



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

July 15, 2010

Vice President, Operations  
Entergy Nuclear Operations, Inc.  
Indian Point Energy Center  
450 Broadway, GSB  
P.O. Box 249  
Buchanan, NY 10511-0249

SUBJECT: INDIAN POINT NUCLEAR GENERATING UNIT NO. 2 - RELIEF REQUEST  
RR-11 FOR THE FOURTH 10-YEAR INSERVICE INSPECTION INTERVAL  
(TAC NO. ME4064)

Dear Sir or Madam:

By letter dated June 3, 2010, Entergy Nuclear Operations, Inc. (Entergy or the licensee), submitted Relief Request RR-11 for Indian Point Nuclear Generating Unit No. 2 (IP2) to the Nuclear Regulatory Commission (NRC) for IP2's fourth 10-year inservice inspection (ISI) and containment inservice inspection (CISI) interval, which will end in May 2016. Entergy requests to utilize the alternative qualification requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Case N-739-1, "Alternate Qualification Requirements for Personnel Performing Class CC Concrete and Post-tensioning System Visual Examinations," in lieu of the requirements in the ASME Code, Section XI, Article IWA-2300, "Qualifications Of Nondestructive Examination Personnel," for personnel performing visual examinations of ASME Code Class CC concrete surfaces for this CISI interval.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(a)(3)(i), the licensee requested to use the proposed alternative on the basis that the alternative provides an acceptable level of quality and safety.

The NRC staff has reviewed the licensee's submittal and concludes that the licensee's proposed alternative to use ASME Code Case N-739-1 in lieu of ASME Code, Section XI, Article IWA-2300, as discussed in Relief Request RR-11, will provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the use of the proposed alternative for qualification of personnel performing visual examinations of Class CC concrete surfaces is authorized for the fourth 10-year CISI program interval for IP2, or until ASME Code Case N-739-1 is approved for general use by reference in Regulatory Guide (RG) 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1."

All other applicable requirements of the ASME Code, Section XI, for which relief has not been specifically requested, remain applicable, including a third-party review by the Authorized Nuclear Inservice Inspector.

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If you have any questions, please contact the Indian Point Project Manager, John Boska, at (301) 415-2901.

Sincerely,

A handwritten signature in black ink that reads "Nancy L. Salgado". The signature is written in a cursive style with a large initial 'N' and a long, sweeping tail on the 'o'.

Nancy L. Salgado, Chief  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-247

Enclosure:  
As stated

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELIEF REQUEST NO. RR-11

ENTERGY NUCLEAR OPERATIONS, INC.

INDIAN POINT NUCLEAR GENERATING UNIT NO. 2

DOCKET NO. 50-247

1.0 INTRODUCTION

By letter dated June 3, 2010 (Reference 1), Entergy Nuclear Operations, Inc. (Entergy or the licensee), submitted Relief Request RR-11 for Indian Point Nuclear Generating Unit No. 2 (IP2) to the Nuclear Regulatory Commission (NRC) for IP2's fourth 10-year inservice inspection (ISI) and containment inservice inspection (CISI) interval, which will end in May 2016. Entergy requests to utilize the alternative qualification requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) Case N-739-1, "Alternate Qualification Requirements for Personnel Performing Class CC Concrete and Post-tensioning System Visual Examinations," in lieu of the requirements in the ASME Code, Section XI, Article IWA-2300, "Qualifications Of Nondestructive Examination Personnel," for personnel performing visual examinations of ASME Code Class CC concrete surfaces for this CISI interval. IP2 does not have any post-tensioning systems in the containment structure.

This safety evaluation addresses the merits of the request for relief from ASME Code requirements proposed by the licensee pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(a)(3)(i) and is based entirely on the licensee's submittal (Reference 1).

2.0 REGULATORY REQUIREMENTS

The ISI of ASME Code Class 1, 2, 3, MC, and CC components is to be performed in accordance with the requirements of Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Code and applicable editions and addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the Commission.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class MC and CC components and their integral attachments must meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection (ISI) of Nuclear Power Plant Components," to the extent practical within the limitation of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the

Enclosure

requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed in 10 CFR 50.55a(b).

