



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

May 18, 2010

Mr. Larry Meyer  
Site Vice President  
NextEra Energy Point Beach, LLC  
6610 Nuclear Road  
Two Rivers, WI 54241-9516

SUBJECT: POINT BEACH NUCLEAR PLANT, UNIT 1 – REVIEW OF THE 2008 STEAM GENERATOR TUBE INSERVICE INSPECTIONS PERFORMED DURING REFUELING OUTAGE 31 (U1R31) (TAC NO. ME1247)

Dear Mr. Meyer:

By letter dated May 7, 2009, as supplemented by letter dated October 16, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession Nos. ML091280187 and ML092890472), NextEra Energy Point Beach, LLC (the licensee), submitted information summarizing the results of the 2008 steam generator (SG) tube inspections performed at Point Beach Nuclear Plant, Unit 1, during the 31<sup>st</sup> refueling outage. In addition, the Nuclear Regulatory Commission (NRC) staff summarized additional information concerning the 2008 SG tube inspections at Point Beach Nuclear Plant, Unit 1, in a letter dated November 20, 2008 (ADAMS Accession No. ML083230820).

The NRC staff has completed its review of these reports and concludes that the licensee provided the information required by Point Beach Nuclear Plant Unit 1 Technical Specifications and that no additional follow-up is required at this time. The NRC staff's review of this report is enclosed.

Sincerely,

A handwritten signature in black ink, appearing to read "Justin Poole", written over a horizontal line.

Justin Poole, Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-266

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

**POINT BEACH NUCLEAR PLANT, UNIT 1**

**REVIEW OF 2008 STEAM GENERATOR TUBE INSPECTION REPORTS**

**FOR THE FALL 2008 REFUELING OUTAGE**

**DOCKET NUMBER 50-266**

By letter dated May 7, 2009, as supplemented by letter dated October 16, 2009 (Agencywide Documents Access Management System (ADAMS) Accession Nos. ML091280187 and ML092890472), NextEra Energy Point Beach, LLC (the licensee), submitted information summarizing the results of the 2008 steam generator (SG) tube inspections performed at Point Beach Nuclear Plant (PBNP), Unit 1, during the 31<sup>st</sup> refueling outage (U1R31). In addition, the Nuclear Regulatory Commission (NRC) staff summarized additional information concerning the 2008 SG tube inspections at PBNP, Unit 1, in a letter dated November 20, 2008 (ADAMS Accession No. ML083230820).

PBNP Unit 1 has two Westinghouse 44F SGs each containing 3214 thermally-treated Alloy 600 tubes. These SGs were installed during refueling outage 11 in 1983. The tubes have an outside diameter of 0.875 inches, a wall thickness of 0.050 inches, and are supported by six stainless steel tube support plates and a baffle plate. The tube support plate holes are quatrefoil shaped. The U-bend region of the tubes in rows 1 through 8 was stress relieved after bending.

The licensee provided the scope, extent, methods, and results of their SG tube inspections in the documents referenced above. In addition, the licensee described corrective actions (i.e., tube plugging) taken in response to the inspection findings. The tubes in both SGs A and B were inspected this outage.

After review of the information provided by the licensee, the NRC staff has the following comments/observations:

- The SGs have accumulated approximately 244.8 effective full power months (EFPM) of operation. At the time of the U1R31 outage, the SGs had operated approximately 23.3 EFPM in the 60-EFPM sequential period.
- Chemical cleaning and sludge lancing were performed in both SGs. Approximately, 7700 pounds of material were removed as a result of these operations.
- Secondary side inspections were performed in SGs A and B during the U1R31 outage. The inspections in both SGs included the steam drum, feeding, J-nozzles, quatrefoil-shaped holes in the top uppermost (sixth) tube support plate, and the flow distribution baffle. In addition, post-chemical cleaning and sludge lance cleanliness visual inspections and foreign object search and retrieval were performed.

- Flow impingement patterns were observed on the feedwater ring, on the outside of primary moisture separator riser barrels as well as under and around several J-nozzles. Possible wear marks were noted inside the feedwater ring near the tee at the bottom concaved portion of the distribution ring with no discernable pattern in SG B. The licensee stated that this will be monitored as part of the secondary side integrity program.
- Thin wafers of rust colored debris were noted in-bundle of the primary separator riser barrels. This debris was reported as being most likely magnetite or scale pieces fallen from the riser tubes. The quatrefoil-shaped holes of the top support plate were determined to have zero percent blockage within the observed individual foils. Additionally, the no-tube lane contained diminished remnants of sludge debris ranging from 0.25 to 0.50 inches high and confined to the center stay rod area. Furthermore, the licensee identified remnant skeletal bridging and collars within the previous sludge pile region limited to a few columns near the center.

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by the technical specifications. In addition, the NRC staff concludes that there are no technical issues that warrant follow-up action at this time since the inspections appear to be consistent with the objective of detecting potential tube degradation and the inspection results appear to be consistent with industry operating experience at similarly designed and operated units.

Principal Contributor: A. Obodoako, NRR

Date: May 18, 2010

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Site Vice President  
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The NRC staff has completed its review of these reports and concludes that the licensee provided the information required by Point Beach Nuclear Plant Unit 1 Technical Specifications and that no additional follow-up is required at this time. The NRC staff's review of this report is enclosed.

Sincerely,

**/RA/**

Justin Poole, Project Manager  
Plant Licensing Branch III-1  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

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ADAMS Accession Number: ML101320220

\*per memo dated February 24, 2010

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