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

March 9, 2016

Mr. Mano Nazar
President and Chief Nuclear Officer
Nuclear Division
NextEra Energy
P.O. Box 14000
Juno Beach, FL 33408-0420

SUBJECT: TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4 – SAFETY EVALUATION FOR RELIEF REQUEST NO. 3 FOR FIFTH 10-YEAR INSERVICE INSPECTION INTERVAL – ALTERNATIVE FOR EXAMINATION OF SNUBBERS (CAC NOS. MF6386 AND MF6387)

Dear Mr. Nazar:

By application dated June 8, 2015, as supplemented by letter dated December 4, 2015, Florida Power & Light Company (the licensee) submitted Relief Request No. 3 for the fifth 10-year inservice inspection (ISI) interval of Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point). Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Paragraph 55a(a)(z)(1), the licensee requested the U.S. Nuclear Regulatory Commission (NRC) to authorize an alternative to the snubber visual examination requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI, 2007 Edition with Addenda through 2008, as amended by 10 CFR, Section 50.55a. The licensee proposed to perform the visual examination of snubbers and associated attachment hardware in accordance with its Snubber Program.

The NRC staff reviewed the subject request and, as set forth in the enclosed safety evaluation, concludes that the licensee adequately addressed all regulatory requirements in 10 CFR 50.55a(a)(z)(1). Accordingly, the NRC staff authorizes Relief Request No. 3 at Turkey Point for the remainder of the fifth 10-year ISI interval, which is currently scheduled to end on February 21, 2024, for Unit 3 and on April 14, 2024, for Unit 4.

All other requirements of 10 CFR 50.55a, the ASME BPV Code, Section XI, and the ASME Operation and Maintenance Code for which relief was not specifically requested and approved, remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

If you have any questions regarding this issue, please contact the project manager, Ms. Audrey Klett, at (301) 415-0489 or by e-mail at Audrey.Klett@nrc.gov.

Sincerely,

Benjamin G. Beasley, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

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 REQUEST NO. 3

FIFTH 10-YEAR INSERVICE INSPECTION INTERVAL

FLORIDA POWER & LIGHT COMPANY

TURKEY POINT NUCLEAR GENERATING UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

1.0 INTRODUCTION

By application dated June 8, 2015,[1] as supplemented by letter dated December 4, 2015,[2] Florida Power & Light Company (the licensee) submitted Relief Request No. 3 (RR No. 3) for the fifth 10-year inservice inspection (ISI) intervals at Turkey Point Nuclear Generating Unit Nos. 3 and 4 (Turkey Point). Pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Paragraph 55a(a)(z)(1), the licensee requested the U.S. Nuclear Regulatory Commission (NRC) to authorize an alternative to the snubber visual examination requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (BPV) Code, Section XI, 2007 Edition with Addenda through 2008, as amended by 10 CFR, Section 50.55a. The licensee proposed to perform the visual examination of snubbers and associated attachment hardware in accordance with its Snubber Program in lieu of the ASME BPV Code, Section XI, Subarticle IWF-2500 requirements. By electronic mail (email) dated October 1, November 13, and November 16, 2015,[3] the NRC staff issued a request for additional information (RAI) to the licensee. By letter dated December 4, 2015, the licensee responded to the NRC staff's request.

2.0 REGULATORY EVALUATION

Paragraph 50.55a(g)(4) of 10 CFR states that throughout the service life of a boiling or pressurized water-cooled nuclear power facility, components (including supports) that are classified as ASME Code Class 1, Class 2, and Class 3 must meet the requirements, except design and access provisions and preservice examination requirements, set forth in Section XI of editions and addenda of the ASME BPV Code, or the ASME Operation and Maintenance (OM) Code for snubber examination and testing, that become effective subsequent to editions specified in paragraphs (g)(2) and (3) of this section and that are

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[1] Agencywide Documents Access and Management System (ADAMS) Accession No. ML15181A251.
[2] ADAMS Accession No. ML15351A405.
[3] ADAMS Accession Nos. ML15274A287, ML16041A106, and ML16041A109, respectively.

incorporated by reference in paragraph (a)(1)(ii) or (iv) for snubber examination and testing of this section, to the extent practical within the limitations of design, geometry, and materials of construction of the components, except where alternatives have been authorized pursuant to 10 CFR 50.55a(z).

