



FPL Energy
Seabrook Station

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NYN-04024

U. S. Nuclear Regulatory Commission
Attn.: Document Control Desk
Washington, DC 20555-0001

Seabrook Station
Submittal of Changes to the Seabrook Station Technical Specification Bases

FPL Energy Seabrook, LLC submits the enclosed changes to the Seabrook Station Technical Specification Bases. The changes were made in accordance with Technical Specification 6.7.6.j., "Technical Specification (TS) Bases Control Program." Please update the Technical Specifications Bases as follows:

Remove

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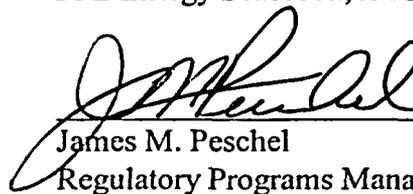
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Should you have any questions concerning this matter, please contact me at (603) 773-7194.

Very truly yours,

FPL Energy Seabrook, LLC


James M. Peschel
Regulatory Programs Manager

A001

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cc: H. J. Miller, NRC Region I Administrator
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ENCLOSURE TO NYN-04024

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3/4.4 REACTOR COOLANT SYSTEM

BASES

3/4.4.1 REACTOR COOLANT LOOPS AND COOLANT CIRCULATION

A reactor coolant loop is comprised of its associated steam generator and reactor coolant pump. An OPERABLE reactor coolant system loop consists of an OPERABLE reactor coolant pump and an OPERABLE steam generator in accordance with the Steam Generator Tube Surveillance Program.

The plant is designed to operate with all reactor coolant loops in operation and maintain DNBR above 1.30 during all normal operations and anticipated transients. In MODES 1 and 2 with one reactor coolant loop not in operation, this specification requires that the plant be in at least HOT STANDBY within 6 hours.

In MODE 3, two reactor coolant loops provide sufficient heat removal capability for removing core decay heat even in the event of a bank withdrawal accident; however, a single reactor coolant loop provides sufficient heat removal capacity if a bank withdrawal accident can be prevented, i.e., by placing the Control Rod Drive System in a condition incapable of rod withdrawal. Single failure considerations require that two loops be OPERABLE at all times.

In MODE 4, and in MODE 5 with reactor coolant loops filled, a single reactor coolant loop or RHR loop provides sufficient heat removal capability for removing decay heat; but single failure considerations require that at least two loops (either RHR or RCS) be OPERABLE.

In MODE 5 with reactor coolant loops not filled, a single RHR loop provides sufficient heat removal capability for removing decay heat; but single failure considerations, and the unavailability of the steam generators as a heat removing component, require that at least two RHR loops be OPERABLE.

A Reactor Coolant "loops filled" condition is defined as follows: (1) Having pressurizer level greater than or equal to 55% if the pressurizer does not have a bubble, and greater than or equal to 17% when there is a bubble in the pressurizer. (2) Having the air and non-condensables evacuated from the Reactor Coolant System by either operating each reactor coolant pump for a short duration to sweep air from the Steam Generator U-tubes into the upper head area of the reactor vessel, or removing the air from the Reactor Coolant System via an RCS evacuation skid, and (3) Having vented the upper head area of the reactor vessel if the pressurizer does not have a bubble. (4) Having the Reactor Coolant System not vented, or if vented capable of isolating the vent paths within the time to boil.

The operation of one reactor coolant pump (RCP) or one RHR pump provides adequate flow to ensure mixing, prevent stratification and produce gradual reactivity changes during boron concentration reductions in the Reactor Coolant System. The reactivity change rate associated with boron reduction will, therefore, be within the capability of operator recognition and control.

The restrictions on starting an RCP in MODES 4 and 5 are provided to prevent RCS pressure transients, caused by energy additions from the Secondary Coolant System, which could exceed the limits of Appendix G to 10 CFR Part 50. The RCS will be protected against overpressure transients and will not exceed the limits of Appendix G by restricting starting of the RCPs to when the secondary water temperature of each steam generator is less than 50°F above each of the RCS cold-leg temperatures.

