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

April 24, 2017

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

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2 – REQUEST FOR ADDITIONAL INFORMATION (CAC NOS. MF8110 AND MF8111)

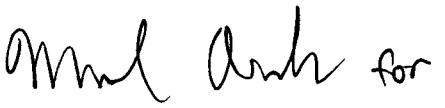
Dear Mr. Hutto:

By letter dated July 1, 2016, as supplemented by letter dated August 24, 2016, Southern Nuclear Operating Company (SNC) submitted a license amendment request (LAR) to revise the Edwin I. Hatch Nuclear Plant (HNP), Units Nos. 1 and 2, Technical Specification 5.5.12, "Primary Containment Leakage Rate Testing Program." In part, the proposed changes would allow SNC to increase the existing Type A integrated leakage rate test interval for each unit from 10 years to 15 years, in accordance with Nuclear Energy Institute (NEI) Topical Report NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," and the conditions and limitations specified in NEI 94-01, Revision 2-A. The U.S. Nuclear Regulatory Commission (NRC) staff issued a request for additional information (RAI) on December 5, 2016, and SNC submitted its response to that request by letter dated February 10, 2017.

The NRC staff has reviewed your February 10, 2017, RAI response and has determined that further clarification and information is needed to complete its review of the LAR. A second RAI is enclosed. The staff discussed the additional information with representatives of your staff on April 18, 2017. During that call, Mr. Ernest Bates of your staff agreed to provide your response within 45 days; however, upon further discussion, both SNC and the NRC agreed that an earlier response was desirable. Therefore, we request your response within 30 days of the date of this letter.

If you have any questions, please contact me at (301) 415-4032 or Randy.Hall@nrc.gov.

Sincerely,



James R. Hall, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

Enclosure:
Request for Additional Information

cc w/enclosure: Distribution via Listserv

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2 – REQUEST FOR ADDITIONAL INFORMATION (CAC NOS. MF8110 AND MF8111) DATED APRIL 24, 2017

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UNITED STATES
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REQUEST FOR ADDITIONAL INFORMATION

LICENSE AMENDMENT REQUEST REGARDING CHANGES TO THE PRIMARY CONTAINMENT LEAKAGE RATE TESTING PROGRAM

SOUTHERN NUCLEAR OPERATING COMPANY, INC.

EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-321 AND 50-366

By letter dated July 1, 2016 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML16188A268), as supplemented by letter dated August 24, 2016 (ADAMS Accession No. ML16238A477), Southern Nuclear Operating Company (SNC, the licensee) submitted a license amendment request (LAR) to revise the Edwin I. Hatch Nuclear Plant (HNP), Unit Nos. 1 and 2, Technical Specification (TS) 5.5.12, "Primary Containment Leakage Rate Testing Program." In part, the proposed changes would allow SNC to increase the existing Type A integrated leakage rate test interval for each unit from 10 years to 15 years, in accordance with Nuclear Energy Institute (NEI) Topical Report NEI 94-01, Revision 3-A, "Industry Guideline for Implementing Performance-Based Option of 10 CFR Part 50, Appendix J," and the conditions and limitations specified in NEI 94-01, Revision 2-A.

The U.S. Nuclear Regulatory Commission (NRC) staff reviewed the LAR and supplement and issued a request for additional information (RAI) on December 5, 2016 (ADAMS Accession No. ML16330A128). SNC submitted its response to that RAI by letter dated February 10, 2017 (ADAMS Accession No. ML17041A294). Based upon its review of that RAI response, the NRC staff has determined that the following information is needed to complete its review of the LAR.

In the LAR, SNC stated that there is no meaningful change in core damage frequency (CDF) when considering the containment overpressure credit for net positive suction head (NPSH) for Unit 1 Emergency Core Cooling (ECCS) pumps, and therefore ΔCDF was not quantitatively evaluated in the LAR. In RAI 6 of the December 6, 2016 letter, the NRC staff requested the licensee to provide additional justification to support the LAR conclusion of negligible impact on CDF. In its February 10, 2017, response to RAIs 6.a and 6.c, the licensee performed an updated risk evaluation and quantified the ΔCDF due to loss of containment overpressure to 5.47E-07/year (RAI 6.a for sequences with containment heat removal), and 7.12E-07/year (RAI 6.c for sequences without containment heat removal). It was not clear to the staff which value for ΔCDF, or both, should be used in the quantification of total ΔCDF.

a. Since the summation of the ΔCDF values provided in the responses to RAI 6.a and 6.c of 1.26E-06/year could potentially result in a change to Large Early Release Frequency (LERF), the NRC staff requests an updated assessment of ΔLERF due to loss of containment overpressure credit impacting Unit 1 ECCS NPSH, taking into account

external hazards. Justify ΔLERF due to loss of containment overpressure, including the contributions from external hazards to loss of containment overpressure risk.

b. The LAR stated that a pre-existing containment leak, resulting in the loss of adequate NPSH to the ECCS pumps would have the same result as containment failure from overpressure when containment heat removal is not available. The response to RAI 6.c provided an estimate of change in CDF from containment overpressure failure and stated that this change in CDF would not contribute to ΔLERF. As indicated in the response to RAI 6.c the containment failure due to overpressure occurs in the 15 hour time frame. While this containment overpressure failure may not be categorized as LERF due to timing, the loss of NPSH to ECCS pumps caused by a potential pre-existing non-detected leak in the containment could happen much earlier than 15 hours and therefore it could be categorized as LERF.

   Discuss and justify how all the accident scenarios with loss of containment heat removal are considered in the estimate of ΔLERF from loss of containment overpressure, provided in response to item a. above.

c. Provide an estimate of the total ΔCDF, ΔLERF, change in population dose, and change in the conditional containment failure probability from all contributors/hazards (internal events, fire, external events, loss of containment over pressure) and confirm that the acceptance criteria in Section 3.2.4.6 of the Safety Evaluation for Electric Power Research Institute (EPRI) Technical Report (TR) 1009325, Revision 2, are met for the application.