June 9, 2006

Mr. Gene F. St. Pierre, Site Vice President
c/o James M. Peschel
Seabrook Station
PO Box 300
Seabrook, NH 03874

SUBJECT: SEABROOK STATION, UNIT NO. 1 - ISSUANCE OF EMERGENCY AMENDMENT RE: ALLOWED OUTAGE TIME EXTENSION FROM 7 DAYS TO 14 DAYS FOR ENCLOSURE AIR HANDLING FAN (TAC NO. MD2190)

Dear Mr. St. Pierre:

The Commission has issued the enclosed Amendment No. 111 to Facility Operating License No. NPF-86 for Seabrook Station, Unit No. 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated June 7, 2006, as supplemented by letters dated June 8, and June 9, 2006.

The amendment revises TS 3.6.5.1, "Containment Enclosure Emergency Air Cleanup Systems," to increase the TS allowed outage time with one inoperable enclosure air handling fan from 7 days to 14 days, on a one-time basis.

A copy of our Safety Evaluation is also enclosed. The Safety Evaluation describes the emergency circumstances under which the amendment was issued and the final determination of no significant hazards. The Notice of Issuance, addressing the final no significant hazards determination and opportunity for a hearing, will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA by R. Ennis for/

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. 111 to NPF-86
2. Safety Evaluation

cc w/encl: See next page

June 9, 2006

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c/o James M. Peschel
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Sincerely,
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G. Edward Miller, Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

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cc w/encl: See next page

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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. 111
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 June 7, 2006, supplemented by letters dated June 8, and June 9, 2006, 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: 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. 111, are hereby incorporated in the license. The licensee 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 prior to the expiration of the current 7-day allowed outage time entered on June 4, 2006, for fan EAH-FN-31B.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Darrell J. Roberts, Chief
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 9, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 111

FACILITY OPERATING LICENSE NO. NPF-86

DOCKET NO. 50-443

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

Remove	Insert
3/4 6-21	3/4 6-21

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 111 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 June 7, 2006, as supplemented by letters dated June 8, and June 9, 2006, FPL Energy Seabrook, LLC (FPLE or the licensee) submitted License Amendment Request No. 06-07, requesting an emergency Technical Specification (TS) change for Seabrook Station, Unit No. 1 (Seabrook). The proposed change would revise TS Limiting Condition of Operation (LCO) 3.6.5.1, "Containment Enclosure Emergency Air Cleanup Systems" to increase the TS allowed outage time (AOT) with one inoperable enclosure air handling (EAH) fan from 7 days to 14 days, on a one-time basis. The extension would allow continued operation of Seabrook while repairs and related testing of the inoperable fan EAH-FN-31B are completed.

Under the current requirements of TS 3.6.5.1, if an EAH fan is found to be inoperable, the inoperable EAH fan must be restored to operable status within 7 days or the plant must be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. The current AOT for the inoperable EAHF expires on June 11, 2006, at 0602 hours. The licensee has proposed that the following note be added to TS 3.6.5.1:

> The 7-day allowed outage time which was entered on June 4, 2006 at 0602 hours, may be extended one time by an additional 7 days to complete repair and testing on the Containment Enclosure Ventilation Area return fan EAH-FN-31B.

2.0 REGULATORY EVALUATION

The Nuclear Regulatory Commission's (NRC's or Commission's) regulations at Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.91 contain provisions for issuance of an amendment where the Commission finds that an emergency situation exists in that failure to act in a timely way would result in shutdown of a nuclear power plant. In such a situation, the NRC may issue a license amendment involving no significant hazards consideration without prior notice and opportunity for a hearing or for public comment. In such a situation, the Commission will not publish a notice of proposed determination on no significant hazards consideration, but will publish a notice of issuance under 10 CFR 2.106.

In evaluating the risk information submitted by the licensee, the NRC staff followed the three-tiered approach documented in Regulatory Guide (RG) 1.177, "An Approach for Plant-Specific, Risk-Informed Decisionmaking: Technical Specifications."

