



October 22, 2020
10 CFR 50.59(d)(2)
10 CFR 50.71(e)
10 CFR 54.37(b)

Docket 50-443

SBK-L-20124

United States Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555-0001

Seabrook Station

10 CFR 50.59 Report, Revision 20 to the Seabrook Station Updated Final Safety Analysis Report, Revision 17 to "Fire Protection Safe Shutdown Capability (10CFR50, Appendix R)," Revision 18 to "Evaluation and Comparison to BTP APCS 9.5-1, Appendix A", Revision 162 to the Technical Requirements Manual, 10 CFR 54.37(b) Aging Management Review Summary, and Summary of Commitment Changes

NextEra Energy Seabrook, LLC (NextEra) encloses the 10 CFR50.59 Report, Revision 20 to the Seabrook Station Updated Final Safety Analysis Report (UFSAR), Revision 17 to "Fire Protection Safe Shutdown Capability (10CFR50, Appendix R)," Revision 18 to "Evaluation and Comparison to BTP APCS 9.5-1, Appendix A" and Revision 162 to the Technical Requirements Manual. The 10 CFR 50.59 Report and the UFSAR are submitted pursuant to the requirements of 10 CFR 50.59(d)(2) and 10 CFR 50.71(e). The 10 CFR 50.59 report covers the period from January 01, 2019 through June 30, 2020. UFSAR Revision 20 incorporates approved and implemented design changes and UFSAR changes identified from January 01, 2019 through June 30, 2020. The incorporated changes to the UFSAR have been reviewed in accordance with 10 CFR 50.59. The reviews determined that these changes did not require prior NRC approval. The Aging Management Review Summary is pursuant to 10 CFR 54.37(b). The Summary of Commitment Changes covers the period of January 01, 2019 through June 30, 2020.

The UFSAR is provided in its entirety on CD-ROM in Portable Document Format (PDF). Changes from Revision 19 are indicated by a change in revision number and a vertical line (revision bar) in the margin next to the change. The List of Effective Pages contained within the UFSAR provides a listing of each page and its revision number with a revision bar indicating which pages contain changes. The controlled drawings referenced in the UFSAR are not being provided as they have the potential to contain security-related information. The drawings are available on site for NRC review. The Fire Protection Safe Shutdown Capability Report, Evaluation and Comparison to BTP APCS 9.5-1 Report and the Technical Requirements Manual are also provided on CD-ROM.

AD53
AD04
NRR

The summaries of 10 CFR 50.59 evaluations for design changes incorporated in Revision 20 of the UFSAR are attached as Enclosure 1. Enclosure 2 provides a summary for changes to the UFSAR incorporated using the guidance of NEI 98-03, "Guidelines for Updating Final Safety Analysis Reports." Enclosure 3 is a listing of UFSAR Change Requests (UFCRs) incorporated in UFSAR Revision 20 during the reporting period. The affected Sections, Tables and Figures are provided for each UFCR. Enclosure 4 contains UFCRs incorporated in the Fire Protection Safe Shutdown Capability Report. Enclosure 5 provides the UFCRs incorporated in Evaluation and Comparison to BTP APCSB 9.5-1 Report. Enclosure 6 contains UFCRs incorporated in the Technical Requirements Manual. Enclosure 7 contains a report describing how the effects of aging of newly-identified structures, systems or components (SSCs) will be managed, as required by 10 CFR 54.37(b). Enclosure 8 provides a summary of Regulatory Commitment Changes.

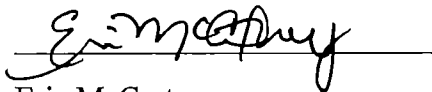
One copy of the UFSAR revision on CD-ROM is being submitted to the Document Control Desk, Washington, DC, along with a copy to the Region I Regional Office and a copy to the Resident Inspector at Seabrook Station.

