

July 30, 2008

Mr. Gene St. Pierre, Site Vice President
c/o Michael O'Keefe
Seabrook Station
FPL Energy Seabrook, LLC
PO Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 – ISSUANCE OF AMENDMENT RE:
CONTROL ROOM HABITABILITY (TAC NO. MD6099)

Dear Mr. St. Pierre:

The Commission has issued the enclosed Amendment No. 119 to Facility Operating License No. NPF-86 for the Seabrook Station, Unit No. 1 (Seabrook), in response to your application dated July 17, 2007, as supplemented by letters dated October 15, 2007, and February 19, 2008.

The amendment revises the Seabrook Technical Specifications related to control room envelope habitability consistent with Technical Specification Task Force (TSTF) Traveler TSTF-448, Revision 3. The proposed amendment would also adopt two changes not addressed by TSTF-448.

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/

G. Edward Miller, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-443

Enclosures:

1. Amendment No. 119 to NPF-86
2. Safety Evaluation

cc w/encls: See next page

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DATE	7/30/2008	7/16/08	7/3/08	7/24/08	7/30/08

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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. 119
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 July 17, 2007, 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.

* 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. 119, and the Environmental Protection Plan contained in Appendix B are incorporated into the Facility License No. NPF-86. FPL Energy Seabrook, LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. Accordingly, the license is amended by changes to paragraph 2.J of Facility Operating License No. NPF-86 and is hereby amended to read as follows:

J. Additional Conditions

The Additional Conditions contained in Appendix C, as revised through Amendment No. 119, are hereby incorporated into this license. FPL Energy Seabrook, LLC, shall operate the facility in accordance with the Additional Conditions.

4. This license amendment is effective as of its date of issuance and shall be implemented within 6 months of issuance. Implementation of the amendment shall include updating the UFSAR in accordance with 10 CFR 50.71(e). This update shall include the discussion of the applicability for the note associated with limiting condition for operation 3.7.6 which stated that the note only applies to openings in the control room envelope (CRE) boundary that can be rapidly restored to the design condition, such as doors, hatches, floor plugs, and access panels. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. For other openings that exceed the allowable opening size, these controls should be proceduralized and consist of stationing a dedicated individual at the opening who is in continuous communication with the operators in the CRE. This individual will have a method to rapidly close the opening and to restore the CRE boundary to a condition equivalent to the design condition when a need for CRE isolation is indicated.

FOR THE NUCLEAR REGULATORY COMMISSION

/ra/ (REnnis for)

Harold K. Chernoff, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the License and
Technical Specifications

Date of Issuance: July 30, 2008

ATTACHMENT TO LICENSE AMENDMENT NO. 119

FACILITY OPERATING LICENSE NO. NPF-86

DOCKET NO. 50-443

Replace the following pages of Facility Operating License No. NPF-86 with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
3	3
7	7

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 areas of change.

<u>Remove</u>	<u>Insert</u>
3/4 7-16	3/4 7-16
--	3/4 7-16a
3/4 7-18	3/4 7-18
6-14	6-14
--	6-14a
--	6-14b

Replace the following pages of the Appendix C, Additional Conditions, with the attached revised pages as indicated. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
1	1
--	2

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 119 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 July 17, 2007 (Agencywide Document and Management System (ADAMS) Accession No. ML072010090), and supplemented by letters dated October 15, 2007 (ADAMS Accession No. ML072950123), and February 19, 2008 (ADAMS Accession No. ML080530391) FPL Energy Seabrook, LLC (the licensee) submitted a license amendment request (LAR) regarding the Seabrook Station (Seabrook) Technical Specifications (TS). The supplemental letters provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on November 6, 2007 (72 FR 62689).

On August 8, 2006, the commercial nuclear electrical power generation industry owners group Technical Specifications Task Force (TSTF) submitted a proposed change, TSTF-448, Revision 3, to the improved Standard Technical Specifications (STS) (NUREGs 1430-1434) on behalf of the industry (TSTF-448, Revisions 0, 1, and 2 were prior draft iterations). TSTF-448, Revision 3, is a proposal to establish more effective and appropriate action, surveillance, and administrative STS requirements related to ensuring the habitability of the Control Room Envelope (CRE).

