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

April 18, 2013

Mr. Thomas Joyce
President and Chief Nuclear Officer
PSEG Nuclear LLC
P.O. Box 236, N09
Hancocks Bridge, NJ 08038

SUBJECT: SALEM NUCLEAR GENERATING STATION, UNIT NO. 2 - SAFETY EVALUATION OF RELIEF REQUEST NO. S2-I4R-123 REGARDING THE FOURTH 10-YEAR INSERVICE INSPECTION INTERVAL (TAC NO. ME8847)

Dear Mr. Joyce:

By letter dated June 7, 2012,[1] PSEG Nuclear, LLC (PSEG, the licensee) requested approval of Relief Request S2-I4R-123, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(a)(3)(i). The request proposed an alternative to the requirements of 10 CFR 50.55a(g)(4)(ii) pertaining to the 10-year update of Salem Generating Station, Unit 2 (Salem 2) Inservice Inspection (ISI) program.

Specifically, S2-I4R-123 proposed to update the Salem 2 ISI program to the requirements in the 2004 Edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, rather than the 2007 Edition with the 2008 Addenda, which is the latest edition/addenda approved for use in 10 CFR 50.55a(b)(2).

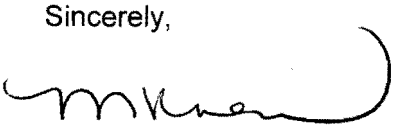
The NRC staff has completed its review of this relief request and determined that the requested alternative will provide an acceptable level of quality and safety. Therefore, the licensee's requests for relief is authorized pursuant to 10 CFR 50.55a(a)(3) for the Salem 2, fourth 10-year ISI interval. The details of the NRC staff's review are included in the enclosed safety evaluation.

All other ASME Code, Section XI requirements for which relief was not specifically requested and approved in the subject requests for relief remain applicable, including third-party review by the authorized Nuclear Inservice Inspector.

[1] Agencywide Documents Access and Management System ADAMS Accession No. ML12159A084.

If you have any questions concerning this matter, please contact the Salem Project Manager, Mr. John Hughey, at (301) 415-3204.

Sincerely,



Meena Khanna, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-272

Enclosure:
Safety Evaluation

cc w/encl: Distribution via Listserv

UNITED STATES
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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO RELIEF REQUEST NO. S2-I4R-123 REGARDING

USE OF ASME SECTION XI 2004 EDITION

PSEG NUCLEAR LLC

SALEM NUCLEAR GENERATING STATION, UNIT NO. 2

DOCKET NO. 50-311

1.0 INTRODUCTION

By letter dated June 7, 2012,[1] PSEG Nuclear, LLC (PSEG, the licensee) requested approval of Relief Request S2-I4R-123, pursuant to Title 10 of the Code of Federal Regulations (10 CFR) 50.55a(a)(3)(i). The request proposed an alternative to the requirements of 10 CFR 50.55a(g)(4)(ii) pertaining to the 10-year update of Salem Generating Station, Unit 2 (Salem 2) Inservice Inspection (ISI) program. Specifically, S2-I4R-123 proposed to update the Salem 2 ISI program to the requirements in the 2004 Edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, rather than the 2007 Edition with the 2008 Addenda, which is the latest edition/addenda approved for use in 10 CFR 50.55a(b)(2).

2.0 REGULATORY REQUIREMENTS

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, "Rules for In-service Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of components. Paragraph 50.55a(g)(4)(i) requires that inservice examination of components and system pressure tests conducted during the first 10-year inspection interval comply with the requirements of the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b)(2) 12 months prior to the issuance of the operating license, subject to the conditions listed therein. Paragraph 50.55a(g)(4)(ii) requires that inservice examination of components and system pressure tests conducted during subsequent 10-year inspection intervals comply with the requirements of the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b)(2) 12 months prior to the start of the 120-month inspection interval, subject to the conditions listed therein.

[1] Agencywide Documents Access and Management System ADAMS Accession No. ML12159A084.

10 CFR 50.55a(a)(3) states that alternatives to the requirements of paragraph (g) may be used, when authorized by the Nuclear Regulatory Commission (NRC), if: (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. As stated in 10 CFR 50.55a(g)(5)(iii), if the licensee has determined that conformance with certain code requirements is impractical for its facility, the licensee shall notify the Commission and submit, as specified in §50.4, information to support the determinations.

The NRC staff finds that there is regulatory basis for the licensee to request and the NRC to authorize this alternative, pursuant to the technical evaluation that follows. The information provided by the licensee in support of the request has been evaluated by the NRC staff and the bases for disposition are documented below.

3.0 TECHNICAL EVALUATION

3.1 Licensee's Request for Alternative

3.2 Code Requirements

The Salem 2 120-month ISI program is required by 10 CFR 50.55a(g)(4)(ii) to be updated to the 2007 Edition with the 2008 Addenda of ASME Section XI in November 2013.

3.3 Licensee's Proposed Alternative

PSEG proposes to utilize the alternative requirements in the 2004 Edition of ASME Section XI, subject to the conditions contained in 10 CFR 50.55a(b)(2).