Should you have any questions regarding this matter, please contact Mr. Kenneth J. Browne, Safety Assurance and Learning Site Director, at (603) 773-7932.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on October 22, 2020

Sincerely,



Eric McCartney
Site Vice President – Seabrook Nuclear Power Plant
NextEra Energy Seabrook, LLC

cc: NRC Region I Administrator
NRC Project Manager, Project Directorate I-2
NRC Senior Resident Inspector

Enclosed CD Listing:

CD 1, 40 files, 636,983,296 bytes
CD 2, 3 files, 103,178,240 bytes

Enclosure 1 to SBK-L-20124

Summary Report of Facility Changes, Tests, and Experiments
Completed in Accordance with the Requirements of 10CFR50.59
for Revision 20 of the Updated Final Safety Analysis Report

Design Change Evaluations

Design changes documented in the following Engineering Changes (EC) were installed during the period covered by the 10 CFR 50.59 Report. A 10 CFR 50.59 evaluation was performed for the ECs identified below. For each of the evaluations performed, there were no activities requiring prior NRC approval identified.

10 CFR 50.59 Evaluation 18-006

EC 291611, MSLB Containment Response Verification Revision

Summary Description and Purpose:

This EC updates the Seabrook GOTHIC containment analysis verification performed during the Stretch Power Uprate (SPU). It determines containment parameters used to evaluate fission product barriers such as maximum containment temperature and pressure during a MSLB. The update incorporates larger containment spray droplet size which results in slightly higher pressure and temperature response. This is an evaluation of an existing analysis, and does not modify the plant in any way. This activity updates the MSLB Containment response calculated to reflect the most recent basedeck model. This activity does not change any UFSAR methodology. This activity updates the MSLB Containment Response analysis to reflect the model consistent with UFSAR Containment verification analysis description.

Evaluation Summary:

Reanalysis of the confirmatory containment response GOTHIC model, developed as part of the power uprate project and used to determine the containment peak pressure and temperature during a MSLB, includes a larger droplet size. It also updates the MSLB model to reflect the revised basedeck approved in EC 289694.

This 50.59 Evaluation was performed for the activity due to the larger droplet size increasing the containment pressure, and temperature response. This change does not result in more than a minimal increase in the radiological consequences of an accident. There is no change to a UFSAR described methodology associated with this change. As a result, the changes of this activity do not require a License Amendment Request.

10 CFR 50.59 Evaluation 19-001

EC 292693, Revise TR 23 to Extend Control Valve Testing Interval

Summary Description and Purpose:

EC 292693 revises Technical Requirement 23 to change the frequency for testing the High Pressure Turbine Control Valves from once per 90 days to once per 150 days, and revises UFSAR Section 3.5 to describe the method of obtaining an input parameter to the Turbine Missile Analysis.

Evaluation Summary:

The proposed change affects the reliability of the turbine control valves and therefore the reliability of the Turbine Overspeed Protection System. The control valves and the Turbine Overspeed Protection System do not function as the initiator of any accident previously evaluated in the UFSAR. Therefore, the change to the turbine control valve testing frequency does not result in more than a minimal increase in the frequency of occurrence of an accident previously evaluated in the UFSAR.

The change in testing frequency for the turbine control valves results in a probability of low trajectory missile damage that is well below the acceptance criteria of 1×10^{-6} per year and a probability of high trajectory missile damage on any safety related structure that is below the acceptance criteria of 1×10^{-7} per year. The increase in the probability of a failure of a turbine control valve is increased by approximately 86%, which is less than the factor of two cited in NEI 96-07, Revision 1, "Guidelines for 10 CFR 50.59 Implementation" as constituting the threshold for a "More the Minimal" increase. Therefore, the proposed change does not result in more than a minimal increase in the likelihood of occurrence of a malfunction of an SSC important to safety previously evaluated in the UFSAR.

The turbine control valves and the Turbine Overspeed Protection System do not function to mitigate the consequences of any accident evaluated in the UFSAR. The decrease in reliability does not affect the ability of any other system or component to mitigate the consequences of any accident. Therefore the proposed activity does not result in more than a minimal increase in the radiological consequences of an accident previously evaluated in the UFSAR.

This 50.59 evaluation concluded that this activity does not require prior NRC approval.

