



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

November 30, 2012

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 REQUESTS GG-ISI-014, GG-ISI-015, AND GG-ISI-016 FOR THE SECOND 10-YEAR INSERVICE INSPECTION INTERVAL (TAC NOS. ME7592, ME7593, AND ME7594)

Dear Sir or Madam:

By letter dated November 15, 2011, as supplemented by letters dated October 4 and November 26, 2012, and clarifying e-mail dated November 19, 2012, Entergy Operations, Inc. (the licensee), submitted relief requests (RRs) GG-ISI-014, GG-ISI-015, and GG-ISI-016 for the second 10-year inservice inspection (ISI) program interval at the Grand Gulf Nuclear Station, Unit 1 (GGNS). Specifically, the licensee requested relief from certain American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, Subarticle IWB-2500 ISI requirements for Examination Category B-O, Pressure Retaining Welds in Control Rod Housings (RR GG-ISI-014); ASME Code, Section XI, 1992 Edition, 1993 Addenda, Table IWC-2500-1 ISI requirements for Examination Category C-G, Pressure Retaining Welds in Pumps and Valves Inspection Program Band, 1992 Edition, 1993 Addenda (RR GG-ISI-015); and ASME Code, Section XI, Table IWF-2500-1 Valves and Examination Category F-A, Supports - Inspection Program B (RR GG-ISI-016). These reliefs are requested pursuant to paragraph 50.55a(g)(6)(i) of Title 10 of the *Code of Federal Regulations* (10 CFR) that the code requirements are impractical.

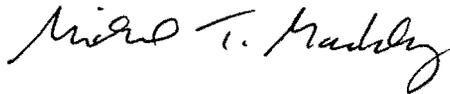
Based on the enclosed safety evaluation, the U.S. Nuclear Regulatory Commission (NRC) staff has reviewed the RRs GG-ISI-014, GG-ISI-015, and GG-ISI-016 and concludes that compliance with the examination coverage requirements of 10 CFR 50.55a(g)(5)(iii) for the ASME Class 1 Category B-O, Pressure Retaining Welds in Control Rod Housings, the ASME Class 2 pressure retaining welds in certain pumps and valves, and Category F-A supports other than piping supports is impractical, and, therefore, satisfies the technical requirements of 10 CFR 50.55a(g)(6)(i). For RR GG-ISI-014, the licensee proposed to continue performing visual examinations (VT-2) examination in conjunction with system leakage tests. The NRC staff concludes that that there is reasonable assurance that the structural and leak-tight integrity of the welds under consideration may be obtained through the use of the licensee's proposed alternative (i.e., VT-2 examinations). For RR GG-ISI-015, the licensee proposed to perform the required examinations if the subject pumps are disassembled for maintenance to the point where the subject welds are accessible. For RR GG-ISI-016, the licensee will perform a VT-3 examination of the supports to the maximum extent possible (approximately 50 percent) and no alternate testing is proposed.

RRs GG-ISI-014, GG-ISI-015, and GG-ISI-016 are applicable to GGNS's second 10-year ISI inservice inspection interval, which began on June 1, 1997, and ended on May 31, 2008. These RRs were submitted on November 15, 2011. Since the RRs were not submitted in a timely manner in accordance with 10 CFR 50.55a(g)(5)(iv), the NRC staff does not have the regulatory authority to grant the requested relief. The NRC's Region IV staff has been informed of the apparent noncompliance with NRC regulations and may take additional NRC actions.

By letter dated November 26, 2012, the licensee provided a commitment to investigate and evaluate for suitability alternative inspection methods (e.g., remote camera), for the third and subsequent ISI intervals as long as the impracticality remains. The licensee also acknowledges that use of any examination method other than the volumetric or surface method specified in ASME Code, Section XI, Table IWB-2500-1 will require relief approved by the NRC.