In Nuclear Regulatory Commission (NRC) Generic Letter 2003-01, licensees were alerted to findings at facilities that existing TS Surveillance Requirements (SRs) for the CRE may not be adequate. Specifically, the results of ASTM E741 tracer gas tests to measure CRE unfiltered inleakage at facilities indicated that the differential pressure surveillance is not a reliable method for demonstrating CRE boundary operability. Licensees were requested to address existing TS as follows:

Provide confirmation that your technical specifications verify the integrity [i.e., operability] of the CRE [boundary], and the assumed [unfiltered] inleakage rates of potentially contaminated air. If you currently have a differential pressure surveillance requirement to demonstrate CRE [boundary] integrity, provide the basis for your conclusion that it remains adequate to demonstrate CRE integrity in light of the ASTM E741 testing results. If you conclude that your differential pressure surveillance requirement is no longer adequate, provide a schedule for: 1) revising the surveillance requirement in your technical specification to reference an acceptable surveillance methodology (e.g., ASTM E741), and 2) making any necessary modifications to your CRE boundary so that compliance with your new surveillance requirement can be demonstrated. If your facility does not currently have a technical specification surveillance requirement for your CRE integrity, explain how and at what frequency you confirm your CRE integrity and why this is adequate to demonstrate CRE integrity

To promote standardization and to minimize the resources that would be needed to create and process plant-specific amendment applications in response to the concerns described in the generic letter, the industry and the NRC proposed revisions to CRE habitability system requirements contained in the STS, using the STS change traveler process. This effort culminated in Revision 3 to traveler TSTF-448, "Control Room Habitability," which the NRC staff approved on January 17, 2007.

The licensee's TS are not in the format of NUREG-1431, Revision 3, "Standard Technical Specifications for Westinghouse Plants." The Licensee's TS are based on the format of NUREG-0452, a precursor to NUREG-1431. The licensee is proposing the incorporation of the content, not the format, of STS changes made by TSTF-448 to address Control Room Habitability TS issues. To facilitate the adoption of TSTF-448 related content, the licensee is also proposing changes not addressed in TSTF-448. The changes not addressed in TSTF-448 were changes previously made to NUREG-1431 by TSTF-51, "Revise containment requirements during handling irradiated fuel and core alterations."

The licensee proposed revising ACTION statements and SRs in TS 3/4.7.6, "Control Room Subsystem Emergency Makeup Air and Filtration" as well as adding a new administrative controls program TS, Specification 6.7.6.I, "Control Room Envelope Habitability Program." The licensee also proposed changes to terminology used to ensure consistency throughout the TS. The licensee submitted changes to the TS Bases that reflect the proposed TS changes. Finally, the licensee proposed a license condition to support implementation of the proposed TS changes. The purpose of the proposed changes is to ensure that CRE boundary operability is maintained and verified through effective surveillance and programmatic requirements, and that appropriate remedial actions are taken in the event of an inoperable CRE boundary.

2.0 REGULATORY EVALUATION

2.1 Control Room and Control Room Envelope

NRC Regulatory Guide 1.196, "Control Room Habitability at Light-water Nuclear Power Reactors," Revision 0, May 2003, uses the term "control room envelope" in addition to the term "control room" and defines each term as follows:

Control Room: The plant area, defined in the facility licensing basis, in which actions can be taken to operate the plant safely under normal conditions and to maintain the reactor in a safe condition during accident situations. It encompasses the

instrumentation and controls necessary for a safe shutdown of the plant and typically includes the critical document reference file, computer room (if used as an integral part of the emergency response plan), shift supervisor's office, operator wash room and kitchen, and other critical areas to which frequent personnel access or continuous occupancy may be necessary in the event of an accident.

Control Room Envelope: The plant area, defined in the facility licensing basis, that in the event of an emergency, can be isolated from the plant areas and the environment external to the CRE. This area is served by an emergency ventilation system, with the intent of maintaining the habitability of the control room. This area encompasses the control room, and may encompass other non-critical areas to which frequent personnel access or continuous occupancy is not necessary in the event of an accident.

NRC Regulatory Guide 1.197, "Demonstrating Control Room Envelope Integrity At Nuclear Power Reactors," Revision 0, May 2003, also contains these definitions, but uses the term CRE to mean both. This is because the protected environment provided for operators varies with the nuclear power facility. At some facilities this environment is limited to the control room; at others, it is the CRE. In this safety evaluation, consistent with the proposed changes to the STS, the CRE will be used to designate both.

