Southern Nuclear

Regulatory Affairs

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August 22, 2023

NL-23-0704
10 CFR 50.90

ATTN: Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555-0001

Joseph M. Farley Nuclear Plant Units 1 and 2
Docket Nos. 50-348 and 50-364

Subject: Emergency License Amendment Request: Technical Specification 3.6.5, Containment Air Temperature, One-Time Temporary Change to Limit

Pursuant to the provisions of 10 CFR 50.90 and 10 CFR 50.91(a)(5), Southern Nuclear Operating Company (SNC) hereby requests an emergency license amendment to the Technical Specifications (TS) for Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2 renewed facility operating licenses NPF-2 and NPF-8, respectively. The requested amendment would temporarily revise the operating license, Appendix A Limiting Condition for Operation (LCO) 3.6.5, Containment Air Temperature, limit on containment average air temperature from 120°F to 122°F effective until 0600 hours on September 9, 2023.

The change was previously discussed with the NRC Staff on August 21, 2023.

SNC requests approval of the proposed license amendment in accordance with the provisions of 10 CFR 50.91(a)(5). A discussion of the emergency situation is provided in the enclosure to this letter. The amendment, if approved, will be implemented immediately upon issuance.

The enclosure to this letter provides the description, technical evaluation, regulatory evaluation (including the Significant Hazards Consideration Determination) and environmental considerations for the proposed changes.

Attachments 1 and 2 provide the marked-up TS pages and revised TS pages, respectively, depicting the requested changes.

Approval of the proposed amendment is requested by August 24, 2023 at 2100 CDT to avoid potentially entering TS Actions that require an immediate shutdown of the respective Unit should its measured containment temperature exceed 120°F for more than 8 hours. This request is for a one-time temporary change. If approved, this license amendment will be effective as of the date of its issuance and shall be immediately implemented upon issuance.

This letter contains no regulatory commitments. This letter has been reviewed and determined not to contain security-related information.

In accordance with 10 CFR 50.91, SNC is notifying the State of Alabama of this license amendment request by transmitting a copy of this letter, enclosure, and attachments to the designated State Official.

If you have any questions, please contact Ryan Joyce at 205-992-6468.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 22nd day of August 2023.

Respectfully submitted,

Ryan Joyce
Manager, Regulatory Affairs
Southern Nuclear Operating Company

Enclosure: Evaluation of the Proposed Change

Attachments:
1. Technical Specification Marked-up Pages
2. Revised Technical Specification Pages

cc: Regional Administrator, Region ll
NRR Project Manager – Farley 1 & 2
Senior Resident Inspector – Farley 1 & 2
Alabama – State Health Officer for the Department of Public Health
RType: CFA04.054

**ENCLOSURE**

**Evaluation of the Proposed Change**

Subject: Emergency License Amendment Request: Technical Specification 3.6.5, Containment Air Temperature, One-Time Temporary Change to Limit



ATTACHMENTS:

1. Technical Specification Page Markups
2. Retyped Technical Specification Pages

## 1. SUMMARY DESCRIPTION

Pursuant to the provisions of 10 CFR 50.90 and 10 CFR 50.91(a)(5), Southern Nuclear Operating Company (SNC) hereby requests an emergency license amendment to the Technical Specifications (TS) for Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2. The requested amendment would temporarily revise the operating license, Appendix A, Limiting Condition for Operation (LCO) 3.6.5, Containment Air Temperature, limit on containment average air temperature from 120°F to 122°F until 0600 hours on September 9, 2023.

## 2. DETAILED DESCRIPTION

### 2.1 System Design and Operation

The containment is a prestressed, reinforced concrete cylindrical structure with a shallow domed roof and a reinforced concrete foundation slab. A 1/4-in.-thick welded steel liner is attached to the inside face of the concrete. The floor liner is installed on top of the foundation slab and is then covered with concrete. The containment completely encloses the reactor, the reactor coolant systems, the steam generators, and portions of the auxiliary and engineered safeguards systems. It ensures that an acceptable upper limit for leakage of radioactive materials to the environment will not be exceeded even if gross failure of the reactor coolant system occurs. The structure is designed to contain radioactive material that may be released from the reactor core following a Design Basis Accident (DBA). Additionally, this structure provides shielding from the fission products that may be present in the containment atmosphere following accident conditions.

