Entergy

Entergy Operations, Inc.
Waterloo Road
P.O. Box 756
Port Gibson, MS 39150
Tel 601 437 2129

GNRO-2008/00038

May 8, 2008

U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

Attention: Document Control Desk

Subject: Response to Request for Additional Information for ISI Request for Alternative GG-ISI-004 - Request to Extend the Current ASME Inservice Interval in accordance with NRC Information Notice 98-44

Grand Gulf Nuclear Station, Unit 1
Docket No. 50-416
License No. NPF-29

Reference: Letter GNRO-2007/00075, "ISI Request for Alternative GG-ISI-004 - Request to Extend the Current ASME Inservice Interval in accordance with NRC Information Notice 98-44," dated December 3, 2007 (TAC. NO. MD7477)

Dear Sir or Madam:

In the application dated December 3, 2007 (GNRO-2007/00075), Grand Gulf Nuclear Station (GGNS) requested relief form certain requirements in the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) to extend the second 10-year inservice inspection (ISI) interval at Grand Gulf Nuclear Station (GGNS) for four months beyond the one-year extension allowed by the ASME Code, Section XI, Paragraph IWA-2430 to include the refueling outage, number RF-16, scheduled for the Fall of 2008. This relief would allow the inspections of the larger reactor pressure vessel nozzle-to-safe end butt welds in this refueling outage to be within the second 10-year ISI interval for GGNS. Based on its review of the application, the NRC requested via email (dated April 24, 2008) from NRC Project Manager Jack Donohew the information in the attached enclosure.

Entergy requests that the NRC staff approve GG-ISI-004 by May 30, 2008 in order to support planning efforts for the upcoming Fall 2008 refueling outage at GGNS. Should you have any questions regarding this submittal, please contact Michael Larson at (601) 437-6685.

This letter contains no commitments.

Sincerely,

Michael J. Larson
Acting Licensing Manager

MJL:mjl

Enclosure: Response To NRC Request For Additional Information - Request for Alternative GG-ISI-004

cc: NRC Senior Resident Inspector
Grand Gulf Nuclear Station
Port Gibson, MS 39150

U. S. Nuclear Regulatory Commission
ATTN: Mr. Elmo E. Collins, Jr. (w/a)
Regional Administrator, Region IV
611 Ryan Plaza Drive, Suite 400
Arlington, TX 76011-4005

U. S. Nuclear Regulatory Commission
ATTN: Mr. Jack N. Donohew, Jr., NRR/APRO/ DORL (w/2)
ATTN: ADDRESSEE ONLY
ATTN: U. S. Postal Delivery Address Only
Mail Stop OWFN/O-8G14
Washington, DC 20555-0001

ENCLOSURE

GNRO-2008/00038

RESPONSE TO NRC REQUEST FOR ADDITIONAL INFORMATION

REQUEST OF ALTERNATIVE

GG-ISI-004

NRC QUESTION FOR RELIEF REQUEST GG-ISI-04 (TAC NO. MD7477)

In the application dated December 3, 2007 (GNRO-2007/00075), relief was requested from certain requirements in the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code) to extend the second 10-year inservice inspection (ISI) interval at Grand Gulf Nuclear Station (GGNS) for four months beyond the one-year extension allowed by the ASME Code, Section XI, Paragraph IWA-2430 to include the refueling outage, number RF-16, scheduled for the fall of 2008. This relief would allow the inspections of the larger reactor pressure vessel nozzle-to-safe end butt welds in this refueling outage to be within the second 10-year ISI interval for GGNS. Based on its review of the application, the NRC staff requests the following information:

In the relief request, it is stated that during refueling outage RF-15 an attempt was made to examine the safe end welds B13-N04F-KB and B-13-N05B-KB and it was determined that none of the Code-required ultrasonic weld examinations could be performed due to the weld configuration/profiles. It is further stated that an attempt was made to perform the needed surface preparation but a large amount of grinding was needed and, because of the critical nature of grinding on ASME Code Class 1 piping welds and the high radiation dose in the vessel annulus region, it was decided an engineering evaluation and structural analysis was needed in order to safely plan and execute the preparation of the welds. Because of this, it was decided to perform the surface preparation for the weld examinations and perform the weld examinations during the next refueling outage, RF-16. The following information is provided:

1. Discuss why, after these welds were examined in the first 10-year ISI interval, the problems found in RF-15 with the weld configuration/profiles were not found in the first 10-year ISI interval and why walkdowns of these welds were not conducted earlier in the second 10-year ISI interval so that weld surface preparation and examination could have been performed before the end of the second 10-year ISI interval.