PLANT SYSTEMS

BASES

3/4.7.6 CONTROL ROOM SUBSYSTEMS

The OPERABILITY of the Control Room Emergency Makeup Air and Filtration Subsystem ensures that the control room will remain habitable for operations personnel during and following credible accident conditions. Cumulative operation of the system with the heaters on for 10 hours over a 31-day period is sufficient to reduce the buildup of moisture on the absorbers and HEPA filters. Heaters cycle on and off to maintain the relative humidity below 70%. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rems or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix A, 10 CFR Part 50. ANSI N510-1980 will be used as a procedural guide for surveillance testing.

The OPERABILITY of the Control Room Emergency Makeup Air and Filtration Subsystem is also contingent on maintaining the integrity of the Control Room complex envelope. Envelope integrity is maintained by controlling activities that could introduce sources of makeup air or infiltration of unfiltered air other than that assumed in the UFSAR. Examples of activities that could render either or both subsystem trains inoperable: (1) removal of penetration seals; (2) blocking open or removing either Control Room door (C312, C325); (3) open access doors to filter units 1-CBA-F-38, 8038; (4) repositioning of remote intake manual isolation valves 1, 2-CBA-V9; (5) any activity which allows makeup air to be drawn into the system from locations other than the remote intakes (e.g., removal of an opacity detector or radiation monitor in the DG Building, cutting of either makeup air line, etc.). Breaches to the envelope shall be controlled by station programs and may require an engineering evaluation to ensure UFSAR assumptions remain valid. Refer to Engineering Evaluation 91-39, Rev. 1 and CR 02-16293 for specific information and compensatory measures.

The OPERABILITY of the safety-related Control Room Air Conditioning Subsystem ensures that the allowable temperature for continuous-duty rating for the equipment and instrumentation cooled by this system is not exceeded. The safety-related Control Room Air Conditioning Subsystem consists of two independent and redundant trains that provide cooling of recirculated control room air. The design basis of the safety-related Control Room Air Conditioning Subsystem is to maintain the control room temperature for 30 days of continued occupancy. The safety-related chillers are designed to operate in conditions down to the design basis winter temperature. When the chiller units unload due to insufficient heat load on the system, each Control Room air Conditioning Subsystem remains operable. Surveillance to demonstrate OPERABILITY will verify each subsystem has the capability to maintain the control room area temperature less than the limiting equipment qualification temperature. The operational surveillance will be performed on a quarterly basis, requiring each safety-related Control Room Air Conditioning Subsystem to operate over a twenty-four hour period. This will ensure the safety related subsystem can remove the heat load based on daily cyclic outdoor air temperature.

The Control Room Air Conditioning fans are necessary to support both the operation of the Control Room Emergency Makeup Air and Filtration and the Control Room Air Conditioning Subsystems.

PLANT SYSTEMS

BASES

3/4.7.7 SNUBBERS

All snubbers are required OPERABLE to ensure that the structural integrity of the Reactor Coolant System and all other safety-related systems is maintained during and following a seismic or other event initiating dynamic loads.

Snubbers are classified and grouped by design and manufacturer but not by size. For example, mechanical snubbers utilizing the same design features of the 2-kip, 10-kip and 100-kip capacity manufactured by Company "A" are of the same type. The same design mechanical snubbers manufactured by Company "B" for the purposes of this Technical Specification would be of a different type, as would hydraulic snubbers from either manufacturer.