As described in FSAR subsection 6.2.2, three systems are provided to reduce containment atmosphere temperature and pressure and/or to remove heat from the containment under post-accident conditions. These are the low-head safety injection/residual heat removal system, the containment spray system, and the containment cooling system. The two redundant trains of the containment spray system have been designed to provide sufficient heat removal capacity to prevent exceeding containment design pressure for all piping breaks. The containment cooling system has been designed to remove heat which will be released to the containment atmosphere during any Main Steam Line Break (MSLB) or Loss Of Coolant Accident (LOCA) up to and including the double-ended rupture of the largest system pipe. This is accomplished by one of four containment air coolers.

As described in FSAR subsection 6.2.1.3.3, Containment Pressure Transient Analysis, and shown in Table 6.2-3, Initial Conditions for Pressure Analysis, and Table 6.2-19, Containment Results for the Design Basis LOCA, the analyses for containment pressure assumed an initial containment temperature of 127°F.

### 2.2 Current Technical Specifications Requirements

LCO 3.6.5 requires that the containment average air temperature be limited to ≤ 120°F. Once this limit is reached, the plant has 8 hours to restore the temperature within limits. If this action is not met, the plant must be in Mode 3 within 6 hours and Mode 5 within 36 hours.

2.3 Reason for the Proposed Change

The proposed change is necessary based on the unforeseen emergent conditions of the FNP site ambient temperature being persistently elevated including the upcoming period of projected temperatures to exceed approximately 100°F for multiple days. This ambient condition is projected to result in both FNP Units 1 and 2 containment average air temperatures exceeding 120°F.

Additionally, the Southeastern Reliability Coordinator (SeRC) has elevated a Conservative System Operations (CSO) Watch to a CSO Warning, applicable to FNP Units 1 and 2 operation, as follows:

> *The Southeastern Reliability Coordinator (SeRC) is elevating to a Conservative System Operations (CSO) Warning for the entire Southeastern Reliability Coordinator footprint (APC, GPC, MPC, PSEC, SEPA, GSOC/GTC, MEAG) starting 05:00 CPT Monday 08/21/2023 through 20:00 CPT Friday 08/25/2023 due to forecasted high temperatures, Southern BA loads at or above 43,000 MWs for multiple days, and the various state of similar alerts by our neighboring entities. The purpose of this CSO Watch* [sic] *is to ensure generation, transmission availability, and system transfer capability in order to maintain system reliability and resiliency*.

In the event this request is not approved, the alternative is an unplanned forced shutdown of one or both units. Considering this alternative, input from Southern Company Fleet Operations and Bulk Power Operations has provided the following evaluation:

> *In regard to the potential unplanned outages of Plant Farley units 1 and 2 during the week of August 21, 2023, the impacts to the Bulk Electric System (BES) would be a significant degradation to the energy supplies in the southeast (Southern Balancing Area), and the ability to deliver energy from other generation resources to customers and a potential impact to the customers of neighboring utilities. Loss of ~1800 MW at Plant Farley will cause large deviations in normal power flows in southern Alabama and Georgia and northern Florida, and will likely cause load curtailments in the Southern Balancing Area and create a higher probability of rotating load shed that could produce safety and wellness issues for customers during sustained periods of extremely high temperatures.*

This change is proposed to be applicable until 0600 hours on September 9, 2023 to allow for containment temperature to decrease based on expected seasonal temperatures. From review of the 2022 unit 1 and unit 2 daily containment temperature readings, the peak containment temperatures started decreasing around this time

2.4 Basis for Emergency Processing

In 10 CFR 50.91(a)(5), the NRC refers to “emergency situations” as those in which failure to act in a timely way would result in derating or shutdown of a nuclear power plant, or in prevention of either resumption of operation or of increase in power output up to the plant’s licensed power level. Under such a situation, the Commission may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or public comment.