2.2 Control Room Emergency Makeup Air and Filtration System (CREMAFS)

The CREMAFS (the term used at Seabrook for the CRE Emergency Ventilation System (CREEVS)) provides a protected environment from which operators can control the unit, during airborne challenges from radioactivity, hazardous chemicals, and fire byproducts, such as fire suppression agents and smoke, during both normal and accident conditions.

The CREMAFS is designed to maintain a habitable environment in the control room envelope for the duration of a Design Basis Accident (DBA), without exceeding a 5 rem total effective dose equivalent (TEDE).

The CREMAFS consists of two independent, redundant trains each capable of maintaining the habitability of the CRE. The CREMAFS is considered operable when the individual components necessary to limit operator exposure are operable in both trains. A CREMAFS train is considered operable when the associated:

- Fan is operable;
- High efficiency particulate air (HEPA) filters and charcoal adsorbers are not excessively restricting flow, and are capable of performing their filtration functions;
- Heater, ductwork, valves, and dampers are operable, and air circulation can be maintained;
- CRE boundary is operable (the single boundary supports both systems).

The CRE boundary is considered operable when the measured unfiltered air inleakage is less than or equal to the inleakage value assumed by the licensing basis analyses of design basis accident consequences to CRE occupants.

2.3 Regulations Applicable to Control Room Habitability

In Appendix A, "General Design Criteria for Nuclear Power Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, "Domestic Licensing of Production and Utilization Facilities," General Design Criteria (GDC) 1, 2, 3, 4, 5, and 19 apply to CRE habitability. A summary of these GDCs follows.

GDC 1, "Quality Standards and Records," requires that structures, systems, and components (SSCs) important to safety be designed, fabricated, erected, and tested to quality standards commensurate with the importance of the safety functions performed.

GDC 2, "Design Basis for Protection Against Natural Phenomena," requires that SSCs important to safety be designed to withstand the effects of earthquakes and other natural hazards.

GDC 3, "Fire Protection," requires SSCs important to safety be designed and located to minimize the effects of fires and explosions.

GDC 4, "Environmental and Dynamic Effects Design Bases," requires SSCs important to safety to be designed to accommodate the effects of and to be compatible with the environmental conditions associated with normal operation, maintenance, testing, and postulated accidents, including loss-of-coolant accidents (LOCAs).

GDC 5, "Sharing of Structures, Systems, and Components," requires that SSCs important to safety not be shared among nuclear power units unless it can be shown that such sharing will not significantly impair their ability to perform their safety functions, including, in the event of an accident in one unit, the orderly shutdown and cooldown of the remaining units.

GDC 19, "Control Room," requires that a control room be provided from which actions can be taken to operate the nuclear reactor safely under normal conditions and to maintain the reactor in a safe condition under accident conditions, including a LOCA. Adequate radiation protection is to be provided to permit access and occupancy of the control room under accident conditions without personnel receiving radiation exposures in excess of specified values.

In its response to Generic Letter 2003-01, the licensee stated that the existing design of Seabrook Station meets all of the applicable regulatory requirements regarding Control Room habitability.

Prior to incorporation of TSTF-448, Revision 3, the STS requirements addressing CRE boundary operability resided only in the following CRE ventilation system specifications:

- NUREG-1431, TS 3.7.10, "Control Room Emergency Filtration System (CREFS)."

2.4 Adoption of TSTF-448, Revision 3, by Seabrook

Adoption of TSTF-448, Revision 3, is meant to ensure that the facility's TS limiting condition for operation (LCO) for the Control Room heating, ventilation, and air conditioning (HVAC) System is met by demonstrating operability of the CRE boundary. In support of this, TSTF-448, Revision 3, also adds TS administrative controls to assure the habitability of the CRE. LCOs and associated SRs are evaluated for conformance with 10 CFR 50.36(d)(2) and 10 CFR 50.36(d)(3), respectively.

3.0 TECHNICAL EVALUATION

The NRC staff reviewed the proposed changes against the licensee's current TS, Updated Final Safety Analysis Report (UFSAR), and corresponding changes made to the STS by TSTF-448, Revision 3, which the NRC staff has found to satisfy applicable regulatory requirements, as described above in Section 2.0. The emergency operational mode of the CREMAFS at Seabrook pressurizes the CRE to minimize unfiltered air inleakage. The proposed changes are consistent with this design.

