



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

June 7, 2015

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

SUBJECT: ST. LUCIE PLANT, UNIT NO. 2 – RELIEF REQUEST NUMBER 6,
REVISION 0 – ALTERNATIVE FOR EXAMINATION REQUIREMENTS OF
SNUBBERS (TAC NO. MF4336)

Dear Mr. Nazar:

By letter dated June 30, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14203A004), as supplemented by letter dated November 11, 2014 (ADAMS Accession No. ML14335A317), Florida Power & Light Company (FPL, the licensee) submitted Relief Request (RR) No. 6, Revision 0, to the U.S. Nuclear Regulatory Commission (NRC) for the fourth 10-year inservice inspection (ISI) program for the St. Lucie Plant, Unit No. 2 (SL-2). RR No. 6, Revision 0, was submitted for the use of alternatives to perform the visual examination of snubbers and associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) per the Snubber Program, in lieu of the requirements specified in IWF-2500 of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME BPV Code), Section XI, in the 2007 Edition through 2008 Addenda.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.55a(a)(3)(i), the licensee requested to use the proposed alternative for examination of snubbers on the basis that the alternative provides an acceptable level of quality and safety.

By *Federal Register* Notice dated November 5, 2014 (79 FR 65776), which became effective on December 5, 2014, the paragraph headings in 10 CFR 50.55a were revised. Accordingly, RRs that had been previously covered by 10 CFR 50.55a(a)(3)(i) are now covered under the equivalent 10 CFR 50.55a(z)(1), and relief requests that had been previously covered by 10 CFR 50.55a(a)(3)(ii) are now covered under the equivalent 10 CFR 50.55a(z)(2).

As set forth above, the NRC staff determined that RR No. 6, Revision 0, as documented in the licensee's letter dated June 30, 2014, as supplemented by letter dated November 11, 2014, 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. 6, Revision 0, at SL-2, for the fourth 10-year ISI interval and Snubber Program.

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

M. Nazar

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The NRC staff authorizes alternative RR No. 6, Revision 0, at SL-2 for the fourth 10-year ISI interval, which began on August 8, 2013, and is scheduled to end on August 7, 2023.

The bases for the NRC staff's conclusion are contained in the enclosed safety evaluation. If you have any questions, please contact the Project Manager, Farideh E. Saba, at 301-415-1447 or Farideh.Saba@nrc.gov.

Sincerely,



Shana R. Helton, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-389

Enclosure:
Safety Evaluation

cc w/enclosure: 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. 6, REVISION 0,

REGARDING EXAMINATION OF SNUBBERS

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 2

DOCKET NO. 50-389

1.0 INTRODUCTION

By letter dated June 30, 2014 (Agencywide Documents and Access Management System (ADAMS) Accession No. ML14203A004, Florida Power & Light Company (FPL, the licensee), submitted Relief Request (RR) No. 6, Revision 0, for the fourth 10-year inservice inspection (ISI) program for the St. Lucie Plant, Unit 2 (SL-2). The licensee submitted its response to the Nuclear Regulatory Commission (NRC, Commission) staff's request for additional information (RAI) on November 11, 2014 (ADAMS Accession No. ML14335A317). The submitted RR No. 6, Revision 0, proposes to perform the visual examination of snubbers and associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) per the Snubber Program, in lieu of the requirements specified in IWF-2500 of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME BPV Code), Section XI, in the 2007 Edition through the 2008 Addenda. The fourth 10-year ISI interval began on August 8, 2013, and is scheduled to end on August 7, 2023.

Specifically, pursuant to Title 10 of the *Code of Federal Regulations* (10 CFR) paragraph 50.55a(a)(3)(i), the licensee requested to use the proposed alternative in RR No. 6, Revision 0, on the basis that the alternative provides an acceptable level of quality and safety.

By *Federal Register* Notice dated November 5, 2014 (79 FR 65776), which became effective on December 5, 2014, the paragraph headings in 10 CFR 50.55a were revised. Accordingly, RRs that had been previously covered by 10 CFR 50.55a(a)(3)(i) are now covered under the equivalent 10 CFR 50.55a(z)(1), and relief requests that had been previously covered by 10 CFR 50.55a(a)(3)(ii) are now covered under the equivalent 10 CFR 50.55a(z)(2).

The SL-2 fourth 10-year ISI program will comply with the ASME BPV Code, Section XI, 2007 Edition through 2008 Addenda.

Enclosure

2.0 REGULATORY EVALUATION

It states, in part, in 10 CFR 50.55a(g)(4) 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 ASME OM [Operation and Maintenance] 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 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.

It states, in part, in 10 CFR 50.55a(g)(4)(ii) that inservice examination of components and system pressure tests conducted during successive 120-month inspection intervals must comply with the requirements of the latest edition and addenda of the Code incorporated by reference in paragraph (a) of this section 12 months before the start of the 120-month inspection interval (or the optional ASME Code Cases listed in NRC [U.S. Nuclear Regulatory Commission] Regulatory Guide 1.147, Revision 17, when using Section XI, or Regulatory Guide 1.192, Revision 1, when using the OM Code, that are incorporated by reference in paragraphs (a)(3)(ii) and (iii) of this section), subject to the conditions listed in paragraph (b) of this section.

