

September 12, 2003

Mr. Mark E. Warner, Site Vice President  
c/o James M. Peschel  
Seabrook Station  
FPL Energy Seabrook, LLC  
PO Box 300  
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - ISSUANCE OF AMENDMENT RE:  
CHANGES TO TECHNICAL SPECIFICATIONS ASSOCIATED WITH  
RELOCATING CERTAIN ENGINEERED SAFETY FEATURES PUMP VALUES  
TO THE TECHNICAL REQUIREMENTS MANUAL (TAC NO. MB5022)

Dear Mr. Warner:

The Commission has issued the enclosed Amendment No. 90 to Facility Operating License No. NPF-86 for the Seabrook Station, Unit No. 1 (Seabrook Station), in response to your application dated April 24, 2002, filed by North Atlantic Energy Service Corporation (NAESCO) as the then licensee for Seabrook Station, Unit No. 1. On November 1, 2002, the U.S. Nuclear Regulatory Commission (NRC or Commission) approved the transfer of the license for Seabrook Station, Unit No. 1, to the extent held by NAESCO, and certain co-owners of the facility, on whose behalf NAESCO was also acting, to FPL Energy Seabrook, LLC (FPLE Seabrook). By letter dated December 20, 2002, FPLE Seabrook requested that the NRC continue to review and act upon all requests before the Commission that had been submitted by NAESCO.

The amendment revises Technical Specifications (TSs) 4.6.2.1 "Containment Spray System," and TS 4.7.1.2.1b, "Auxiliary Feedwater System," and associated Bases Section 3/4.7.1.2. Specifically, the changes would move surveillance requirements acceptance criteria for containment spray and auxiliary feedwater pumps from the TSs to the Seabrook Station Technical Requirements Manual. These criteria include the specified values of pressure, differential pressure and flow, as well as specific test methods.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

*/RA/*

Victor Nerses, Senior Project Manager, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosures: 1. Amendment No. 90 to NPF-86  
2. Safety Evaluation

cc w/encls: See next page

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DATE	9/10/03	7/15/03; 9/9/03	7/15/03	7/22/03	9/11/03

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FPL ENERGY SEABROOK, LLC, ET AL.\*

DOCKET NO. 50-443

SEABROOK STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 90  
License No. NPF-86

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by FPL Energy Seabrook, LLC, et al. (the licensee), dated April 24, 2002, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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\*FPL Energy Seabrook, LLC (FPLE Seabrook), is authorized to act as agent for the: Hudson Light & Power Department, Massachusetts Municipal Wholesale Electric Company, and Taunton Municipal Light Plant, and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-86 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 90, and the Environmental Protection Plan contained in Appendix B are incorporated into Facility License No. NPF-86. FPLE Seabrook shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

James W. Clifford, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: September 12, 2003

ATTACHMENT TO LICENSE AMENDMENT NO. 90

FACILITY OPERATING LICENSE NO. NPF-86

DOCKET NO. 50-443

Replace the following pages of the Appendix A, Technical Specifications, with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

Remove

3/4 6-14

3/4 7-4

B 3/4 7-2

Insert

3/4 6-14

3/4 7-4

B 3/4 7-2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 90 TO FACILITY OPERATING LICENSE NO. NPF-86

FPL ENERGY SEABROOK, LLC

SEABROOK STATION, UNIT NO. 1

DOCKET NO. 50-443

## 1.0 INTRODUCTION

By letter dated April 24, 2002, the North Atlantic Energy Services Corporation (NAESCO), as the then licensee for Seabrook Station, Unit No.1 (Seabrook), requested changes to the Technical Specifications (TSs). On November 1, 2002, the U.S. Nuclear Regulatory Commission (NRC or the Commission) approved the transfer of the license for Seabrook to the extent held by NAESCO and certain co-owners of the facility on whose behalf NAESCO was also acting, to FPL Energy Seabrook, LLC (FPLE Seabrook or licensee). By letter dated December 20, 2002, FPLE Seabrook requested that the NRC continue to review and act upon all requests before the Commission that had been submitted by NAESCO.

The proposed changes would revise surveillance requirements (SRs) in TS 4.6.2.1, "Containment Spray System," and TS 4.7.1.2.1b, "Auxiliary Feedwater System," and associated Bases Section 3/4.7.1.2. Specifically, the proposed changes would move SR acceptance criteria for containment spray and auxiliary feedwater pumps from the TSs to the Seabrook Station Technical Requirements Manual (SSTRM). These criteria include the specified values of pressure, differential pressure and flow, as well as specific test methods.

