



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

August 31, 2017

Vice President, Operations  
Entergy Operations, Inc.  
Grand Gulf Nuclear Station  
P.O. Box 756  
Port Gibson, MS 39150

SUBJECT: GRAND GULF NUCLEAR STATION, UNIT 1 – RELIEF REQUEST GG-ISI-022  
TO ALLOW USE OF LATER EDITIONS AND ADDENDA OF AMERICAN  
SOCIETY OF MECHANICAL ENGINEERS CODE FOR INSERVICE  
INSPECTION (CAC NO. MF9911)

Dear Sir or Madam:

By letter dated June 28, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17179A360), and clarified by e-mail dated July 24, 2017 (ADAMS Accession No. ML17206A152), Entergy Operations, Inc. (the licensee) submitted Relief Request GG-ISI-022 to allow use of certain portions of later editions and addenda of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, for inservice inspection (ISI). The relief request relates to the ISI requirement for Class 2 pump casing welds and valve body welds (Examination Category C-G in Table IWC-2500-1) at Grand Gulf Nuclear Station, Unit 1 (GGNS).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(g)(4)(iv), the licensee requested to use the 2007 Edition through 2008 Addenda of the ASME Code subject to conditions in 10 CFR 50.55a(b) for ISI of the welds in pump casing and valve body.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the licensee's submittal and determined, as set forth in the enclosed safety evaluation, that use of certain portions of subsequent editions and addenda of the ASME Code, Section XI, for ISI is acceptable. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(4)(iv). Therefore, the NRC staff authorizes request GG-ISI-022 (i.e., use of the 2007 Edition through 2008 Addenda of the ASME Code, Section XI, for ISI of Class 2 pump casing welds and valve body welds) for the remainder of the third 10-year ISI interval at GGNS, which is currently scheduled to end November 30, 2017.

All other ASME Code, Section XI, requirements for which relief was not specifically requested and authorized herein by the NRC staff remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

If you have any questions, please contact the Project Manager, Siva P. Lingam, at 301-415-1564 or via e-mail at [Siva.Lingam@nrc.gov](mailto:Siva.Lingam@nrc.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "R. Pascarelli".

Robert J. Pascarelli, Chief  
Plant Licensing Branch IV  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:  
Safety Evaluation

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELIEF REQUEST GG-ISI-022 REGARDING USE OF LATER EDITIONS AND ADDENDA OF  
AMERICAN SOCIETY OF MECHANICAL ENGINEERS CODE FOR INSERVICE INSPECTION

ENTERGY OPERATIONS, INC.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated June 28, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17179A360), and clarified by e-mail dated July 24, 2017 (ADAMS Accession No. ML17206A152), Entergy Operations, Inc. (the licensee) submitted Relief Request GG-ISI-022 to allow use of certain portions of later editions and addenda of the American Society of Mechanical Engineers Boiler and Pressure Vessel (BPV) Code (ASME Code), Section XI, for inservice inspection (ISI). The relief request relates to the ISI requirement for Class 2 pump casing welds and valve body welds (Examination Category C-G in Table IWC-2500-1) at Grand Gulf Nuclear Station, Unit 1 (GGNS).

Specifically, pursuant to Title 10 of the *Code of Federal Regulations*, (10 CFR), Section 50.55a(g)(4)(iv), "Applicable ISI Code: Use of subsequent Code editions and addenda," the licensee requested to use the 2007 Edition through 2008 Addenda of the ASME Code (Section XI) subject to conditions in 50.55a(b), "Use and conditions on the use of standards," for ISI of the welds in pump casing and valve body.

2.0 REGULATORY EVALUATION

The requirements in 10 CFR 50.55a, "Codes and standards," were revised in a *Federal Register* notice published on July 18, 2017 (82 FR 32934), which became effective on August 17, 2017.

Pursuant to 10 CFR 50.55a(a) "Documents approved for incorporation by reference" and 10 CFR 50.55a(a)(1)(ii) "ASME Boiler and Pressure Vessel Code, Section XI," the ASME Code, Section XI, from the 1970 Edition through 1976 Winter Addenda, and the 1977 Edition through 2013 Edition have been approved for incorporation by reference, but limited to those provisions identified in Section 10 CFR 50.55a(b)(2), "Conditions on ASME BPV Code, Section XI."