Under the first tier, the staff determines if the proposed change is consistent with the NRC's Safety Goal Policy Statement, as documented in RG 1.174, "An Approach for Using Probabilistic Risk Assessment in Risk-Informed Decisions on Plant-Specific Changes to the Licensing Basis," for adequacy of plant protection from potential risk. Specifically, the first tier objective is to ensure that the plant risk does not increase unacceptably during the period the equipment is taken out of service.

The second tier addresses the need to preclude potentially high-risk plant configurations that could result if additional equipment, not associated with the proposed change, is taken out of service during the proposed 7-day AOT extension.

The third tier addresses the establishment of a configuration risk management program for identifying risk-significant configurations resulting from maintenance or other operational activities, and taking appropriate compensatory measures to avoid such configurations.

3.0 TECHNICAL EVALUATION

The NRC staff has reviewed the licensee's regulatory and technical analyses in support of its proposed one-time license amendment which is described in the licensee's submittal.

The licensee's submittal dated June 7, 2006, as supplemented by letters dated June 8, and June 9, 2006, in response to a request for additional information (RAI), is risk-informed in that the licensee considered deterministic[1] and probabilistic[2] safety aspects. The NRC staff evaluated the deterministic and probabilistic assessments provided by the licensee.

3.1 Proposed TS Changes

Fan EAH-FN-31B is presently inoperable due to a failed motor. The licensee determined the reason for the failure was a short in the motor windings.

The licensee stated that due to the time required to transport the failed motor to a vendor for repairs, rewind the motor, return the motor to Seabrook, install and test the repaired motor and to return EAH-FN-31B to an operable status, the current TS AOT of 7 days, which expires at 0602 hours on June 11, 2006, may be exceeded. The licensee is requesting a one-time extension of this 7-day AOT by an additional 7 days to assure adequate time is available for completion of repairs, post-maintenance testing, and surveillance testing of the inoperable fan.

---

[1] A deterministic analysis is an assessment of the availability of safety equipment necessary to ameliorate the consequences of design-basis accidents.

[2] A probabilistic analysis is an assessment of the probability that given accident sequences will lead to core damage and/or a large early release of radioactivity.

3.2 Deterministic Evaluation

The containment enclosure emergency air cleanup system trains are redundant, to ensure the maintenance of a negative pressure in the containment enclosure and related areas and to ensure cleanup of the exhaust air following an accident. Analysis has shown that one containment enclosure emergency exhaust filter fan is capable of drawing down the entire containment enclosure area to the design negative differential pressure in less than 8 minutes after the initiation of a design-basis loss-of-coolant accident (LOCA). This analysis takes into account the engineered safety feature actuation system signal delay time, delay time for the diesel generator to supply power in the event of a simultaneous loss of offsite power, and the time for the filter fan to come up to speed. The system is designed to limit offsite post-accident doses to values below those specified in 10 CFR Part 100.

A single component failure will not result in loss of function of this ESF system. The system components required for an operable containment enclosure emergency air cleanup system include those dampers, fans, filters, etc., and necessary ductwork and instrumentation that evacuate or isolate areas, route air, and filter the exhaust prior to discharge to the environment, which include:

- Containment enclosure cooling fans (EAH-FN-5A and 5B);
- Containment enclosure ventilation area return fans (EAH-FN-31A and 31B);
- Containment enclosure emergency exhaust fans (EAH-FN-4A and 4B);
- Charging pump room return air fans (EAH-FN-180A and 180B);
- Containment enclosure emergency clean up filters (EAH-F-9 and F-69);
- PAB / CEVA isolation dampers (PAH-DP-35A, 36A, 35B, and 36B);

The containment enclosure ventilation area return fans (EAH-FN-31A and 31B) are necessary to support the system's ability to establish a negative pressure within the containment enclosure and to provide cooling to the equipment served. During normal and emergency operations, one containment enclosure cooling fan (EAH-FN-5A or 5B) and one containment enclosure ventilation area return fan (EAH-FN-31A or 31B) operates to provide cooling to both trains of equipment and areas served.

