



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

May 11, 2016

Mr. C. R. Pierce
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
P.O. Box 1295, BIN B038
Birmingham, AL 35201-1295

SUBJECT: EDWIN I. HATCH NUCLEAR PLANT, UNIT NOS. 1 AND 2 - ACCEPTANCE
REVIEW OF REQUESTED LICENSING ACTION RE: ADOPTION OF
TSTF-500, REVISION 2, "DC ELECTRICAL REWRITE – UPDATE TO
TSTF-360" (CAC NOS. MF6611 AND MF6612)

Dear Mr. Pierce:

By letter dated August 11, 2015 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML15226A276), Southern Nuclear Operating Company, Inc. (SNC) submitted a license amendment request for the Edwin I. Hatch Nuclear Plant (HNP), Unit Nos. 1 and 2. The proposed amendment would revise the technical specification (TS) requirements related to direct current (DC) electrical systems in TS Limiting Condition for Operation (LCO) 3.8.4, "DC Sources - Operating"; LCO 3.8.5, "DC Sources – Shutdown"; and LCO 3.8.6, "Battery Cell Parameters." A new battery monitoring and maintenance program is being proposed for Section 5.5, "Administrative Controls – Programs and Manuals."

The purpose of this letter is to provide the results of the U.S. Nuclear Regulatory Commission (NRC) staff's acceptance review of this amendment request. 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 amendment to the license (including the TSs) 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 letters dated March 16 and April 4, 2016 (ADAMS Accession Nos. ML16076A453 and ML16095A373, respectively), and in response to NRC letter dated February 3, 2016 (ADAMS Accession No. ML15331A337), SNC provided supplemental information to its license amendment request. The NRC staff reviewed your application and supplement and has concluded that they do provide technical information in sufficient detail to enable the NRC staff to complete its detailed technical review and make an independent assessment regarding the acceptability of the proposed amendment in terms of regulatory requirements and the protection of public health and safety and the environment.

Given the lesser scope and depth of the acceptance review as compared to the detailed technical review, issues may be identified that impact the NRC staff's ability to complete the detailed technical review, despite the completion of an adequate acceptance review. During the review of the March 16, 2016, supplement, the NRC staff identified the following technical issues that will require further information and review.

In its detailed review, the NRC staff will be looking for additional justification to support the defense-in-depth and safety margin criteria outlined in Regulatory Guide (RG) 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications" (ADAMS Accession No. ML100910008), for increasing the station service DC battery allowed outage time (AOT) from 2 hours to 12 hours. The unavailability of the DC power subsystem, due to the increase in the completion time for the restoration of an inoperable station service DC battery, appears to eliminate the redundancy of the HNP, Unit Nos. 1 and 2, DC electrical system beyond the current Final Safety Analysis Report, Chapters 6 and 15, analysis assumptions. More information will be needed to clarify both defense-in-depth and safety margin during a loss-of-coolant accident or loss-of-offsite power with a concurrent failure of the redundant station service DC battery. The Regulatory Position described in Regulatory Guide (RG) 1.93, "Availability of Electric Power Sources," (ADAMS Accession No. ML090550661) provides one method for meeting NRC requirements. Additionally, the NRC staff will be looking for examples of past plant-specific operating experience (i.e., actual hours spent plus a margin for activities to restore the station service DC battery to operability) to justify the requested 12-hour AOT.

The NRC staff also reviewed the risk information provided in the April 4, 2016, supplement and the following technical issues will require further information and review. SNC assumes that the impact of fire risk on the proposed TSs change is three times larger than the risk impact from internal events because a fire probabilistic risk assessment (PRA) has not been completed. The NRC staff will be looking for additional justification that the assumed fire risk provides a bounding or conservative estimate of incremental conditional core damage probability, incremental large early release probability, change in core damage frequency (ΔCDF), and change in large early release frequency ($\Delta LERF$) due to internal fire. Additionally, the NRC staff will be looking for information regarding (1) the effects of possible failures of systems, components, and structures that mitigate those accidents on the seismic risk contribution to ΔCDF and $\Delta LERF$, (2) why bin 2 seismic events do not contribute to ΔCDF and $\Delta LERF$, and (3) why assuming a conditional core damage probability of one for bin 3 seismic events is justified.

The NRC staff requests a public meeting with SNC staff to discuss how the proposed amendment will meet the defense-in-depth and safety margin criteria, and provide additional details on the PRA used to justify the TS changes.

C. Pierce

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If you have any questions, please contact the HNP Project Manager, Michael D. Orenak, at 301-415-3229 or Michael.Orenak@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Michael D. Orenak', with a stylized, cursive script.

Michael D. Orenak, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

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If you have any questions, please contact the HNP Project Manager, Michael D. Orenak, at 301-415-3229 or Michael.Orenak@nrc.gov.

Sincerely,

/RA/

Michael D. Orenak, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-321 and 50-366

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