



Entergy Nuclear Operations, Inc.
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PNP 2015-022

April 29, 2015

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

SUBJECT: Relief Request Number RR 5-1, Proposed Alternative, Extend the Current ASME Code of Record into the Fifth 10-year ISI Interval for ISI Related Activities

Palisades Nuclear Plant
Docket 50-255
Renewed License No. DPR-20

- References:
1. NRC letter to Nuclear Management Company, LLC, *Palisades Nuclear Plant - Request for Relief from ASME Boiler and Pressure Vessel Code, Section XI, System Leakage Test Prior to Plant Startup Following a Reactor Refueling Outage, Relief Request No. RR 4-5 (TAC No. MD2408)*, dated April 20, 2007 (ADAMS Accession Number ML070790035)
 2. NRC letter to Nuclear Management Company, LLC, *Palisades Nuclear Plant - Request for Relief from ASME Code, Section XI, IWA-2600, Weld Reference System, Relief Request No. RR 4-11 (TAC No. MD2414)*, dated April 30, 2007 (ADAMS Accession Number ML070920029)
 3. NRC letter to Entergy Nuclear Operations, Inc., *Palisades Nuclear Plant - Relief Request Number RR-4-19, Proposed Alternative to the Requirements of ASME Code Case N-638-4 (TAC No. MF3517)*, dated August 13, 2014 (ADAMS Accession Number ML14199A557)

Dear Sir or Madam:

Pursuant to 10 CFR 50.55a(z)(1), Entergy Nuclear Operations, Inc. (ENO) hereby requests Nuclear Regulatory Commission (NRC) approval of relief request number RR 5-1, a proposed alternative for the Palisades Nuclear Plant (PNP). This alternative is for the fifth 10-year Inservice Inspection (ISI) interval.

This request is to update the PNP ISI program to the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (BPV), Section XI 2007 Edition with the 2008 Addenda while maintaining and performing ISI related activities such as repair/replacement (R/R), pressure testing (PT), and nondestructive examination (NDE) to the current, fourth 10-year ISI interval, ASME BPV, Section XI, 2001 Edition through 2003 Addenda requirements.

ENO's proposed duration for this alternative is from December 13, 2015 through December 31, 2017 and will include one refueling outage in the spring of 2017. The information provided in the enclosed request demonstrates that the proposed alternative provides an acceptable level of quality and safety. Additionally, ENO requests that three relief requests; RR 4-5 (Reference 1), RR 4-11 (Reference 2), and RR 4-19 (Reference 3), previously authorized for use during the current fourth 10-year ISI interval, be extended for use into the fifth 10-year ISI interval for the time duration coinciding with the planned use of the 2001 Edition through the 2003 Addenda of Section XI.

ENO requests NRC approval by December 12, 2015 to support plans to implement the proposed alternative at the start of the fifth ten-year interval.

Summary of Commitments

This letter contains no new commitments and no revised commitments.

Sincerely,

A handwritten signature in black ink, appearing to read 'JAH' followed by a stylized flourish.

jah/jpm

Enclosure: Entergy Nuclear Operations, Inc., Palisades Nuclear Plant, 10 CFR 50.55a
Relief Request Number RR 5-1, Proposed Alternative in Accordance with
10 CFR 50.55a(z)(1) Maintaining Inservice Inspection Related Activities on the
2001E/2003A ASME Section XI Code

cc: Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC

ENCLOSURE

ENTERGY NUCLEAR OPERATIONS, INC.

PALISADES NUCLEAR PLANT

10 CFR 50.55a Relief Request Number RR 5-1

Proposed Alternative

in Accordance with 10 CFR 50.55a(z)(1)

Maintaining Inservice Inspection

Related Activities on the

2001E/2003A ASME Section XI Code

8 pages follow

**Entergy Nuclear Operations, Inc., Palisades Nuclear Plant,
10 CFR 50.55a Request Number RR 5-1 Proposed Alternative in Accordance with
10 CFR 50.55a(z)(1) Maintaining Inservice Inspection Related Activities
on the 2011E/2003A ASME Section XI Code**

1. American Society of Mechanical Engineers (ASME) Code Component(s) Affected

Code Class: ASME Code Class 1, 2, 3 components and component supports
Component Numbers: Various
Code References: ASME Boiler and Pressure Vessel (BPV) Code, Section XI, 2007 Edition with 2008 Addenda
ASME BPV Code, Section XI, 2001 Edition with 2003 Addenda
Examination Category: Various
Item Number(s): Various
Unit/Inspection Interval Palisades Nuclear Plant (PNP) / Fifth 10-Year ISI Interval
December 13, 2015 – December 12, 2025

2. Applicable Code Edition and Addenda

Entergy Nuclear Operations, Inc. (ENO), will start the fifth 10-year Inservice Inspection (ISI) program interval at PNP on December 13, 2015, and is required to follow the ASME BPV Code, Section XI, 2007 Edition through the 2008 Addenda.

