

DRAFT

REQUEST FOR ADDITIONAL INFORMATION

PROPOSED ALTERNATIVE REQUEST FOR RELIEF NOS. 4RR-02 AND 4RR-06

FOURTH TEN-YEAR INSPECTION INTERVAL

PPL SUSQUEHANNA, LLC

ALLEGHENY ELECTRIC COOPERATIVE, INC.

SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2

DOCKET NOS. 50-387 AND 50-388

By letter dated August 30, 2013,¹ PPL Susquehanna, LLC (PPL, the licensee), submitted a set of Relief Requests from the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI for the Fourth Ten-Year Inservice Inspection (ISI) Interval at Susquehanna Steam Electric Station (SSES) Units 1 and 2.

4RR-02

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50.55a(a)(3)(i), the licensee requested relief from certain inspection requirements regarding ISI of reactor pressure vessel (RPV) circumferential welds, consistent with the guidance provided in Generic Letter 98-05, "Boiling Water Reactor Licensee Use of the BWRVIP-05 Report to Request Relief from Augmented Examination Requirements on Reactor Pressure Vessel Circumferential Welds," dated November 10, 1998, and the Nuclear Regulatory Commission (NRC) staff's safety evaluation (SE) for the BWRVIP-05 report issued on July 28, 1998. The licensee's submittal stated that Relief Request 4RR-02 was being provided as an administrative placeholder because this relief request was submitted in the Second Ten-Year ISI Interval as 2RR-22 by letter dated November 7, 2000,² and was subsequently approved by the NRC staff in a safety evaluation dated February 28, 2001,³ until the end of the initial license for both units, which includes the Fourth 10-Year Inservice Inspection Interval. Relief Request 4RR-02 is essentially identical to Relief Request 2RR-22. However, because the initial license period ends at midnight on July 17, 2022 for SSES, Unit 1 and Midnight on March 24, 2024 for SSES, Unit 2, while the 4th ten-year ISI interval ends June 1, 2024, the staff determined that a part of the 4th 10-year interval is not covered by the relief request. Therefore, the licensee requested that the staff review and disposition relief request 4RR-02 for the Fourth Ten-Year ISI Interval. To complete its review of Relief Request 4RR-02, the NRC staff requests responses to the questions below.

RAI 4RR-02 1:

Confirm the requested duration for Relief Request 4RR-02.

¹ Agencywide Documents Access and Management System (ADAMS) Accession No. ML13247A167

² ADAMS Accession No. ML003769393

³ ADAMS Accession No. ML010330383

RAI 4RR-02 2:

Both relief request 2RR-22 and 4RR-02 determined the adjusted reference temperature for the limiting circumferential weld based on a peak RPV inner diameter neutron fluence of $0.078 \times 10^{19} \text{ n/cm}^2$ associated with 32 effective full power years (EFPY) of operation. Since the Fourth Ten-Year ISI for SSES Unit 1, and SSES, Unit 2 extends beyond the end of the initial license period for both units, confirm that the neutron fluence at the end of the Fourth Ten-Year ISI Interval for both units, will remain bounded by the value for 32 EFPY. If the neutron fluence is not bounded, provide a revised evaluation of the adjusted reference temperature of the limiting circumferential weld for SSES at the end of the Fourth Ten-Year ISI Interval.

RAI 4RR-02 3:

The "Code Requirement" section of 4RR-02 states, in part, that:

10 CFR 50.55a(g)(6)(ii)(A)(2) requires volumetric of RPF shell welds to be performed completely, once, as an augmented examination requirement. These examinations are required to be performed using the 1989 Edition of the ASME Code Section XI. These examinations are required during the inspection interval when the regulation was approved or the first period of the next inspection interval.

The "Relief Requested" section of 4RR-02 states, in part, that:

Approval of this alternative examination is requested in accordance with 10 CFR 50.55a(a)(3)(i) and 10 CFR 50.55a(g)(6)(ii)(A)(5) for permanently excluding volumetric examination of circumferential RPV welds.

The staff notes that the requirements of 10 CFR 50.55a(g)(6)(ii)(A) as stated above have been removed and replaced by "[Reserved]" in the current version of 10 CFR 50.55a. However, the staff also notes that ASME Code, Section XI editions more recent than 1989 contain the requirement to perform volumetric examination of essentially 100% of RPV shell welds.

