NEXTera ENERGY POINT BEACH

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TS 5.6.8

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Point Beach Nuclear Plant, Units 1
Docket 50-266
Renewed License No. DPR-24

Response to Request for Additional Information
Fall 2011 Unit 1 (U1R33) Steam Generator Tube Inspection Report

References: (1) NextEra Energy Point Beach, LLC letter to NRC, dated May 29, 2012, Fall 2011 Unit 1 (U1R33) Steam Generator Tube Inspection Report (ML12150A287)

(2) NRC letter to NextEra Energy Point Beach, LLC, dated August 28, 2012, Point Beach Nuclear Plant, Unit 1 – Request for Additional Information Regarding the Fall 2011 Steam Generator Tube Inservice Inspection Report (TAC No. ME8780) (ML12234A460)

NextEra Energy Point Beach, LLC (NextEra) submitted the Fall 2011 Unit 1 (U1R33) Steam Generator Tube Inspection Report via Reference (1) documenting the scope and results of the inspection per prescribed Technical Specification Reporting Requirements.

The NRC Staff has determined additional information (Reference 2) is required to enable continued review of the Reference (1) report. Enclosure 1 provides the NextEra response to the NRC Staff's request for additional information.

This letter contains no new Regulatory Commitments and no revisions to existing Regulatory Commitments.

Very truly yours,

NextEra Energy Point Beach, LLC

James Costedio
Licensing Manager

Enclosure

cc: Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC
PSCW

ENCLOSURE 1

NEXTERA ENERGY POINT BEACH, LLC
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

REACTOR VESSEL INTERNALS INSPECTION PLAN
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

The NRC Staff determined that additional information is required (Reference 1) to enable the continued review of the Point Beach Nuclear Plant (PBNP) Fall 2011 Unit 1 (U1R33) Steam Generator Tube Inspection Report (Reference 2). The following information is provided by NextEra Energy Point Beach, LLC (NextEra) in response to the NRC Staff's request.

RAI 1

It was indicated that the secondary-side inspections showed "no significant degradation."

Please discuss the results of the secondary-side inspections, including clarifying whether any degradation was observed.

NextEra Response

The general area of the steam drum was inspected following the modifications made in support of an extended power uprate (EPU). The mid and lower decks of the steam drums were inspected for a baseline. The internal feedring, J-nozzles, and thermal sleeve were inspected. The secondary moisture separators, primary moisture separators (PMSs), mid-deck extension, hatch, hinges, riser barrels, top hats, and externals of feedring and J-nozzles were inspected in the general area inspections. Burn-through on the interface of the J-nozzle and feedring was observed at J-nozzle 28 in Steam Generator (SG) A, and at J-nozzles 7, 11 and 14 in SG B. Burn-through indications are from construction of the SGs and not a service induced condition. The interior of the feedring was clear of any foreign material. The 112 PMSs were visual inspected. All PMSs were covered in a light coating of magnetite.

Baseline ultrasonic testing (UT) measurements were taken in various locations on the secondary side to allow future trending of post-EPU secondary side wear. There were 56 UT measurements taken on the SG A PMSs, 64 UT measurements taken on the SG A feedring, 55 UT measurements taken on the SG B PMSs, and 64 UT measurements taken on the SG B feedring. No abnormal measurements were identified.

RAI 2

Please discuss the results of the tube plug inspections.

NextEra Response

A video inspection of five installed plugs in SG A (hot and cold legs) and six installed plugs in SG B (hot and cold legs) showed that all plugs are dry.

RAI 3

Please clarify whether 50 or 100 percent of the tube ends in steam generator A were inspected with a rotating probe (since Sections 2.1.b and 2.1.e both indicate that 50 percent of the tubes were inspected).

NextEra Response

In the SG A hot leg, 50% of all tubes were inspected for the full depth of the tubesheet with a rotating probe. An expansion to 100% inspection of the tubes in SG A was not required since crack indications were not found in that SG. In the SG B hot leg, the inspection of the tubes within the tubesheet was expanded from 50% to 100% based on the discovery of crack indications in that SG. 100% of the peripheral tubes in the cold leg of both SGs were inspected with a rotating probe for the full depth of the tubesheet.

RAI 4

In Section 5.2.b, it was indicated that 74 indications of wear at the anti-vibration bars were observed and that 72 of these indications were sized with the bobbin coil.

Please discuss how the remaining two indications were sized. If not sized, how were they dispositioned and how was it determined that condition monitoring criteria were satisfied.

NextEra Response

The wording in Section 5.2.b is inconsistent with Table 5-2, which shows the Anti-Vibration Bar (AVB) Wear History for SG B. There are 73 AVB wear indications in 51 tubes that were sized by the bobbin coil in the U1R33 inspection. Tube R16 C77 in Table 5-2 is Indication Not Reportable (INR), and therefore, no sizing was performed on that particular tube. Table 5-2 includes Tube R16 C77, which makes the total 74 indications of wear in 52 tubes. Therefore, all 73 indications that had a percent wear call were sized by the bobbin coil.

RAI 5

The number of indications of wear above the top of the tubesheet which were attributed to sludge lancing equipment in Table 5-6 does not appear to match the corresponding text. According to the text, there were 17 indications of wear; however, Table 5-6 only lists 10 indications with wear (and 7 "indications not reportable").

Please clarify.

NextEra Response

A review of the Eddy Current Database was performed. The 21 SG A tubes with 22 indications reported in Section 5.6 of Reference (2) are comprised of both volumetric (percentage wear) and geometric (GEO) anomalies. Table 5-6 of Reference (2) provides a historical view of the volumetric indications from the current inspection as well as previous inspections for a total of 17 indications. There were 10 indications of wear and 7 previous wear indications which did not show wear and are classified as INR. There is no wear associated with the indications classified as INR, and therefore, those indications are not counted as wear in U1R33, but are still included in Table 5-6 of Reference (2).

Additional reviews of the Eddy Current Database identified additional GEO indications. Table 5-6 of Reference (2) did not include GEO indications because they are geometric distortions without wear and are tracked for additional analysis in future inspections. Based on additional review of the Eddy Current Database, the original report should have stated there were 13 tubes with 14 GEO indications, 10 tubes with wear indications, and 7 tubes with 7 INR as part of monitoring from previous outages for a total of 30 tubes with 31 indications. In future reports, GEO indications will not be counted as mechanical wear.

RAI 6

Several foreign objects were left in steam generator A.

Please confirm that an engineering analysis was performed to assess the acceptability of leaving these objects in the steam generator until the next inspection.

NextEra Response

Three sludge rocks and two wire bristles were not retrieved from SG A. The wire bristles were 0.005 inches in diameter and a length of 0.125 inches. There is no reported history of tube damage from a sludge rock and the sludge rocks not retrieved from SG A were determined to be harmless. The wire bristles have essentially no mass associated with them and would not affect tube integrity. Longer wire bristles have previously been reported in the Unit 1 SGs and those evaluations provide a bounding analysis for the smaller wire bristles identified in U1R33. A foreign object search and retrieval (FOSAR) is scheduled following sludge lancing for both SGs in U1R34.

References

(1) NRC letter to NextEra Energy Point Beach, LLC, dated August 28, 2012, Point Beach Nuclear Plant, Unit 1 – Request for Additional Information Regarding the Fall 2011 Steam Generator Tube Inservice Inspection Report (TAC No. ME8780) (ML12234A460)

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