A list of individual snubbers with detailed information of snubber location and size and of system affected shall be available at the plant in accordance with Section 50.71(c) of 10 CFR Part 50. The accessibility of each snubber shall be determined and approved by the Station Operation Review Committee (SORC). The determination shall be based upon the existing radiation levels and the expected time to perform a visual inspection in each snubber location as well as other factors associated with accessibility during plant operations (e.g., temperature, atmosphere, location, etc.), and the recommendations of Regulatory Guides 8.8 and 8.10. The addition or deletion of any hydraulic or mechanical snubber shall be made in accordance with Section 50.59 of 10 CFR Part 50.

ELECTRICAL POWER SYSTEMS

BASES

3/4.8.1 AC SOURCES (Continued)

SURVEILLANCE REQUIREMENTS (SR) (continued)

SR 4.8.1.1.2e

This surveillance requires that, at a 184-day frequency, the EDG starts from standby conditions and achieves required voltage and frequency within 10 seconds (a.k.a, "fast start"). The 10-second start requirement supports the assumptions of the design basis LOCA analysis in the UFSAR, Chapter 15 (Ref. 5).

Upper limits for voltage and frequency are not specified during the initial EDG start in order to account for potential overshoot in voltage and frequency because of governor control system characteristics when testing the EDG in an unloaded condition.

Since this SR requires a 10 second start, it is more restrictive than SR 4.8.1.1.2a.5), and it may be performed in lieu of SR 4.8.1.1.2a.5). Associated footnote # allows crediting of this SR for SR 4.8.1.1.2a.5). Additionally, footnote # stipulates that gradual loading per SR 4.8.1.1.2a.6) must immediately follow this surveillance.

In addition to the SR requirements, the time for the EDG to reach steady state operation, unless the modified EDG start method is employed, is periodically monitored and the trend evaluated to identify degradation of governor and voltage regulator performance.

This SR in combination with SR 4.8.1.1.2a.5) help to ensure the availability of the standby electrical power supply to mitigate DBAs and transients and to maintain the unit in a safe shutdown condition.

The 184-day frequency is consistent with Generic Letter 84-15 (Ref. 7) and provides adequate assurance of EDG OPERABILITY, while minimizing degradation resulting from testing.

SR 4.8.1.1.2f

Surveillances carried out under SR 4.8.1.1.2f are activities normally conducted during shutdown at a refueling frequency of every 18 months. The SR is modified by footnote ## which provides a dispensation from the 'during shutdown' requirement provided an evaluation supports the safe conduct of a particular surveillance in a condition or mode that is consistent with safe operation of the plant. This disposition is consistent with Generic Letter 91-04 (Ref. 13).

Note: SR 4.8.1.1.2f.1) and SR 4.8.1.1.2f.13) are Not Used.

SR 4.8.1.1.2f.2) demonstrates the EDG load response characteristics and capability to reject the largest single load without exceeding predetermined voltage and frequency limits. This surveillance may be accomplished by either:

- a. Tripping the EDG output breaker with the EDG carrying greater than or equal to its associated single largest post-accident load while paralleled to offsite power, or while solely supplying the bus, or
- b. Tripping its associated single largest post-accident load with the EDG solely supplying the bus.

If method a. is used the EDG power factor must be in the range of 0.9 which is representative of actual design basis inductive loading.

ELECTRICAL POWER SYSTEMS

BASES

3/4.8.2 and 3/4.8.3 DC SOURCES and ONSITE POWER DISTRIBUTION

The OPERABILITY of the minimum specified A.C. and D.C. power sources and associated distribution systems during shutdown and refueling ensures that: (1) the facility can be maintained in the shutdown or refueling condition for extended time periods and (2) sufficient instrumentation and control capability is available for monitoring and maintaining the unit status.

The Surveillance Requirement for demonstrating the OPERABILITY of the station batteries are based on the recommendations of Regulatory Guide 1.129, "Maintenance Testing and Replacement of Large Lead Storage Batteries for Nuclear Power Plants," February 1978, and IEEE Std. 450-1980, "IEEE Recommended Practice for Maintenance, Testing, and Replacement of Large Lead Storage Batteries for Generating Stations and Substations."

