



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

July 1, 2024

Jamie M. Coleman
Regulatory Affairs Director
Southern Nuclear Operating Company
3535 Colonnade Parkway
Birmingham, AL 35243

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 – NONACCEPTANCE OF REQUESTED LICENSING ACTION RE: LICENSE AMENDMENT REQUEST TO REVISE TECHNICAL SPECIFICATION 3.6.5, "CONTAINMENT AIR TEMPERATURE," USING RISK-INFORMED PROCESS FOR EVALUATIONS (EPID L-2024-LLA-0052)

Dear Jamie Coleman:

By letter dated April 19, 2024 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML24110A126), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) to change Technical Specification (TS) 3.6.5, "Containment Air Temperature," actions for the Joseph M. Farley Nuclear Plant (Farley), Units 1 and 2, using Temporary Staff Guidance TSG-DORL-2021-001, Revision 3, "Risk--Informed Process for Evaluation" (ML23122A014). SNC proposed to revise TS 3.6.5 Required Action and Completion Time A.1, add Required Actions and Completion Times A.2, A.3, and A.4, as well as remove an expired note from TS 3.6.5 Limiting Conditions for Operation (LCO). Specifically, the change would have modified the TS 3.6.5 Actions if containment average air temperature exceeds the LCO of 120 degrees Fahrenheit (°F) to allow continued operation for up to 30 cumulative days per calendar year provided that the containment average air temperature does not exceed 122°F (verified within eight hours of containment average air temperature exceeding 120°F and once per eight hours thereafter) and that refueling water storage tank temperature remains less than or equal to 100°F (verified within eight hours of containment average air temperature exceeding 120°F and once per eight hours thereafter). The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this LAR. The acceptance review was performed to determine if there is sufficient technical information in scope and depth to allow the NRC staff to complete its detailed technical review. The acceptance review is also intended to identify whether the application has any readily apparent information insufficiencies in its characterization of the regulatory requirements or the licensing basis of the plant.

Consistent with Section 50.90 of Title 10 of the *Code of Federal Regulations* (10 CFR), an application for an amendment to a license (including the technical specifications) must fully describe the changes requested, and following as far as applicable, the form prescribed for original applications. Section 50.34 of 10 CFR addresses the content of technical information required. This section stipulates that the submittal address the design and operating characteristics, unusual or novel design features, and principal safety considerations.

By letter dated June 14, 2024 (ML24166A290), and in response to the NRC letter dated May 28, 2024 (ML24143A041), SNC provided supplemental information to this LAR.

The NRC staff has reviewed your application and supplemental information and concluded that it did not provide technical information in sufficient detail to enable the staff to complete its detailed review and make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements for the protection of public health and safety and the environment. Specifically, the application and supplement did not provide adequate justification for changing the TS 3.6.5 Required Actions and Completion Times to allow for exceeding the LCO of $\leq 120^{\circ}\text{F}$ (i.e., $\leq 122^{\circ}\text{F}$) for up to 30 days per calendar year, with compensatory actions.

The NRC staff notes that your responses to confirmatory information requests 1 and 2 from the June 14, 2024, letter were sufficient and should be included in any subsequent requests for this proposed TS change. If you reapply for this amendment, the NRC staff requests that you include a more detailed justification that addresses the following points.

- Provide information to appropriately characterize the basis for and safety margin during the proposed 30-day completion time. The application should describe the plant-specific methodology used to analyze the impact on the peak cladding temperature (PCT) for the large break loss-of-coolant accident (LOCA), including why the methodology used is appropriate for the evaluation being performed along with the key results, pertinent inputs, the uncertainties associated with the inputs, and any assumptions or limitations relevant to the analysis. A qualitative discussion stating that the PCT change was estimated from sensitivity studies performed on similar pressurized water reactor plant designs is not sufficient for the NRC to make a finding for Farley that the fuel integrity requirements of 10 CFR 50.46 are maintained. In addition, this qualitative discussion is not sufficient to justify the specification is derived from an analysis included in the final safety analysis report, as required by 10 CFR 50.36.
- Provide information to enable the staff to make a finding that the performance-monitoring element of risk-informed decision making has been met. The application should discuss how the licensee will document the margin remaining in the PCT calculation and how this margin will be tracked/maintained in case of any future revisions to the analysis of record. Even if ample margin exists today to justify the safety of the proposal, the NRC staff needs to assure that future amendment reviews appropriately consider the impacts of the request.

While we appreciate the supplemental information that you provided, the staff have identified some additional requests for clarification that we ask you to consider if you reapply for this amendment.

- Expand on the response to supplemental information request 2 related to Net Positive Suction Head (NPSH). Specifically, the NRC requests that the licensee provide a discussion on the uncertainties for the containment average air temperature and the accumulator water temperature that are inputs to the GOTHIC code used to evaluate how the proposed change in the Containment Average Air Temperature impacts LOCA sump temperature response. In addition, include the NPSH margin for the containment spray pumps during the LOCA recirculation phase, along with the margin information already provided for the residual heat removal pumps in the June 14, 2024, supplement. Lastly, provide a discussion on the version of the GOTHIC code used for the NPSH

analysis. If the version is different from a previously NRC-accepted version, discuss the verification performed to justify that the change in the code version does not result in a numerically significant departure from the previously accepted version.

- Provide information sufficient to justify that the Required Actions in the technical specification can be considered remedial actions as defined in 10 CFR 50.36, rather than a new LCO. The NRC notes that: (1) the proposed Actions simply allow continued operation for up to 30 cumulative days a year, (2) that there are no explicit restorative actions proposed by the licensee; the licensee can wait for temperatures to drop, and (3) the licensee appears to expect that current peak containment temperature will be challenged every year during the hot weather months.

Because of the nature of the information needed, the NRC staff finds the request for approval of the proposed action unacceptable for NRC review pursuant to 10 CFR 2.101.

Based on a verbal request from SNC, on June 26, 2024, for additional discussions and the licensee's concern for already high summer containment temperatures at Farley, the NRC plans to schedule a public meeting for July 11, 2024, to discuss the information identified above for a license amendment to operate at higher environmental temperatures.

If you have any questions, please contact me at (301) 415-2258 or by email at zachary.turner@nrc.gov.

Sincerely,

/RA/

Zachary M. Turner, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

cc: Listserv

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