Pursuant to 10 CFR 50.55a(z), alternatives to requirements may be authorized by the NRC if the licensee demonstrates that: (1) the proposed alternatives provide an acceptable level of quality and safety, or (2) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. A proposed alternative must be submitted and authorized prior to implementation.

Based on the above, and subject to the following technical evaluation, the NRC staff finds that regulatory authority exists for the licensee to request and the Commission to authorize the alternative requested by the licensee.

3.0 TECHNICAL EVALUATION

The ASME Code Affected Components and Requirements

The affected components are ASME Code Class 1, 2, and 3, snubbers' attachments hardware (pin-to-pipe and pin-to-structure), excluding integral attachments. The licensee is required to update the SL-2 10-year ISI Program to the latest edition and addenda of the ASME BPV Code, Section XI, as specified in 10 CFR 50.55a(b)(2), for the fourth 10-year ISI interval.

The applicable ASME Section XI edition and addenda for the SL-2 fourth 10-year ISI program is the 2007 Edition through the 2008 Addenda.

The examination requirements for supports and associated attachment hardware are specified in ASME Section XI, IWF-2500. Table IWF-2500-1, Examination Category F-A requires that visual VT-3 examination be performed on Class 1, 2, and 3 piping and component supports.

The examination and testing of snubbers is governed by ASME OM Code, Subsection ISTD as per ASME Section XI, IWF-1220, and 10 CFR 50.55a(b)(3)(v)(B).

The interface boundaries for the examination of snubber and snubber attachment hardware are further addressed in 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 Reason for Request

SL-2 is required to perform VT-3 visual examinations on Class 1, 2, and 3 supports, including attachment hardware, per ASME Section XI. SL-2 is also required to perform visual examinations and testing on snubber assemblies in accordance with the ASME OM Code, Subsection ISTD. When incorporating the criteria of Subsection ISTD into the Snubber Program, FPL 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). The visual examination criteria of the Snubber Program are nearly identical to those established by ASME Section XI. Having two nearly identical sets of requirements for the visual examination of snubber attachment hardware would require the performance of redundant examinations and cause unnecessary confusion in the sample selection, data collection and documentation of these examinations.

Licensee's Proposed Alternative and Basis for Use

FPL proposes to perform the visual examination of snubbers and associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) per the Snubber Program that is documented in St. Lucie Quality Instruction Procedure No. QI-10-PR/PSL-6, "Control, Inspection, and Monitoring of Mechanical and Hydraulic Snubbers," which is in accordance with ASME OM Code, Subsection ISTD. The examination of integral attachments will be in accordance with the ASME 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 DA).

The examination and testing requirements for snubbers are documented in St. Lucie Quality Instruction Procedure No. QI-10-PR/PSL-6. This procedure requires an examination frequency that establishes a high level of confidence in the acceptability of the plant's snubbers. This procedure requires the visual examination of snubber attachments, support attachments, and attachments to the supporting foundation, including nuts, bolts, studs, welds, pins, spacers, and embedments. The visual examination criteria established in Quality Instruction Procedure No. QI-10-PR/PSL-6 meets or exceeds the examination criteria specified in ASME Section XI, Table IWF-2500-1. Performing both the ASME Section XI and Snubber Program examinations would be redundant and would not improve the level of quality and safety in the plant. However, it would increase the occupational radiation exposure and cause the unnecessary repetition of activities.

The examinations on integral attachments that are associated with snubber attachment hardware are not included in the scope of this RR. The examination of these items will continue in accordance with ASME Section XI.

By letter dated November 11, 2014, the licensee submitted its response to the NRC staff's RAI. In its response, the licensee clarified that the ASME OM Code 2004 Edition with 2005 and 2006 Addenda will be used from snubber (pin-to-pin) inclusively and ASME Section XI 2007 Edition with 2008 Addenda will be used from pin-to-structure and pin-to-piping (associated attachment hardware).

3.2 NRC Staff Evaluation

The NRC staff reviewed three issues of interest: (a) the snubber (pin-to-pin) inservice examination requirements, (b) snubber attachments visual examination, and (c) the proposed alternative.

The SL-2 Snubber Program for the fourth 10-year interval is based on ASME OM Code 2004 Edition through 2006 Addenda, whereas the visual inspection of attachments for snubber attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments), is based on ASME Section XI 2007 Edition with 2008 Addenda.

The 2007 Edition through the 2008 Addenda of ASME Section XI contains Figure IWF-1300-1(f), which depicts the examination boundaries for snubber (as shown in Figure 1 below).