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

Sincerely,



Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:
Safety Evaluation

cc w/encl: Distribution via Listserv



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELIEF REQUESTS GG-ISI-14, GG-ISI-15, AND GG-ISI-16 FROM ASME CODE,
SECTION XI, INSERVICE INSPECTION REQUIREMENTS FOR PRESSURE
RETAINING WELDS IN CONTROL ROD HOUSINGS, PUMPS AND VALVES,
AND CATEGORY F-A SUPPORTS
ENTERGY OPERATIONS, INC.
GRAND GULF NUCLEAR STATION, UNIT 1
DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated November 15, 2011 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML113200448), as supplemented by letters dated October 4 and November 26, 2012 (ADAMS Accession Nos. ML12279A040 and ML12332A333, respectively), and clarifying e-mail dated November 19, 2012 (ADAMS Accession No. ML12331A093), Entergy Operations, Inc. (the licensee), requested relief from certain requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, 1992 Edition through the 1993 Addenda, under the provisions of paragraph 50.55a(g)(4) of Title 10 of the *Code of Federal Regulations* (10 CFR) for Grand Gulf Nuclear Station, Unit 1 (GGNS). Relief Requests (RRs) GG-ISI-014, GG-ISI-015, and GG-ISI-016 are applicable to the second 10-year inservice inspection (ISI) program interval for GGNS, which began on June 1, 1997, and ended on May 31, 2008.

Specifically, pursuant to 10 CFR 50.55a(g)(5)(iii), the licensee requested relief and to use alternative requirements (as identified), for Examination Category B-O Pressure Retaining Welds in Control Rod Housing (RR GG-ISI-014), Examination Category C-G Pressure Retaining Welds in Pumps and Valves (RR GG-ISI-015), and Examination Category F-A supports (RR GG-ISI-016) on the basis that the Code requirement is impractical. The licensee's submittal requested relief for its second 10-year ISI interval; however, the request was submitted more than 12 months following the end of that interval.

2.0 REGULATORY EVALUATION

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the preservice examination requirements, set forth in the ASME Code, Section XI, to the extent

Enclosure

practical within the limitations 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 requirements in the latest edition and addenda of Section XI of the ASME Code, which was 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 therein.

The regulations in 10 CFR 50.55a(g)(5)(iii) state, in part, that licensees may determine that conformance with certain code requirements is impractical and that the licensee shall notify the Commission and submit information in support of the determination. Determination of impracticality in accordance with this section must be based on the demonstrated limitations experienced when attempting to comply with the code requirements during the ISI interval for which the request is being submitted. Requests for relief made in accordance with this section must be submitted to the NRC no later than 12 months after the expiration of the initial 120-month inspection interval or subsequent 120-month inspection interval for which relief is sought.

The regulations in 10 CFR 50.55a(g)(6)(i) state that the Commission will evaluate determinations under paragraph (g)(5) of this section that code requirements are impractical. The Commission may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility.

The licensee has requested relief from ASME Code requirements pursuant to 10 CFR 50.55a(g)(5)(iii). The ASME Code of record for GGNS's second 10-year ISI program interval is the 1992 Edition through the 1993 Addenda of Section XI of the ASME Code. The GGNS second 10-year ISI interval began on June 1, 1997, and ended on May 31, 2008.

The licensee submitted RRs GG-ISI-14, GG-ISI-15, and GG-ISI-16 beyond the 12-month timeframe following the second 10-year ISI interval as required by 10 CFR 50.55a(g)(5)(iii) and this condition has been addressed in GGNS's Correction Action Corrective Action Process under Condition Report CR-GGN-2011-03865 which was initiated on June 6, 2011. The NRC staff will only review the licensee's relief requests to determine whether or not there are any safety significant issues because of the lateness of the licensee's submittal. The NRC staff cannot authorize the relief requests because the licensee did not meet the requirements of 10 CFR 50.55a(g)(5)(iii) in submitting a relief determined to be impractical within 12 months following the end of the second 10-year ISI interval. Based on the above, the NRC staff concludes that the regulatory authority does not exist for the Commission to grant the reliefs requested by the licensee.

3.0 TECHNICAL EVALUATION

3.1 Relief Request GG-ISI-014 - ASME Code, Section XI, Table IWB-2500-1 Examination Category B-O, Item 14.10 Welds in Control Rod Drive (CRD) Housings

3.1.1 ASME Code Components Affected (as stated by the licensee)

COMPONENT NO	ASME CODE CATEGORY	ASME CODE ITEM NUMBER	DESCRIPTION
B13D009-03/18-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-03/18-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-03/22-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-03/22-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-03/26-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-03/26-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-03/30-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-03/30-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-03/34-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-03/34-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-03/38-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-03/38-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-03/42-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-03/42-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-07/10-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-07/10-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-07/50-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-07/50-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-11/06-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-11/06-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-11/54-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-11/54-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-19/02-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-19/02-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-19/58-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-19/58-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-23/02-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-23/02-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-23/58-WELD-1	B-O	B14.10	Welds in CRD Housing