## 2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act of 1954, as amended (the Act) requires applicants for nuclear power plant operating licenses to include the TSs as part of the license. The Commission's regulatory requirements related to the content of the TSs are set forth in Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.36. The regulation requires that the TSs include items in eight specific categories. The categories are: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCO); (3) SRs; (4) design features; (5) administrative controls; (6) decommissioning; (7) initial notification; and (8) written reports. However, the regulation does not specify the particular requirements to be included in a plant's TSs.

For LCO, 10 CFR 50.36(c)(2)(ii) specifies four criteria to be used in determining whether a particular matter is required to be included in a LCO, as follows: (1) installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary; (2) a process variable, design feature, or operating restriction that is an initial condition of a design-basis accident (DBA) or transient analysis that either assumes the failure of, or presents a challenge to, the integrity of a fission product

barrier; (3) a structure, system, or component (SSC) that is part of the primary success path, and which functions or actuates to mitigate a DBA or transient that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier; or (4) an SSC, which operating experience or probabilistic safety assessment has shown to be significant to public health and safety. LCOs and related requirements that fall within, or satisfy any of, the criteria in the regulation must be retained in the TSs, while those requirements that do not fall within, or satisfy, these criteria may be relocated to licensee-controlled documents.

The Seabrook TSs include detailed information related to system design and operation and also procedural details for meeting TS action and SRs. When inclusion of such information has been shown to give little or no safety benefit, its removal from the TS may be appropriate. In most cases, relaxations previously granted to individual plants on a plant-specific basis were the result of: (1) generic NRC actions; (2) new staff positions that have evolved from technological advancements and operating experience; or (3) resolution of the industry comments on Standard Technical Specifications (STSs). The NRC staff reviewed generic relaxations contained in STSs and found them acceptable because they are consistent with current licensing practices and the Commission's regulations. The licensee proposed to relocate information from existing SRs that describes engineered safety features (ESF) pump inservice testing (IST) acceptance criteria and test methods.

The licensee stated that information related to ESF pump performance criteria would be moved to the SSTRM, a licensee-controlled document, which is referenced in the Updated Final Safety Analysis Report (UFSAR), and used for implementing Seabrook's Technical Specification Improvement Program. By virtue of the SSTRM's incorporation by reference into the UFSAR, and as required by current TS 6.7.1.i, changes to requirements in the SSTRM must be reviewed pursuant to 10 CFR 50.59. In addition, the TSs require such changes to be reviewed and approved by the Station Operations Review Committee prior to implementation.

The licensee, in its submittal, identified the applicable regulatory requirements. The regulatory requirements and guidance on which the staff based its acceptance criteria are:

- 10 CFR Section 50.36
- The model TSs contained in the improved STSs, NUREG-1431, Revision 2, "Standard Technical Specifications, Westinghouse Plants," dated October 10, 2001
- Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," Revision 2, March 1997
- NUREG-1482, "Guidelines for Inservice Testing at Nuclear Power Plants," April 1995

### 3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed license amendment, which are described in Enclosure 1 of the licensee's application.

### 3.1 Statement of Proposed Changes

#### Specification 3/4.6.2.1, "Containment Spray System"

TS 4.6.2.1b is changed from

Each Containment Spray System shall be demonstrated OPERABLE by verifying that on recirculation flow, each pump develops a differential pressure of greater than or equal to 262 psi when tested pursuant to Specification 4.0.5.

to

Each Containment Spray System shall be demonstrated OPERABLE by verifying OPERABILITY of each pump when tested pursuant to Specification 4.0.5.

#### Specification 3/4.7.1.2, "Auxiliary Feedwater System"

TS 4.7.1.2.1b is changed from

At least once per 92 days on a STAGGERED TEST BASIS by:

- 1) Verifying that the motor-driven emergency feedwater pump develops a discharge pressure of greater than or equal to 1460 psig at a flow of greater than or equal to 270 gpm;
- 2) Verifying that the steam turbine-driven pump develops a discharge pressure of greater than or equal to 1460 psig at a flow of greater than or equal to 270 gpm when the secondary steam supply pressure is greater than 500 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3;
- 3) Verifying that the startup feedwater pump develops a discharge pressure of greater than or equal to 1375 psig at a flow of greater than or equal to 425 gpm;

to

At least once per 92 days on a STAGGERED TEST BASIS by verifying the following pumps develop the required discharge pressure and flow as specified in the Technical Requirements Manual:

- 1) The motor-driven emergency feedwater pump;
- 2) The steam turbine-driven emergency feedwater pump when the secondary steam supply pressure is greater than 500 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3;
- 3) The startup feedwater pump.