Pursuant to 10 CFR 50.55a(z)(1), alternatives to requirements may be authorized by the NRC if the licensee demonstrates that the proposed alternatives provide an acceptable level of quality and safety. A proposed alternative must be submitted and authorized prior to implementation. Section 50.55a of 10 CFR allows the NRC to authorize alternatives and to grant relief from ASME Code requirements upon making the necessary findings.

Paragraph 50.55a(b)(3)(v)(B) states that the licensee must comply with the provisions for examining and testing snubbers in Subsection ISTD of the ASME OM Code when using the 2006 Addenda and later editions and addenda of Section XI of the ASME BPV Code.

Based on the above, and subject to the following technical evaluation, the NRC staff finds that regulatory authority exists for the NRC to authorize the alternative requested by the licensee for the remainder of the fifth 10-year ISI intervals. Accordingly, the NRC staff reviewed and evaluated the licensee's request pursuant to 10 CFR 50.55a(z)(1).

The code of record for the fifth 10-year ISI intervals is the ASME Code, Section XI, 2007 Edition with Addenda through 2008, as amended by 10 CFR 50.55a.

3.0 TECHNICAL EVALUATION

ASME Code Components for RR No. 3 and Applicable Code Edition and Addenda

The applicable components for RR No. 3 are ASME Code Class 1, 2, and 3, snubber attachment hardware (pin-to-pipe and pin-to-structure), excluding integral attachments. The components are ASME Examination Category F-A, item numbers F1.10, F1.20, F1.30, and F1.40.

The applicable ASME BPV Code, Section XI edition and addenda for Turkey Point's fifth 10-year ISI program is the 2007 Edition through the 2008 Addenda. The Turkey Point snubber program for the fifth 10-year ISI intervals is based on the the ASME OM Code, Subsection ISTD, 2004 Edition with Addenda through 2006, as required by 10 CFR 50.55a(b)(3)(v)(B).

The examination requirements for supports and associated attachment hardware are specified in ASME BPV Code, Section XI, Subarticle IWF-2500. Table IWF-2500-1, Examination Category F-A requires that visual VT-3 examinations be performed on ASME Code Class 1, 2, and 3 piping and component supports. The examination and testing of snubbers is governed by the ASME OM Code, Subsection ISTD, in accordance with the ASME BPV Code, Section XI, Subsubarticle IWF-1220, and 10 CFR 50.55a(b)(3)(v)(B).

When determining the boundaries for support examinations, Subparagraph IWF-1300(g) states that all integral and nonintegral connections within the boundary governed by IWF rules and requirements are included. The interface boundaries for the examination of snubber and snubber attachment hardware are further addressed in Subparagraph IWF-1300(h), which

states, "The examination boundary of the support containing snubber shall not include the connection to the snubber assembly (pins)." These boundaries are shown graphically in Figure IWF-1300-1(f).

Licensee's Proposed Alternative

The licensee proposed that a single program – the Turkey Point Snubber Program – maintain the schedule of the examination of snubbers and the associated attachment hardware. The licensee stated it will perform the visual examination of snubbers concurrently with the associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) per the Snubber Surveillance Procedure No. 0-OSP-105.1, "Visual Inspection, Removal and Reinstallation of Mechanical Shock Arrestors."

The licensee stated that examinations on integral attachments that are associated with snubber attachment hardware are not included in the scope of this request for relief and that the examination of these items will continue in accordance with the ASME BPV Code, Section XI.

Licensee's Reason for the Proposed Alternative

The licensee is required to perform VT-3 visual examinations on Class 1, 2, and 3 supports, including attachment hardware, per the ASME BPV Code, Section XI. The licensee is also required to perform visual examinations and testing on snubber assemblies (snubber program) in accordance with the the ASME OM Code, Subsection ISTD. When incorporating the requirements of Subsection ISTD into its Snubber Program, the licensee included the visual examination of snubber attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) along with the visual examination of the snubber assembly (pin-to-pin).

Having two nearly identical sets of requirements for the visual examination of the snubber (pin-to-pin) and snubber attachment hardware would require the performance of redundant examinations and cause unnecessary confusion in sample selection, data collection and documentation of these examinations. It would increase the occupational radiation exposure and cause the unnecessary repetition of activities. The licensee stated that it will update Surveillance Procedure No. 0-OSP-105.1, "Visual Inspection, Removal and Reinstallation of Mechanical Shock Arrestors," to include the visual examination of snubber attachment hardware (pin-to-pin and pin-to structure, excluding integral attachments).

