

3/4.7 PLANT SYSTEMS

BASES

3/4.7.1 SERVICE WATER SYSTEMS

The OPERABILITY of the service water systems ensures that sufficient cooling capacity is available for continued operation of safety-related equipment during normal and accident conditions. The redundant cooling capacity of these systems, assuming a single failure, is consistent with the assumptions used in the accident conditions within acceptable limits.

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3/4.7.2 CONTROL ROOM EMERGENCY FILTRATION SYSTEM

The OPERABILITY of the control room emergency filtration system ensures that (1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and (2) the control room will remain habitable for operations personnel during and following all design basis accident conditions. Continuous operation of the system with the heaters OPERABLE for 10 hours during each 31-day period is sufficient to reduce the buildup of moisture on the adsorbers and HEPA filters. 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 rem 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.

3/4.7.3 SHORE BARRIER PROTECTION

The purpose of the shore barrier is to protect the site backfill from wave erosion.

Category 1 structures are designed to withstand the impact of waves up to 5.4 feet. So long as the backfill is in place, waves greater than 5.4 feet cannot impact Category 1 structures because of the lack of sufficient depth of water to sustain such waves.

The shore barrier can sustain a high degree of damage and still perform its function, protecting the site backfill from erosion. Thus the operability condition for operation of the shore barrier has been written to ensure that severe damage to the structure will not go undetected for a substantial period of time and provide for prompt NRC notification and corrective action.

3/4.7.4 REACTOR CORE ISOLATION COOLING SYSTEM

The reactor core isolation cooling (RCIC) system is provided to assure adequate core cooling in the event of reactor isolation from its primary heat sink and the loss of feedwater flow to the reactor vessel without requiring actuation of any of the Emergency Core Cooling System equipment. The RCIC system is conservatively required to be OPERABLE whenever reactor pressure exceeds 150 psig. This pressure is substantially below that for which the low pressure core cooling systems can provide adequate core cooling for events requiring the RCIC system.

The RCIC system specifications are applicable during OPERATIONAL CONDITIONS 1, 2, and 3 when reactor vessel pressure exceeds 150 psig because RCIC is the primary non-ECCS source of emergency core cooling when the reactor is pressurized.

Bases Insert

The Ultimate Heat Sink consists of two 50% capacity Residual Heat Removal (RHR) reservoirs which must be capable of being cross-connected. Surveillance Requirement 4.7.1.5.b.2 assures that the ability to cross-connect the two reservoirs is not compromised in the event of a failure of a single electrical power source.