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STANDBY FEEDWATER SYSTEM

3.20.1 Two standby feedwater pumps shall be available* and at least 60,000 gallons of water (available volume), shall be in the Demineralized Water Storage Tank.**

APPLICABILITY: MODES 1, 2, 3

ACTION:

1. With one standby feedwater pump unavailable, restore the unavailable pump to available status within 30 days or submit a SPECIAL REPORT per 6.9.3.j.
2. With both standby feedwater pumps unavailable:
 - a) Within 24 hours, notify the NRC and provide cause for unavailability and plans to restore pump(s) to available status and,
 - b) Submit a SPECIAL REPORT per 6.9.3.j.
3. With less than 60,000 gallons of water in the Demineralized Water Storage Tank restore the available volume to at least 60,000 gallons within 24 hours or submit a SPECIAL REPORT per 6.9.3.j.
4. The provisions of Specifications 3.0.1 and 3.0.4 are not applicable.

* These pumps are not safety related equipment and do not require plant safety related emergency power sources for availability.

** The Demineralized Water Storage Tank is non-safety grade.

4.21 STANDBY FEEDWATER SYSTEM

APPLICABILITY: Applies to the periodic surveillance of the STANDBY FEEDWATER SYSTEM.

OBJECTIVE: To demonstrate availability of the STANDBY FEEDWATER SYSTEM*.

*NOTE: The standby feedwater pumps are not safety related equipment and do not require plant safety related emergency power sources for availability.

SPECIFICATION:

1. The Demineralized Water Storage tank water volume shall be determined to be within limits at least once per 24 hours.
2. At least quarterly verify the standby feedwater pumps are available by testing in recirculation.
3. During each refueling outage, verify availability of the respective standby feedwater pump by powering from the non-safety grade diesel generators and providing feedwater to the steam generators.

- g. With untreated gaseous effluents exceeding the limits of 3.9.2.e pursuant to Specification 3.9.2.e.3, submit a report which includes the following information:
- (1) Identification of the inoperable equipment or subsystems and the reason for inoperability,
 - (2) Action(s) taken to restore the inoperable equipment to OPERABLE status, and
 - (3) Summary description of action(s) taken to prevent a recurrence.
- h. With the annual (calendar year) dose or dose commitment to any MEMBER OF THE PUBLIC from all uranium fuel cycle sources exceeding the limits of Technical Specification 3.9.2.h, submit a report that defines the corrective action to be taken to reduce subsequent releases to prevent recurrence of exceeding the limits of Specification 3.9.2.h and includes the schedule for achieving conformance with those limits. This report, as defined in 10 CFR Part 20.405c, shall include an analysis that estimates the radiation exposure (dose) to a MEMBER OF THE PUBLIC from uranium fuel cycle sources, including all effluent pathways and direct radiation, for the calendar year that includes the release(s) covered by this report. It shall also describe levels of radiation and concentrations of radioactive material involved, and the cause of the exposure levels or concentrations. If the estimated dose(s) exceeds the limits of Specification 3.9.2.h and if the release condition resulting in violation of 40 CFR Part 190 has not already been corrected, the report shall include a request for a variance in accordance with the provisions of 40 CFR Part 190. Submittal of the report is considered a timely request, and a variance is granted until staff action on the request is complete.
- i. With the measured levels of radioactivity in environmental samples as a result of plant effluents pursuant to Specification 4.12.1.b, submit a report that identifies the cause(s) for exceeding the limit(s) and defines the corrective actions to be taken to reduce radioactive effluents so that the potential dose to a MEMBER OF THE PUBLIC is less than the limits of Specifications 3.9.1.b, 3.9.2.b and 3.9.2.c.
- j. If the Limits of Technical Specifications 3.20 are exceeded, submit a report describing the cause of the unavailability, action taken and a schedule for restoration within 30 days.

BASES FOR LIMITING CONDITIONS FOR OPERATION**STANDBY FEEDWATER SYSTEM**

The purpose of this specification and the supporting surveillance requirements is to provide for administrative controls which will assure availability and performance of the non-safety grade standby feedwater system. The term availability is used rather than operability so as to positively avoid any implication or connotation that the standby feedwater system is designed or documented to meet safety system requirements such as seismic loads, environmental qualification, safety grade emergency power supply, etc. The system does consist of commercial grade components designed and constructed to industry and FPL standards for this class of equipment located in the outdoor plant environment typical of FPL facilities system wide. The system is expected to perform with high reliability, i.e., comparable to that typically achieved with this class of equipment. FPL intends to maintain the system in good operating condition with regard to appearance, structures, supports, component maintenance, calibrations, etc., but would not document these activities to the degree required for safety grade systems.

The standby feedwater system can be used as a backup to the auxiliary feedwater (AFW) system in the event the AFW system does not function properly. The system would be manually started and controlled by the operator when needed. In the event of a loss of offsite power the pumps can be powered via the non-safety grade diesel generators connected to the non-vital 4160 volt bus.

A supply of 60,000 gallons from the Demineralized Water Storage Tank for the Standby Feedwater Pumps is sufficient water to remove decay heat from the reactor for six (6) hours for a single unit or two (2) hours for two units. This was the basis used for requiring 60,000 gallons of water in the non-safety grade Demineralized Water Storage Tank and is judged to provide sufficient time for restoring the AFW System or establishing make-up to the Demineralized Water Storage Tank.

The motor driven standby feedwater pumps are not designed to NRC requirements applicable to emergency feedwater systems and not required to meet design basis events. These pumps may be out of service for up to 24 hours before initiating formal notification because of the extremely low probability of such an event.

The guidelines for NRC notification in case of both pumps being out of service for longer than 24 hours are provided in applicable plant procedures, as a VOLUNTARY 4 hour notification.



10-11-12

BASES FOR SURVEILLANCE REQUIREMENTS

STANDBY FEEDWATER SYSTEM

Adequate demineralized water for the standby feedwater system will be verified once per 24 hours.. The Demineralized Water Storage Tank provides a source of water to several systems and therefore, requires daily verification.

The standby feedwater pumps will be verified available quarterly by starting and operating them in the recirculation mode typically from their normal power supply. Also, during each unit's refueling outage, the respective standby feedwater pump will be powered from the unit's C bus utilizing Units 1 and 2 non-safety grade diesel generators and flow tested to the nuclear unit's steam generators. Prior to this test, the refueling unit's C bus will be de-energized and the necessary loads will be transferred to the other unit's C bus.

This surveillance regimen will thus demonstrate availability of the entire flow path, backup non-safety grade power supply and pump associated with a unit at least each refueling outage. The pump, motor driver, and normal power supply availability would typically be demonstrated by operation of the pumps in the recirculation mode at least quarterly.