The emergency situation resulted from the unforeseen failure of the containment enclosure ventilation area return fan EAH-FN-31B fan motor. The time required to complete repairs to the motor, as well as perform post-maintenance and surveillance testing that can not be completed within the TS 7-day AOT, is the cause for the current emergency situation for which a license amendment is being requested.

FPLE proposes to revise TS 3.6.5.1. The proposed change will permit completing required corrective maintenance and repair on the EAH-FN-31B fan motor, perform post-maintenance

and surveillance testing, and return the fan to an operable status. The extension of the existing 7-day AOT to 14 days will prevent exposure to the inherent risks associated with an unnecessary plant shutdown. There are no proposed changes to any technical operability performance requirements or test acceptance criteria.

The licensee's submittal dated June 8, 2006, stated that:

> With the unavailability of both containment EAH equipment vault exhaust fans EAH-FN-31A and EAH-FN-31B, exhaust airflow from the equipment vaults is greatly reduced. However, a supply of cooled air to the vaults is still supplied by the operating Containment Enclosure Cooling Unit (EAH-AC-2A or 2B) supply fan, EAH-FN-5A or 5B. The air supplied to the equipment vaults results in establishing a differential pressure across the exhaust ducting and exhaust fans EAH-FN-31A and B. This results in some return airflow back to the containment enclosure ventilation area where the cooling units and supply fans are located. The ability to achieve safe shutdown conditions is maintained with both fans inoperable for both normal and accident conditions.

The NRC staff reviewed the licensee's request for the one-time extension of the AOT on an emergency basis. The staff finds that continued operation for the 7 additional days of the requested extension does not impact or degrade the system or component reliability and continues to meet 10 CFR Part 100. In addition, the licensee stated that the ability to achieve safe shutdown conditions is maintained with both fans inoperable for both normal and accident conditions. Therefore, the NRC staff finds from a systems and component operational consideration, the one-time extension of the AOT is acceptable.

3.2.1 Summary

The NRC staff considers, based on a deterministic review, that the proposed change to TS 3.6.5.1, to increase the TS AOT with one inoperable EAH fan from 7 days to 14 days, on a one-time basis for Seabrook, is acceptable. The change will allow for the completion of required maintenance and subsequent post-maintenance testing, and will provide greater confidence in the ability of the EAH fan to perform its intended functions.

3.3 Probabilistic Evaluation

3.3.1 Basis and Quality of Risk Assessment

The licensee used its probabilistic risk assessment (PRA) model to assess the risk increase associated with operation at-power for a period of 7 additional days without fan EAH-FN-31B being operable. The Seabrook PRA is an all modes, full-scope PRA model. The licensee stated that the current model of record (SB2004X) of the Seabrook PRA is based on plant data and modifications through December 2004. A peer review of the Seabrook PRA was completed in December 1999, using the Westinghouse Owner's Group methodology. The licensee identified the general nature of the issues arising from the peer review, and stated that the remaining open issues from this review, which have not yet been resolved and incorporated into the PRA model, would not affect the results of this analysis, based on the following:

- Open items related to model documentation or other programmatic issues would have no impact.

- Open items for Level 2 analyses related to the use of more current code versions to evaluate severe accident phenomena would have minimal impact on the large early release frequency (LERF) results for this application, since LERF is dominated by containment bypass events which are not significantly impacted by containment performance.

- Other open items affecting the Level 1 analyses would impact both the base case and the analysis case and would therefore tend to cancel out in a delta risk calculation, and so would not affect the results significantly.