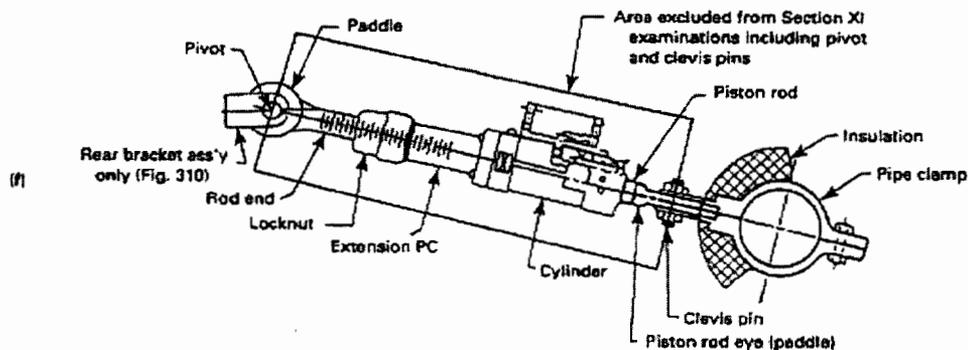


Figure 1

The boundaries indicate that the attachment of the snubber to the pressure boundary and building structure is required to be examined in accordance with IWF-2000, whereas excluded snubber (pin-to-pin) to be examined per ASME OM Code.

The licensee states that in order to eliminate the duplicate of effort by tracking two different examination boundaries for one component, SL-2 requests alternative, proposes to perform the visual examination of snubbers and associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments) per the Snubber Program in lieu of the requirements specified in IWF-2500 of ASME BPV Code, Section XI.

The NRC staff reviewed all the information provided in SL-2 submittal and response to RAIs, and found that the proposed examination boundaries of snubber and associated attachment hardware (pin-to-pipe and pin-to-structure, excluding integral attachments), per the Snubber Program, are acceptable, based on the following:

- (1) The ASME Section XI, 2007 Edition including the 2008 Addenda, Figure IWF-1300-1(f) specifies boundaries between snubber and its attachments, because snubber (pin-to-pin) examination and testing are moved in to the ASME OM Code. RR No. 6, Revision 0, proposes 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 both examination boundaries (snubbers and their attachments) into one program provides a better understanding of the condition of snubber and its associated attachments, without sacrificing any quality and safety.
- (3) The licensee will be using VT-3 qualified personnel for both snubbers and their associated attachments at SL-2. Performing both visual examinations of snubbers and their attachments under purposed boundaries in the Snubber Program using VT-3 qualified personnel to perform examinations provides a better understanding of the snubber and attachments.
- (4) Visual examination of the snubber and associated attachments will be performed at the same time to save the time and radiation dose.
- (5) FPL Procedure QI-10-PR/PSA-6, "Control, Inspection, and Monitoring of Mechanical and Hydraulic Snubbers," has been replaced with OSP-73.01 to incorporate changes necessary to ensure compliance with ASME Section XI, IWA and IWF requirements.
- (6) The licensee states that while performing visual examination of snubbers and their attachments, any findings related to snubber (pin-to-pin) will be evaluated in accordance with ASME OM Code requirements and will not be subject to ASME Section XI, Article IWF requirements for evaluation and expansion. Any findings identified from pin-to-structure and pin-to-piping system will be evaluated in accordance with Article IWF and corrective measures taken (including scope expansion if applicable) during the same refueling outage.
- (7) The Code Case OMN-13 provides specific requirements that must be met in order to allow extension of the visual examination interval beyond the maximum interval allowed by Table ISTD-4252-1 for snubbers. The licensee states that SL-2 does not satisfy the conditions required to use Code Case OMN-13 to extend the visual examination frequency to the 10 year maximum allowable. Currently, 100 percent of the examinations which include the snubber and associated attachment hardware are repeated every 3 years. If OMN-13 is implemented and the program inspection interval is increased to the 10 year maximum allowable, the complete support assembly would be examined every 10 years. Therefore, a larger population of visual examinations is

performed of snubbers and their associated attachment hardware that required by ASME Section XI, Table IWF-2500-1.

Based on above, the NRC staff finds that the licensee proposed alternative of snubber boundaries for visual examination, which includes snubbers and their attachments, provides an acceptable level of quality and safety.

4.0 CONCLUSION

As set forth above, the NRC staff determines that RR No. 6, Revision 0, as documented in the licensee's letter dated June 30, 2014, with supplement dated November 11, 2014 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. 6, Revision 0, at the SL-2 for the fourth 10-year interval ISI and Snubber Program.

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

The NRC staff authorizes alternative RR No. 6, Revision 0, at SL-2 for the fourth 10-year ISI interval, which began on August 8, 2013, and is scheduled to end on August 7, 2023.

Principal Contributor: Gurjendra Bedi

Date: June 7, 2015

M. Nazar

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The NRC staff authorizes alternative RR No. 6, Revision 0, at SL-2 for the fourth 10-year ISI interval, which began on August 8, 2013, and is scheduled to end on August 7, 2023.

The bases for the NRC staff's conclusion are contained in the enclosed safety evaluation. If you have any questions, please contact the Project Manager, Farideh E. Saba, at 301-415-1447 or Farideh.Saba@nrc.gov.

Sincerely,

/RA/

Shana R. Helton, Chief
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-389

Enclosure:
Safety Evaluation

cc w/enclosure: Distribution via Listserv

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