

August 31, 2005

Mr. F. G. Burford
Acting Director
Nuclear Safety & Licensing
Entergy Operations, Inc.
1340 Echelon Parkway
Jackson, MS 39213-8298

SUBJECT: GRAND GULF NUCLEAR STATION UNIT 1 - REQUEST IST-2005-1, USE OF
SUBSEQUENT AMERICAN SOCIETY OF MECHANICAL ENGINEERS CODE
FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS
EDITION AND ADDENDA FOR CONDITION MONITORING CHECK VALVES
(TAC NO. MC7229)

Dear Mr. Burford:

By letter dated June 3, 2005, you requested approval, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(f)(4)(iv), to use Paragraph ISTC-5222 of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 2001 Edition through the 2003 Addenda at Arkansas Nuclear One, Units 1 and 2, Grand Gulf Nuclear Station, Unit 1 (GGNS), River Bend Station, and Waterford Steam Electric Station, Unit 3. By letter dated August 4, 2005, you revised the request for GGNS and withdrew the request for Arkansas Nuclear One, Units 1 and 2, River Bend Station, and Waterford Steam Electric Station, Unit 3.

The NRC staff has reviewed the subject request, IST-2005-1, dated August 4, 2005, for GGNS and concludes that you have adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(f)(4)(iv). Therefore, the NRC staff approves your proposed use of Subsection ISTC of the 2001 Edition with 2003 Addenda of ASME OM Code for the conduct of check valve testing at GGNS until December 1, 2007, the end of current 120-month interval for inservice testing program. The NRC staff's related Safety Evaluation is enclosed.

Sincerely,

/RA/

David Terao, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-416

Enclosure: As stated

cc w/encl: See next page

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Office of Nuclear Reactor Regulation

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WPoerter

RidsOgcRp

RidsAcrsAcnwMailCenter

RidsRgn4MailCenter (KKennedy)

Accession No.: ML052240261

*Safety Evaluation input date

OFFICE	PDIV-1/PM	PDIV-1/LA	EMEB/SC(A)	PDIV-1/SC
NAME	DTerao for BVaidya	DJohnson	RKaras*	DTerao
DATE	8/31/2005	8/18/2005	08 / 03 /2005	8/31/2005

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
REQUEST NO. IST-2005-1 TO USE A SUBSEQUENT EDITION AND ADDENDA OF
THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS
CODE FOR OPERATION AND MAINTENANCE OF NUCLEAR POWER PLANTS
FOR CONDITION MONITORING CHECK VALVES
ENTERGY OPERATIONS, INC.
GRAND GULF NUCLEAR STATION
DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated June 3, 2005, (Agencywide Documents Access and Management System (ADAMS) Accession Number ML051600328), as revised and superceded by letter dated August 4, 2005 (ADAMS Accession Number ML052220323), Entergy Operations, Inc. (Entergy or the licensee), pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Paragraph 50.55a(f)(4)(iv), submitted Request Number IST-2005-1 to the U.S. Nuclear Regulatory Commission (NRC) for use of Paragraph ISTC-5222 of the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), 2001 Edition through the 2003 Addenda, for condition monitoring check valves at Arkansas Nuclear One, Units 1 and 2; Grand Gulf Nuclear Station (GGNS); River Bend Station; and Waterford Steam Electric Station, Unit 3. Entergy submitted the request in accordance with NRC Regulatory Issue Summary 2004-12, "Clarification on Use of Later Editions and Addenda to the ASME OM Code and Section XI" and the guidance provided in NUREG-1482, Rev. 1, "Guidelines for Inservice Testing at Nuclear Power Plants." By letter dated August 4, 2005, Entergy revised the request for GGNS and withdrew the request for Arkansas Nuclear One, Units 1 and 2, River Bend Station, and Waterford Steam Electric Station, Unit 3.

2.0 REGULATORY EVALUATION

In the *Federal Register* (69 FR 58804) published October 1, 2004, the Commission amended 10 CFR 50.55a, to incorporate by reference the 2001 Edition through the 2003 Addenda of ASME OM Code. Subsection ISTC provides the requirements for inservice testing (IST) of pumps and valves. The Code of record for GGNS is the ASME/ANSI OM-10a, 1988 Edition.

3.0 TECHNICAL EVALUATION

3.1 Description - Request No. IST-2005-1

3.1.1 ASME Code Components Affected (As Submitted)

All check valves within the Inservice Testing (IST) program.

3.1.2 Applicable Code Edition and Addenda (As Submitted)

Currently, Grand Gulf Nuclear Station (GGNS) is committed to ASME/ANSI OM-10a, 1988 Edition. The next 120-month interval starts December 2007.

3.1.3 Proposed Subsequent Code Edition and Addenda (or Portion) (As Submitted)

Pursuant to 10 CFR 50.55a(f)(4)(iv), Entergy Operations, Inc. (Entergy) requests permission to use Subsection ISTC of the 2001 Edition with 2003 Addenda of ASME Operation and Maintenance (OM) Code for the conduct of check valve testing at GGNS.