FNP Units 1 and 2 do not currently have appreciable leakage into containment or degraded containment heat removal performance issues that would lead to excessive increases in containment average air temperature.

The projected ambient temperature conditions for an extended period could not have been anticipated until recent forecast projections. Once the forecast ambient temperatures were known, and given the recent containment air temperature trends, evaluations of the associated impact to containment average air temperature revealed the likelihood of exceeding the 120°F limit beyond the allowed 8 hours allowed to restore containment air temperature to within the limit, efforts began to expeditiously develop an emergency license amendment request.

The last 5 years of historical rainfall averaged 6.7” in the month of August. Based on rainfall data to date this August, the Farley plant area has received 1.22” with little rain expected over the remainder of this week.

Based on historical average temperature, the average August temperature is 79.7°F; so far this August the average is approximately 83°F.

Without approval of this proposed change, a unit shutdown of one or both units could be required to commence (each Unit commencing when its respective containment average air temperature exceeds 120°F for more than 8 hours) and proceed until such time that containment average air temperature was restored to ≤ 120°F or Mode 5 (Cold Shutdown) is reached. Operation at a reduced power level is unlikely to result in containment average air temperature reductions to within the limit of TS 3.6.5 based on a review of containment temperature trends during unit down-power maneuvers.

2.5 Description of the Proposed Change

The LCO 3.6.5 limit on containment average air temperature is proposed to be revised from 120°F to 122°F until 0600 hours on September 9, 2023. During period(s) of operation > 120°F the following compensatory measures will be implemented:

- Operate four containment coolers on fast speed with emergency service water aligned
- Run containment mini-purge continuously
- Run containment recirculation fans in high speed
- Work controls are in place to not remove containment cooling system components or supporting systems from service
- Containment cooling systems are being protected

Markups showing the TS change are provided in Attachment 1.

3. TECHNICAL EVALUATION

Risk Insights

Although this license amendment request is not risk-informed, SNC has developed risk insights related to the proposed change. A qualitative and quantitative risk analysis was performed to demonstrate with reasonable assurance that the increase in containment temperature will have negligible impact on the PRA. In support of this evaluation, three specific areas were reviewed: 1) MAAP analyses, 2) Human Error Probability (HEP) Development, and 3) PRA model sensitivity evaluating the criteria for containment coolers.

Overall, it is judged that there is negligible impact on the MAAP conclusions (timing, success criteria) currently used in support of the development of the PRA model for both core damage frequency (CDF) and large early release frequency (LERF). Similarly, the post-initiator operator actions currently credited in the PRA were reviewed for different parameters (timing, crew composition, cues, procedures, pathways, and training) and are also considered to have a negligible impact to HEPs and therefore to CDF and LERF. Containment Spray would likely occur earlier in a LOCA scenario, but RWST cues are still available to inform operators of low level. The quantitative sensitivity analysis performed by placing more restrictive success criteria for containment fan coolers from 2/4 to 3/4 showed that there is a negligible impact to the CDF. They are not credited for LERF mitigation. In each of these cases it was determined that the proposed increase in containment temperature is expected to have negligible impact on the PRA risk metrics.

Furthermore, given that the loss of FNP Units 1 and 2 generation will cause large deviations in normal power flows in southern Alabama and Georgia and northern Florida, and will likely cause load curtailments in the Southern Balancing Area and create a higher probability of rotating load shed that could produce safety and wellness issues for customers during sustained periods of extremely high temperatures, the request reflects a significant reduction in risk to public health and safety should this amendment request not be approved.