Licensee's Basis for the Proposed Alternative

The licensee's proposed Snubber Program surveillance procedure 0-OSP-105-1 provides the requirements for the visual examination of snubbers (pin-to-pin) and associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments). This Snubber Program provides the requirements necessary to implement and administer a comprehensive snubber surveillance, testing, maintenance, and service life monitoring. Procedure No. 0-OSP-105-1 includes the examination data sheets and drawings associated with the complete support assembly as required by the ASME BPV Code, Section XI, Article IWF, as well as of the ASME OM Code, Subsection ISTA, "General Requirements," and Subsection ISTD, "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants."

The licensee stated that examinations are performed by VT-3 certified personnel in accordance with the ASME BPV Code, Section XI, Subarticle IWF-2300. The licensee stated that findings identified during examinations that fail to meet specified criteria from Article IWF and Subsection ISTD are entered into its corrective action program, and findings associated with the snubber (pin-to-pin) are evaluated in accordance with the ASME OM Code. The licensee stated that findings between the pin-to-structure and pin-to-pipe are evaluated in accordance with the ASME Section XI, Article IWF.

The licensee stated that examination of integral attachments will be in accordance with the ASME BPV Code, Section XI, Table IWB-2500-1 (Examination Category B-K), Table IWC-2500-1 (Examination Category C-C) and Table IWD-2500-1 (Examination Category D-A). The licensee stated that the visual examination criteria established in Procedure No. 0-OSP-105-1 meets the examination criteria specified in the ASME BPV Code, Section XI, Table IWF-2500-1. The licensee stated that this procedure requires the visual examination of snubber (pin-to-pin), and snubber attachments, support attachments and attachments to the supporting foundation, including nuts, bolts, studs, welds, pins spacers, and embedment.

Duration of Proposed Alternative

The licensee requested to implement the alternative requirements during the fifth 10-year ISI intervals, which began on February 22, 2014, for Unit 3, and on April 15, 2014, for Unit 4.

NRC Staff Evaluation

The Turkey Point snubber program for the fifth 10-year ISI intervals is based on the ASME OM Code, 2004 Edition with 2005 and 2006 addenda; whereas the visual inspection of attachments for snubber attachment hardware (i.e., pin-to-pipe and pin-to structure, excluding integral attachments) is based on the ASME BPV Code, Section XI, 2007 Edition with 2008 Addenda. Snubbers (pin-to-pin) were removed from the ASME BPV Code, Section XI in the 2006 Addenda. The 2007 Edition through the 2008 Addenda of the ASME BPV Code, Section XI contains Figure IWF-1300-1(f) that depicts the examination boundaries for snubber (pin-to-pin) and attachments (see Figure 1 below).

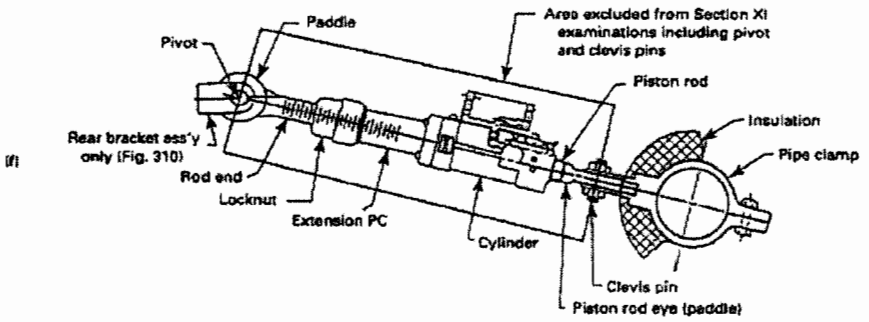

Figure 1

The component supports include snubbers (pin-to-pin) and their attachment hardware (pin-to-pipe and pin-to-structure), excluding the integral attachments. The examination and inspection of the snubbers (pin-to-pin) are to be performed per Subsections ISTA and ISTD of the ASME OM Code. However, examinations and inspections of support attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) are to be performed as specified in paragraphs IWF-1220 and IWF-2000 of the ASME BPV Code, Section XI. The licensee stated that having two similar sets of requirements for the visual examination and inspection for the same component supports (i.e., one for snubbers and another for their attachments and hardware), would require the performance of redundant examinations and cause unnecessary confusion in sample selection, data collection, and documentation of these examinations.

