

April 29, 2022

Docket Nos.: 50-321
50-366

NL-22-0283
10 CFR 50.90

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

Edwin I. Hatch Nuclear Plant - Units 1 and 2
Supplement to License Amendment Request to Revise Technical Specifications
to Adopt Risk Informed Completion Times TSTF-505, Revision 2,
"Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b"

Ladies and Gentlemen:

On October 26, 2021 [ADAMS Accession Number ML21300A153], pursuant to the provisions of Section 50.90 of Title 10 of the Code of Federal Regulations, Southern Nuclear Operating Company (SNC) requested amendments to Edwin I. Hatch Nuclear Plant, Units 1 and 2 (HNP) renewed facility operating licenses DPR-57 and NPF-5, respectively. The proposed amendment requested U.S. Nuclear Regulatory Commission (NRC) approval to modify Technical Specifications (TS) requirements to permit the use of Risk Informed Completion Times in accordance with TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b" [ML18183A493].

As part of their review of the license amendment request (LAR), NRC Staff transmitted an audit agenda and list of audit questions via letter dated March 1, 2022 [ML22048C223].

The Attachment to this letter provides responses to audit question numbers 10 and 14.

SNC requests the same approval and implementation schedule as requested in its original application [ML21300A153]. The conclusions of the No Significant Hazards Consideration Determination and Environmental Consideration contained in the original application have been reviewed and are unaffected by this supplement.

In accordance with 10 CFR 50.91, SNC is notifying the State of Georgia of this supplement to license amendment request by transmitting a copy of this letter, with attachment, to the designated State Official.

This letter contains no regulatory commitments. 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 29th day of April 2022.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'C. A. Gayheart', with a stylized flourish at the end.

C. A. Gayheart
Director, Regulatory Affairs
Southern Nuclear Operating Company

CAG/RMJ

Attachment: SNC Response to NRC Audit Questions

cc: Regional Administrator, Region II
NRR Project Manager – Hatch
Senior Resident Inspector – Hatch
Director, Environmental Protection Division – State of Georgia
RType: CHA02.004

Edwin I. Hatch Nuclear Plant - Units 1 and 2
Supplement to License Amendment Request to Revise Technical Specifications
to Adopt Risk Informed Completion Times TSTF-505, Revision 2,
"Provide Risk-Informed Extended Completion Times - RITSTF Initiative 4b"

Attachment

SNC Response to NRC Audit Questions

SNC Response to NRC Audit Questions

Nuclear Regulatory Commission (NRC) Staff transmitted a list of audit questions to Southern Nuclear Operating Company (SNC) via letter dated March 1, 2022 [ML22048C223]. The audit questions were regarding SNC's license amendment request (LAR) for Hatch Nuclear Plant (HNP) Units 1 and 2 to adopt Technical Specifications Task Force (TSTF) traveler TSTF-505, Revision 2, "Provide Risk-Informed Extended Completion Times – RITSTF Initiative 4b" dated October 26, 2021 [ML21300A153]. The NRC Staff's audit question numbers 10 and 14 are below; SNC's responses are provided following each question.

NRC Audit Question Number 10

Section 2.3.1, Item 7, of NEI 06-09, states that the "impact of other external events risk shall be addressed in the RMTS program" and explains that one method to do this is by "performing a reasonable bounding analysis and applying it along with the internal events risk contribution in calculating the configuration risk and the associated RICT." The NRC staff's SE for NEI 06-09 states that "Where PRA models are not available, conservative or bounding analyses may be performed to quantify the risk impact and support the calculation of the RICT."

In Section 5 of Enclosure 4 to the LAR, the licensee discussed the effect of using different seismic hazard curves with different spectral frequencies on the seismic penalty for use in the RICT calculations. The licensee provided a comparison of seismic core damage frequency (SCDF) values obtained from convolution of the hazard curves from the probabilistic seismic hazard analysis (PSHA) in the Hatch Seismic Hazard Reevaluation and Screening Report (2014; ADAMS Accession No. ML14092A017) and the plant-level fragility based on the high confidence of low probability of failure (HCLPF) from the Hatch Individual Plant Examination of External Events (IPEEE). Hazard curves for four different spectral frequencies (peak ground acceleration (PGA), 10 Hz, 5 Hz, and 2.5 Hz) and HCLPF values adjusted per the Hatch IPEEE seismic margins earthquake (SME) ground response spectra curve were used, and the comparison shows that the PGA-based SCDF is approximately 15-percent lower than those based on other spectral frequencies. The licensee also stated that, if the ground motion response spectra (GMRS) from the 2014 Hatch PSHA were used (instead of IPEEE SME spectra), the difference in the calculated SCDFs would be less than 10-percent.

- a) Provide SCDF values for different spectral frequencies (PGA, 10 Hz, 5 Hz, and 2.5 Hz) obtained from calculations involving the GMRS from the 2014 HNP PSHA, demonstrating the difference in the calculated SCDFs is less than 10-percent.
- b) Justify that the consideration of seismic hazard curves at frequencies other than the PGA does not significantly change the SCDF penalty proposed in the LAR.