Adequate Defense in Depth is Maintained

The defense-in-depth (DID) design features applicable to containment heat removal include:

- Containment temperature is maintained by using four safety related forced air heat exchangers. The containment cooling system consists of four containment air coolers, each with a one-third cooling capacity during normal operation, with up to four units operating. Each air cooler consists of a fan and finned tube coil supplied by water from the service water system. As the post-accident containment atmosphere, which consists of a steam-air mixture, is circulated through the bank of cooling coils, it is cooled and a portion of the steam is condensed. The capacity of one cooler in conjunction with one containment spray train is adequate to maintain pressure and temperature below peak calculated LOCA conditions.
- The containment cooling and ventilating functions are augmented by the containment recirculation fans, which take suction from the containment dome and discharge downward to help provide mixing of the containment atmosphere during normal operation to augment heat removal and maintain uniform temperature distributions throughout the containment volume.
- The control rod drive mechanism (CRDM) cooling system consists of fans and ducting to draw air through the CRDM shroud and eject it to the main containment atmosphere. One hundred-percent redundancy is provided by a standby fan.
- The reactor vessel support cooling system, consisting of two 100% capacity fans and ducting, is arranged to cool the reactor vessel supports by drawing air through the supports. One hundred percent redundancy of all active components is provided.
- The containment spray system has been designed to spray water into the containment atmosphere, when appropriate, in the event of a MSLB or LOCA, to ensure the containment peak pressure is below its design value. This is accomplished by one of the two trains of containment spray.

- Post-DBA, after the injection operation, water collected in the containment sump is cooled and returned to the RCS by the low-head/high-head recirculation flow paths.

The containment heat removal systems are designed to ensure that the failure of any single active component, assuming the availability of either onsite or offsite power exclusively, does not prevent the systems from accomplishing their design safety functions.

Temporarily extending Containment Air Temperature limit from 120°F to 122°F does not impact the layers of DID inherent to the FNP Units 1 and 2 containment heat removal systems. There are no changes to the design or performance of these systems. There are no changes to the redundancy inherent in the containment heat removal design. Existing conservatisms in analysis methodology will offset the additional stored energy in the accumulators due to increased temperature (refer to discussion in following section), therefore, there are no significant changes to the mass and energy released into containment during an event. Therefore, the FNP Units 1 and 2 design provides reasonable assurance of the continued availability of the containment heat removal systems to perform their intended function after an anticipated operational occurrence or a postulated design-basis accident.

Sufficient Safety Margins are Maintained

SNC has evaluated the impact of the proposed increase in the bulk containment average temperature on the maximum calculated containment pressure in FSAR Chapter 6 and on the dose analyses in FSAR Chapter 15. The margins in these analyses are sufficient to bound the impacts of the proposed 2°F increase in containment average air temperature.

Containment maximum temperatures analyses for the LOCA and MSLB currently assume an initial bulk containment temperature of 127°F. For a MSLB, the current analyses of record are bounding for the proposed containment initial temperature change.

The LOCA analysis assumes an accumulator liquid temperature of 120°F. However, the LOCA analysis assumes a Refueling Water Storage Tank (RWST) initial temperature of 110°F. Current operational data show the RWST to be below 95°F.

With the accumulator initial liquid water temperature increased by 2°F, the corresponding energy will increase by 382,000 Btu. The increase in accumulator energy is more than offset by assuming an RWST initial temperature decrease from 110°F to 100°F, resulting in a decrease in the integrated break energy at 3600 seconds by 10.59E6 Btu. This is a net total decrease in energy into the containment of 10,208,000 Btu. The analyzed mass and energy releases at an accumulator initial temperature of 120°F and RWST initial temperature of 110°F would remain bounding for a set of initial conditions where the accumulator temperature has increased from 120°F to 122°F and the RWST temperature has decreased from 110°F to 100°F. Therefore, the impact on containment pressure from a potential increase in accumulator temperature to 122°F is bounded by the conservative margin between RWST operating temperature and its analysis assumed initial temperature. As a result, there would be no appreciable increase in post-LOCA containment pressure from what's analyzed. Based on the service water temperature evaluation below, the containment fan cooler performance curves used in the containment response analysis will not be impacted.