3.1 Proposed Changes

The proposed amendment would strengthen CRE habitability TS requirements by changing TS 3/4.7.6, CONTROL ROOM EMERGENCY MAKEUP AIR AND FILTRATION SYSTEM and adding a new TS administrative controls program on CRE habitability. The proposed amendment also includes two changes that are not specifically addressed in TSTF-448 and the accompanying safety evaluation. These changes include: (1) extending the applicability of TS 3/4.7.6.1, "Control Room Subsystems," to include the condition of movement of irradiated fuel assemblies; and (2) replacing an action that requires suspending core alterations with an action to suspend movement of irradiated fuel assemblies. Accompanying the proposed TS changes are appropriate conforming technical changes to the TS Bases.

The NRC staff compared the proposed TS changes to the STS, and the STS markups and evaluations in TSTF-448. The staff verified that differences from the STS were adequately justified on the basis of plant-specific design or retention of current licensing basis.

3.2 Editorial Changes

The licensee proposed editorial changes to TS 3/4.7.6.1 to establish standard terminology, such as "control room envelope (CRE)" in place of "control room," except for the plant-specific name for the CREMAFS, and "radiological, chemical, and smoke hazards" in place of various phrases to describe the hazards that CRE occupants are protected from by the CREMAFS. These changes improve the usability and quality of the presentation of the TS, have no impact on safety, and therefore, are acceptable.

3.3 TS 3/4.7.6 CREMAFS

The licensee proposed to modify the CREMAFS LCO by adding a note allowing the CRE boundary to be opened intermittently under administrative controls. As discussed in the LCO Bases, the NRC staff understands that this will only apply to openings in the CRE boundary that can be rapidly restored to the design condition, such as doors, hatches, floor plugs, and access panels. For entry and exit through doors, the administrative control of the opening is performed by the person(s) entering or exiting the area. Further, the NRC staff understands that for other openings, these controls should be proceduralized and will consist of stationing a dedicated individual at the opening who is in continuous communication with operators in the CRE. This individual will have a method to rapidly close the opening and to restore the CRE boundary to a condition equivalent to the design condition when a need for CRE isolation is indicated. The note is acceptable because the administrative controls will ensure that the opening will be quickly sealed to maintain the validity of the licensing basis analyses of DBA consequences.

The licensee proposed changes to ACTION requirements and SR for TS 3/4.7.6.1. The proposed changes adopt the content of TSTF-448 STS. A TSTF-51 related change is necessary to make the TSTF-448 related changes to TS 3/4.7.6.1 consistent with TSTF-448 changes to STS.

Technical Specifications for CREVS trains based on NUREG-0452 and NUREG-1431 originally contained OPERABILITY requirements for CREVS during MODEs 1, 2, 3, 4, 5, and 6, or during movement of irradiated fuel or during CORE ALTERATIONS. TSTF-51, approved by NRC on November 11, 1999, removed the term CORE ALTERATIONS from TS 3.7.10 of NUREG - 1431. TS 3.7.10 in NUREG-1431 is the STS version of Seabrook TS 3/4.7.6.1. The licensee proposed extending the applicability of TS 3.7.6.1 to include the condition of movement of irradiated fuel assemblies. The licensee presented justification for the proposed change in its LAR. The current version of Seabrook TS 3.7.6.1 has no applicability requirements during movement of irradiated fuel. The CREMAFS is credited for mitigating a fuel handling accident (FHA), which is postulated to occur either in containment or in the fuel storage building (FSB). Movement of irradiated fuel may take place in the FSB when the reactor is completely de-fueled, and consequently, in a condition outside the current applicability of TS 3.7.6.1 of "All Modes." Therefore, consistent with the FHA analysis assumptions, the proposed change establishes a requirement for operability of the CREMAFS during movement of irradiated fuel assemblies, which may occur in the FSB when all fuel has been removed from the reactor vessel. This modification makes TS 3.7.6.1 consistent with TS 3.7.10 in TSTF-448, Revision 3, although this change is not specifically addressed in TSTF-448. This additional change from those described in TSTF-448 is a more restrictive change, since it adds a new condition necessitating operability of the CREMAFS that does not exist under current TS 3.7.6.1. The staff reviewed the proposed change and justification and found that it maintained the current licensing basis at Seabrook, meets the requirements outlined in Section 2.0 above, and makes TSTF-448 related changes to TS 3/4.7.6.1 consistent with TSTF-448 changes to STS. Therefore the change is acceptable.

