

PCN-210
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P PDR

CONTAINMENT SYSTEMS

RECIRCULATION FLOW PH CONTROL

LIMITING CONDITION FOR OPERATION

- 3.6.2.2 The recirculation flow pH control system shall be operable with a minimum of 15,400 lbs. (256 cu. ft.) of trisodium phosphate (w/12 hydrates), or equivalent, available in the storage racks in the containment.

APPLICABILITY: Modes 1, 2 and 3

ACTION:

With less than the required amount of trisodium phosphate available, restore the system to the correct amount within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

- 4.6.2.2 The recirculation flow pH control system shall be demonstrated operable during each refueling outage by:
- a. Visually verifying that the TSP storage racks have maintained their integrity and the TSP containers contain a minimum of 15,400 lbs. (256 cu. ft.) of TSP (w/12 hydrates) or equivalent.
 - b. Verifying that when a sample of less than 3.00 grams of trisodium phosphate (w/12 hydrates) or equivalent, selected at random from one of the storage racks inside of containment, is submerged, without agitation, in at least 1 litre of 120 ± 10 degrees-F borated demineralized water borated to at least 2482 ppm boron, allowed to stand for 4 hours, then decanted and mixed, the pH of the solution is greater than or equal to 7.0.

BASES

3/4.6.2.2 RECIRCULATION FLOW PH CONTROL SYSTEM

The operability of the recirculation flow pH control system ensures that there is sufficient trisodium phosphate available in containment to guarantee a sump pH of ≥ 7.0 during the recirculation phase of a postulated LOCA. This pH level is required to minimize the potential for chloride stress corrosion of austenitic stainless steel. The specified amount of TSP will result in a recirculation phase pH of 7.2 assuming complete dissolution and maximum allowed boric acid concentrations from the borated water sources. Similarly, surveillance 4.6.2.2 will produce a pH of 7.2. The specified temperature of 120 ± 10 degrees-F for the surveillance is based is consistent with expected long term recirculation phase sump temperature reported in the FSAR.

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