

NRR-PMDAPEm Resource

From: Beltz, Terry
Sent: Friday, August 02, 2013 12:41 PM
To: Millen, Michael
Cc: 'harv.hanneman@nexteraenergy.com'; Clark, Roger; McLellan, Thomas; Audrain, Margaret; Carlson, Robert
Subject: Point Beach Nuclear Plant, Units 1 and 2 - Draft Requests for Additional Information Regarding Relief Request RR-4L1 (TAC Nos. MF1148 and MF1149)
Attachments: Point Beach Nuclear Plant Units 1 and 2 - Draft Requests for Additional Information Regarding Relief Request RR-4L1 (TAC Nos. MF1148 and MF1149).docx

Dear Mr. Millen:

By letter to the U.S. Nuclear Regulatory Commission (NRC) dated March 19, 2013 (Agencywide Documents Access and Management System Accession No. ML13079A142), NextEra Energy Point Beach, LLC (the licensee) submitted relief request RR-4L1 associated with the requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components for the Point Beach Nuclear Power Plant, Units 1 and 2.

The NRC staff in the Piping & NDE Branch (EPNB) and the Vessel & Internals Integrity Branch (EVIB) of the Office of Nuclear Reactor Regulatory has identified areas where additional information is needed to complete its review. The draft requests for additional information (RAI) are provided as an attachment to this e-mail.

You may accept the draft RAIs as formal Requests for Additional Information and provide a response by September 6, 2013. Alternatively, you may request to discuss the contents of these draft RAIs with the NRC staff in a conference call, including any change to the proposed response date.

Please let me know if you have any questions or concerns.

Sincerely,

TERRY A. BELTZ, SENIOR PROJECT MANAGER
U.S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Rockville, MD 20852-2738
Mail Stop: O-8D15
Phone: (301) 415-3049
Terry.Beltz@nrc.gov

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Recipients:

"harv.hanneman@nexteraenergy.com" <harv.hanneman@nexteraenergy.com>

Tracking Status: None

"Clark, Roger" <Roger.Clark@nexteraenergy.com>

Tracking Status: None

"McLellan, Thomas" <Thomas.McLellan@nrc.gov>

Tracking Status: None

"Audrain, Margaret" <Margaret.Audrain@nrc.gov>

Tracking Status: None

"Carlson, Robert" <Robert.Carlson@nrc.gov>

Tracking Status: None

"Millen, Michael" <Michael.Millen@nexteraenergy.com>

Tracking Status: None

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REQUEST FOR ADDITIONAL INFORMATION

RELIEF REQUEST RR-4L1

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

NEXTERA ENERGY POINT BEACH, LLC

DOCKET NOS. 50-266 AND 50-301

(TAC NOS. MF1148 AND MF1149)

1.0 SCOPE OF REVIEW

By letter dated March 19, 2013, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML13079A142), NextEra Energy Point Beach, LLC (NextEra, the licensee) submitted Request for Relief (RR) 4L1 from the requirements of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components, for the Point Beach Nuclear Plant, Units 1 and 2 (PBNP 1 and 2). The request for relief applies to the fourth 10-year inservice inspection (ISI) interval which began on July 1, 2002, and ended on July 31, 2012, in which the licensee adopted the 1998 Edition through the 2000 Addenda of ASME Code Section XI as the code of record.

In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 50.55a(g)(5)(iii), the licensee has submitted the subject requests for relief for limited examinations in multiple ASME Code Examination Categories. The ASME Code, Section XI, requires that 100 percent of the examination volumes, or surface areas, described in ASME Code, Section XI, Tables IWB-2500 and IWC-2500 be performed during each interval. The licensee stated that 100 percent of the ASME Code-required volumes, or surface areas, are impractical to obtain at PBNP 1 and 2.

10 CFR 50.55a(g)(5)(iii) states that when licensees determine that conformance with ASME Code requirements is impractical at their facility; they shall submit information to support this determination. The Nuclear Regulatory Commission (NRC) will evaluate such requests based on impracticality, and may impose alternatives, giving due consideration to public safety and the burden imposed on the licensee.

The staff requires additional information to continue its review of its licensee's request for relief. For clarity, the licensee's requests have been evaluated according to ASME Code Examination Category and the corresponding requests for relief are labeled in parts alphabetically.

2.0 REQUESTS FOR ADDITIONAL INFORMATION

2.1 Request for Relief RR-4L1, Part A, ASME Code, Section XI, Examination Category B-A, Item B1.11, Pressure Retaining Welds in Reactor Vessel, PBNP 1 and 2

2.1.1 Please submit detailed and specific information, including photographs or sketches, as necessary, to augment the descriptions of limitations to examinations, and to support the bases for volumetric coverage obtained for ASME Code, Section XI, Examination

Category B-A components, and therefore, demonstrate impracticality.

- a) As applicable, describe nondestructive examination (NDE) equipment (ultrasonic scanning apparatus), details of the listed obstructions (size, shape, proximity to the weld, etc.) to demonstrate accessibility limitations.
- b) Discuss whether alternative methods or advanced technologies could be employed to maximize ASME Code volumetric coverage.
- c) Confirm that examinations of components listed in Examination Category B-A, were conducted in accordance with the performance demonstration requirements described in ASME Code, Section XI, Appendix VIII.
- d) Fully clarify the wave modality and insonification angles used for all ultrasonic examinations.
- e) Show cross-sectional coverage plots to describe ASME Code volumes examined.
- f) State whether any indications were discovered as a result of ASME Code-required examinations, and how these indications have been dispositioned.

