



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

November 29, 2017

Mr. Mano Nazar
President and Chief Nuclear Officer
Nuclear Division
NextEra Energy Seabrook, LLC
Mail Stop: EX/JB
700 Universe Blvd.
Juno Beach, FL 33408

**SUBJECT: SEABROOK STATION, UNIT NO. 1 – SUPPLEMENTAL INFORMATION
NEEDED FOR ACCEPTANCE OF REQUESTED LICENSING ACTION
RE: AMENDMENT TO DELETE OPERATOR ACTION AND REQUEST FOR
EXEMPTION (EPID L-2017-LLA-0353 AND EPID L-2017-LLE-0028)**

Dear Mr. Nazar:

By letter dated October 10, 2017, NextEra Energy Seabrook, LLC (NextEra) submitted a license amendment and exemption request for Seabrook Station, Unit No. 1. The proposed amendment and exemption would update the fire protection program to remove an operator action to trip the station offsite power circuit breakers during a fire in the train A switchgear room. 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 and exemption 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 technical specifications) 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.

Pursuant to 10 CFR 50.12(a)(1) the NRC is authorized to grant an exemption upon determining that the exemption is authorized by law, will not present an undue risk to the public health and safety, and is consistent with the common defense and security.

The NRC staff has reviewed your application and concluded that the information delineated in the enclosure to this letter is necessary to enable the staff to make an independent assessment regarding the acceptability of the proposed amendment and exemption in terms of regulatory requirements and the protection of public health and safety and the environment.

In order to make the application complete, the NRC staff requests that NextEra supplement the application to address the information requested in the enclosure by December 14, 2017. This

will enable the NRC staff to begin its detailed technical review. If the information responsive to the NRC staff's request is not received by the above date, the application will not be accepted for review pursuant to 10 CFR 2.101, and the NRC will cease its review activities associated with the application. If the application is subsequently accepted for review, you will be advised of any further information needed to support the staff's detailed technical review by separate correspondence.

The information requested and associated time frame in this letter were discussed with Ms. Christine Thomas of your staff on November 27, 2017.

If you have any questions, please contact the Seabrook Project Manager, Justin Poole, at (301) 415-2048 or by email to Justin.Poole@nrc.gov.

Sincerely,

A handwritten signature in black ink, appearing to read 'Justin Poole', with a long horizontal flourish extending to the left.

Justin C. Poole, Project Manager
Plant Licensing Branch I
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosure:
Supplemental Information Needed

cc w/Enclosure: Distribution via Listserv

SUPPLEMENTAL INFORMATION NEEDED

AMENDMENT AND EXEMPTION REQUEST

NEXTERA ENERGY SEABROOK, LLC

SEABROOK STATION, UNIT NO. 1

DOCKET NO. 50-443

The U.S. Nuclear Regulatory Commission (NRC or the Commission) staff has performed an acceptance review of Seabrook Station, Unit No. 1 (Seabrook's), submittal dated October 10, 2017 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML17283A398). As stated in Office Instruction LIC-109, "Acceptance Review Procedures," it is the policy of the Office of Nuclear Reactor Regulation to review an application to amend a license for completeness and acceptability for docketing. In accordance with LIC-109, the NRC staff has concluded that the following information is needed to complete the acceptance review.

Regulatory Insufficiencies

When a licensee requests a change to its license that involves a change to an approved fire protection program, the appropriate licensing process and appropriate application of that regulatory process is needed for the staff to perform a review.

REG1: Use of Appropriate Regulatory Process. Although Seabrook submitted a Title 10 of the Code of Federal Regulations (10 CFR) Section 50.12 exemption to 10 CFR 50, Appendix R, Section III.G.2, the correct request is a license amendment only per 10 CFR 50.90. An exemption in accordance with 10 CFR 50.12 only applies when there is a specific requirement to meet the regulation and the NRC staff did not identify this requirement for Seabrook. Section 50.48(b) of 10 CFR states that Appendix R is required for plants licensed prior to January 1, 1979, and Seabrook's operating license is beyond this date. Please remove the request for an exemption from the submittal.

REG2: Appropriate Application of Regulatory Process. The Seabrook Facility Operating License (ADAMS Accession No. ML053130320), Condition 2.F, states:

NextEra Energy Seabrook, LLC, may make changes to the approved fire protection program without prior approval of the Commission, only if those changes would not adversely affect the ability to achieve and maintain shutdown in the event of a fire.

