

January 13, 2005

Mr. Lew W. Myers
Chief Operating Officer
FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
P.O. Box 97, A290
10 Center Road
Perry, OH 44081

SUBJECT: PERRY NUCLEAR POWER PLANT, UNIT 1 - REQUEST TO USE LATER
AMERICAN SOCIETY OF MECHANICAL ENGINEERS CODE EDITION AND
ADDENDA, REQUEST NO. IR-053 (TAC NO. MC5045)

Dear Mr. Myers:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated October 4, 2004, FirstEnergy Nuclear Operating Company, the licensee for Perry Nuclear Power Plant, Unit 1 (PNPP), requested NRC approval to use portions of a later edition and addenda of Section XI of the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (Code).

The NRC staff has completed its review of the subject request No. IR-053. As documented in the enclosed Safety Evaluation, the NRC staff approves the use of ASME Code, Section XI, paragraph IWA-4312, with the 1995 Addenda, for Class 1, 2, and 3 piping in accordance with Title 10 of the *Code of Federal Regulations*, Section 50.55a(g)(4)(iv). The request is approved for the remainder of PNPP's second 10-year ISI interval which began November 18, 1998, and ends November 17, 2008. All other requirements of the ASME Code, Section XI, for which relief has not been specifically requested remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Sincerely,

/RA/

William A. Macon, Jr., Project Manager, Section 2
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-440

Enclosure: As stated

cc w/encl: See next page

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Perry Nuclear Power Plant, Unit 1

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO INSERVICE INSPECTION PROGRAM REQUEST NO. IR-053

FIRSTENERGY NUCLEAR OPERATING COMPANY

PERRY NUCLEAR POWER PLANT, UNIT 1

DOCKET NO. 50-440

1.0 INTRODUCTION

By letter to the U.S. Nuclear Regulatory Commission (NRC, Commission) dated October 4, 2004 (ML042880234), FirstEnergy Nuclear Operating Company, the licensee for Perry Nuclear Power Plant, Unit 1 (PNPP), requested NRC approval to use Paragraph IWA-4312, "Rerating," and related portions of the 1995 Addenda of Section XI of the American Society of Mechanical Engineers (ASME) *Boiler and Pressure Vessel Code* (Code). The request No. IR-053 is for the remainder of the second 10-year inservice inspection (ISI) interval which began November 18, 1998, and ends November 17, 2008.

2.0 REGULATORY EVALUATION

The ISI of ASME Code, Class 1, 2, and 3 components shall be performed in accordance with Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," of the ASME Code and applicable edition and addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.55a(g), except when specific relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). Section 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if the licensee demonstrates that (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

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 practical within the limitations of design, geometry, and materials of construction of the components. The regulation requires 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 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 ISI Code of record for PNPP for the second 10-year ISI interval is the ASME Code, Section XI, 1989 Edition, No Addenda.

Section 50.55a(g)(4)(iv), states that the ISI of components and system pressure tests may meet the requirements set forth in subsequent editions and addenda that are incorporated by

reference in Section 50.55a(b), subject to the limitations and modifications listed therein and subject to NRC approval. Portions of the editions or addenda may be used provided that all related requirements of the respective editions and addenda are met.

3.0 TECHNICAL EVALUATION

3.1 Systems/Component(s) for which Relief is Requested

All ASME Code, Class 1, 2, and 3 piping systems within the scope of the PNPP ASME Code, Section XI boundary.

3.2 Applicable Code Requirements

The ISI ASME Code of record for PNPP for the second 10-year ISI interval is the ASME Code, Section XI, 1989 Edition, No Addenda.

3.3 Licensee's Proposed Subsequent Portions of the ASME Code

PNPP proposed using the rerating requirements of ASME Code, Section XI, paragraph IWA-4312, with the 1995 Addenda.