Enclosure 2 to SBK-L-20124

Summary of Changes to the Updated Final Safety Analysis Report
Incorporated Using the Guidance of NEI 98-03,
“Guidelines for Updating Final Safety Analysis Reports”

The following provides a summary of changes incorporated in Revision 20 of the Updated Final Safety Analysis Report using the guidance contained in NEI 98-03, "Guidelines for Updating Final Safety Analysis Reports."

**UFCR/UCR
Number**

Affected Sections, Tables, Figures

EC 290087

UFSAR Section 9.4.15.2.h, Table 9.4-19

Description of Change: Sections 9.4.15.2.h and Table 9.4-19 describe the air conditioning in the Secondary Alarm Station (SAS) Uninterruptible Power Supply (UPS) Room. These sections were updated to describe the replacement air conditioning. Specifically, the condenser unit is moved from within the Turbine Building to the Heater Bay Roof; and the capacity is reduced from 3 tons (36,000 Btu/hr) to 2-1/2 tons (30,000 Btu/hr).

EC 292807

UFSAR Section 13.1.1.1

Description of Change: This activity revises Section 13.1.1.1 to match the language in the Quality Assurance Topical Report (QATR) for the Director of Engineering.

EC 292920

UFSAR Table 1.1-1

Description of Change: The activity deletes Table 1.1-1 from the UFSAR. UFSAR Table 1.1-1 is a cross reference list of UFSAR figure numbers and design drawings numbers, including revision and issue dates.

EC 293144

**UFSAR Section 8.2.1.4.g, 9.5.2.2.b.2,
9.5.2.3.b**

Description of Change: The activity revises the UFSAR relay room configuration description to be consistent with the equipment modifications made by this design change. It also removes the 48 VDC system components from the relay room equipment list in the UFSAR.

EC 294470

UFSAR Section 9.3, 13.1, 13.1.3.2

Description of Change: Editorial correction to Chapter 9.3, Page 12, refers to the Steam Generator Blowdown sample sink flow being routed via a TMOD (Temporary Modification). TMOD has been removed. Chapter 13.1 has been revised to reflect organizational structure changes. Section 13.1.3.2, Qualifications of Station Personnel, was also deleted. This paragraph refers to the station management during start-up. This information is historical.

Enclosure 3 to SBK-L-20124

Listing of UFSAR Change Requests (UFCRs/UCRs) Incorporated in
Updated Final Safety Analysis Report, Revision 20

<u>UFCR/UCR Number</u>	<u>Affected Sections</u>	<u>Affected Tables</u>	<u>Affected Figures</u>
EC13552	9.3.5.2a, 9.3.5.2c, 9.3.2.2a.3		9.3-18, 9.3-19, 9.3-20, 9.3-23, 9.3-24, 11.2-2, 1.1-1
EC284000	6.8, 8.4, 9.2		
EC287319	8.2		8.2-5, 8.2-10
EC287967	8.3.2.1.b		
EC289197		3.9(B)-27, 3.9(B)-28	
EC290087	9.4.15.2.h	9.4-19	
EC291611	6.2.1.8		
EC292628	3.8.1.3, 3.8.1.4, 3.8.3.3, 3.8.3.5, 3.8.3.6, 3.8.3.7, 3.8.4.3, 3.8.4.4, 3.8.4.5, 3.8.4.6, 3.8.4.7, 3.8.6, 3.9(B)	3.8-1, 3.8-14, 3.8-16, 3.8-17, 3.8-18	
EC292653	3.5		
EC292807	13.1.1.1		
EC292920		1.1-1	
EC293144	8.2.1.4.g, 9.5.2.2.b.2, 9.5.2.3.b		
EC293173	8.3.1.1.g		

<u>UFCR/UCR Number</u>	<u>Affected Sections</u>	<u>Affected Tables</u>	<u>Affected Figures</u>
EC293343	8.3.1.1.g		
EC293641		8.3-1, 8.3-2	
EC293900	Chapter 18, 18.1.1, 18.1.2, 18.1.3, 18.1.4, 18.1.5, 18.1.6, 18.2.1, 18.2.2, 18.2.3, 18.2.4, Appendix 18A		
EC293964		8.3-1	
EC294424	7.2.1.1.c.2, 10.2.2.4		
EC294470	9.3, 13.1, 13.1.3.2		
EC294927	3.9(N), 4.2, 4.3, 7.7		