The staff identified that the request did not describe how the requested changes to the fire protection program would adversely impact Seabrook's ability to "achieve and maintain shutdown in the event of a fire." The request should also include information to support how the fire protection program, following the adverse change, provides confidence in the ability to achieve and maintain safe shutdown conditions in the event of a fire.

Technical Insufficiencies

In order for the staff to determine the technical acceptability of the request, the NRC staff used the concept of defense-in-depth, as described in Regulatory Guide 1.189, Revision 2, "Fire Protection for Nuclear Power Plants," October 2009 (ADAMS Accession No. ML092580550), as the regulatory basis for the questions below. During the staff's acceptance review of the licensee's October 10, 2017, submittal, it identified topic areas where the submittal lacks sufficient information to support a technical review. The staff requires sufficient technical information to fully understand the safety aspects of the request in order to perform the review efficiently and effectively.

Fire Prevention

TECH1: Ignition Sources and Combustibles. The staff noted that the submittal lacks a discussion of where the shunt trip cables may be subjected to fire damage and which ignition sources and combustibles could result in a fire that could damage those cables.

TECH2: Exclusion of Institute of Electrical and Electronics Engineers (IEEE) 383 Cables as Combustibles. The staff noted that the submittal does not consider IEEE 383 cables as combustibles. This lack of consideration of IEEE 383 cables as combustibles is not a common assumption; therefore, the licensee should provide a discussion of the basis for acceptance of this assumption. The staff understands that a technical argument could be made that IEEE 383 cables may not have to be considered ignition sources, but in the presence of other ignition sources, these cables are combustible and usually considered as part of a combustible loading calculation.

Fire Protection

TECH3: Fire Detection. The staff noted that the submittal lacks specific information regarding the detection system, code compliance, spacing, and any deviations that exist for the detection system. It is common for detection systems for large fire areas to have some deviations from the code of record. If there are deviations, a description of those deviations should be included, along with an explanation of any impacts those deviations have on the proposed change.

TECH4: Location Description of Shunt Trip Cables. The staff noted that the submittal lacks a discussion of the routing of the shunt trip cables. A better understanding of the room layout, a description of the types of electrical cabinets, and their relationship to the target cabinets and cables is needed for the staff to make a safety determination regarding the lack of 20 feet of separation with intervening combustibles. The staff noted that the submittal also lacks information regarding the relationship between the two trains and how close the cables are together, both vertically and horizontally.

Safe Shutdown Capability

TECH5: Possible Cable Damage in Main Control Room and Cable Spreading Room. The staff noted that the submittal only addresses fires in the switchgear room (the room the reactor trip breakers are in). The submittal does not address the main control room or the cable spreading room, both of which contain the same cables that can cause the failure to trip. The staff recognizes that the likelihood of an anticipated transient without scram, is low, due to the redundancy and diversity of the reactor trip system, but the staff noted that this request only addresses one fire area out of three that could cause the event.

TECH6: Other Unaffected Shutdown Capability. The staff noted that the submittal lacks a discussion of other trip capabilities (automatic or manual) to either insert the control rods or otherwise stop the reaction (boric acid injection). The staff also noted that there is no discussion if these other means – either automatic or manual, are susceptible to the same fire damage as the shunt trip cables. In addition, there is no discussion of whether this scenario defeats other anticipated transient without scram countermeasures.

TECH7: Procedure Response. The submittal states that in response to a fire in the train A switchgear room, the operators would implement procedure OS1200.01, "Safe Shutdown and Cooldown from the Main Control Room," and initiating a manual reactor trip is the first step in the procedure. The staff noted that the submittal lacks a discussion of what represents a fire (detector activation, confirmation of a fire, confirmation of a fire that damages safe shutdown equipment, etc.). An understanding of the entry conditions into OS1200.01 is important for the staff to evaluate if the procedure will be entered in time before credible fire damage could prevent a plant trip using the shunt trip.

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DATED NOVEMBER 29, 2017**

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JRobinson, NRR

ADAMS Accession No.: ML17332A341

*by memorandum

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| OFFICE | NRR/DORL/LPL1/PM | NRR/DORL/LPL1/LA | NRR/DRA/APLB(A)* |
| NAME | JPoole | LRonewicz | JRobinson |
| DATE | 11/29/17 | 11/29/17 | 11/08/17 |
| OFFICE | NRR/DORL/LPL1/BC | NRR/DORL/LPL1/PM | |
| NAME | JDanna | JPoole | |
| DATE | 11/29/17 | 11/29/17 | |

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