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3.9 SPENT FUEL POOL

Applicability

Applies to the Spent Fuel Pool Cooling System.

Objective

To provide for adequate cooling of the Spent Fuel Pool to ensure that the pool temperature is kept low enough to prevent boiling.

Specification

3.9.1 One train of the Decay Heat Removal System (DHRS) must be put in service to provide alternate cooling for the Spent Fuel Pool if the coolant temperature reaches 140° and the Spent Fuel Pool Cooling System is inoperable, and as a supplement to the Spent Fuel Pool Cooling System if a maximum temperature of 180°F is exceeded.

3.9.2 If a train of the DHRS is being used to provide alternate cooling for the Spent Fuel Pool, it shall be considered as if it is inoperable and the provisions of Technical Specification 3.3.2 shall apply unless the reactor is in Cold Shutdown.

3.9.3 Use of the DHRS for Spent Fuel Pool cooling shall be limited to no more than 100 hours when not in cold shutdown in any 12-month period.

3.9.4 Reactor shutdown must be initiated immediately if the Spent Fuel Pool bulk temperature reaches 180°F, and the reactor must be in Cold Shutdown within 24 hours.

BASES

This specification provides a method to ensure that the Spent Fuel Pool bulk temperature does not reach the boiling point. The use of a train of the Decay Heat Removal System (DHRS), per Operating Procedure A.21, Section 7.3, provides immediate alternate cooling capability to ensure this. Either train of the DHRS can easily be lined up for Spent Fuel Pool cooling by opening two manual valves (DHS-032 and DHS-055 or -56), one motor operated valve (HV-26047 or 46), and starting the appropriate decay heat pump (P-261A or B). However, since use of the DHRS train for Spent Fuel Pool cooling effectively removes it from its normal service, an operating duration limit of 100 hours per 12-month period is imposed.

References

[1] Licensing Report for High Density Spent Fuel Storage Racks for Rancho Seco.

[2] Time to Boil Calculation, Supplement No. 2 to Thermo-Hydraulic Calculations for Rancho Seco Nuclear Station; Report No. TM-661.