Pursuant to 10 CFR 50.55a(g)(4)(iv), inservice examination of components and system pressure tests may meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in Section 10 CFR 50.55a(a), subject to the conditions listed in Section 10 CFR 50.55a(b), and subject to Commission approval. Portions of editions or

Enclosure

addenda may be used, provided that all related requirements of the respective editions or addenda are met.

Based on the above, and subject to the following technical evaluation, the NRC staff finds that regulatory authority exists for the licensee to request and the NRC to authorize the use of subsequent editions and addenda of the ASME Code requested by the licensee.

### 3.0 TECHNICAL EVALUATION

#### Components Affected

ASME Code Class 2 pump casing welds and valve body welds are affected. These welds are classified as Examination Category C-G, Item Nos. C6.10 and C6.20 (Table IWC-2500-1 of ASME Code, Section XI).

#### Applicable Code Edition and Addenda

The Code of record for the third 10-year ISI interval is the 2001 Edition through 2003 Addenda of the ASME Code, Section XI.

#### Duration of Request

The licensee submitted this request for the remainder of the third 10-year ISI interval at GGNS, which commenced on May 31, 2008, and is scheduled to end on November 30, 2017.

#### Request

The licensee requested to use the requirements of the 2007 Edition through 2008 Addenda of the ASME Code (Section XI) for performance of ISI of Class 2 pump casing welds and valve body welds. The licensee stated that Examination Category C-G was removed from Table IWC-2500-1 of the 2007 Edition through 2008 Addenda.

The licensee stated that the VT-2 visual examinations that accompany system leakage test (Examination Category C-H in Table IWC-2500-1) will continue to be conducted every inspection period. Any through-wall leakage, if it were to occur, is detected by the VT-2 visual examinations.

#### Basis for Request

The licensee stated that the ISI requirements for Class 2 pump casing welds and valve body welds (Examination Category C-G) were removed from the 2007 Edition through 2008 Addenda because operating experience has not shown any failure of these welds.

The licensee stated that any degradations of the pump casing welds or valve body welds would be detected by the mechanic working on pump or valve component internals.

### 4.0 NRC Staff Evaluation

The NRC staff has evaluated this request pursuant to 10 CFR 50.55a(g)(4)(iv). The NRC staff's evaluation focuses on whether: (1) the subsequent editions and addenda of the ASME Code as requested for use, is incorporated by reference in 50.55a(a); (2) the Code requirements subject

to the conditions listed in 50.55a(b) are met; (3) a request is submitted for NRC approval; and (4) all related requirements of the respective editions and addenda are met. The NRC staff finds that if these four criteria are met, the requirements of 10 CFR 50.55a(g)(4)(iv) will also be met.

In evaluating the licensee's request GG-ISI-022, the NRC staff confirms that,

1. The 2007 Edition through 2008 Addenda of Section XI to the ASME Code as requested for use, is incorporated by reference in 10 CFR 50.55a, and subject to conditions in Section 10 CFR 50.55a(b)(2).
2. There are no applicable provisions in 10 CFR 50.55a.
3. This submittal (request GG-ISI-022) serves as the licensee's request for NRC approval to use the 2007 Edition through 2008 Addenda of Section XI for performance of the ISI of pump casing welds and valve body welds.
4. The licensee has acknowledged that it will comply with all related requirements of the respective editions and addenda (i.e., system leakage tests as required by Examination Category C-H in Table IWC-2500-1).

Based on the above, the NRC staff determines that each of the four regulatory requirements for use of certain portions of later editions and addenda of the Code have been met, and that use of the 2007 Edition through 2008 Addenda of the ASME Code (Section XI) for performance of ISI of Class 2 pump casing welds and valve body welds is acceptable.

## 5.0 CONCLUSION

As set forth above, the NRC staff determines that use of certain portions of subsequent editions and addenda of the ASME Code, Section XI, for ISI is acceptable. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(4)(iv). Therefore, the NRC staff authorizes request GG-ISI-022 (i.e., use of the 2007 Edition through 2008 Addenda of the ASME Code, Section XI, for ISI of Class 2 pump casing welds and valve body welds) for the remainder of the third 10-year ISI interval at GGNS, which is scheduled to end on November 30, 2017.

All other ASME Code, Section XI, requirements for which relief was not specifically requested and authorized herein by the NRC staff remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: A. Rezai

Date: August 31, 2017

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**ADAMS Accession No. ML17235A533**

\*SE via email

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