COMPONENT NO	ASME CODE CATEGORY	ASME CODE ITEM NUMBER	DESCRIPTION
B13D009-23/58-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-27/02-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-27/02-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-27/58-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-27/58-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-31/02-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-31/02-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-31/58-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-31/58-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-35/02-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-35/02-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-35/58-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-35/58-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-39/02-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-39/02-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-39/58-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-39/58-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-43/02-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-43/02-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-43/58-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-43/58-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-51/06-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-51/06-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-51/54-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-51/54-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-55/10-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-55/10-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-55/50-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-55/50-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-59/18-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-59/18-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-59/22-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-59/22-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D091-59/26-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-59/26-WELD-2	B-O	B14.10	Welds in CRD Housing

COMPONENT NO	ASME CODE CATEGORY	ASME CODE ITEM NUMBER	DESCRIPTION
B13D009-59/30-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-59/30-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-59/34-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-59/34-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-59/38-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-59/38-WELD-2	B-O	B14.10	Welds in CRD Housing
B13D009-59/42-WELD-1	B-O	B14.10	Welds in CRD Housing
B13D009-59/42-WELD-2	B-O	B14.10	Welds in CRD Housing

The Code of record for the second 10-year ISI interval at GGNS is the 1992 Edition through 1993 Addenda of the ASME Code, Section XI.

3.1.3 Applicable Code Requirement

ASME Code, Section XI, 1992 Edition, 1993 Addenda, Table IWB-2500-1, Examination Category B-O, Pressure Retaining Welds in Control Rod Housings, Item B14.10 requires volumetric or surface examination of 10% of peripheral CRD housing welds.

3.1.4 Basis for Impracticality of Compliance (as stated by the licensee)

The as-installed configuration of the CRD housings makes performance of the required examinations impractical for the following reasons. The housings are in close proximity to the reactor vessel support pedestal, which limits access to the welds on the outer circumference of the housings. Next, the subject welds are below the lower reactor insulation support structure where the housings pass through a series of closely-spaced CRD housing support beams and associated hanger rods, which further limit access to the welds in the upper portion of the housings. Access to both the upper and lower welds from below is further limited by a series of CRD housing support bars, grid plates and grid clamps. Access to the lower welds from the housing ID [inner diameter] requires removal of the CRD mechanisms and sleeves.

In its request for additional information (RAI) dated August 23, 2012 (ADAMS Accession No. ML12237A006), the NRC staff asked the licensee if it had considered using a remote camera to examine the CRD welds since there have been improvements in quality of the equipment. In its RAI response dated October 4, 2012, the licensee stated it had not attempted to use cameras or alternate technologies to perform the alternative VT-2 examinations. The NRC asked if the licensee would consider using a remote camera for the next interval (the third 10-year ISI interval). By letter dated November 26, 2012, the licensee made the following regulatory commitment:

Entergy will continue to investigate and evaluate for suitability alternative inspection methods, such as the remote camera suggested by the NRC, for the third and subsequent ISI intervals as long as the impracticality remains.

3.1.5 Licensee's Proposed Alternative Examination

Relief is requested from performing the volumetric or surface examinations on 10 percent of the peripheral CRD housing welds. In its letter dated November 15, 2011, the licensee stated, in part, that

The subject welds have received VT-2 examinations with the Reactor Coolant Pressure Boundary leakage test after each refueling outage. The Leak Detection System that is monitored continuously from the Control Room would detect a leak if one occurred while the plant was in operation. The "Shoot Out" steel and Grid support steel would prevent complete ejection of the CRD and will minimize the leak rate for the Makeup System.

For the Third 10 Year ISI Inspection Interval, Grand Gulf will access the CRD Housing weld area to inspection these welds to the extent possible during Refuel Outage 18.

3.1.6 Duration of Relief

Relief is requested for the second 10-year ISI interval, which began on June 1, 1997, and ended on May 31, 2008.