- 2.1.2 It has been noted that for the fourth inspection interval, ASME Code volumetric coverage(s) for the Reactor Pressure Vessel (RPV) lower shell-to-lower head ring Welds RPV-17-683, at PBNP 1, and RPV-17-683, at PBNP 2, have decreased by approximately 4 and 10 percent, respectively, as compared to examinations performed in the third inspection interval (information found in previous SER- ADAMS Accession Number ML003677847).

Please clarify why there was a decrease in calculated coverage.

- 2.1.3 In third inspection interval (information found in previous SER - ADAMS Accession No. ML003677847), the ASME Code Category and Item number for lower shell-to-lower head ring Welds RPV-17-683, for PBNP 1, and RPV-17-683, for PBNP 2, were listed as ASME Code, Section XI, Category B-A, Item B1.21. In the current request for relief, the ASME Code, Section XI, Item number is listed as B1.11.

Please clarify this discrepancy and state the correct ASME Code, Section XI, Category B-A, Item number for the subject lower shell-to-lower head ring welds.

If the correct Item number is ASME Code, Section XI, B1.21, for the RPV circumferential head welds, please state the **accessible length** for each of the lower shell-to-lower head ring Welds RPV-17-683, for PBNP 1, and RPV-17-683, for PBNP 2, then please clarify whether the volumetric coverage percentages obtained are applicable to the accessible length, as opposed to the entire length of the weld.

2.2 Request for Relief RR-4L1, Part B, ASME Code, Section XI, Examination Category B-D, Items B3.90 and B3.110, Full Penetration Welded Nozzles in Vessels, PBNP 1 and 2

2.2.1 Please submit detailed and specific information, including photographs or sketches, as necessary, to augment the descriptions of limitations to examinations, and to support the bases for volumetric coverage obtained for ASME Code, Section XI, Examination Category B-D components, and therefore, demonstrate impracticality.

- a) As applicable, describe NDE equipment (ultrasonic scanning apparatus), details of the listed obstructions (size, shape, proximity to the weld, etc.) to demonstrate accessibility limitations.
- b) Discuss whether alternative methods or advanced technologies could be employed to maximize ASME Code volumetric coverage.
- c) Confirm that the examinations listed in ASME Code, Section XI, Examination Category B-D, Item B3.90, were conducted in accordance with the performance demonstration requirements described in ASME Code, Section XI, Appendix VIII. If not, please state the ASME Code requirements used for the ultrasonic examinations of these welds.
- d) Fully clarify the wave modality and insonification angles used for all ultrasonic examinations.
- e) Show cross-sectional coverage plots to describe ASME Code volumes examined.
- f) State whether any indications were discovered as a result of ASME Code-required examinations, and how these indications have been dispositioned.

2.2.2 The volumetric examination coverage provided for PZR-SPRAYNOZ-IRS, PBNP, Unit 1 and 2, are 73.3 percent and 88 percent, respectively. The limitation provided by the licensee for each of the welds states "Examination limited due to permanent insulation straps (14.7 percent) and raised lettering (cast-in) on head (12 percent)." According to the percentages provided in the limitation description, the examination coverage for PZR-SPRAYNOZ-IRS, for both PBNP 1 and 2, should be 73.3 percent.

Please explain how the volumetric examination coverage was calculated for each of the subject welds and why they are different for PBNP, Unit 1 and Unit 2.

2.3 Request for Relief RR-4L1, Part C, ASME Code, Section XI, Examination Category B-K, Item B10.10, Integral Attachments for Class 1 Vessels, Piping, Pumps, and Valves, PBNP, Units 1 and 2

2.3.1 Please discuss any additional NDE techniques that could be used to verify structural integrity of the welds. For example, discuss whether a visual VT-1 examination could have been performed to augment the limited surface examinations.

2.3.2 Please state whether any indications were discovered as a result of the examinations performed, and how these indications were dispositioned.

2.3.3 Please state the materials of construction for the regenerative heat exchanger.

2.4 Request for Relief RR-4L1, Part D, ASME Code, Section XI, Examination Category C-B, Item C2.21, Pressure Retaining Nozzle Welds in Vessels, PBNP 1

The licensee has provided only general, and somewhat vague, information regarding the impracticality of obtaining ASME Code-required volumetric examinations. For example, the licensee's statement "limitation due to configuration," does not provide a detailed basis and reason for not obtaining the ASME Code-required examination volumes.

Please provide a detailed basis of the impracticality to obtain the ASME Code-required examination as noted below:

- 2.4.1 Submit detailed and specific information, including photographs or sketches, as necessary, to augment the descriptions of limitations to examinations, and to support the bases for volumetric coverage obtained for ASME Code, Section XI, Examination Category C-B components, and therefore, demonstrate impracticality.
- a) As applicable, describe NDE equipment (ultrasonic scanning apparatus), details of the listed obstructions (size, shape, proximity to the weld, etc.) to demonstrate accessibility limitations.
 - b) Discuss whether alternative methods or advanced technologies could be employed to maximize ASME Code volumetric coverage.
 - c) Fully clarify the wave modality and insonification angles used for all ultrasonic examinations.
 - d) State whether any indications were discovered as a result of Code-required volumetric examinations, and how these indications have been dispositioned.
 - e) Confirm that the required surface examinations (liquid penetrant or magnetic particle) were performed for the subject welds, whether these surface examinations were full ASME Code examinations (>90% coverage), and describe any indications that were detected.
- 2.4.2 Please state the materials of construction and the wall thicknesses for the configuration of the PBNP, Unit 1 steam generator shell-to-main steam nozzle weld.