Based on these evaluations, there is no anticipated increase in the containment vapor temperature, sump temperature, or containment peak pressure following a MSLB or LOCA. Therefore, containment releases will remain within the assumptions of the calculated offsite doses.

Compensatory Measures

The following compensatory measures will be in-place during any periods where containment average air temperature exceeds 120°F:

- Operate four containment coolers on fast speed with emergency service water aligned
- Run containment mini-purge continuously
- Run containment recirculation fans in high speed
- Work controls are in place to not remove containment cooling system components or supporting systems from service
- Containment cooling systems are protected (i.e., protected equipment posted with handswitch tags, equipment signs, and/or equipment areas signs)

As discussed in Section 2.3, Reason for the Proposed Change, the SeRC issued a CSO Warning due to the forecasted high temperatures. The CSO Warning provides operating instructions to each entity regarding transmission, generation, and emergency management functions. The purpose of this CSO Warning is to ensure generation, transmission availability, and system transfer capability in order to maintain system reliability and resiliency. FNP has implemented procedural guidance that provides direction in the coordination, communication, and performance of activities when conditions that challenge grid capacity or reliability have been declared. Work controls are in place to re-evaluate planned work that could threaten generation. The review is performed for the duration of the CSO Warning, and includes high and medium nuclear risk activities that could threaten generation, high and medium production risk activities, LCO expiration times/dates, Surveillance due dates, system outages, and switchyard and transmission line work.

The above compensatory measures reduce the likelihood of requiring a dual-unit shutdown during the temporary period of applicability of this requested amendment.

Service Water and Ultimate Heat Sink Evaluation

The Ultimate Heat Sink analysis for the Farley service water pond considers various combinations of units in shutdown and accident conditions. The service water discharge from both units is aligned back to the pond, resulting in the pond absorbing decay heat from both units for the 30 day period. The small increase in containment temperature at the start of the event represents an insignificant effect compared to the magnitude of decay heat from both units.

Equipment Qualification Evaluation

A temporary 2°F increase in the containment average air temperature is bounded by the existing equipment qualification (EQ) analyses, due to conservatisms and margins in the existing test programs and calculations. Thus an increase from 120°F to 122°F for the containment average temperature limit will have no impact on the qualification status or qualified lives of existing equipment located in containment in the EQ Program scope.

Instrument Uncertainty

The containment average air instrument uncertainty calculation demonstrates sufficient margin to the assumed safety analyses initial condition of 127°F to account for an increase from 120°F to 122°F.

Post-LOCA Subcriticality Assessment

Post-LOCA subcriticality analyses minimize liquid mass inventories for boration sources such as accumulators. A change to the maximum accumulator temperature to 122°F will change the accumulator mass slightly due to the density change. Due to the level of precision used for the density in those calculations and the small change in temperature (2°F), there would be no measurable impact to the resulting accumulator mass used in the subcriticality calculations.

Post-LOCA Sump Dilution and Hot Leg Switchover Assessment

The accumulator mass is based on a higher density that is not associated with the maximum accumulator temperature. As a result, there is no impact to the post-LOCA sump dilution calculation due to the increase in maximum accumulator temperature. The hot leg switchover analysis used the same accumulator mass as that discussed above for post-LOCA sump dilution. As noted above, this accumulator mass is not impacted by an increase in accumulator temperature and as a result there is no impact to the hot leg switchover analysis.

Post-LOCA Decay Heat Removal Assessment

Any minor changes in core voiding and core boil-off rates resulting from the 2°F accumulator temperature increase are relatively short term effects that do not persist into the long-term cooling phase of the emergency core cooling system (ECCS) performance evaluations.

