From: Mahoney, Michael
Sent: Thursday, May 21, 2020 8:15 AM
To: Vaughan, Jordan L
Cc: Arthur.Zaremba@duke-energy.com; Wasik, Christopher J
Subject: Request for Additional Information - Oconee Nuclear Station - O2R29 SGTIR Review (L-2020-LRO-0005)

Jordan,

By letter dated March 10, 2020 (Agencywide Documents Access and Management System Accession No. ML20070H575), Duke Energy submitted information summarizing the results of the fall 2019 steam generator (SG) inspections performed at Oconee Nuclear Station, Unit 2. The inspections were performed during refueling outage 29 (O2R29). Technical Specification (TS), Section 5.6.8 requires that a report be submitted within 180 days after the initial entry into hot shutdown (MODE 4) following completion of an inspection of the replacement SGs performed in accordance with TS Section 5.5.10, which requires that a SG Program be established and implemented to ensure SG tube integrity is maintained.

The NRC staff has reviewed the application and, based upon this review, determined that additional information is needed to complete our review. Please provide a response on the docket within 30 days of this correspondence.

Request for Additional Information (RAI-01)

The March 10, 2020 letter, reports that two changes affecting the depths and quantities of tube support plate (TSP) wear indications reported were implemented during O2R29. Specifically, the depth reporting threshold was changed from 5 percent through-wall to 8 percent through-wall to eliminate reporting signals due to tube noise or mix residual as opposed to true tube wear. In addition, a fixed curve for bobbin depth sizing was implemented. The March 10, 2020, letter, stated that calibration standards previously used at Oconee have shown abnormal variation in growth rates. Further, it was stated that the intent of the fixed curve for bobbin depth sizing is to reduce the variability in sizing related to the calibration standards so that the measured growth rates better represent the true growth rates.

a) Please discuss how the fixed curve for bobbin depth sizing was developed and implemented to reduce sizing variability related to the calibration standards.

b) Please discuss when it was identified that the bobbin calibration standards were showing abnormal variation in growth rates and provide a discussion on why they were showing abnormal variation in growth rates.

(RAI-02)

During O2R29, historical tube to tube wear (TTW) indications were assigned a Historical No Change (HNC) code if they had been previously inspected at least three times with array probe and there was no change in the bobbin probe signal. The March 10, 2020, letter, reported 31 and 20 HNC indications associated with TTW in the 2A and 2B SGs, respectively. The March 10, 2020, letter, stated that these indications were not depth sized because they previously had ample margin to the structural integrity performance criteria and there has been no change in the bobbin probe signals. The NRC staff notes that it appears that there were 25 TTW

indications that did not meet the previously stated criteria to be assigned an HNC code. These indications were depth sized with array probe and the maximum depth was reported as 12 percent through-wall.

a) Please provide the largest array probe depth for the HNC indications.

b) Please discuss how the bobbin probe signal comparison was performed to classify an HNC indication.

(RAI-03)

In the table of tubes plugged during O2R29, it was reported that tube R91C115 in the 2A SG was plugged because it contained TSP wear greater than or equal to 40 percent through-wall. However, in the list of service induced indications, the TSP wear in tube R91C115 in the 2A SG lists as 13 percent through-wall.

Please discuss this discrepancy.

(RAI-04)

During O2R29, a foreign object search and retrieval was performed only in the 2A SG. However, an indication of presumed foreign object wear at the top of the first TSP was identified in tube R61C130 in the 2B SG (13 percent through-wall). The indication was initially found with bobbin probe and then confirmed with array probe.

Please verify that the presumed foreign object wear had no evidence of a remaining loose part.

Once this email is added to ADAMS, I will provide the accession number for your reference.
Thanks
Mike

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Tracking Status: None
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