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

February 7, 2020

Mr. Bryan C. Hanson
Senior Vice President
Exelon Generation Company, LLC
President and Chief Nuclear Officer
Exelon Nuclear
4300 Winfield Road
Warrenville, IL 60555

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2 – REVIEW OF THE SPRING 2019 STEAM GENERATOR TUBE INSPECTION REPORT (EPID L-2019-LRO-0061)

Dear Mr. Hanson:

By letter dated July 16, 2019 (Agencywide Documents Access and Management System Accession No. ML19200A029), Exelon Generation Co., LLC (the licensee) submitted information summarizing the results of the Spring 2019 steam generator inspections at Calvert Cliffs Nuclear Power Plant, Unit 2. These inspections were performed during the 23rd refueling outage.

The U.S. Nuclear Regulatory Commission staff has completed its review of the information provided and concludes that the licensee provided the information required by its technical specifications and that no follow-up is required at this time. The staff's review summary is enclosed.

Sincerely,

/RA/

Michael L. Marshall, Jr., Senior Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-318

Enclosure:
Steam Generator Tube Inspection
Report Summary

cc: Listserv

SUBJECT: CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2 – REVIEW OF THE SPRING 2019 STEAM GENERATOR TUBE INSPECTION REPORT (EPID L-2019-LRO-0061) DATED FEBRUARY 7, 2020

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REVIEW OF THE SPRING 2019

STEAM GENERATOR TUBE INSPECTION REPORT

CALVERT CLIFFS NUCLEAR POWER PLANT, UNIT 2

DOCKET NO. 50-318

By letter dated July 16, 2019 (Agencywide Documents Access and Management System Accession No. ML19200A029), Exelon Generation Co., LLC (the licensee) submitted information summarizing the results of the Spring 2019 steam generator (SG) inspections at Calvert Cliffs Nuclear Power Plant (Calvert Cliffs), Unit 2. These inspections were performed during the 23rd refueling outage (RFO 23).

Calvert Cliffs, Unit 2, has two Babcock and Wilcox International SGs. Each SG contains 8,471 tubes made from thermally treated Alloy 690 material. Each tube has a nominal outside diameter of 0.75 inches and a nominal wall thickness of 0.042 inches. The SGs have a triangular tube pitch arrangement with 1-inch spacing between tube centers. The tubes are hydraulically expanded the entire depth of the tubesheet. Rows 1-18 of the U-bend received stress relief treatment after bending.

The licensee provided the scope, extent, methods, and results of its SG tube inspections in the document referenced above.

The licensee stated that were 22 foreign object wear indications reported in RFO 23. The licensee used the Array probe for sizing foreign object wear in the SGs for the first time during RFO 23. In previous outages, sizing had been performed with the +Point™ probe. Eddy current sizing data was taken with both the Array and +Point™ probes in RFO 21, and the Array probe data from RFO 21 was used to establish valid growth rates with the data taken in RFO 23. Only 1 of the 22 foreign object wear indications reported in RFO 23 was reported as a new indication. The new indication was just above the tubesheet on the hot-leg side and had a reported depth of 21 percent through-wall. No foreign objects were identified by eddy current or visual inspection near any of the 22 indications. All 22 indications were below the 40 percent through-wall plugging limit, and none of these tubes were plugged. The licensee also stated that no tubes were plugged during RFO 23.

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 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.

Enclosure