3. Applicable ASME Code Requirements

ENO is required to update the PNP 120-month ISI program to the latest Edition and Addenda of the ASME BPV Code, Section XI, as approved by the NRC in 10 CFR 50.55a(1)(ii), for the fifth 10-Year ISI Interval.

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 BPV 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 following 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 BPV 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 (a)(1)(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 which 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

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10 CFR 50.55a(z)(1) Maintaining Inservice Inspection Related Activities
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(b)(2)(viii) and (b)(2)(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

ENO proposes an alternative to the requirements of 10 CFR 50.55a(a)(1)(ii), 10 CFR 50.55a(g)(4) and 10 CFR 50.55a(g)(4)(ii); specifically, to update the PNP ISI program to the ASME BPV Code, Section XI, 2007 Edition with the 2008 Addenda while maintaining and performing ISI related activities such as Repair/Replacements (R/R), Pressure Testing (PT), and Nondestructive Examination (NDE) to the current ASME BPV Code, Section XI 2001 Edition through the 2003 Addenda requirements. With eight other Entergy nuclear operating plants starting new 10-year ISI inspection intervals between June 2015 and December 2017, Entergy proposes with this alternative to maintain standardization of the corporate administered R/R, PT, and NDE programs across its entire nuclear fleet at the 2001 Edition through 2003 Addenda through December 2017. This will be done so that these ISI related activities can remain standardized, implemented and administered consistently at all of the Entergy plants so that all ISI related fleet activities can be updated effectively at the same time. This request does not impact nor affect the PNP Containment ISI (CISI) program for Subsection IWE/IWL, because the PNP CISI program is not required to be updated until after December 31, 2017, which is the expiration date for this request.

5. Proposed Alternative and Basis for Use

Proposed Alternative

Pursuant to 10 CFR 50.55a(z)(1), ENO requests authorization to maintain the current use of ASME BPV Code, Section XI, 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, ENO 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 BPV Section XI Code. Code Cases will also be adopted per RG 1.147, *Inservice Inspection Code Cases Acceptability, ASME Section XI, Division 1*, for those cases applicable to the 2001 Edition through the 2003 Addenda. Additionally, PNP 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

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the planned use of the 2001 Edition through the 2003 Addenda of Section XI. The requests to be extended are:

- Request RR 4-5, authorized on April 20, 2007, (TAC No. MD2408) and associated with the PT program for the direct visual examination under the reactor vessel during the system leakage test [ADAMS Accession No. ML070790035]
- Request RR 4-11, authorized on April 30, 2007, (TAC No. MD2414) and associated with the NDE program (IWA-2600 Weld Reference System) [ADAMS Accession No. ML070920029]
- Request RR 4-19, authorized on August 13, 2014, (TAC No. MF3517) and associated with the R/R program (Proposed Alternative to the Requirements of ASME Code Case N-638-4) [ADAMS Accession No. ML14199A557]

In accordance with 10 CFR 50.55a(g)(4)(ii), the code of record for the ISI program will be the ASME BPV Code, Section XI, 2007 Edition with 2008 Addenda with the selection, planning and scheduling of ISI examinations and tests as defined in IWB-, IWC-, IWD- and IWF-2500 or NRC authorized ISI alternatives being performed accordingly.

ENO has proposed specific details in the Attachment 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 program selection, planning and scheduling of ISI examinations and tests.

Basis for Use

On December 13, 2015, the PNP ISI program will be updated to the Fifth Ten-Year Interval in accordance with 10 CFR 50.55a(g)(4)(ii). While the ISI 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 related activities in compliance with ASME Section XI, 2001 Edition through the 2003 Addenda, while conforming to all conditions of 10 CFR 50.55a.