3.4 Basis for Proposed Alternative

In the licensee's submittal, it is stated that,

> On May 20, 2011, Salem Unit 1 was updated to the 2004 Edition of Section XI in accordance with the requirements of 10 CFR 50.55a(g)(4)(ii). Additionally, on April 22, 2010 the Salem Units 1 and 2 Containment Inservice Inspection (CISI) programs were updated to the 2004 Edition of Section XI in accordance with the requirements of 10 CFR 50.55a(g)(4)(ii).

PSEG Nuclear utilizes the same procedures and processes for management and implementation of the Salem 1 and 2 ASME, Section XI programs. Because of the recent inspection interval updates of the Unit 1 ISI and the Units 1 and 2 CISI programs, these procedures have been modified to address two sets of Section XI requirements. If the Salem 2 ISI program was updated to the 2007 Edition with the 2008 Addenda in November 2013, then this would require the implementing procedures to continue utilizing two different

Editions/Addenda of ASME Section XI. PSEG states that,

> For licensees who operate multiple units, it has been shown to improve performance by focusing procedures on the use of a common set of requirements that are enhanced over time through multiple unit use.

3.5 Staff Evaluation

The licensee's proposed alternative would allow Salem 2 to update its fourth 10-year ISI interval program to the 2004 Edition of the ASME Code, Section XI, rather than the 2007 Edition through the 2008 Addenda, currently incorporated by reference in 10 CFR 50.55a(b). The Salem 2 fourth 10-year ISI interval is scheduled to begin November 27, 2013.

There were numerous changes incorporated into the 2004 Edition of ASME Code, Section XI. The NRC staff evaluated these changes when the 10 CFR 50.55a(b)(2) regulations were changed to incorporate by reference the 2007 Edition through the 2008 Addenda of Section XI. The NRC staff did not find it necessary to mandate that plants following earlier editions and addenda of ASME Code, Section XI implement any of the changes incorporated into the 2007 Edition through the 2008 Addenda of Section XI. However, the NRC staff did mandate certain augmented ISI program requirements found in 10 CFR 50.55a(g)(6)(ii), (i.e., Reactor vessel head inspections, Reactor coolant pressure boundary visual inspections, and Examination requirements for class 1 piping and nozzle dissimilar-metal butt welds) which include containment ISI in accordance with Subsections IWE and IWL, that Salem 2 must follow.

In the submittal dated June 7, 2012, the licensee stated that implementation of S2-I4R-123 using the 2004 Edition of ASME Code, Section XI would not affect compliance with the requirements of 10 CFR 50.55a(g)(6)(ii) for Salem 2. The NRC staff also notes that 10 CFR 50.55a(b)(2)(xv) requires licensees utilizing editions and addenda after the 2001 Edition through the 2006 Addenda to use the 2001 Edition of Appendix VIII. Therefore, the NRC staff finds that an ISI program following the requirements of the 2004 Edition of ASME Code, Section XI, subject to the conditions of 10 CFR 50.55a(b) and the requirements of 50.55a(g)(6)(ii), will provide an acceptable alternative to the 2007 Edition through the 2008 addenda.

The proposed alternative will allow the use of a common Code of record for the Salem 1 and 2 ISI Programs and the Salem 1 and 2 Second 10-year CISI Interval. The common Code of record will be 2004 Edition of ASME Code, Section XI for all four Salem ISI programs. There are distinct advantages in implementing the same code requirements at multi-unit sites for a licensee. The advantages include the reduction of administrative burden of maintaining different sets of procedures and requirements, and results in a significant decrease in the chances of applying the wrong requirements.

Based on the above, the NRC staff has determined that the licensee's proposed alternative will make implementation of the ISI programs at Salem 2 more efficient and effective. Therefore, the NRC staff finds that the licensee's proposed alternative will provide an acceptable level of quality and safety.

4.0 CONCLUSION

As set forth above, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a, and the proposed alternative Relief Request S2-I4R-123 provides an acceptable level of quality and safety. Accordingly, the NRC staff concludes that the licensee has adequately addressed all of the regulatory requirements set forth in 10 CFR 50.55a(a)(3)(i), and is in compliance with the ASME Code's requirements for which no relief was requested. Therefore, the NRC staff authorizes use of Relief Request S2-I4R-123 for the fourth 10-year ISI interval at Salem Generating Station, Unit 2.

All other ASME Code, Section XI, requirements for which relief was not specifically requested and approved in the subject requests for relief remain applicable, including third-party review by the authorized Nuclear Inservice Inspector.

Principal Contributor: Keith M. Hoffman

Date: April 18, 2013

If you have any questions concerning this matter, please contact the Salem Project Manager, Mr. John Hughey, at (301) 415-3204.

Sincerely,

/RA/

Meena Khanna, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-272

Enclosure:
Safety Evaluation

cc w/encl: Distribution via Listserv

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ADAMS Accession No.: ML13088A219 *via e-mail dated

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