SNC Response to Audit Question Number 10

SNC provides the table below for comparison to the table provided in NL-21-0576 (see page E4-15 of Enclosure 4). Compared to the convolved SCDF values presented in NL-21-0576, use of the GMRS from the 2014 PSHA results in equal or lower convolved SCDF values that differ less (<10%). Thus, as discussed in NL-21-0576 Enclosure 4, Section 5, "Seismic Assessment," use of a seismic penalty of 1.18E-06 is reasonable and justified for use in RICT calculations.

SCDF Summary Table Using GMRS from 2014 PSHA

	<u>PGA</u>	<u>10 Hz</u>	<u>5 Hz</u>	<u>2.5 Hz</u>
Plant-Level Fragility (Am):	0.60	1.29	1.32	1.31
Convolved SCDF:	1.18E-06	1.28E-06	1.18E-06	1.18E-06

NRC Audit Question Number 14

The following TS [Technical Specifications] are listed as variations in the cross reference table (Table E1-2) but are not listed in the variation section, Section 2.3, of the LAR [license amendment request]. The NRC staff notes that these TS are not in TSTF-505 and should be listed under number 4 in Section 2.3, where it is stated that there is one Hatch TS SNC is proposing to apply the RICT [Risk-Informed Completion Time] program to. There are 5 total including 3.6.2.5, which is currently listed in the variation section.

- 3.5.1.C.1
- 3.7.2.D.1
- 3.8.7.A.1
- 3.8.7.B.1

SNC Response to Audit Question Number 14

In response to audit question 14, SNC hereby provides the below supplement to Item 4 of NL-21-0576, Attachment 1, Section 2.3, "Optional Variations." Text originally provided in NL-21-0576 [ML21300A153] is shown in plain black font; supplementing text is shown in [blue underline font](#) with revision bars in the right-hand margin. The remainder of NL-21-0576 remains unchanged by this response to audit question number 14.

4. There is one [complete](#) HNP TS for which SNC is proposing to apply the RICT Program that is in addition to those proposed in TSTF-505, Revision 2. As noted in Enclosure 1, Table E1-2, LCO 3.6.2.5, Residual Heat Removal (RHR) Drywell Spray, is not identified in the TSTF and thus, does not propose the RICT for drywell spray Actions. However, the HNP drywell spray Actions are similar to NUREG-1433 Actions for RHR Suppression Pool Cooling (TS 3.6.2.3), RHR Suppression Pool Spray (TS 3.6.2.4), and Drywell Cooling System Fans (TS 3.6.3.1), which provide for application of RICT for one of two required subsystems inoperable.

Refer to Peach Bottom Atomic Power Station, Units 2 and 3, Amendments 338 and 341 respectively (ADAMS Accession No. ML21074A411) as precedent for applying the RICT Program for Residual Heat Removal (RHR) Drywell Spray.

[Additionally, there are four HNP TS Required Actions for which SNC is proposing to apply the RICT Program that are in addition to those proposed in TSTF-505, Revision 2.](#)

[As noted in Enclosure 1, Table E1-2, LCO 3.5.1, Emergency Core Cooling System \(ECCS\) – Operating, Required Action C.1 is not identified in TSTF-505 and thus, is not proposed for a RICT in TSTF-505. The LCO 3.5.1 new Required Action C.1 and its application of a RICT are addressed below in Section 2.4, item 3.](#)

[As noted in Enclosure 1, Table E1-2, LCO 3.7.2, Plant Service Water \(PSW\) and Ultimate Heat Sink \(UHS\), Required Action D.1 is not identified in TSTF-505 and thus, is not proposed for a RICT in TSTF-505. This Required Action is similar to TSTF-505 LCO 3.7.2, Required Action B.1 \(HNP 1&2 LCO 3.7.2 Required Action C.1\) in that it addresses inoperable equipment in each subsystem. Thus, a RICT is proposed consistent with the comparable TSTF-505 LCO 3.7.2, Required Action B.1.](#)

As noted in Enclosure 1, Table E1-2, LCO 3.8.7, Distribution Systems - Operating, Required Action A.1 is not identified in TSTF-505 and thus, is not proposed for a RICT in TSTF-505. This Required Action is similar to TSTF-505 LCO 3.8.9, Required Action A.1 (HNP 1&2 LCO 3.8.7 Required Action C.1) in that it addresses inoperable electrical power distribution subsystems. Thus, a RICT is proposed consistent with the comparable TSTF LCO 3.8.9, Required Action A.1.

As noted in Enclosure 1, Table E1-2, LCO 3.8.7, Distribution Systems - Operating, Required Action B.1 is not identified in TSTF-505 and thus, is not proposed for a RICT in TSTF-505. This Required Action is similar to TSTF-505 LCO 3.8.9, Required Action A.1 (HNP 1&2 LCO 3.8.7 Required Action C.1) in that it addresses inoperable electrical power distribution subsystems. Thus, a RICT is proposed consistent with the comparable TSTF-505 LCO 3.8.9, Required Action A.1.