The licensee identified that the PRA model uses the assumption that failure of the EAC system (i.e., loss of both emergency air cleaning (EAC) fan trains) would immediately fail the cooling support function for all of the emergency core cooling system (ECCS) pumps. Specifically, the charging pumps, safety injection pumps, residual heat removal (RHR) pumps, and containment spray pumps would be considered unavailable if the remaining EAH fan were to fail. The licensee identified that this is a conservative assumption. The unavailability of both of the EAH fans would result in greatly reduced airflow to the equipment vaults, but since there are other supply fans in the design which would be available, there would be some reduced flow through the exhaust ducts and idle EAH fans. The licensee judges that the area temperatures with no exhaust fans operating would not exceed equipment qualified temperatures. Further, contingency plans have been developed to increase airflow if necessary. Therefore, the PRA model is reasonably conservative in assuming that the EAC system must function for room cooling.

The licensee further identified that the EAC system function of controlling radiological releases was not a contributor to LERF, and this function was, therefore, not included in the PRA model. The LERF is dominated by containment bypass events where the filtration and pressure control function of the EAC system would not provide any mitigation.

The risk quantification was performed with an event tree truncation limit of 1.0E-14. The risk consideration included quantifying risk to determine the change in core damage frequency (CDF) and LERF as a result of the proposed 7-day allowed AOT extension. Also, the licensee is maintaining the continuous on-line risk management program to control the performance of other risk-significant tasks during the extended AOT period, with consideration of specific compensatory measures listed in the initial submittal (and Section 4.0 below) to minimize risk.

The NRC staff evaluated the quality and scope of the PRA models, limited to the systems related to the proposed change used in the risk assessment, and found it acceptable for this application.

3.3.2 Risk Impact of the Proposed Change (Tier 1)

An acceptable approach to risk-informed decision making is to show that the proposed change meets several key principles. One of these principles is to show that the proposed change results in a small, but acceptable, increase in risk in terms of CDF and LERF, and is consistent with the NRC's Safety Goal Policy Statement. Acceptance guidelines for meeting this principle are presented in RG 1.177 and RG 1.174.

The licensee used its PRA model to calculate risk increases due to the AOT extension of 7 days, during which fan EAH-FN-31B is out of service. Both the incremental conditional core damage probability (ICCDP) and the incremental conditional large early release probability (ICLERP) were assessed. These quantities are a measure of the increase in probability of core damage and large early release, respectively, during a single EAH fan outage that would last for the entire duration allowed by the proposed change. The acceptance guideline for an extension of the TS AOT is provided in RG 1.177 as 5.0E-7 and 5.0E-8 for ICCDP and ICLERP, respectively. However, the RG 1.177 guideline is for a permanent change, and the reviewer has considered additional credits for the proposed one-time extension within the bound of adequate protection under the guideline in RG 1.174.

The NRC staff separately assessed the risk by modifying the Seabrook simplified plant analysis risk (SPAR) model to include a unique failure event with a probability of 3.2E-4 (equivalent to the combined failure probability of a failure to start of a fan of 1.04E-4 and failure to run of a fan for 24 hours of 2.16E-4). The failure probability is conservative, since the remaining operable fan is running and would only be required to start in the event of an interruption of power. This new event was placed in the model as appropriate to fail the charging pumps, safety injection pumps, and RHR pumps. The containment spray pumps are not used to evaluate CDF in the Seabrook SPAR model. Since the remaining operable fan is powered from train ‘A’ power, the appropriate failure logic for ‘A’ train power was also added to the logic for failure of the ‘B’ train charging pumps, safety injection pumps, and RHR pumps. This addresses the dependency of the ‘B’ train equipment on the operable ‘A’ train EAH fan.