3.1.7 NRC Staff Evaluation

ASME Code, Section XI, 1992 Edition, 1993 Addenda, Table IWB-2500-1, Examination Category B-O, Pressure Retaining Welds in Control Rod Housings, Item B14.10 requires volumetric or surface examination of 10 percent of the peripheral CRD housing welds. The licensee was unable to perform the ASME Code-required examination due to the as-installed configuration of the CRD housings. The subject CRD housings are laterally proximate to the reactor vessel support pedestal, which limits access to the upper and lower welds on the outer circumference of the housings. In addition, the subject CRD housing welds are below the lower reactor insulation support structure where the housings pass through a series of closely-spaced CRD housing support beams and associated hanger rods, which further limit access to the welds in the upper portion of the housings. Access to both the upper and lower welds from

below is further limited by a series of CRD housing support bars, grid plates and grid clamps. Access to the lower welds from the housing ID requires removal of the CRD mechanisms and sleeves. In its RAI dated August 23, 2012, the NRC staff inquired if the licensee had considered examining the subject CRD housing welds by camera since there has been an improvement in resolution of lenses for cameras for remote visual examinations over the past few years. In its RAI response dated October 4, 2012, the licensee stated it had not attempted to use cameras or alternate technologies to perform the alternative VT-2 examinations. However, in its letter dated November 26, 2012, the licensee provided a commitment to investigate and evaluate for suitability alternative inspection methods (e.g., remote camera), for the third and subsequent ISI intervals as long as the impracticality remains. By e-mail dated November 19, 2012, the licensee clarified that in the examinations performed on these welds in the third 10-year ISI interval, the upper welds were examined with 100 percent coverage, with no indications found. In addition, the licensee stated that four lower welds were accessible for 50 percent examination volume, with no indications found.

The licensee performs ASME Code VT-2 visual examinations each refueling outage and during operation of the plant the licensee constantly monitors the leakage rate on the bottom of the reactor vessel from the control room. Based on the above, the NRC staff determined that there are no safety significant issues caused by the licensee not meeting the 10 CFR 50.55a(g)(5)(iii) time frame requirements in submitting RR GG-ISI-014. The NRC staff concludes that the licensee has not adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(g)(5)(iii), and is not in compliance with the ASME Code's requirements because the licensee submitted this relief request beyond 12 months of the end of the second 10-year ISI interval and the subject RR is not granted by the staff.

3.2 Relief Request GG-ISI-015 - ASME Code, Section XI, Table IWC-2500-1, Examination Category C-G, Pressure Retaining Welds in Pumps and Valves

3.2.1 ASME Code Components Affected

ASME Code Class: Class 2
 Examination Category: C-G, Pressure Retaining Welds in Pumps and Valves, Table IWC-2500-1
 Item No.: C6.10, Pump Casing Welds

The components for which relief is requested are listed below, as provided by the licensee in its letter dated October 4, 2012:

Component ID	Pump	System	Material
Q1E12C002B-SB-1	1E12-C002B	Residual Heat Removal System	Tack/Root – E7018 Final – F72 – EM12K Suction Shell – SA 516 Gr. 70 Suction Flange – SA 105
Q1E12C002B-SB-2	1E12-C002B	Residual Heat Removal System	Tack/Root – E7018 Final – F72 – EM12K Suction Shell – SA 516 Gr. 70 Suction Flange – SA 105

Component ID	Pump	System	Material
Q1E21C002B-SB-1	1E21-C001	Low Pressure Core Spray System	Tack/Root – E7018 Final – F72 – EM12K Suction Shell – SA 516 Gr. 70 Suction Flange – SA 105
Q1E21C002B-SB-2	1E21-C001	Low Pressure Core Spray System	Tack/Root – E7018 Final – F72 – EM12K Suction Shell – SA 516 Gr. 70 Suction Flange – SA 105
Q1E22C002B-SB-1	1E22-C001	High Pressure Core Spray System	Tack/Root – E7018 Final – F72 – EM12K Suction Shell – SA 516 Gr. 70 Suction Flange – SA 105
Q1E22C002B-SB-2	1E22-C001	High Pressure Core Spray System	Tack/Root – E7018 Final – F72 – EM12K Suction Shell – SA 516 Gr. 70 Suction Flange – SA 105
Q1E22C002B-SB-3	1E22-C001	High Pressure Core Spray System	Tack/Root – E7018 Final – F72 – EM12K Suction Shell – SA 516 Gr. 70 Suction Flange – SA 105

3.2.2 Applicable Code Edition and Addenda

The Code of record for the second 10-year ISI interval at GGNS is the 1992 Edition through the 1993 Addenda of the ASME Code, Section XI.