Verifying average electrolyte temperature above the minimum for which the battery was sized, total battery terminal voltage on float charge, connection resistance values, and the performance of battery service and discharge tests ensures the effectiveness of the charging system, the ability to handle high discharge rates, and compares the battery capacity at that time with the rated capacity.

Table 4.8-2 specifies the normal limits for each designated pilot cell and each connected cell for electrolyte level, float voltage, and specific gravity. The limits for the designated pilot cells float voltage and specific gravity, greater than 2.13 volts and 0.015 below the manufacturer's full charge specific gravity or a battery charger current that had stabilized at a low value, is characteristic of a charged cell with adequate capacity. The normal limits for each connected cell for float voltage and specific gravity, greater than 2.13 volts and not more than 0.020 below the manufacturer's full charge specific gravity with an average specific gravity of all the connected cells not more than 0.010 below the manufacturer's full charge specific gravity, ensures the OPERABILITY and capability of the battery.

Operation with a battery cell's parameter outside the normal limit but within the allowable value specified in Table 4.8-2 is permitted for up to 7 days. During this 7-day period: (1) the allowable values for electrolyte level ensures no physical damage to the plates with an adequate electron transfer capability; (2) the allowable value for the average specific gravity of all the cells, not more than 0.020 below the manufacturer's recommended full charge specific gravity, ensures that the decrease in rating will be less than the safety margin provided in sizing; (3) the allowable value for an individual cell's specific gravity, ensures that an individual cell's specific gravity will not be more than 0.040 below the manufacturer's full charge specific gravity and that the overall capability of the battery will be maintained within an acceptable limit; and (4) the allowable value for an individual cell's float voltage, greater than 2.07 volts, ensures the battery's capability to perform its design function.

3/4.8.4 ELECTRICAL EQUIPMENT PROTECTIVE DEVICES

Containment electrical penetrations and penetration conductors are protected by either deenergizing circuits not required during reactor operation or by demonstrating the OPERABILITY of primary and backup overcurrent protection circuit breakers during periodic surveillance.

The Surveillance Requirements applicable to lower voltage circuit breakers provide assurance of breaker reliability by testing at least one representative sample of each manufacturer's brand of circuit breaker. Each manufacturer's air circuit breakers, molded case circuit breakers, and overload devices are grouped into representative samples which are then tested on a rotating basis to ensure that all breakers are tested. If a wide variety exists within

3/4.9 REFUELING OPERATIONS (Continued)

BASES

3/4.9.5 (THIS SPECIFICATION NUMBER IS NOT USED.)

3/4.9.6 (THIS SPECIFICATION NUMBER IS NOT USED.)

3/4.9.7 (THIS SPECIFICATION NUMBER IS NOT USED.)

3/4.9.8 RESIDUAL HEAT REMOVAL AND COOLANT CIRCULATION

The requirement that at least one residual heat removal (RHR) loop be in operation ensures that: (1) sufficient cooling capacity is available to remove decay heat and maintain the water in the reactor vessel below 140°F as required during the REFUELING MODE, and (2) sufficient coolant circulation is maintained through the core to minimize the effect of a boron dilution incident and prevent boron stratification.

The requirement to have two RHR loops OPERABLE when there is less than 23 feet of water above the reactor vessel flange ensures that a single failure of the operating RHR loop will not result in a complete loss of residual heat removal capability. With the reactor vessel head removed and at least 23 feet of water above the reactor pressure vessel flange, a large heat sink is available for core cooling. Thus, in the event of a failure of the operating RHR loop, adequate time is provided to initiate emergency procedures to cool the core.

Closure of the Equipment Hatch containment penetration using the Containment Outage Door may satisfy the containment closure requirement of the action statements for Technical Specifications 3.9.8.1 and 3.9.8.2, when the Containment Outage Door is being used during the movement of non-recently irradiated fuel assemblies within containment in lieu of the Containment Equipment Hatch.