The licensee proposed establishing new action requirements for an inoperable CRE boundary. The existing TS 3.7.6.1 actions are more restrictive than would be appropriate for situations in which CRE occupant implementation of compensatory measures or mitigating actions would temporarily afford adequate CRE occupant protection from postulated airborne hazards.

The licensee proposed a revised TS 3.7.6.1 ACTION a, applicable in Operational MODES 1, 2, 3, and 4, to state, "With one CREMAFS train inoperable for reasons other than an inoperable CRE boundary, restore the inoperable system to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours."

The licensee proposed a revised TS 3.7.6.1 ACTION b, to apply when one or more CREMAFS trains are inoperable due to an inoperable CRE boundary in MODES 1, 2, 3, and 4. In such cases the licensee is required to immediately initiate action to: implement mitigating actions or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours (ACTION b.1); and verify, within 24 hours, mitigating actions ensure CRE occupant exposures to radiological, chemical, and smoke hazards will not exceed limits or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours (ACTION b.2); and restore CRE boundary to OPERABLE status within 90 days or be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours (ACTION b.3). TS 3.7.6.1 ACTION b is therefore distinguished from TS 3.7.6.1 ACTION a.

The licensee proposed TS 3.7.6.1 ACTION c, applicable in Operational MODES 1, 2, 3, and 4, to state, "With two CREMAFS trains inoperable for reasons other than an inoperable CRE boundary, immediately enter Technical Specification 3.0.3."

The 7-day completion time of ACTION a is reasonable based on the low probability of a DBA occurring during this time period, and ability of the remaining train to provide the required capability. The 24-hour completion time of new ACTION b.2 is reasonable based on the low probability of a DBA occurring during this time period, and the use of mitigating actions. The 90-day completion time of ACTION b.3 is reasonable based on the determination that the mitigating actions will ensure protection of CRE occupants within analyzed limits while limiting the probability that CRE occupants will have to implement protective measures that may adversely affect their ability to control the reactor and maintain it in a safe shutdown condition in the event of a DBA, and is a reasonable time to diagnose, plan and possibly repair, and test most anticipated problems with the CRE boundary. The requirement of ACTION c, to immediately enter TS LCO 3.0.3, is necessary to prevent operation of the unit in a condition outside the accident analyses. Therefore, proposed TS 3.7.6.1 ACTIONS a, b.1, b.2, b.3, and c are acceptable.

The CREMAFS is credited in the mitigation of an FHA. An FHA could occur in containment or the FHB in MODE 5, 6, or during movement of irradiated fuel assemblies. Therefore, requiring CREMAFS equipment operability in these situations is necessary. The licensee proposed to add ACTIONS d, e, and f to apply in MODE 5 or 6, or during movement of irradiated fuel assemblies. The new ACTIONS d, e, and f are needed because proposed ACTIONS a, b, and c will only apply in MODE 1, 2, 3, and 4.

Proposed ACTION d replaces current ACTION a. Proposed ACTION d states "With one CREMAFS train inoperable for reasons other than an inoperable CRE boundary, restore the inoperable system to OPERABLE status within 7 days or either immediately initiate and maintain operation of the remaining OPERABLE CREMAFS train in the filtration/recirculation mode or immediately suspend movement of irradiated fuel assemblies."

Proposed ACTION e replaces current ACTION b. The licensee proposed replacing the phrase "operations involving CORE ALTERATIONS," in the current TS 3.7.6.1 ACTION b, with the phrase "movement of irradiated fuel assemblies." In the LAR, the licensee presented justification for replacing the phrase "operations involving CORE ALTERATIONS" with the phrase "movement of irradiated fuel assemblies." In Seabrook TS the defined term CORE ALTERATION includes movement of any fuel, sources, or reactivity control components within the reactor vessel with the vessel head removed and fuel in the vessel. The licensee stated that there is no mitigation of the FHA except for crediting the CREMAFS to reduce dose consequences. The licensee further stated that the suspension of core alterations, except for suspension of movement of irradiated fuel, will not prevent or impair mitigation of an FHA. The staff deemed this justification acceptable, based on Seabrook's current licensing basis and the content of NUREG-1431. Proposed ACTION e states "With both CREMAFS trains inoperable, or with the OPERABLE CREMAFS train, required to be in the filtration/recirculation mode by ACTION d, not capable of being powered by an OPERABLE emergency power source, immediately suspend all movement of irradiated fuel assemblies."