LERF is calculated employing NRC Inspection Manual Chapter 0609, Significance Determination Process, Appendix H with the CDF-LERF conversion factor of 0.1. This conversion multiplier is a ratio of LERF-to-CDF to evaluate the LERF value conservatively for those plants without available Level 2 PRA models. The Seabrook containment is a large, dry, concrete containment with a steel liner. Because of this design feature, containment failure mechanisms do not typically contribute to LERF. As is the case for other large, dry containments, the major contributors to LERF are from the containment bypass sequences, which include interfacing systems LOCAs and steam generator tube rupture events. However, without any bias toward containment bypass sequences, the LERF multiplier (based on CDF) is typically less than 0.1.

Based on the one-time extension of 7 days, the incremental changes are summarized in the following table:

		Baseline CDF	Incremental Change in ICCDP	Baseline LERF	Incremental Change in ICLERP
Prior to AOT Extension		1.53E-05/yr		9.23E-08/yr	
Increase because of 7-day AOT extension (licensee results)			7.3E-07***		2.25E-10***
Increase because of 7-day AOT Extension	A. using NRC SPAR 3.2 Model		2.45E-07		<2.45E-08
	B. Compensatory Measures*		Not credited		Not credited
Acceptance Guidelines**			5E-7		5E-8

* Quantifiable compensatory measures provided by the licensee
** Criteria for permanent change, flexibility considered for a one-time change.
*** The licensee identified the risk associated with the 14-day period, which is twice the 7-day risk, and separately provided fire and internal flooding risk.

Based on the NRC staff's analysis using the SPAR model, the configuration risk increase associated with internal initiating events with fan EAH-FN-31B out-of-service is 2.45E-7 ICCDP, which is within the threshold value of 5.0E-07, the acceptance guideline for total CDF risk (internal and external events, including internal fires) in RG 1.177 for permanent changes. The licensee's assessment of ICCDP of 7.3E-7 is slightly greater than the acceptance guideline of 5E-7 in RG 1.177. The licensee's assessment includes the contribution from internal floods and fires, and is discussed below. The licensee's commitment to not perform voluntary maintenance on train 'A' components, which rely upon the EAC system for room cooling, is not reflected in these numbers, so the actual risk would be expected to be somewhat lower. Since this is a one-time change and not a permanent change, the incremental risk would increase the annual CDF by the same amount; therefore, the delta-CDF in both cases is below the RG 1.174 guideline of 1E-6/yr for very small changes. The staff considered that the licensee's calculation of ICCDP is conservative and not significantly greater than the guidelines of RG 1.177, and that this is a one-time temporary change which is within the guidelines of RG 1.174. Further, the staff considered that the PRA model is conservative in its assumption that equipment cooled by the EAC system would fail immediately if the remaining fan were to fail, and did not credit any contingency measures by the licensee to provide temporary cooling.

The NRC staff's analysis of ICLERP is no more than 2.45E-08, compared with the licensee's evaluation using their Level 2 PRA model of 2.25E-10. Both values are below the acceptance guidelines of RG 1.177 (5E-8). Similar to the delta-CDF calculation described above, the delta-LERF for a one-time change is less than the RG 1.174 guideline of 1E-7/yr for very small changes.

The licensee's initial evaluation of risk did not include internal flooding and fires, and the risk associated with these initiating events was provided by a supplement to the original submittal. Over the 7-day extension period, the additional core damage probability is approximately 6E-8, and is reflected in the table.

The licensee's PRA model includes the capability to assess the risk of transition and shutdown to cold shutdown conditions. In support of this amendment request, the licensee evaluated the risk of shutting down the plant to cold shutdown at the end of the current 7-day AOT, completing repairs to fan EAH-FN-31B during the shutdown, and returning the unit to full power. The licensee stated the ICCDP for this evolution was calculated as 2E-7.

The staff finds that a one-time 7-day extension of TS LCO 3.6.5.1 to perform required repairs to fan EAH-FN-31B during power operations results in an acceptably small increase in risk, consistent with the guidance of RG 1.177 and RG 1.174, and avoids transitional and shutdown risk which would otherwise be incurred. The staff notes that these analyses are based on conservative assumptions with regard to the postulated effect of the unavailability of the EAC room cooling function, and do not credit contingency actions which could mitigate the effects of a loss of the remaining EAH fan, and are, therefore, appropriately conservative.