Small Break LOCA Evaluation

Based on the relatively small reduction in total energy removal capability of the accumulator fluid associated with a 122°F initial containment temperature (the increase in containment temperature corresponds to an enthalpy increase of ~2 Btu/lbm [~2.23%]), accumulator initial injection timing and characteristics remaining unaffected, and the low core and vessel internals stored energy associated with a small break transient, it is concluded that increasing the maximum containment temperature from 120°F to 122°F will have a negligible impact on the small break LOCA analysis of record, leading to an estimated peak cladding temperature impact of 0°F and a negligible impact on the maximum local oxidation reaction on the cladding surfaces.

Large Break LOCA Pellet-Clad Temperature (PCT) Evaluation

Accumulator temperature sensitivities from similar pressurized water reactor plant designs with similar fuel assembly design, power level, were performed and predicted cladding temperature response to determine an estimated effect for FNP. It is acknowledged that accumulator temperature sensitivities were executed prior to modeling of fuel thermal conductivity degradation (TCD) in best-estimate LOCA analyses and fuel performance codes. The sensitivities remain valid for the purpose of estimating the effect of the increase accumulator temperature range; however, the overall PCT for limiting transients when modeling fuel TCD are on the order of 150°F higher. As such, a conservative multiplier of 2 is applied to the estimate of effect to account for the use of pre-TCD transient results from representative plants for the Farley evaluation.

The estimated effect is a PCT increase of ~0.5°F per 1°F increase in accumulator temperature. As such, with the conservative multiplier, the 2°F increase in the maximum accumulator temperature is estimated to have a 2°F effect on the analysis PCT. The latest racked up PCT is 2034°F. With the additional 2°F, the racked up PCT is estimated to be 2036°F, which maintains margin to the regulatory acceptance criterion of 2200°F.

Net Positive Suction Head (NPSH) Evaluation

A review of NPSH calculation "NPSH Calculation from Containment Sump to the Residual Heat Removal (RHR) Pumps – Recirculation Mode" documents available NPSH margin at sump temperatures between 120°F and 291°F. The NPSH margins up to 180°F are all greater than 14 feet of head. The strainer head losses are also shown to decrease as the sump temperature increases above 140°F. Based on the competing affects between vapor pressure of the sump inventory and strainer head losses, the pump NPSH margin would be expected to increase or stay the same as the sump temperature increases above 212°F. Therefore, an increase in containment temperature from 120°F to 122°F would be expected to have no adverse impacts on NPSH margin.

Miscellaneous Evaluations

A variety of miscellaneous evaluations did not reveal any additional impacts from increasing the containment average air temperature limit from 120°F to 122°F.

Summary

Given that the high ambient temperature projections persist for many days, the uncertainty associated with those weather projections, and the potential for containment latent heat to delay reduction in containment average air temperature, the SNC request includes additional days of conservatism beyond the period of projected ambient temperatures approaching or exceeding 100°F. The proposed period of temporary applicability of the change provides a limited duration for the one-time allowance to apply the proposed 122°F limit while minimizing the potential for repeated regulatory relief interaction should containment average air temperature exceed 120°F during this period.

The qualitative risk insights, integrated with considerations of defense in depth and safety margins, provide reasonable assurance that the health and safety of the public will not be endangered by temporary operation with a one-time revised containment average air temperature limit of 122°F.

Additionally, given that the loss of FNP Units 1 and 2 generation will cause large deviations in normal power flows in southern Alabama and Georgia and northern Florida, and will likely cause load curtailments in the Southern Balancing Area and create a higher probability of rotating load shed that could produce safety and wellness issues for customers during sustained periods of extremely high temperatures, the request reflects an enhancement to public health and safety.

## 4. REGULATORY EVALUATION

### 4.1 Applicable Regulatory Requirements/Criteria

This activity involves changes to the operating license Appendix A, Technical Specifications; therefore, in accordance with 10 CFR 50.90, this activity requires an amendment. As such, NRC approval is required prior to making the proposed changes in this license amendment request.