3.1.4 Related Requirements (As Submitted)

There are no related requirements. The NRC approved the use of Appendix II condition monitoring program requirements specified in the 2001 Edition and 2003 Addenda with no limitations or modifications as documented in 10 CFR 50.55a(b)(3)(iv). In *Federal Register* 69 FR 58814, the NRC stated in part:

“The modification in (b)(3)(iv) does not apply to the 2003 Addenda of the ASME OM Code because the earlier Code provisions on which this regulation was based were revised in the 2003 Addenda of the ASME OM Code to address the underlying issues which led to the NRC to impose the modification. The check valve monitoring program requirements in Appendix II of the 2003 Addenda of the ASME OM Code are equivalent to the check valve monitoring program requirements in § 50.55a(b)(3)(iv).”

Unlike earlier editions and addenda of the OM Code, the 2003 Addenda of the 2001 Edition contains the modifications imposed by the NRC for those earlier editions and addenda. Included in these requirements is bi-directional testing of check valves. By adopting this edition and addenda of the OM Code, Entergy will comply with these requirements.

3.1.5 Duration of Proposed Request (As Submitted)

Entergy plans to begin implementing the Appendix II condition monitoring program upon approval of this request. Entergy has identified 72 Class 1, 2, and 3 check valves that are currently required to be uni-directionally tested in accordance with the IST Plan. Of these, 39 are scheduled to be tested during outages. Entergy will begin incorporating these 39 check valves into the

Appendix II condition monitoring program upon approval of this request. By completion of the fall 2005 refueling outage, these valves will meet the Appendix II or ISTC requirements for bi-directional testing.

The remaining 33 valves that are uni-directionally tested in accordance with the IST Plan are currently tested on-line. By March 30, 2006, these valves will meet the Appendix II or ISTC requirements for bi-directional testing except as follows:

Entergy will make a good-faith effort to meet the requirements for bi-directional testing by March 30, 2006. Efforts to develop test methods for these 33 valves will not begin until after the fall 2005 refueling outage. If Entergy determines that bi-directional testing is only possible during an outage, Entergy will perform such testing during the spring 2007 refueling outage.

For those Class 1, 2, and 3 check valves currently required to be bi-directionally tested in accordance with the IST Plan, Entergy will continue to bi-directionally test these valves. Entergy will apply the requirements of Subsection ISTC to these valves by December 1, 2007.

3.2 Evaluation

By letter dated June 3, 2005, as supplemented by letter dated August 4, 2005, the licensee requested NRC approval to use portions of a more recent edition and addenda of the ASME OM Code for the GGNS pursuant to 10 CFR 50.55a(f)(4)(iv). Specifically, the licensee requested approval to apply the requirements of the 2001 Edition through 2003 Addenda of the ASME OM Code, Subsection ISTC, Inservice Testing of Valves in Light-Water Reactor Nuclear Power Plants, for the conduct of check valve testing for all check valves subject to IST requirements, for the remainder of the second 120-month IST program interval. Implementation of the 2001 Edition through 2003 Addenda check valve testing requirements will be phased in for all check valves at GGNS as described in the licensee's August 4, 2005, letter. Full implementation will be completed by December 1, 2007.

The current Code of Record for Grand Gulf Nuclear Station is the 1989 Edition of the ASME Boiler and Pressure Vessel Code, Section XI, with no addenda, which references ASME/ANSI Standard OM-10 for IST of valves. The regulations in 10 CFR 50.55a(f)(4)(iv) state that IST of pumps and valves may meet the requirements set forth in subsequent editions and addenda that are incorporated by reference in 10 CFR 50.55a(b), subject to the limitations and modifications listed in 10 CFR 50.55a(b), and subject to NRC approval. Portions of editions or addenda may be used provided that all related requirements of the respective editions or addenda are met. The 2001 Edition through 2003 Addenda of the ASME OM Code was incorporated by reference into 10 CFR 50.55a(b) on October 1, 2004 (69 FR 58804), and became effective on November 1, 2004, subject to certain limitations and modifications.

There are no limitations or modifications listed in 10 CFR 50.55a(b) for meeting Subsection ISTC IST requirements for check valves. Further, the NRC staff has identified no related requirements in the specified later ASME Code edition and addenda that would also need to be met to implement Subsection ISTC for the conduct of check valve testing. Therefore, pursuant

to 10 CFR 50.55a(f)(4)(iv), the use of Subsection ISTC for the IST of check valves, is approved for GGNS until December 1, 2007, the end of the current 120-month IST program interval.

4.0 CONCLUSION

Consistent with the requirements set forth in 10 CFR 50.55a(f)(4)(iv), the staff has reviewed the licensee's request, as supplemented, and determined that the related requirements were adequately addressed. Therefore, the NRC staff finds the licensee's request acceptable and approves the use of Subsection ISTC of the ASME OM Code 2001 Edition through the 2003 Addenda for the IST of check valves, for GGNS until December 1, 2007, the end of the current 120-month interval for IST.

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Date: August 31, 2005

Grand Gulf Nuclear Station

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May 2005