Pursuant to 10 CFR 50.55a(a)(3), alternatives to the requirements of paragraphs (c), (d), (e), (f), (g), and (h) of 10 CFR 50.55a may be authorized by the NRC if the licensee demonstrates that: (i) the proposed alternatives provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The licensee submitted Relief Request RR-11 pursuant to 10 CFR 50.55a(3)(i) as an alternative to the regulatory modification stipulated in 10 CFR 50.55a(b)(2)(viii)(F) to the provision in IWL-2310(d) of the ASME Code, Section XI.

### 3.0 TECHNICAL EVALUATION

#### 3.1 Relief Request RR-11

The licensee requested relief, pursuant to 10 CFR 50.55a(a)(3)(i), to utilize the alternative qualification requirements of ASME Code Case N-739-1, "Alternate Qualification Requirements for Personnel Performing Class CC Concrete and Post-tensioning System Visual Examinations," in lieu of the requirements in IWA-2300, "Qualifications Of Nondestructive Examination Personnel," specifically for personnel performing visual examinations of ASME Code Class CC concrete surfaces for IP2 for the fourth 10-year CISI interval. IP2 does not have any post-tensioning systems in the containment structure.

##### 3.1.1 ASME Code Components Affected

Code Class:	CC
Code Reference:	ASME Code, Section XI, 2001 Edition with 2003 Addenda, Article IWA-2300 and Subsection IWL-2310 Code Case N-739-1
Examination Category:	L-A
Item Number:	L1.11, L1.12 in Table IWL-2500-1 of Subsection IWL
Description:	Request to Utilize the Alternative Requirements of Code Case N-739-1: "Alternative Qualification Requirements for Personnel Performing Class CC Concrete and Post-Tensioning System Visual Examinations"

### 3.1.2 Applicable Code Edition and Addenda

ASME Code, Section XI, 2001 Edition, 2003 Addenda, Subsections IWA and IWL.

### 3.1.3 Applicable Code Requirement From Which Relief is Requested

Paragraph IWL-2310(d) states that: "The Owner shall define qualification requirements for personnel performing examinations of concrete and tendon anchorage hardware, wires, or strands."

The regulatory modification requirement in 10 CFR 50.55a(b)(2)(viii)(F) states that "Personnel that examine containment concrete surfaces and tendon hardware, wires, or strands must meet the qualification provisions in IWA-2300. The "owner-defined" personnel qualification provisions in IWL-2310(d) are not approved for use."

Article IWA-2300 provides requirements for qualification and certification of personnel performing non-destructive examinations.

### 3.1.4 Proposed Alternative

The licensee has requested to utilize the alternative requirements in the ASME Code, Section XI, Division 1, Code Case N-739-1, "Alternate Qualification Requirements for Personnel Performing Class CC Concrete and Post-tensioning System Visual Examinations," in lieu of the requirements of IWA-2300 for qualification of personnel that examine containment concrete surfaces. The licensee has requested this relief pursuant to 10 CFR 50.55a(a)(3)(i), on the basis that the proposed alternative would provide an acceptable level of quality and safety.

### 3.1.5 Licensee's Basis for Proposed Alternative

The licensee stated that ASME has developed an alternative set of qualification requirements in Code Case N-739-1 which provide detailed criteria to qualify personnel who examine containment concrete surfaces and tendon hardware, wires or strands. The licensee stated that, similar to the requirements in IWA-2300, Code Case N-739-1 includes plant and Section XI Subsection IWL experience requirements, as well as detailed training proficiency requirements for personnel performing Class CC concrete visual examinations. IP2 does not have any post-tensioning systems in the containment structure.

The licensee stated that the alternative requirements in ASME Code Case N-739-1 details specific guidance for personnel qualification for containment concrete inspections that provide an acceptable level of quality and safety similar to the requirements in IWA-2300 and, therefore, addresses the intent of the requirements in 10 CFR 50.55a(b)(2)(viii)(F).

### 3.1.6 Duration of Proposed Alternative

The proposed alternative is requested for the fourth 10-year CISI interval for IP2, which began in March 2007, and ends in May 2016.