Proposed ACTION f states "With one or both CREMAFS trains inoperable due to an inoperable CRE boundary, immediately suspend movement of irradiated fuel assemblies."

The proposed ACTIONS d, e, and f establish a requirement for operability of the CREMAFS during MODE 5 or 6, or during movement of irradiated fuel assemblies. The NRC staff reviewed the proposed ACTIONS d, e, and f and the licensee's justifications and found that they maintain the current licensing basis at Seabrook, meet the requirements outlined in Section 2.0 above, and make TSTF-448 related changes to TS 3/4.7.6.1 consistent with TSTF-448 changes to STS. Therefore, the changes are acceptable.

The licensee proposed deleting the Seabrook CRE pressurization SR 4.7.6.1.d.4 that requires verification that the system can maintain a positive pressure of at least 1/8 inches water gauge relative to the adjacent areas during the filtered pressurization mode of operation at a pressurization flow rate of ≤ 600 cfm. The deletion of this SR is proposed because measurements of unfiltered air inleakage into the CRE at numerous reactor facilities has demonstrated that a basic assumption of this SR, an essentially leak-tight CRE boundary, was incorrect for most facilities. Hence, meeting this SR by achieving the required CRE pressure is not necessarily a conclusive indication of CRE boundary leak tightness (i.e., CRE boundary operability). The licensee proposed replacing the existing TS control room pressurization surveillance with an inleakage measurement SR and CRE Habitability Program in TS (described in Section 3.4), in accordance with the approved version of TSTF-448, Revision 3. In place of the pressurization SR, the licensee proposed adding a new SR 4.7.6.1.g that will require performance of CRE unfiltered air inleakage testing in accordance with the Control Room Envelope Habitability Program, proposed TS 6.7.6.l (described in Section 3.4). The performance of unfiltered air inleakage testing past the CRE boundary into the CRE will be in accordance with the testing methods and at the frequencies specified in the CRE Habitability Program. Based on the adoption of the content of TSTF-448, Revision 3, the licensee's proposal to delete SR 4.7.6.1.d.4 is acceptable.

3.4 TS 6.7.6.l, CRE Habitability Program

The proposed administrative controls program TS is consistent with the model program TS in TSTF-448, Revision 3. In combination with SR 4.7.6.1.g, this program is intended to ensure the operability of the CRE boundary, which as part of an operable CREMAFS will ensure that CRE habitability is maintained such that CRE occupants can control the reactor safely under normal conditions and maintain it in a safe condition following a radiological event, hazardous chemical release, or a smoke challenge. The program shall ensure that adequate radiation protection is provided to permit access and occupancy of the CRE under design basis accident (DBA) conditions without personnel receiving radiation exposures in excess of 5 rem TEDE for the duration of the accident.

A CRE Habitability Program TS acceptable to the NRC staff requires the program to contain the following elements:

Definitions of CRE and CRE boundary.

This element is intended to ensure that these definitions accurately describe the plant areas that are within the CRE, and also the interfaces that form the CRE boundary, and are consistent with the general definitions discussed in Section 2.1 of this safety evaluation. Establishing what is meant by the CRE and the CRE boundary will preclude ambiguity in the implementation of the program.

Configuration control and preventive maintenance of the CRE boundary.

This element is intended to ensure the CRE boundary is maintained in its design condition. Guidance for implementing this element is contained in Regulatory Guide 1.196, which endorsed, with exceptions, NEI 99-03. Maintaining the CRE boundary in its design condition provides assurance that its leak-tightness will not significantly degrade between CRE inleakage determinations.

Assessment of CRE habitability at the frequencies stated in Sections C.1 and C.2 of Regulatory Guide 1.197, Revision 0, and measurement of unfiltered air leakage into the CRE in accordance with the testing methods and at the frequencies stated in Sections C.1 and C.2 of Regulatory Guide 1.197.

This element is intended to ensure that the plant assesses CRE habitability consistent with Sections C.1 and C.2 of Regulatory Guide 1.197. Assessing CRE habitability at the NRC-accepted frequencies provides assurance that significant degradation of the CRE boundary will not go undetected between CRE inleakage determinations. Determination of CRE inleakage using test methods acceptable to the NRC staff assures that test results are reliable for ascertaining CRE boundary operability. Determination of CRE inleakage at the NRC-accepted frequencies provides assurance that significant degradation of the CRE boundary will not occur between CRE inleakage determinations.