Entergy has standardized the performance of ISI related activities such as R/R, PT and NDE across its entire nuclear fleet to the ASME BPV Code, Section XI, 2001 Edition through the 2003 Addenda. While ISI program plans are controlled on a site-by-site basis, the R/R, PT and NDE programs are administered under a set of corporate procedures. With Entergy being required to update the PNP ISI, R/R, PT and NDE program activities to the 2007 Edition with the 2008 Addenda in accordance with 10 CFR 50.55a(a)(1)(ii), this would require establishing and maintaining two different programs; one for PNP and one for the other nine (9) Entergy 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 ASME BPV Code that adversely impacted safety. In the latest revision to 10 CFR 50.55a, the NRC did not mandate that

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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 PNP will use the ASME Operation and Maintenance (OM) Code for snubber inservice inspection and testing.

Entergy 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 examinations and tests.

- **Palisades Inservice Inspection Plan:** This document implements the ASME BPV Code, Section XI inservice inspection program at PNP. It ensures that the selection, planning and scheduling of ISI examinations and tests will be performed in accordance with 2007 Edition/2008 Addenda of ASME Section XI as delineated in the Attachment.
- **Administrative and Program Procedures:** These procedures establish requirements for implementing the ASME BPV Code, Section XI R/R, PT and NDE programs. These procedures also ensure that program requirements comply with applicable requirements in the 2001 Edition (Appendix VIII¹ ultrasonic examination qualifications) and the 2001 Edition/2003 Addenda of ASME Section XI as described in the Attachment for the performance of R/R, PT and NDE activities.

Entergy's existing processes will ensure that the use of dual Code Editions/Addenda at PNP are appropriately managed, tracked, and controlled.

Maintaining the PNP ISI related activities to the 2001 Edition through the 2003 Addenda standard with the other Entergy plants will improve the level of quality and safety at PNP. This allows leveraging the knowledge from the eight other Entergy nuclear plants of ISI related activities to provide PNP 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 Entergy 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 Interval at PNP begins on December 13, 2015 and ends on December 12, 2025. However, with eight other Entergy nuclear operating plants starting new 10-year ISI inspection intervals between June 2015 and December 2017, Entergy proposes to maintain standardization of the corporate administered R/R, PT and NDE programs across its entire nuclear fleet at the 2001 Edition through 2003 Addenda through December 2017. Prior to December 31, 2017, Entergy will request, as required, NRC approval to update these ASME Section XI activities to the latest ASME BPV Code edition incorporated by reference in 10 CFR 50.55a for the entire fleet. Therefore, the proposed duration of this

¹ Examinations performed using Code Case N-729-1 will be in accordance with Appendix VIII of the 2004 Edition of Section XI pursuant to 10 CFR 50.55a(g)(6)(ii)(D)(4).

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alternative is from December 13, 2015 through December 31, 2017 and will include only the spring 2017 refueling outage.

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 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. ML13169A057], and August 7, 2013 [ADAMS Accession No. ML13224A243] and authorized August 22, 2013 (TAC No. MF1194), [ADAMS Accession No. ML13228A197]

Attachment: Request RR 5-1, Proposed ASME Section XI Code of Record for Palisades Nuclear Plant Fifth 10-Year Inservice Inspection Interval

ATTACHMENT

REQUEST RR 5-1

PROPOSED ASME SECTION XI CODE OF RECORD

FOR PALISADES NUCLEAR PLANT

FIFTH 10-YEAR INSERVICE INSPECTION INTERVAL

PROPOSED ASME SECTION XI CODE OF RECORD FOR PALISADES NUCLEAR PLANT

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	
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

Notes: A

- (1) Entergy Nuclear Operations, Inc. (ENO) 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) Palisades Nuclear Plant (PNP) is proposing to use IWA-2100, 2200, and 2300 from the 2001 Edition/2003 Addenda for requirements applicable to authorized inspection, examination methods, qualification of non-destructive examination (NDE) personnel and will

continue to use the weld reference system authorized in request RR 4-11 cited in Section 5. However, PNP will use the 2007 Edition/2008 Addenda when using IWA-2400 and 2500 for the selection, planning and scheduling of ISI examinations and tests.

- (3) As exceptions to IWA-4000 of the 2001 Edition/2003 Addenda, PNP 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 American Society of Mechanical Engineers (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 PNP ISI Program Plans.
- (5) ENO 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, ENO 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 preservice and inservice inspection and testing requirements will be implemented from subsection ISTD of the Operation and Maintenance (OM) Code, 2004 Edition through 2006 Addenda.