   GGNS RESPONSE:
   Ultrasonic examination techniques and component surface preparation requirements of dissimilar material (DM) safe-end to penetration and pipe to safe-end welds changed on November 2002 when Code ASME Section XI Appendix VIII Supplement 10 was implemented. Based on this change, it is now mandatory that the weld crown is flush with the base material allowing adequate scanning on top of, and over the butter material of the weld. Flush is defined as no more than a 1/32" gap between the ultrasonic search unit and the examination surface for the entire length of the weld. Examples of conditions that can cause this 1/32" gap include excessive weld crown/weld toe, weld shrinkage, tapers or transitions on the outside surface of the component. Any deviation from flush on a dissimilar metal (DM) weld can create a limited ultrasonic examination.

   Weld profiles and past UT exams were reviewed prior to RF14 on all the DM welds to be examined in RF15 (Start Date: 3/18/07 and End Date 4/12/07). Based on the review, it was believed that the DM weld profiles would meet the new requirements under ASME Section XI Appendix VIII Supplement 10.

2. Discuss the results of the examinations performed in the first 10-year ISI interval, specifically regarding whether any indications were found during these examinations. Discuss how the results of these examinations would contribute to a conclusion regarding the reasonable assurance of structural integrity of the subject components in support of the current request for a four-month extension of the second 10-year ISI interval.

GGNS RESPONSE:
Weld 1B13-N04F-KB has been ultrasonically examined In-service (ISI) six times. 10/14/1986 (Report 86083); 11/27/1986 (Report NDEN 1089-86); 04/11/1989 (Report NDEN 1148-89); 11/04/1990 (Report NDEN 1191-90); 05/19/1992 (Report NDEN 1406-92); and 05/06/1995 (Report NDEN 0114-95). Based on these previous examinations, 1B13-N04F-KB has no reportable indications associated with Inner Granular Stress Corrosion Cracking (IGSCC).

Weld 1B13-N05B-KB has been ultrasonically examined In-service four times. 10/09/1986 (Report 86087 & 86086); 11/08/1990 (Report NDEN 1235-90); and 05/20/1992 (Report NDEN 1411-92). Based on these previous examinations, Weld 1B13-N05B-KB has no reportable indications associated with Inner Granular Stress Corrosion Cracking (IGSCC).

There have been no instances of IGSCC recorded on ASME Section XI Code Class 1 pipe welds at Grand Gulf Nuclear Station. This includes all dissimilar material (DM) safe-end to penetration and pipe to safe-end welds examined after Appendix VIII Supplement 10 was mandated during RF15. Taking this into consideration, a reasonable assurance of the structural integrity for welds 1B13-N04F-KB and 1B13-N05B-KB exists for these components to function four months beyond the second 10-year ISI interval.

3. What is the time frame between when the examinations were performed during the first 10-year ISI interval and the proposed examinations in RF-16?

GGNS RESPONSE:
Weld 1B13-N04F-KB was last ultrasonically examined on 05/06/1995 (Report NDEN 0114-95).

Weld 1B13-N05B-KB was last ultrasonically examined was 05/20/1992 (Report NDEN 1411-92).

4. Discuss what would be the effect of NRC not granting the relief requested, which is to extend the second 10-year interval by four months beyond the automatic 1-year extension allowed by the ASME Code.

GGNS RESPONSE:
The effect of NRC not granting the relief requested, which is to extend the second 10-year interval by four months beyond the automatic 1-year extension allowed by the ASME Code would result in a plant shut down on June 1, 2008 to perform weld preparation and the exams.

5. Discuss the planned examinations of the welds in RF-16 with respect to ASME Code requirements.

GGNS RESPONSE:
The welds will be prepped by mechanical means to achieve the required weld profile specified under ASME Section XI Appendix VIII Supplement 10. An engineering evaluation/structural analysis has been completed to allow execution of the weld preparation.