Measurement of CRE pressure with respect to all areas adjacent to the CRE boundary at designated locations for use in assessing the CRE boundary at a frequency of 18 months on a staggered test basis (with respect to the CREMAFS trains).

This element is intended to ensure that CRE differential pressure is regularly measured to identify changes in pressure warranting evaluation of the condition of the CRE boundary. Obtaining and trending pressure data provides additional assurance that significant degradation of the CRE boundary will not go undetected between CRE inleakage determinations.

Quantitative limits on unfiltered inleakage.

This element is intended to establish the CRE inleakage limit as the CRE unfiltered infiltration rate assumed in the CRE occupant radiological consequence analyses of design basis accidents including hazardous chemical impacts. Having an unambiguous criterion for the CRE boundary to be considered operable in order to meet LCO 3.7.6.1 will ensure that associated action requirements will be consistently applied in the event of CRE degradation resulting in inleakage exceeding the limit.

Consistent with TSTF-448, Revision 3, the program states that the provisions of SR 4.0.2 are applicable to the program frequencies for performing the activities required by program paragraph number c, parts (i) and (ii) (assessment of CRE habitability and measurement of CRE inleakage), and paragraph number d (measurement of CRE differential pressure).

This statement is needed to avoid confusion. SR 4.0.2 is applicable to the surveillance that references the testing in the CRE Habitability Program. However, SR 3.0.2 is not applicable to Administrative Controls unless specifically invoked. Providing this statement in the program eliminates any confusion regarding whether SR 4.0.2 is applicable, and is acceptable.

Consistent with TSTF-448, Revision 3, proposed TS 6.7.6.I states that: (1) a CRE Habitability Program shall be established and implemented; (2) the program shall include all of the NRC-staff required elements, as described above; and (3) the provisions of SR 4.0.2 shall apply to program frequencies. Therefore, TS 6.7.6.I, which is consistent with the model program TS approved by the NRC staff in TSTF-448, Revision 3, is acceptable.

3.5 Implementation of New Surveillance and Assessment Requirements by the Licensee

The licensee has proposed license conditions regarding the initial performance of the new surveillance and assessment requirements. The new license conditions adopted the conditions in Section 2.3 of the model application published in the *Federal Register* on January 17, 2007 (72 FR 2022). Non-substantive, plant-specific changes, were made to these proposed license conditions. The proposed plant-specific license conditions are consistent with the model application appropriate for the Seabrook TSs. The proposed license conditions are, therefore, acceptable.

3.6 Summary of Adoption of TSTF-448, Revision 3, by Seabrook

The licensee is not proposing to adopt the STS format used by TSTF-448 because Seabrook TS use a format that pre-dates STS and licensees are not required to adopt the format of STS. Instead, the licensee proposes adoption of TSTF-448 content. The changes to Seabrook TS will assure the facility's TS LCO for the CREMAFS is met by demonstrating CRE operability at a test interval (frequency) described in Regulatory Guide 1.197. The changes also add TS administrative controls to assure the habitability of the CRE between tests. In addition, changes to Seabrook TS based on TSTF-448 content will establish clearly stated and reasonable required actions in the event CRE unfiltered inleakage exceeds the analysis assumption.

TSTF-448 made changes to the STS for the CREVS and the CRE boundary that meet the requirements of 10 CFR 50.36(d)(2), 10 CFR 50.36(d)(3), and the other regulatory requirements described in Section 2.0. The licensee proposed adopting TSTF-448 content to address plant-specific design issues while retaining the current licensing basis of Seabrook. The staff review concluded the changes meet the regulatory requirements outlined in Section 2.0 of this Safety Evaluation, address Seabrook plant-specific design issues, and allow for retention of the current licensing basis. The proposed plant-specific adoption of TSTF-448 content will assure that Seabrook's CRE will remain habitable during normal operation and DBA conditions. These changes are, therefore, acceptable.

5.0 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.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and 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 (73 FR 14850). 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.

7.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) the amendment does not (a) involve a significant increase in the probability or consequences of an accident previously evaluated; or (b) create the possibility of a new or different kind of accident from any accident previously evaluated; or (c) involve a significant reduction in a margin of safety; (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner; (3) such activities will be conducted in compliance with the Commission's regulations; and (4) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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