
	VI		X	
	VII		X	
	VIII	X		
	IX		X	
	X			X ⁴

Proposed ASME Section XI Code of Record for the HNP ISI Fifth 10-Year ISI/CII Interval

Notes:

- (1) Southern Nuclear Operating Company will also comply with all NRC conditions, limitations, and restrictions specified in 10 CFR 50.55a as they apply to the specific edition and addenda referenced.
- (2) HNP is proposing to use IWA-2100, 2200, 2300 and 2600 from the 2001 Edition/2003 Addenda for requirements applicable to authorized inspection, examination methods, qualification of NDE personnel and the weld reference system. However, HNP will use the 2007 Edition/2008 Addenda when using IWA-2400 and 2500 for the selection, planning and scheduling of ISI/CII examinations and tests.
- (3) As exceptions to IWA-4000 of the 2001 Edition/2003 Addenda, HNP will comply with the alternatives listed below to comply with NRC conditions in 10 CFR.50.55a:
 - The NDE provision in IWA-4540(a)(2) of the 2001 Edition/2002 Addenda will be applied when performing system leakage tests after repair/replacement activities involving welding or brazing to comply with 10 CFR 50.55a(b)(2)(xx)(B).
 - Pressure testing of mechanical joints of Class 1, 2, and 3 items will be performed in accordance with IWA-4540(c) of the 1998 Edition/No Addenda to comply with 10 CFR 50.55a(b)(2)(xxvi).
- (4) The selection, planning, and scheduling of ISI examinations/tests will comply with these ASME Section XI articles (e.g. IWB-1000 and 2000) from the 2007 Edition/2008 Addenda or applicable NRC approved alternatives that are specified in the HNP ISI/CII Program Plans.
- (5) Southern Nuclear Operating Company will not apply the IWB-3514 acceptance standards of the 2001 Edition/2003 Addenda to planar surface flaws in UNS N06600, N06682, or W86182 materials or austenitic stainless steels which are subject to stress corrosion cracking. Therefore, if a flaw is found in an ASME Class 1 austenitic stainless steel weld, Southern Nuclear Operating Company would either evaluate the acceptability of the flaw in accordance with IWB-3600 or correct the flawed condition by performing an approved ASME Section XI repair/replacement activity.
- (6) As required by 10 CFR 50.55a(b)(3)(v), snubber pre-service and in-service inspection and testing requirements are implemented in subsection ISTD of the Operation and Maintenance (OM) Code, 2004 Edition through 2006 Addenda in its entirety.