3.3.3 Avoidance of High-Risk Plant Configurations (Tier 2)

There should be reasonable assurance that risk-significant equipment outages will not occur when equipment is out of service consistent with the proposed TS change. The licensee has identified critical train 'A' components which should remain available during the period when the EAH-FN-31B is unavailable, and has proposed to implement compensatory measures to identify these components with signs, barrier tape, or similar markings, and to not perform any elective maintenance on these systems while the extended AOT is in effect. The NRC staff finds that these proposed compensatory measures, identified in the licensee's submittal, are adequate for preventing plant configurations or conditions that may increase risk significantly.

3.3.4 Risk-Informed Configuration Risk Management (Tier 3)

The intent of risk-informed configuration risk management is to ensure that plant safety is maintained and monitored. A formal commitment to maintain a configuration risk management program is necessary on the part of a utility prior to implementation of a risk-informed TS. This program can support the licensee's decision-making regarding the appropriate actions to control risk whenever a risk-informed TS LCO is entered. The licensee has stated that the Seabrook program and procedures which implement 10 CFR 50.65(a)(4) are in place during the extended AOT to assess and manage risk associated with planned maintenance activities and emergent issues. The NRC staff finds that the licensee's configuration risk management program as described in their submittal is adequate to support the proposed license amendment.

3.3.5 Summary

The NRC staff has evaluated the licensee's proposed TS change to permit a one-time 7-day extension of TS LCO 3.6.5.1 to permit repairs to fan EAH-FN-31B during power operations. The staff considers that the proposed change results in an acceptably small increase in risk, consistent with the guidance of RG 1.177 and RG 1.174, and avoids transitional and shutdown

risk which would otherwise be incurred. Further, the staff finds that the licensee has provided adequate compensatory measures to avoid risk-significant configurations during the additional 7-day period when fan EAH-FN-31B is unavailable, and that the licensee's configuration risk management program, consistent with 10 CFR 50.65(a)(4), is adequate to evaluate the risk impact of maintenance activities to support the proposed change. Therefore, the staff finds that the licensee's submittal is consistent with the requirements of the three-tiered approach to evaluate the risk associated with the TS AOT change as identified in RG 1.177, and is acceptable.

4.0 OPERATIONAL AND MAINTENANCE RESTRICTIONS

The licensee stated it will implement the following compensatory measures while operating in the extended AOT for TS 3.6.5.1:

1. Continue to assess and manage the increase in risk that may result from planned maintenance activities and emergent issues in accordance with the Seabrook Station program and procedures that implement 10 CFR [50.]65(a)(4).

2. Maintain critical train "A" components protected. Install signs, barrier tape, or similar markings to protect the following train "A" equipment:

    - Emergency diesel generator
    - Containment enclosure emergency air cleanup system
    - Emergency feedwater
    - Ocean supplied service water
    - Service water cooling tower
    - Primary component cooling water
    - ECCS equipment vaults (RHR, safety injection, and containment building spray)
    - Centrifugal charging pumps
    - Control room makeup air and filtration system

3. No elective maintenance will be performed on the following train "A" systems:

    - Emergency diesel generator
    - Containment enclosure emergency air cleanup system
    - Emergency feedwater
    - Ocean supplied service water
    - Service water cooling tower
    - Primary component cooling water
    - RHR
    - Safety injection
    - Containment building spray
    - Centrifugal charging pumps
    - Control room makeup air and filtration system

[4]. Surveillance activities required by the Operating License will continue to be performed.