### 3.1.7 Staff Evaluation

The modification stipulated in 10 CFR 50.55a(b)(2)(viii)(F) states that personnel that examine containment concrete surfaces and tendon hardware, wires, or strands must meet the qualification provisions in IWA-2300 and that the "owner-defined" personnel qualification provisions in IWL-2310(d) are not approved for use. IWA-2300 stipulates qualification provisions for personnel performing nondestructive examination, including VT-1, VT-2, and VT-3 visual examinations. Paragraph IWA-2312(c) requires training, qualification, and certification of visual examination personnel to comply with the requirements of Appendix VI of the Code, which makes reference to standard CP-189, "Standard for Qualification and Certification of Nondestructive Testing Personnel," by the American Society of Nondestructive Testing, and allows for limited certification (for personnel who are restricted to performing examinations of limited or specific scope, i.e., limited operations or limited techniques) per IWA-2350.

The NRC staff's review of ASME Code Case N-739-1 finds that it stipulates specific experience, classroom training, written and practical examination, and vision test requirements for qualification of personnel approved for performing general (or VT-3) and detailed (or VT-1) visual examinations of structural concrete and reinforcing steel of Class CC containments under the direction of the responsible engineer.

The qualification requirements adequately cover relevant plant experience, instructional topics for classroom training in IWL requirements and plant-specific IWL visual examination procedures, written and practical examination requirements and frequency of administration to demonstrate training proficiency, vision test requirements and documentation of qualification requirements in the employer's written practice.

The NRC staff finds that ASME Code Case N-739-1 meets the intent of the qualification provisions in IWA-2300, with specific scope for qualification of personnel that examine concrete surfaces of Class CC containments and is, therefore, acceptable as an alternative to the provisions of IWA-2300 for that scope of examinations. Therefore, the NRC staff finds that the relief request meets the intent of the modification stipulated in 10 CFR 50.55a(b)(2)(viii)(F) and provides an acceptable level of quality and safety. The NRC staff notes that the ACI reference indicated as ACI 201.1 in Code Case N-739-1 should be ACI 201.1R. The NRC staff authorizes the requested relief pursuant to 10 CFR 50.55a(a)(3)(i) for the fourth CISI interval from March 2007 thru May 2016.

## 4.0 CONCLUSION

On the basis of the NRC staff's review of the submitted information (Reference 1) and the staff's evaluation above, the NRC staff concludes that the licensee's proposed alternative to use ASME Code Case N-739-1 in lieu of ASME Code, Section XI, IWA-2300, as discussed in the request for relief RR-11, will provide an acceptable level of quality and safety. Therefore, pursuant to 10 CFR 50.55a(a)(3)(i), the use of the proposed alternative for qualification of personnel performing visual examinations of Class CC concrete surfaces is authorized for the fourth 10-year CISI program interval for IP2, or until ASME Code Case N-739-1 is approved for general use by reference in RG 1.147, "Inservice Inspection Code Case Acceptability, ASME Section XI, Division 1." After that time, if the licensee wishes to continue to use Code Case N-739-1, the licensee must follow all conditions and limitations placed on the use of the code

case, if any, that are specified in RG 1.147. All other applicable requirements of the ASME Code, Section XI, for which relief has not been specifically requested, remain applicable, including a third-party review by the Authorized Nuclear Inservice Inspector.

## 5.0 REFERENCES

1. Letter No. NL-10-059 dated June 3, 2010, from Robert Walpole, Licensing Manager, Entergy Nuclear Operations, Inc., to US NRC regarding Relief Request IP2-ISI-RR-11 for Indian Point Unit 2 for the Fourth 10-Year Containment Inservice Inspection interval (Agencywide Documents Access and Management System (ADAMS) Accession No. ML101650055).

Principal Contributor: Scott Sloan

Date: July 15, 2010

If you have any questions, please contact the Indian Point Project Manager, John Boska, at (301) 415-2901.

Sincerely,

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Nancy L. Salgado, Chief  
Plant Licensing Branch I-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-247

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As stated

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