The staff requests the licensee revise 4RR-02 accordingly to reflect the current version of 10 CFR 50.55a and the version of the ASME Code, Section XI applicable for the Fourth Ten-Year ISI Interval for SSES, Units 1 and 2.

4RR-06

Specifically, pursuant to 10 CFR 50.55a(a)(3)(i) the licensee requested an alternative from the requirements of ASME Code Section XI, Subsection IWF for the visual inspection of snubber attachments, on the basis that the alternatives provide an acceptable level of quality and safety. To complete its review of Relief Request 4RR-06, the NRC staff requests responses to the questions below.

RAI 4RR-06 1:

Based on information in the relief request, two different ASME Codes will be used. Verify that for snubbers (pin-to-pin), ASME OM Code 2004 Edition with 2005 and 2006 Addenda and for

the snubber supports and attachments, ASME Section XI 2007 Edition with 2008 addenda will be used.

RAI 4RR-06 2:

Most of the plants, snubber inservice examination is implemented by a separate snubber program. Please explain and provide details how two different programs (1) snubbers and their supports including attachments; and (2) supports including attachments (without snubber), will be maintained and implemented.

RAI 4RR-06 3:

Clarify that while using Figure 2 of relief request 4RR-06 as the new boundary for inspection of snubbers, and their supports and attachments, if the support attachment is connected to insulated pipe, then the insulation will be removed for inspection of the attachment/support.

RAI 4RR-06 4:

Please verify that for supports included under this relief request (Figure 2) all items will be examined as specified in IWF-2500.

RAI 4RR-06 5:

IWF-2430(a) states, in part, that component supports examination performed in accordance with Table IWF-2500-1 that reveal flaws or relevant conditions exceeding the acceptance standards of IWF-3400, and that requires corrective measures, shall be extended, during the current outage, to include the component supports immediately adjacent to flawed supports. Please explain how this situation (to include supports adjacent to flawed supports) will be considered, because this relief request only considers supports with snubbers. (Note: the adjacent supports could be without snubber)

RAI 4RR-06 6:

In the "Proposed Alternative and Basis for Use" section of Relief Request 4RR-06," it is noted that ASME OM Code Case OMN-13 requires 100% of safety related snubbers to be examined and evaluated at least once every 10 years. This exceeds the requirements the ASME Section XI, Table IWF-2500-1, which only requires 15% of Class 1, 15% of Class 2, and 10% of Class 3 supports/attachment over a 10-year interval. Please respond to the following:

- (a) ASME OM Code Case OMN-13 allows to extend the snubber visual examination once every 10 years, and can be implemented after the requirements of ISTD-4251 and ISTD-4252 have been satisfied and the previous examination per Table ISTD 4252-1 was performed satisfactory at a maximum interval of two fuel cycles. (a) Please specify that the ISTD-4251 and ISTD-4252 requirements are met at Susquehanna and Table ISTD 4252-1 requirements have been satisfied to use Code Case OMN-13; and (b) Please elaborate on how the proposed snubber examination extended up to 10 years can be aligned with the 10-year ISI interval of the support and attachments (containing the snubber) for inspection.
- (b) While using OMN-13 for snubbers during the extended interval of 10-years, if the number of unacceptable snubbers (pin-to-pin) exceeds the ISTD-4252-1 limits (these

unacceptable snubbers can be found during non-inspection activities such as walkdowns or any other events i.e. water hammer, etc.), what action will be taken and how will these findings align with the supports and attachments inspection.

RAI 4RR-06 7:

Verify that for snubbers and their supports and attachments, VT-3 will be performed as defined in IWA-2213 (i.e. IWA-2213(a) thru IWA-2213(g)).

RAI 4RR-06 8:

Please explain how the proposed inspection of supports containing snubbers (once every 10 years) will be aligned with inspection scheduled for others supports (without snubbers), as defined in Table IWF-2410-1.

RAI 4RR-06 9:

What action will be taken if a snubber/support/attachment failed during the proposed combined inspection interval? Please provide separate responses for snubbers and supports/attachments. (Note: Also see RAI 4RR-06 6(b) above for snubbers and IWF-2430, "Additional Examination," for supports)

RAI 4RR-06 10:

How will the newly added support(s) with snubber(s) and support(s) without snubber(s) be inspected during the 10-year interval as per this relief request? Please provide your response based on proposed relief request and IWF-2410(c).