[5]. A non-routine surveillance has been created to review logger printouts on a more frequent basis (currently every 2-hours)

[6]. Contingencies have been developed to increase the amount of cooling airflow that would be provided to the equipment vaults if necessary. These contingency plans will be included in an Operations Standing Order. Without either exhaust fan operating, it has been estimated that the equipment vault area temperatures could approach 165 EF. A review of equipment Environmental Qualification temperatures has determined that the lowest [i.e., most limiting] qualified temperature of the components located in the equipment vaults is 250 EF. Therefore, these contingencies may not be needed to maintain equipment temperatures below their qualified limits. In our Engineering judgement, these contingency plans enhance the ability to achieve safe shutdown conditions for both normal and accident conditions.

5.0 EMERGENCY CIRCUMSTANCES

As stated previously, the NRC's regulations at 10 CFR 50.91 contain provisions for issuance of an amendment where the Commission finds that an emergency situation exists, in that failure to act in a timely way would result in shutdown of a nuclear power plant.

In this instance, an emergency situation exists in that the proposed amendment is needed to allow the licensee to preclude an unnecessary plant shutdown. The licensee, in its application dated June 7, 2006, stated:

> The need to request an emergency TS change arose from an unexpected condition discovered during normal operation on June 4, 2006. Fan EAH-FN-31B tripped at 2038 on June 3, 2006 and was discovered to be tripped on June 4, 2006 at 0602. After extensive electrical testing it was determined that the motor needed to be sent offsite for repair. The fan motor was removed and sent offsite for a motor rewind. Preliminary internal inspection of the failed fan motor revealed the cause of failure appears to be a breakdown in the insulation system due to a pre-existing flaw created by incidental contact during the assembly phase of the motor during construction. The estimated time for completion of the motor repair is 0200 on June 14, 2006. The time required to have the motor repaired, reinstall the motor in the fan, and test the fan and motor will exceed the current 7-day AOT. This issue has been entered into the site Corrective Action Program for resolution and determination of causes and corrective actions.
>
> FPL Energy Seabrook could not have foreseen the need for this TS change prior to the failure of the EAH fan motor. The current Preventative Maintenance (PM) strategy was developed during a comprehensive PM optimization program that considered internal and external operating experience as well as vendor recommendations. With the current PM strategies, an impending winding failure would not have been detected. Routine fan preventative and predictive maintenance activities performed on EAH-FN-31B include vibration monitoring, breaker current injection testing, and motor starter inspections. None of these activities is designed to detect degraded motor winding conditions.

There are standard winding insulation tests for motor windings – (DC Coil Resistance Test, Insulation Resistance Test, Polarization Index Test, DC High Potential Test and Surge Comparison Test). Of these tests, the coil resistance test and the surge comparison test would have been potentially capable of detecting a degraded winding. The coil resistance test is capable of locating poor connections, open windings and shorted windings or turns. However, it is not capable of predicting turn-to-turn failures. The surge comparison test may be able to predict turn to turn failures in some cases. None of these tests are currently incorporated in the Seabrook PM strategy for motors. The 480V motor PM philosophy is based on the relative age of our motor population (first half of 40-year life), our low failure rates among safety and non-safety-related motors, and on the limited ability of technologies to trend winding degradation.

The potential manufacturing defect may have been able to be detected if extended testing (e.g. surge comparison testing) were in place. However, for normal aging of the motor population, these extended technologies are not routinely used as failure prevention and prediction tools, and are therefore not employed at Seabrook.

The Commission expects licensees to apply for license amendments in a timely fashion. In this situation, however, the NRC staff has determined that the licensee has explained, as set forth above, why this emergency situation occurred and why it could not avoid this situation. Based on the licensee's reasons set forth above, the NRC staff has determined that the licensee could not reasonably have foreseen the continued inoperability of the subject EAH fan, and could not file the application in advance of that event. Accordingly, the NRC staff has determined that the licensee made a timely application for the amendment, has not abused the emergency provisions of 10 CFR 50.91(a)(5), and did not itself create the emergency.

