

3.4 STEAM AND POWER CONVERSION SYSTEM

Applicability

Applies to the turbine cycle components for removal of reactor decay heat.

Objective

To specify minimum conditions of the turbine cycle equipment necessary to assure the capability to remove decay heat from the reactor core.

Specifications

- 3.4.1 The reactor shall not be heated above 280°F unless the following conditions are met:
1. Capability to remove decay heat by use of two steam generators.
 2. Fourteen of the steam system safety valves are operable.
 3. A minimum of 267,000 gallons of water is available in condensate storage tank, T41B, when required for both units. A minimum of 107,000 gallons of water is available in T41B when only required for Unit 1.
 4. (Deleted)
 5. Both main steam block valves and both main feedwater isolation valves are operable.
- 3.4.2 Components required to be operable by Specification 3.4.1 shall not be removed from service for more than 24 consecutive hours. If the system is not restored to meet the requirements of Specification 3.4.1 within 24 hours, the reactor shall be placed in the hot shutdown condition within 12 hours. If the requirements of Specification 3.4.1 are not met within an additional 48 hours, the reactor shall be placed in the cold shutdown condition within 24 hours.
- 3.4.3 Two (2) EFW trains shall be operable as follows:
1. The motor driven EFW pump and its associated flow path shall be operable when the RCS is above CSD conditions and any Steam Generator is relied upon for heat removal.
 2. The turbine driven EFW pump and its associated flow path shall be operable when the RCS temperature is $\geq 280^{\circ}\text{F}$.

* Except that during hydrotests, with the reactor subcritical, fourteen of the steam system safety valves may be gagged and two (one on each header), may be reset for the duration of the test, to allow the required pressure for the test to be attained.

** Except that the surveillance testing of the turbine driven EFW pump shall be performed at the appropriate plant conditions as specified by Surveillance Requirement 4.8.1.

The T41B condensate storage tank is seismically qualified and a portion of the tank is protected from tornado missiles. The protected volume of water in the tank can provide a source of emergency feedwater (EFW) for both units for at least 30 minutes. Thirty minutes is adequate for the operators to manually switch the EFW suction alignment to the service water system (SWS), if required. The SWS provides the assured source of cooling water.

The TS volume requirements for the condensate storage tank are based on the EFW systems of both units being aligned to T41B simultaneously or only Unit 1 being aligned. The minimum TS volume requirements are sufficient to support several hours of cooling flow for both units. During this time, the need for EFW will be determined. Alignment to available water sources will be performed as necessary to ensure adequate heat removal is maintained. The LCO volume requirements are nominal values. In the conversion of the required volumes to indicated level, instrument uncertainty need not be applied.