3.2.3 Applicable Code Requirement

The ASME Code, Section XI, IWC-2500, Table IWC-2500-1, Examination Category C-G, Item No. C6.10, "Pump Casing Welds," requires surface examination of 100% of welds in all components in each piping run examined under Examination Category C-F each inspection interval. For extent of examination, Note 1 of Table IWC 2500-1 of Examination Category C-G applies, and states that, "in the case of multiple pumps and valves of similar design, size, function and service in a system, the examination of only one pump and one valve among each group of multiple pumps and valves is required."

3.2.4 Licensee's Proposed Alternative Examination

In its letter dated November 15, 2011, the licensee stated, in part, that

Insufficient access exists to perform the required examination of the subject welds due to the pump casings being encase in concrete where only partial or no access is available.

The required examinations will be performed if the subject pumps are disassembled for maintenance to the point where the subject welds are accessible.

The licensee stated in its letter dated October 4, 2012, that the welds were examined during fabrication with no relevant indications. The subject welds consist of carbon steel pump base materials with carbon steel weld filler material and are monitored continuously from the control room with the leakage detection system.

3.2.5 Duration of Relief

Relief is requested for the second 10-year ISI interval, which began on June 1, 1997, and ended on May 31, 2008.

3.2.6 NRC Staff Evaluation

The NRC staff evaluated this request against the criteria contained in 10 CFR 50.55a(g)(6)(i), that is, the NRC may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon the licensee that could result if the requirements were imposed on the facility. The NRC staff considers activities such as those involving: significant modifications to equipment; personnel hazards; or radiation exposure to constitute burdens. The NRC staff considers alternatives which provide reasonable assurance of structural and/or leaktight integrity of the subject components to meet the regulatory requirement of "will not endanger life or property".

In its submittal, the licensee proposed that based on the welds being encased in concrete, the weld was not accessible for inspection without removal of the encasement, which constituted a burden.

The NRC staff agrees with the licensee's assessment that the disassembly of the pump to remove the concrete encasing constitutes a burden. In addition, the requirement to examine these welds was removed in the 2007 Edition, 2008 Addenda of the ASME Code, Section XI. The regulations in 10 CFR 50.55a(b) set no conditions on Examination Categories C-G in the 2007 Edition, 2008 Addenda of the ASME Code, Section XI. Since these welds no longer require examination under the latest edition of the Code, the NRC staff concludes that granting relief based on current ASME Code requirements provides reasonable assurance of the structural and leak-tight integrity of the welds under consideration.

Therefore, the NRC staff concludes that the alternative proposed by the licensee meets the technical criteria contained in 10 CFR 50.55a(g)(6)(i) (i.e., complying with the regulations constitutes a burden on the facility and utilization of the proposed alternative "will not endanger life or property"). However, as discussed in Section 2.0 of this safety evaluation, the NRC staff concludes that the timeliness of submission requirements contained in 10 CFR 50.55a(g)(5)(iv) have not been met.

3.3 Request for Relief GG-ISI-016 ASME Code, Section XI, Table IWF-2500-1, Examination Category F-A, Supports Other Than Piping Supports

3.3.1 ASME Code Components Affected (as stated by the licensee)

ASME Code Class: Class 2
Examination Category: F-A, Supports, Table IWF-2500-1
Item No.: F1.40, Supports other than piping supports

Item #	Description	% Coverage	Reason for Limitation	Indications
1E12-C002B	Pump Support	50	Partially encased in concrete	None

3.3.2 Applicable Code Edition and Addenda

The Code of record for the second 10-year ISI interval at GGNS is the 1992 Edition through 1993 Addenda of the ASME Code, Section XI.

3.3.3 Applicable Code Requirement (as stated by the licensee)

ASME Code, Section XI, 1992 Edition, 1993 Addenda, Table IWF-2500-1, Examination Category F-A, Supports – Inspection Program B. Item F1.40 requires visual examination of 100% of supports other than piping supports in each inspection interval.

3.3.4 Licensee's Proposed Alternative

Due to limited access, being encased in concrete, certain code examination volumes cannot be examined to the extent of obtaining full code coverage. The licensee requests approval to perform a VT-3 examination to the extent possible. Portions of the support have been inspected in service in accordance with the requirements of the ASME Code, Section XI, with no relevant indications. The portions of the support that are inaccessible are encased in concrete and do not provide a leakage boundary to the atmosphere. Any indications within the inaccessible portion would propagate to the accessible area, where inspections are performed.

No alternative testing is proposed at this time. Entergy has examined this support welds to the extent available.