10 CFR 50.91(a)(5) provides the requirements to be met to allow the NRC to perform expedited approval of a license amendment in an emergency situation. SNC is requesting emergency processing of this license amendment request, as a delay in approval of the proposed changes would result in derating or shutdown of a nuclear power plant, or in prevention of either resumption of operation or of increase in power

output up to the plant's licensed power level. Accordingly, this license amendment request satisfies the criteria for the Commission to issue a license amendment under the emergency provisions of 10 CFR 50.91(a)(5).

10 CFR 50.36(c)(2) requires that TSs include Limiting Condition for Operation (LCOs). Per 10 CFR 50.36(c)(2)(i), LCOs “are the lowest functional capability or performance levels of equipment required for safe operation of the facility.” The regulation also requires that when an LCO of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the TS until the condition can be met. The proposed change to the containment average air temperature limit continues to reflect the lowest functional capability required for safe operation and continues to provide appropriate remedial actions including a required plant shutdown if they are not met.

10 CFR 50, Appendix A, General Design Criterion (GDC) 38, Containment Heat Removal, requires a system to remove heat from the reactor containment. The change does not impact any containment heat removal functions, and therefore adequately satisfies the requirements of GDC 38.

4.2 Precedent

On August 19, 2010 the NRC issued Notice of Enforcement Discretion (NOED) for Southern Nuclear Operating Company regarding Joseph M. Farley Nuclear Plant (FNP) Unit 1 (NOED No. 10-2-004) [ADAMS Accession No. ML102310595]. This action included in part an SNC commitment that the FNP Unit 1 would be shutdown if containment air temperature exceeded 122°F.

4.3 No Significant Hazards Consideration Determination Analysis

Pursuant to 10 CFR 50.90 and 10 CFR 50.91(a)(5), Southern Nuclear Operating Company (SNC) requests an emergency amendment to Joseph M. Farley Nuclear Plant (FNP), Units 1 and 2 renewed facility operating licenses NPF-2 and NPF-8, respectively. The requested amendment would revise Appendix A Technical Specification (TS) 3.6.5, Containment Air Temperature, limit on containment average air temperature from 120°F to 122°F until 0600 hours on September 9, 2023.

SNC has evaluated whether a significant hazards consideration is involved with the proposed amendment(s) by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of amendment," as discussed below:

1) Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed changes do not adversely affect the operation of any structures, systems, or components (SSCs) associated with an accident initiator or initiating sequence of events. The proposed changes do not affect the design of the containment heat removal systems.

   The proposed amendment does not affect accident initiators or precursors nor adversely alter the design assumptions, conditions, and configuration of the facility. The proposed amendment does not alter any plant equipment or operating practices with respect to such initiators or precursors in a manner that the probability of an accident is increased. The proposed amendment to temporarily

change the initial containment average air temperature does not adversely affect the operation of the assumed mitigation systems or the containment fission product barrier assumptions. As demonstrated in the SNC request, the temporary increase in allowed containment temperature is more than offset by existing margins in the safety analyses. As such, the proposed temporary change will not alter assumptions relative to the mitigation of an accident or transient event. The proposed amendment does not increase the likelihood of the malfunction of an SSC or adversely impact analyzed accidents.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2) Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendment does not introduce any new or unanalyzed modes of operation. The proposed changes do not involve a physical alteration to the plant (i.e., no new or different type of equipment will be installed) or a change to the methods governing normal plant operation. The changes do not alter the limiting assumptions made in the safety analysis.

Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3) Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The margin of safety is related to the ability of the fission product barriers to perform their design functions during and following an accident. These barriers include the fuel cladding, the reactor coolant system, and the containment. The performance of these fission product barriers is not affected by the proposed amendment; based on the pre-existing margins and conservatisms currently assumed in the safety analyses. Therefore, the margins to the onsite and offsite radiological dose limits are not significantly reduced.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, SNC concludes that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

4.4 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission’s regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5. ENVIRONMENTAL CONSIDERATION

The proposed changes to the Technical Specifications (TS) are described in Section 2.5 of this Enclosure.