3.4 Related Requirements

The related requirements of ASME Code, Section XI, IWA-4311 and IWA-5000 with the 1995 Addenda, both referenced within ASME Code, Section XI, IWA-4312, will be used. When an ASME Code, Section XI, IWA-5213(a) system leakage test is required for rerating, the hold times specified in limitation 10 CFR 50.55a(b)(2)(xx) will be used. Although the 1995 Addenda is not specifically referenced in the limitation, the limitation hold times will be used because the hold times of the 1995 Addenda are the same as those of the 1997 Addenda and later editions and addenda for which the limitation is applied. Finally, the definition of rerating within ASME Code, Section XI, IWA-9000 with the 1995 Addenda (not previously included in the ASME Code) will also be used. There are no other related requirements for rerating.

3.5 Duration of the Proposed Request

The rerating provision of ASME Code, Section XI, IWA-4312, with the 1995 Addenda and identified related requirements will be utilized through the remainder of PNPP's second 10-year ISI interval which began November 18, 1998, and ends November 17, 2008.

3.6 NRC Staff Evaluation

The licensee's ISI Code of record is the 1989 Edition with no Addenda. The use of later editions and addenda or portions thereof may be used provided all related requirements are also used. The licensee is requesting to use the requirements contained in the Subparagraph IWA-4312 from the 1995 Addenda of the ASME Code for rerating all Class 1, 2, and 3 piping. This is a new, stand alone, subparagraph that did not exist in the 1989 Edition of the ASME Code. Rerating as defined in the 1995 Addenda, IWA-9000, is a "nonphysical change to an item or piping system done by changing its design ratings (e.g., internal or external pressure or temperature). Rerating covers pressure boundary items, core supports, and component supports."

To use ASME Code, Section XI, IWA-4312, the licensee must determine that all related requirements are met. A review of IWA-4312 identified the following requirements that must be used from the 1995 Addenda: IWA-5000 and IWA-4311 with reference to IWA-4180(c).

ASME Code, Section XI, IWA-5000 pertains to system pressure tests. IWA-5000 is a portion of the 1995 Addenda of the ASME Code that is referenced in 10 CFR 50.55a(b) as acceptable. As discussed by the licensee, the wording for ASME Code, Section XI, IWA-5213(a) in the 1995 Addenda is the same as the wording in the 1997 Addenda. Beginning with the 1997 Addenda, the NRC staff took an exception to IWA-5213(a) that was published in 10 CFR 50.55a(b)(2)(xx). The exception states, "When performing system leakage tests in accordance [with] IWA-5213(a), 1997 Addenda through the latest edition and addenda incorporated by reference in paragraph (b)(2) of this section, a 10 minute hold time after attaining test pressure is required for Class 2 and Class 3 components that are not in use during normal operating conditions, and no hold time is required for the remaining Class 2 and Class 3 components provided that the system has been in operation for at least 4 hours for insulated components or 10 minutes for uninsulated components." The licensee will adhere to the restriction that was imposed on the 1997 Addenda, which is acceptable.

ASME Code, Section XI, IWA-4180(c) permits attaching revisions to existing reports, records, and specifications as an amendment or supplement. This requirement did not exist in the 1989 Edition of the ASME Code. IWA-4180(c) is a portion of the 1995 Addenda of the ASME Code that is reference in 10 CFR 50.55a(b), and is acceptable.

Therefore, the use of ASME Code, Section XI, IWA-4312, with the 1995 Addenda, for the subject piping may be used as a stand alone requirement for ISI examination performed according to the 1989 Edition of the ASME Code.

5.0 CONCLUSION

The NRC staff has concluded, based on the considerations discussed above, that the use of ASME Code, Section XI, paragraph IWA-4312, of the 1995 Addenda, for the subject piping is acceptable. Therefore, the staff approves the use of ASME Code, Section XI, IWA-4312, with the 1995 Addenda, for Class 1, 2, and 3 piping in accordance with 10 CFR 50.55a(g)(4)(iv). The request is approved for the remainder of PNPP's second 10-year ISI interval which began November 18, 1998, and ends November 17, 2008. All other requirements of the ASME Code, Section XI, for which relief has not been specifically requested remain applicable, including third party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: D. Naujock, NRR

Date: January 13, 2005