6.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The Commission's regulation at 10 CFR 50.92(c) states that the Commission may make a final determination that a license amendment involves no significant hazards consideration (NSHC) if operation of the facility in accordance with the proposed amendment would not: (1) involve a significant increase in the probability or consequences of an accident previously evaluated; (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) result in a significant reduction in a margin of safety.

The NRC staff reviewed the following NSHC evaluation that was provided by the licensee in its submittal dated June 7, 2006.

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

   Response: No.

   The proposed change affects the AOT for the TS 3.6.5.1 Action. The proposed change allows a one-time extension of the current AOT for the inoperable containment enclosure ventilation area return fan EAH-FN-31B from seven (7) days to fourteen (14) days. The proposed change does not affect the design of the Containment Enclosure Emergency Air Cleanup System, the operational characteristics or function of the Containment Enclosure Emergency Air Cleanup

System, the interfaces between the Containment Enclosure Emergency Air Cleanup System and other plant systems, or significantly affect the reliability of the Containment Enclosure Emergency Air Cleanup System. Limiting conditions for operation and their associated allowed outage times are not considered initiating conditions for any accident previously evaluated, nor is the Containment Enclosure Emergency Air Cleanup System considered an initiator for any accident previously evaluated. The containment enclosure ventilation area return fans (EAH-FN-31A and 31B) are necessary to support the system's ability to establish a negative pressure within the containment enclosure and to provide cooling to the equipment served. During normal and emergency operations, one containment enclosure cooling fan (EAH-FN-5A or 5B) and one containment enclosure ventilation area return fan (EAH-FN-31A or 31B) operates to provide cooling to both trains of equipment and areas served. The consequences of accidents previously evaluated are not affected by the proposed change in AOT. To fully evaluate the effect of the proposed Containment Enclosure Emergency Air Cleanup System AOT extension, Probabilistic Risk Assessment (PRA) methods and a deterministic analysis were utilized. The results of the analysis show no significant increase in Core Damage Frequency or Large Early Release Frequency.

Therefore, the proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the probability of a new or different accident from any accident previously evaluated?

   Response: No.

   The proposed change does not involve a change in the design, configuration, or method of operation of the plant. The proposed change will not alter the manner in which equipment operation is initiated, nor will the functional demands on credited equipment be changed. The proposed change allows operation of the unit to continue while fan EAH-FN-31B is repaired and retested. The proposed extension does not affect the interaction of fan EAH-FN-31B with any system whose failure or malfunction can initiate an accident. As such, no new failure modes are being introduced.

   Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

   Response: No.

   The proposed change does not alter the plant design, nor does it affect the assumptions contained in the safety analyses. Specifically, there are no changes being made to the Containment Enclosure Emergency Air Cleanup System, including instrument setpoints. The proposed change has been evaluated both deterministically, and using risk-informed methods. Based upon

these evaluations, margins of safety ascribed to Containment Enclosure Emergency Air Cleanup System availability and to plant risk have been determined to not be significantly reduced. The evaluation has concluded the following with respect to the proposed change:

Applicable regulatory requirements will continue to be met and sufficient safety margins will be maintained. Furthermore, increases in risk posed by potential combinations of equipment out of service during the proposed extended Emergency Air Handling Fan EAH-FN-31B AOT will be managed under a configuration risk management program consistent with 10 CFR 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants," paragraph (a)(4).

The availability of the other containment enclosure ventilation area return fan EAH-FN-31A and the use of on-line risk assessment tools, as well as planned compensatory measures, provide adequate compensation for the potential small incremental increase in plant risk associated with the extended containment enclosure ventilation area return fan EAH-FN-31B AOT.

Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Based on the NRC staff's review of the licensee's analysis, the staff concludes that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff has made a final determination that NSHC is involved for the proposed amendment and that the amendment should be issued as allowed by the criteria contained in 10 CFR 50.91.

7.0 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.

8.0 ENVIRONMENTAL CONSIDERATION

This 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. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has made a final finding that the amendment involves no significant hazards consideration. 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.

9.0 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.

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