A review has determined that the proposed changes require an amendment to the operating license. A review of the anticipated effects of the requested amendment has determined that the requested amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9), in that:

(i) There is no significant hazards consideration.

As documented in Section 4.3, No Significant Hazards Consideration Determination Analysis, of this license amendment request, an evaluation was completed to determine whether or not a significant hazards consideration is involved by focusing on the three standards set forth in 10 CFR 50.92, “Issuance of amendment.” The Significant Hazards Consideration evaluation determined that (1) the proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated; (2) the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated; and (3) the proposed amendment does not involve a significant reduction in a margin of safety. Therefore, it is concluded that the proposed amendment does not involve a significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and accordingly, a finding of “no significant hazards consideration” is justified.

(ii) There is no significant change in the types or significant increase in the amounts of any effluents that may be released offsite.

The proposed changes are unrelated to any aspect of plant construction or operation that would introduce any change to effluent types (e.g., effluents containing chemicals or biocides, sanitary system effluents, and other effluents) or affect any plant radiological or non-radiological effluent release quantities. Furthermore, the proposed changes do not affect any effluent release path or diminish the functionality of any design or operational features that are credited with controlling the release of effluents during plant operation. Therefore, it is concluded that the proposed amendment does not involve a significant change in the types or a significant increase in the amounts of any effluents that may be released offsite.

(iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed change in the requested amendment does not affect the shielding capability of, or alter any walls, floors, or other structures that provide shielding. Plant radiation zones and controls under 10 CFR 20 preclude a significant increase in occupational radiation exposure. Therefore, the proposed amendment does not involve a significant increase in individual or cumulative occupational radiation exposure.

Based on the above review of the proposed amendment, it has been determined that anticipated effects of the proposed amendment do not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore,

pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

## 6. REFERENCES

None.

**Attachment 1**
**to the Enclosure of NL-23-0704**

**Technical Specification Page Markups**

Insertions Denoted by underlined Blue text.

(This Attachment consists of 2 pages, including this cover page)

3.6 CONTAINMENT SYSTEMS

3.6.5 Containment Air Temperature

LCO 3.6.5 Containment average air temperature shall be ≤ 120°F.

----------NOTE----------
Containment average air temperature shall be ≤ 122°F until 0600 hours on September 9, 2023.
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APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|---|---|
| A. Containment average air temperature not within limit. | A.1 Restore containment average air temperature to within limit. | 8 hours |
| B. Required Action and associated Completion Time not met. | B.1 Be in MODE 3.<br>AND<br>B.2 Be in MODE 5. | 6 hours<br><br>36 hours |

**Attachment 2**
**to the Enclosure of NL-23-0704**

**Retyped Technical Specification Pages**

(This Attachment consists of 2 pages, including this cover page)

## 3.6 CONTAINMENT SYSTEMS

### 3.6.5 Containment Air Temperature

LCO 3.6.5 Containment average air temperature shall be ≤ 120°F.

----------NOTE----------
Containment average air temperature shall be ≤ 122°F until 0600 hours on September 9, 2023.
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APPLICABILITY: MODES 1, 2, 3, and 4.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|---|---|
| A. Containment average air temperature not within limit. | A.1 Restore containment average air temperature to within limit. | 8 hours |
| B. Required Action and associated Completion Time not met. | B.1 Be in MODE 3.<br><br>AND<br><br>B.2 Be in MODE 5. | 6 hours<br><br><br><br>36 hours |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | | FREQUENCY |
|---|---|---|
| SR 3.6.5.1 | Verify containment average air temperature is within limit. | In accordance with the Surveillance Frequency Control Program |