The STS Bases for SR 3.5.2.4, emergency core coolant system (ECCS) pump IST, state that:

Periodic surveillance testing of ECCS pumps to detect gross degradation caused by impeller structural damage or other hydraulic component problems is required by Section XI of the ASME Code. This type of testing may be accomplished by measuring the pump developed head at only one point of the pump characteristic curve. This verifies both that the measured performance is within an acceptable tolerance of the original pump baseline performance, and that the performance at the test flow is greater than, or equal to, the performance assumed in the plant safety analysis. SRs are specified in the Inservice Testing Program, which encompasses Section XI of the ASME Code. Section XI of the ASME Code provides the activities and Frequencies necessary to satisfy the requirements.

The forgoing discussion also applies to the IST of containment spray pumps and the emergency feedwater pumps, that correspond to STS SR 3.6.6A.4 and SR 3.7.5.2, respectively. However, these STS SRs do not contain explicit values of pump performance acceptance criteria or describe the pump test method. For example, STS SR 3.6.6A.4 states:

Verify each containment spray pump's developed head at the flow test point is greater than or equal to the required developed head in accordance with the Inservice Testing Program.

TSs 4.6.2.1b, 4.7.1.2.1b.1, and 4.7.1.2.1b.2 provide details such as flow and pressure values describing the containment spray and emergency feedwater pump acceptance criteria and test methods (e.g., testing on recirculation flow) associated with the performance surveillance test. The removal of this kind of surveillance detail and specific values is acceptable because it does not alter the TS requirements that ensure the operability of the containment spray and emergency feedwater systems. In particular, the requirements of the applicable LCO and the associated SRs for these subsystems, as well as the TS definition of operability, are adequate to ensure that these systems are maintained operable. As a result, these details are not necessary to ensure the containment spray and emergency feedwater systems can perform their intended safety functions and are not required to be in the TS to provide adequate protection of the public health and safety. The relocation of these details is also consistent with the STSs. Any change to these details will be made in accordance with 10 CFR 50.59, as specified in the licensee's programs and procedures governing changes to the SSTRM.

The Seabrook TSs contain operability and testing requirements (TS 3.7.1.2.a and 4.7.2.1b.3) for the startup feedwater pump even though this pump is not safety related. These requirements are essentially the same as specified for the emergency feedwater pumps. The TSs include the startup feedwater pump, because of its function as a manual backup to the emergency feedwater pumps in the event of a loss of offsite power. The startup feedwater pump has sufficient flow capacity to reduce the reactor coolant system temperature to 350°F in the event of a loss of offsite power, without reliance on the emergency feedwater pumps. The TSs need not contain the numerical values of the pump performance criteria for the startup feedwater pump for the same reasons given in the previous discussion of the containment spray pumps and emergency feedwater pumps.

The staff finds that: (a) the SSTRM will continue to ensure adequate implementation of the information regarding TS pump performance criteria and test methods that is being moved to

the SSTRM from existing TSs 4.6.2.1b, 4.7.1.2.1b.1, 4.7.1.2.1b.2, and 4.7.1.2.1b.3; (b) adequate regulatory controls exist through 10 CFR 50.59 and current TS 6.7.1.i to control future changes to this information; and (c) the revised TS requirements, TS 4.0.5, and the IST program requirements, as applicable, are adequate to ensure the operability of the containment spray pumps, emergency feedwater pumps, and the startup feedwater pump. Therefore, moving the information regarding pump performance criteria and test methods from existing TSs 4.6.2.1b, 4.7.1.2.1b.1, 4.7.1.2.1b.2, and 4.7.1.2.1b.3 to the SSTRM is acceptable.

The licensee also proposed a change to the Bases for TS 4.7.1.2.1b.2 to clarify the application of the specified exception to TS 4.0.4 for entry into Mode 3 for the steam turbine-driven emergency feedwater pump SR. The proposed change accurately describes when this SR must be met following entry into Mode 3, therefore, the staff has no objection to this change.

### 3.2 Summary

The information that the licensee has proposed to move to licensee-controlled documents is not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to public health and safety. Further, where such information is contained in LCOs and associated requirements in the existing TS, the NRC staff has concluded that it does not fall within any of the four criteria contained in 10 CFR 36(c)(2)(ii). Therefore, the containment spray and auxiliary feedwater pump performance criteria and test methods are not needed in the Seabrook TSs to ensure the effectiveness of TSs to adequately protect the health and safety of the public. Accordingly, this information may be moved to the SSTRM, a licensee-controlled document, for which changes are adequately governed by 10 CFR 50.59.

## 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Hampshire and Massachusetts State Officials were notified of the proposed issuance of the amendment. The State Officials had no comments.

## 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes SRs. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (67 FR 40024). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

## 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: C. Harbuck

Date: September 12, 2003

Seabrook Station, Unit No. 1

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