



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

January 4, 2010

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 – REQUEST FOR ADDITIONAL
INFORMATION RE: RELIEF REQUESTS GG-ISI-005 THROUGH GG-ISI-012
(TAC NOS. ME1376-ME1383)

Dear Sir or Madam:

By application dated May 29, 2009, as supplemented October 1, 2009, Entergy Operations, Inc. (Entergy, the licensee), submitted requests for relief GG-ISI-005 through GG-ISI-012 from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, for the second 10-year inservice inspection (ISI) interval at Grand Gulf Nuclear Station, Unit 1 (GGNS). The relief requests are based on limitations that preclude full code examination coverage for ASME Code welds and components.

The NRC staff has reviewed the information provided in your submittal and determined that additional information is required in order to complete its review. These questions were provided to Mr. M. Larson of your staff on December 17, 2009. Please provide a response to the enclosed questions by February 12, 2010.

The NRC staff considers that timely responses to requests for additional information help ensure sufficient time is available for staff review and contribute toward the NRC's goal of efficient and effective use of staff resources. If circumstances result in the need to revise the requested response date, please contact me at 301-415-2296 or via e-mail at fred.lyon@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "CF Lyon", is positioned above the typed name.

Carl. F. Lyon, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:
As stated

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REQUEST FOR ADDITIONAL INFORMATION

ENTERGY OPERATIONS, INC.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

By application dated May 29, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML091490755), as supplemented by letter dated October 1, 2009 (ADAMS Accession No. ML092760079), Entergy Operations, Inc. (Entergy, the licensee), submitted requests for relief GG-ISI-005 through GG-ISI-012 from the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, for the second 10-year inservice inspection (ISI) interval at Grand Gulf Nuclear Station, Unit 1 (GGNS). The relief requests are based on limitations that preclude full code examination coverage for ASME Code welds and components.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(5)(iii), the licensee submitted the subject requests for relief for limited examinations in multiple ASME Code Examination Categories. The ASME Code requires that 100 percent of the examination volumes, or surface areas, described in ASME Code, Section XI, Tables IWB-2500 and IWC-2500 be performed during each interval. The licensee stated that 100 percent of the ASME Code-required volumes, or surface areas, are impractical to obtain at GGNS.

The regulations in 10 CFR 50.55a(g)(5)(iii) state that when licensees determine that conformance with ASME Code requirements are impractical at their facility, they shall submit information to support this determination. The Nuclear Regulatory Commission (NRC) will evaluate such requests based on impracticality, and may impose alternatives, giving due consideration to public safety and the burden imposed on the licensee. Based on the NRC staff's review, it determined that additional information was required in order to complete its evaluation of the relief requests.

1. Requests for Relief GG-ISI-005 through GG-ISI-012 (Parts A through H), Examination Categories B-A, B-D, B-F, B-G-1, B-J, B-K, C-F-2, and F-A

Based on the licensee's submittal, it is unclear which Edition and Addenda of ASME Code, Section XI, is applicable to the specific components listed in the individual relief requests. For example, in relief request GG-ISI-005, the licensee lists the 1977 Edition through the 1979 Addenda, 1992 Edition through the 1993 Addenda, and the 1995 Edition through the 1996 Addenda as having applicable ISI requirements for the subject components. The licensee states that the 1995 Edition through the 1996 Addenda of ASME Code was mandated for implementation of the ASME Code, Section XI, Appendix VIII examinations during the interval; however, this does not clear up the multiple ASME Code applicability issues. Please confirm the ASME Code of record for the second interval ISI program at GGNS, how the licensee arrived at this edition/addenda of the ASME Code, and the specific requirements for each of the subject components listed in each request for relief.

Enclosure

2. **Request for Relief GG-ISI-007 (Part C), Examination Category B-F, Item B5.10, Pressure Retaining Dissimilar Metal Welds in Vessel Nozzles**

The 1992 Edition of the ASME Code, Section XI requires both volumetric and surface examinations by Examination Category B-F, Item Number B5.10 for the subject dissimilar metal nozzle-to-safe end butt welds. However, neither the original submittal nor the response to the request for additional information dated October 1, 2009, state that surface examinations were required and performed for Welds N01A-KB and N02K-KB. Please confirm that the required surface examinations were performed for the subject welds, whether these surface examinations were full ASME Code examinations (>90 percent coverage), and describe any indications that were detected.

3. **Request for Relief GG-ISI-011, Examination Category B-K, Item B10.10, Integral Attachments for Vessels, Piping, Pumps, and Valves**

The licensee has requested relief from the requirements of Examination Category B-K, Item B10.10, to address limited surface examinations on the reactor pressure vessel (RPV) support skirt weld. However, the 1992 Edition through the 1993 Addenda of the ASME Code does not have an Examination Category B-K. The subject RPV support skirt examination requirements are listed in Examination Category B-H.

The licensee may have invoked ASME Code Case N-509, *Alternative Rules for the Selection and Examination of Class 1, 2, and 3 Integrally Welded Attachments, Section XI, Division 1*, which lists Examination Category B-K, and states requirements for this, and other integral attachment welds. However, no mention of the use of ASME Code Case N-509 has been stated. ASME Code Case N-509, is conditionally acceptable according to an earlier revision of NRC Regulatory Guide 1.147, *Inservice Inspection Code Case Acceptability*, which may have been in effect at the start of the licensee's second 10-year inspection interval. The NRC condition for acceptable use was that a minimum 10 percent sample of integrally welded attachments for each item in each ASME Code class shall be examined during each interval.

State whether ASME Code Case N-509 was invoked for the second interval at GGNS, and confirm that the listed condition for acceptance was applied for all Class 1, 2, and 3 integral attachment welds.

4. **Request for Relief GG-ISI-012 (Part G), Examination Category F-A, Item F1.40, Support Other Than Piping Supports**

The licensee has requested relief from the visual examination of RPV support skirt Weld B13D003S1 and states that no access is available to the inside region of the support skirt to examine this attachment weld. However, the staff is aware that other licensees have performed these visual examinations, either directly or remotely, via access through manways in the support skirt. These manways are also typically used for access to maintain the control rod drive mechanisms. Please confirm that no access is available at GGNS to complete the ASME Code visual examinations, and whether these visual examinations might be performed remotely.

5. **Request for Relief GG-ISI-011 (Part H), Examination Category C-F-2, Item C5.51, Pressure Retaining Welds in Carbon or Low Alloy Steel Piping**

ASME Code, Section XI, 1992 Edition requires a surface examination for Examination Category C-F-2, Item Number C5.51, for the subject Class 2 pipe welds. However, neither the original submittal nor the response to the request for additional information state that surface examination was required and performed for Weld 1E51G004-16-8-3. Please confirm whether the required surface examination was performed for the subject weld, whether these surface examinations were full ASME Code examinations (>90 percent coverage), and describe any indications that were detected.

January 4, 2010

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Sincerely,
/RA/

Carl F. Lyon, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:
As stated

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*memo dated

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