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

January 6, 2017

Mr. Eric McCartney
Site Vice President
Seabrook Station
NextEra Energy
626 Lafayette Road
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 – REVIEW OF THE FALL 2015 STEAM GENERATOR TUBE INSPECTIONS (CAC NO. MF7686)

Dear Mr. McCartney:

By letter dated April 22, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16120A203), as supplemented by letter dated October 27, 2016 (ADAMS Accession No. ML16302A398), NextEra Energy Seabrook, LLC (NextEra) submitted information summarizing the results of the fall 2015 steam generator tube inspections at the Seabrook Station, Unit 1 (Seabrook). These inspections were performed during the 17th refueling outage.

The U.S. Nuclear Regulatory Commission (NRC) staff has completed its review of the information and determined that NextEra provided the information required by its technical specifications. In addition, the NRC staff did not identify any technical issues that warrant followup action at this time. Enclosed is the NRC staff's review of the Seabrook steam generator tube inspection report.

If you have questions, please contact me at 301-415-2048 or by e-mail to Justin.Poole@nrc.gov.

Sincerely,

Justin C. Poole, Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosure:
Review of Fall 2015 Steam Generator
Tube Inspections

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REVIEW OF THE FALL 2015 STEAM GENERATOR TUBE INSPECTIONS

NEXTERA ENERGY SEABROOK, LLC

SEABROOK STATION, UNIT NO. 1

DOCKET NO. 50-443

By letter dated April 22, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16120A203), as supplemented by letter dated October 27, 2016 (ADAMS Accession No. ML16302A398), NextEra Energy Seabrook, LLC (NextEra or the licensee) submitted information summarizing the results of the fall 2015 steam generator (SG) tube inspections at the Seabrook Station, Unit No. 1 (Seabrook). These inspections were performed during the 17th refueling outage (RFO 17).

Seabrook has four Westinghouse Model F SGs, each of which contains 5,626 thermally-treated Alloy 600 tubes. Each tube has a nominal outside diameter of 0.688 inches and a nominal wall thickness of 0.040 inches. During SG fabrication, the tube ends were hydraulically expanded over the full depth of the tubesheet. Type 405 stainless steel support plates, which have broached quatrefoil holes, support the vertical section of the tubes, and anti-vibration bars support the U-bend section of the tubes.

The licensee provided the scope, extent, methods, and results of its SG tube inspections in the documents referenced above. The licensee also described corrective actions in the form of tube plugging and tube stabilization taken in response to the inspection findings.

Based on the U.S. Nuclear Regulatory Commission (NRC) staff's review of the information submitted by NextEra, the staff has the following observations/comments:

- During RFO 17, four tubes with indications of cracking were identified in three SGs:
    - A single axial indication (SAI) of primary water stress corrosion cracking (PWSCC) was identified just below the top of the tubesheet (TTS) in the hot-leg expansion transition of a tube in SG A. The tube was plugged and removed from service.
    - An SAI of PWSCC was identified just below the TTS in the hot-leg expansion transition of a tube in SG C. The tube was plugged and removed from service. Also, in SG C, an SAI of outside diameter stress corrosion cracking was identified just below the TTS in the hot-leg expansion transition of a tube. The tube was plugged and removed from service.
    - An SAI of PWSCC was identified in a tube just above the tack expansion, near the bottom of the tubesheet, in SG D. Since the indication was lower than the approved alternate repair criteria (H*) depth, the tube was not plugged and remains in service.

Based on a review of the information provided, the NRC staff concludes that the licensee provided the information required by its technical specifications. In addition, the NRC staff concludes that there are no technical issues that warrant followup 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.

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Justin C. Poole, Project Manager
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ADAMS Accession No.: ML16355A317 *by memo

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