Enclosure 4 to SBK-L-20124

Listing of UFSAR Change Requests (UFCRs) Incorporated in
Fire Protection Safe Shutdown Capability (10CFR50, Appendix R), Revision 17

Seabrook Station 10CFR50.59 Report, Enclosure 4

<u>UFCR/UCR Number</u>	<u>Affected Sections</u>	<u>Affected Tables/ Tabulations</u>	<u>Affected Figures</u>
EC294568	3.4-2, 3.4-4		

Enclosure 5 to SBK-L-20124

Listing of UFSAR Change Requests (UFCRs) Incorporated in
Evaluation and Comparison to BTP APCS 9.5-1, Appendix A Revision 18

<u>UFCR/UCR Number</u>	<u>Affected Sections</u>	<u>Affected Tables</u>	<u>Affected Figures</u>
EC290084	F.2, Tab 15		
EC293456	F.2, Tab 9		

Enclosure 6 to SBK-L-20124

Listing of UFSAR Change Requests (UFCRs) Incorporated in
Revisions 158 through 162 of the Technical Requirements Manual

<u>UFCR/UCR Number</u>	<u>Affected Sections</u>	<u>Affected Tables</u>	<u>Affected Figures</u>
EC292653	TR-23		
EC292754	1		
EC293102	TR-5.5		
EC294544	TR-17		
EC293360	6		
EC294153	TR-35, TR-36		
EC293173	TR-13, TR-14		

Enclosure 7 to SBK-L-20124

10 CFR 54.37(b)

Aging Management Review Summary

10 CFR 54.37(b) states that “After the renewed license is issued, the FSAR update required by 10 CFR 50.71(e) must include any systems, structures, and components newly identified that would have been subject to an aging management review or evaluation of time-limited aging analysis in accordance with §54.21. This FSAR update must describe how the effects of aging will be managed such that the intended function(s) in §54.4(b) will be effectively maintained during the period of extended operation.”

This summary comprises of a period from 1/1/2019 through 6/30/2020 to align with the UFSAR update as required within 10 CFR 50.71(e). In addition, this summary includes a review of engineering changes completed in the time period of 3/1/2018 – 12/31/2018 because of the time frame of the Eighth Annual Update (Accession Number ML18172A045), and receipt of the Renewed Facility Operating License issued on 3/12/2019.

During this reporting period, there was one new component identified to be added to the Aging Management Program for Seabrook Station identified within EC UCR: 289197. Below describes the component ID and applicable Aging Management Programs that will be used to ensure the effects of aging will be managed such that the intended function(s) will be effectively maintained during the period of extended operation.

1-FW-V-54 will be added to the Water Chemistry Aging Management Program LRAP-M002, One Time Inspection Aging Management Program LRAP-M032, and External Surfaces Aging Management Program LRAP-M036.

Enclosure 8 to SBK-L-20124

Summary of Commitment Changes during the Period of January 1, 2019 through June 30, 2020.

Below is a summary for one Commitment change made during the period of January 1, 2019 through June 30, 2020. The Commitment change was performed in accordance with station procedures and guidance provided within Nuclear Energy Institute (NEI) 99-04 – Guidelines for Manager NRC Commitment Changes. The following Commitment change for Seabrook Station requires notification to the NRC.

Commitment Change Request Number	Original Commitment	Revised Commitment	Basis for Revision
18-01	NRC Bulletin 85-01. Emergency Feedwater (EFW) Pump discharge temperature checks every four hours.	EFW pump discharge temperature checks revised to every 12 hours.	NRC Bulletin 85-01 and Generic Letter 88-03 states to monitor once per shift. Technical Specifications Table 1.1, Frequency Notation, "S" is defined as "at least once per 12 hours."