



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

June 28, 2017

Mr. James J. Hutto
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
P.O. Box 1295 / Bin 038
Birmingham, AL 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 – CORRECTION TO
JUNE 2, 2017, STAFF EVALUATION OF THE REACTOR VESSEL INTERNALS
AGING MANAGEMENT PROGRAM

Dear Mr. Hutto:

By letter dated June 2, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17135A252), the U.S. Nuclear Regulatory Commission (NRC) issued a staff evaluation of the reactor vessel internals ageing management program for the Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2.

The purpose of this letter is to correct an error regarding the outage dates for the inspections of the baffle-former bolts that was identified on page 5 of the Safety Evaluation in Section 3.2.2, "Baffle Bolts."

The following is the statement located in the June 2, 2017, letter, with the incorrect outage dates highlighted in bold font:

With respect to baffle bolts at FNP Unit 1, the licensee stated that it will perform initial inspections (ultrasonic testing—UT) of these bolts during the **spring 2018** outage. Similarly, for FNP Unit 2, the licensee stated that it will perform initial inspections of these bolts during the **spring 2022** outage.

The following is the corrected statement that replaces the above incorrect statement with the correct outage dates highlighted in bold font:

With respect to baffle bolts at FNP Unit 1, the licensee stated that it will perform initial inspections (ultrasonic testing—UT) of these bolts during the **fall 2025** outage. Similarly, for FNP Unit 2, the licensee stated that it will perform initial inspections of these bolts during the **fall 2026** outage.

Enclosed is the corrected page 5 of the Safety Evaluation that contain marginal lines indicating the areas of change.

J. Hutto

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If you have any questions concerning this matter, please contact the Project Manager, Shawn Williams, at 301-415-1009 or by e-mail at Shawn.Williams@nrc.gov.

Sincerely,

A handwritten signature in black ink that reads "Shawn Williams". The signature is written in a cursive style with a large, prominent "S" and "W".

Shawn A. Williams, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

Enclosure:
Staff Evaluation

cc w/enclosure: Distribution via Listserv

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 – CORRECTION TO JUNE 2, 2017, STAFF EVALUATION OF THE REACTOR VESSEL INTERNALS AGING MANAGEMENT PROGRAM DATED JUNE 28, 2017

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addition, it reduces the pressure difference across the baffle, which reduces the loading on the bolt. With respect to baffle bolts at FNP Unit 1, the licensee stated that it will perform initial inspections (ultrasonic testing—UT) of these bolts during the **fall 2025** outage. Similarly, for FNP Unit 2, the licensee stated that it will perform initial inspections of these bolts during the **fall 2026** outage.

NRC Staff Evaluation

The NRC staff noted that baffle bolt replacement in the FNP units with Type 316 materials in conjunction with modified bolt design and upflow conversion, which reduces loads on the baffle bolts, provides reasonable assurance that the licensee is adequately managing the aging degradation in these bolts. In order to maintain the adequacy of the AMP for these bolts, the licensee will be inspecting the baffle bolts at the FNP units during the PEO. The staff noted that the inspection frequency and the inspection techniques that would be used for these bolts are consistent with I&E guidelines addressed in MRP-227-A. Therefore, the staff concludes that the licensee's proposed plan provides reasonable assurance that the aging degradation in this component is being monitored adequately by the licensee during the PEO at the FNP units.

Based on the emerging OE associated with IASCC on these bolts, on August 1, 2016, Westinghouse issued Nuclear Safety Advisory Letter (NSAL)-16-1, Revision 1, "Baffle-Former Bolts," which provides recommendations to manage the aging degradation in baffle-former bolts (ADAMS Accession No. ML16225A729). Recommendations addressed in NSAL-16-1 were developed based on the OE of the baffle-former bolt failures. Each plant that experienced bolt failures was binned under a tier based on the extent of aging degradation of the bolts. The FNP units were binned under "Tier 3" category, and the NRC staff expects that the licensee will follow the guidelines recommended in Nuclear Energy Institute (NEI) NEI 03-08, "Guidelines for the Management of Materials Issues," and NSAL-16-1.

3.2.3 Control Rod Guide Cards

Licensee Evaluation

In Table 7-1 of the licensee's submittal dated August 12, 2015, the licensee indicated that the control rod guide cards at the FNP units are to be inspected no later than two refueling outages from the beginning of the PEO for each unit. The licensee further stated that it will inspect control rod guide cards in accordance with MRP-227-A and WCAP-17451-P, "Reactor Internals Guide Tube Wear." To date, the licensee did not identify any active aging degradation in guide cards at FNP units.

NRC Staff Evaluation

The NRC staff reviewed the licensee's evaluation of the guide cards and determined that the licensee's plan to follow the guidelines addressed in MRP-227-A and WCAP-17451-P provides reasonable assurance that the AMP for the guide cards would be effectively implemented at the FNP units. The staff's basis for this conclusion is addressed below. The staff's assessment of WCAP-17451-P was included in the staff's SE for the WCAP-17096-NP, Revision 2, "Reactor Internals Acceptance Criteria Methodology and Data Requirements," December 2009 (ADAMS Accession No. ML101460157). In the SE for the WCAP-17096-NP, Revision 2 (ADAMS Accession No. ML16061A243), the staff stated that the evaluation methodology and acceptance criteria for the guide cards is acceptable because it provides a methodology for measuring wear that is based on ensuring functionality of the rod cluster control assemblies, and the acceptance