

Plant Systems
BASES

SAFETY VALVES (Continued)

Y = Maximum relieving capacity of any one safety valve in lbs/hour.

3/4.7.1.2 AUXILIARY FEEDWATER SYSTEM

The Auxiliary Feedwater System (AFW) system is configured into three independent AFW pumps and associated flow paths. An AFW pump and associated discharge flow path are considered OPERABLE when the components and flow paths required to provide redundant AFW flow to the steam generators are OPERABLE. This requires that the two motor-driven AFW (MDAFW) pumps be OPERABLE in two diverse paths, each capable of automatically transferring the suction from the condensate storage tank to an Essential Service Water (ESW) supply and supplying AFW to two steam generators. This requires the turbine-driven AFW (TDAFW) pump to be OPERABLE with redundant steam supplies from each of two main steam lines upstream of the MSIVs, and shall be capable of automatically transferring the suction from the condensate storage tank to an ESW supply and supplying AFW to the steam generators. The piping, valves, instrumentation, and controls that are in the required flow path, and are required for the train to perform its specified function(s), are also required to be OPERABLE. Because each ESW supply flow path to the TDAFW pump provides 100% capacity, the "Required ESW Supply" to the TDAFW pump is provided by a single, OPERABLE, supply flow path (the suction flow path begins at the point where the ESW piping branches into two lines, one supplying the MDAFW pump and one supplying the TDAFW pump, and ends at the suction of the TDAFW pump) and associated OPERABLE suction isolation valve.

The OPERABILITY of the Auxiliary Feedwater System ensures that the Reactor Coolant System can be cooled down to less than 350°F from normal operating conditions in the event of a total loss-of-offsite power.

Testing of each electric motor-driven auxiliary feedwater pump on a fixed orifice recirculation flow and ensuring a discharge pressure of greater than or equal to 1535 psig verifies the capability of each pump to deliver a total feedwater flow at the pump discharge of 575 gpm and creating pressure of 1221 psig to the entrance of the steam generators. The steam driven auxiliary feedwater pump is capable of delivering a total feedwater flow at the pump discharge of 1145 gpm and creating a pressure of 1221 psig to the entrance of the steam generators. This capacity is sufficient to ensure that adequate feedwater flow is available to remove decay heat and reduce the Reactor Coolant System temperature to less than 350°F when the RHR System may be placed into operation.

3/4.7.1.3 CONDENSATE STORAGE TANK

The OPERABILITY of the condensate storage tank with the minimum water volume ensures that sufficient water is available to maintain the RCS at HOT STANDBY conditions for 4 hours with steam discharge to the atmosphere concurrent with total loss-of-offsite power and then a cooldown to 350°F at 50°F per hour. The contained water volume limit includes an allowance for water not usable because of tank discharge line location or other physical characteristics.

3/4.7.1.4 SPECIFIC ACTIVITY

The limitations on Secondary Coolant System specific activity ensure that the resultant offsite radiation dose will be limited to a small fraction of 10 CFR Part 100 dose guideline values in the event of a steam line rupture. This dose also includes the effects of a coincident 1 gpm reactor to secondary tube leak in the steam generator of the affected steam line. These values are consistent with the assumptions used in the safety analyses.

WOLF CREEK - UNIT 1

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