In order to eliminate the duplication of effort of tracking two different examination boundaries for one component, the licensee proposed to perform the visual examination of snubbers (pin-to-pin) and associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) per the Snubber Program in lieu of a separate procedure containing the requirements specified in Subarticle IWF-2500 of the ASME BPV Code, Section XI.

NRC staff reviewed the licensee's application and RAI response and found the proposed inservice examination of both snubbers and attachment hardware per the Snubber Program is acceptable because of the following reasons.

(1) The ASME BPV Code, Section XI, 2007 Edition including the 2008 Addenda, Figure IWF-1300-1(f) specifies the boundaries for the visual examination of snubbers (pin-to-pin) and snubber attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments). Examination requirements for snubbers (pin-to-pin) are located in the ASME OM code. Examination requirements for snubber attachment hardware are located in the ASME BPV Code, Section XI. The licensee proposed to perform the visual examination of snubbers and associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) along with snubber (pin-to-pin) visual examination in the Snubber Program.

(2) Incorporating inservice examination of both snubbers and their attachments into one program provides a better understanding of the condition of the snubber and its associated attachments, without sacrificing any quality and safety.

(3) Paragraph IWA-2213 requires the use of VT-3 for visual examination of snubbers' associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments); whereas Subsection ISTA-1500 requires the use of the owner's specified method for visual examination of snubbers. The licensee states that it will be using VT-3 qualified personnel for both snubbers and associated attachments. Performing both visual examinations of a snubber and its attachments under the Snubber Program using VT-3 qualified personnel to perform examinations provides a sufficient understanding of the snubber and its attachments to demonstrate the existence of an acceptable level of quality and safety.

(4) Visual examination of the snubber and associated attachments will be performed at the same time to save time and radiation dose.

(5) The licensee will update Procedure No. 0-OSP-105-1 to include the visual examination of snubber attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments). Licensee procedures will be enhanced to include the current practice of using VT-3 certified examiners.

(6) The licensee stated that while performing visual examination of snubbers and their attachments, any findings related to snubbers (pin-to-pin) will be evaluated in accordance with the ASME OM Code requirements and will not be subject to the ASME BPV Code, Section XI, Subsection IWF requirements for evaluation and expansion. The licensee stated that any findings identified from snubbers' attachments (pin-to-pipe and pin-to-structure, excluding integral attachments) will be evaluated in accordance with Subsection IWF of the ASME BPV Code, Section XI, which prescribes that corrective measures be taken (including scope expansion if applicable) during the same refueling outage.

(7) The licensee stated that if Code Case OMN-13 is implemented for snubbers to extend the visual examination interval to the 10-year maximum allowable, the complete support assemblies would be examined every 10 years. Therefore, a larger population of visual examination is performed for snubbers' associated attachment hardware than required by the ASME BPV Code, Section XI, Table IWF-2500-1.

(8) The licensee stated that for flaws or relevant conditions that are discovered within the IWF boundary and that are determined to require corrective measures, additional examinations will be performed in accordance with the requirements of Subsubarticle IWF-2430, "Additional Examinations." Flaws and relevant conditions discovered on the snubber will be evaluated per the ASME OM Code requirements.

Based on this evaluation, the NRC staff finds that the licensee's proposed alternative for visual examination of snubbers and snubber attachment hardware using the Snubber Program provides an acceptable level of quality and safety.

4.0 CONCLUSION

As set forth in this safety evaluation, the NRC staff determines that RR No. 3 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(z)(1). Therefore, the NRC staff authorizes the use of RR No. 3 at Turkey Point for the remainder of the fifth 10-year ISI and snubber program intervals. For Unit 3, the fifth 10-year ISI interval began on February 22, 2014, and is scheduled to end on February 21, 2024. For Unit 4, the fifth 10year ISI interval began on April 15, 2014, and is scheduled to end on April 14, 2024.

All other requirements of 10 CFR 50.55a, the ASME BPV Code, Section XI, and the ASME OM Code for which relief was not specifically requested and approved, remain applicable, including third-party review by the Authorized Nuclear Inservice Inspector.

Principal Contributor: Gurjendra S. Bedi

Date: March 9, 2016

If you have any questions regarding this issue, please contact the project manager, Ms. Audrey Klett, at (301) 415-0489 or by e-mail at Audrey.Klett@nrc.gov.

Sincerely,

/RA/

Benjamin G. Beasley, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-250 and 50-251

Enclosure:
Safety Evaluation

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