3.3.5 Duration of Relief

Relief is requested for the second 10-year ISI interval, which began on June 1, 1997, and ended on May 31, 2008.

3.3.6 NRC Staff Evaluation

The NRC staff evaluated this request against the criteria contained in 10 CFR 50.55a(g)(6)(i), (i.e., the NRC may grant such relief and may impose such alternative requirements as it determines is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden upon

the licensee that could result if the requirements were imposed on the facility. The NRC staff considers activities such as those involving: significant modifications to equipment; personnel hazards; or radiation exposure to constitute burdens. The NRC staff considers alternatives which provide reasonable assurance of structural and/or leak tight integrity of the subject components to meet the regulatory requirement of "will not endanger life or property".

In its submittal, the licensee proposed that based on the support being partially encased in concrete, the support was not accessible for inspection without removal of the encasement, which constituted a burden.

The NRC staff agrees with the licensee's assessment that removal of the concrete encasing to fully examine the support constitutes a burden. Therefore, the NRC staff concludes that the alternative proposed by the licensee meets the technical criteria contained in 10 CFR 50.55a(g)(6)(i) (i.e., complying with the regulations constitutes a burden on the facility and utilization of the proposed alternative "will not endanger life or property"). However, as discussed in Section 2.0 of this safety evaluation, the NRC staff concludes that the timeliness of submission requirements contained in 10 CFR 50.55a(g)(5)(iv) have not been met.

4.0 REGULATORY COMMITMENT

By letter dated November 26, 2012, Entergy made the following regulatory commitment:

Entergy will continue to investigate and evaluate for suitability alternative inspection methods, such as the remote camera suggested by the NRC, for the third and subsequent ISI intervals as long as the impracticality remains.

The NRC staff concludes that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitment are best provided by the licensee's administrative processes, including its commitment management program. The above regulatory commitment does not warrant the creation of regulatory requirements (items requiring prior NRC approval of subsequent changes).

5.0 CONCLUSION

As set forth above, the NRC staff determined that the proposed inspection provides reasonable assurance of structural integrity or leak tightness of the subject components. However, since the request for relief was not submitted in a timely manner in accordance with 10 CFR 50.55a(g)(5)(iv), the NRC staff does not have the regulatory authority to grant the requested relief. This matter is being forwarded to Region IV staff for any necessary follow-up or enforcement actions due to non-compliance with the NRC regulations.

Principal Contributor: M. Audrain

Date: November 30, 2012

RRs GG-ISI-014, GG-ISI-015, and GG-ISI-016 are applicable to GGNS's second 10-year ISI inservice inspection interval, which began on June 1, 1997, and ended on May 31, 2008. These RRs were submitted on November 15, 2011. Since the RRs were not submitted in a timely manner in accordance with 10 CFR 50.55a(g)(5)(iv), the NRC staff does not have the regulatory authority to grant the requested relief. The NRC's Region IV staff has been informed of the apparent noncompliance with NRC regulations and may take additional NRC actions.

By letter dated November 26, 2012, the licensee provided a commitment to investigate and evaluate for suitability alternative inspection methods (e.g., remote camera), for the third and subsequent ISI intervals as long as the impracticality remains. The licensee also acknowledges that use of any examination method other than the volumetric or surface method specified in ASME Code, Section XI, Table IWB-2500-1 will require relief approved by the NRC.

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

Sincerely,

/RA/

Michael T. Markley, Chief
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-416

Enclosure:
Safety Evaluation

cc w/encl: Distribution via Listserv

DISTRIBUTION:

PUBLIC	RidsNrrDorIDpr Resource	RidsOgcRp Resource
LPLIV r/f	RidsNrrDorILpl4 Resource	RidsRgn4MailCenter Resource
RidsAcrcAcnw_MailCTR Resource	RidsNrrLAJBurkhardt Resource	MAudrain, NRR/DE/EPNB
RidsNrrDeEpnb Resource	RidsNrrPmGrandGulf Resource	

ADAMS Accession Nos.: ML12326A331 **NRR-028** ***via email**

OFFICE	NRR/DORL/LPL4/PM	NRR/DORL/LPL4/LA	NRR/DE/EPNB/BC	NRR/DORL/LPL4/BC
NAME	AWang	JBurkhardt	TLupold*	MMarkley
DATE	11/28/12	11/26/12	11/20/12	11/30/12

OFFICIAL AGENCY RECORD