

C. Containment Purge Supply and Exhaust Valves

The containment purge supply and exhaust valves shall be locked closed and may not be opened unless the reactor is in the cold shutdown or refueling shutdown condition.

Basis

The Reactor Coolant System conditions of cold shutdown assure that no steam will be formed and hence there would be no pressure buildup in the containment if the Reactor Coolant System ruptures.

The shutdown conditions of the reactor are selected based on the type of activities that are being carried out. When the reactor head is not to be removed, the specified cold shutdown margin of 1 $\frac{1}{2}$ $\Delta K/K$ precludes criticality under any occurrence. During refueling the reactor is subcritical by 10% $\Delta K/K$. This precludes criticality under any circumstances even though fuel is being moved or control rods withdrawn. Positive reactivity addition by rod motion from an initial 10% $\Delta K/K$ subcritical reactor condition precludes criticality because the reactor would be substantially subcritical even if all control rods were completely withdrawn. Positive reactivity changes by boron dilution may be required or small fluctuations may occur during preparation for, recovery from, or during refueling but maintaining the boron concentration greater than 1800 ppm precludes criticality under any circumstances. Should continuous dilution occur, the time intervals for this incident are discussed in Section 14.1.5 of the FFDSAR.

Regarding internal pressure limitations, the containment design pressure of 60 psig would not be exceeded if the internal pressure before a major loss-of-coolant accident were as much as 6 psig.⁽¹⁾ The containment is designed to withstand an internal vacuum of 2.0 psig.⁽²⁾

The containment purge supply and exhaust valves are required to be locked closed during plant operations since these valves have not been demonstrated capable of closing from the full open position during a design basis loss-of-coolant accident. Maintaining these valves locked closed during plant operation ensures that excessive quantities of radioactive materials will not be released via the containment purge system in the event of a design basis loss-of-coolant accident. The containment purge supply and exhaust valves will be locked closed by providing locking devices on the control board operators for these valves.

References

- (1) FSAR - Section 14.3.4
- (2) FSAR - Section 5.5.2

TABLE 15.4.1-2 (CONTINUED)

	<u>Test</u>	<u>Frequency</u>
14. Refueling System Interlocks	Functioning	Each refueling shutdown
15. Service Water System	Functioning	Each refueling shutdown
16. Primary System Leakage	Evaluate	Monthly (6)
17. Diesel Fuel Supply	Fuel inventory	Daily
18. Turbine Stop and Governor Valves	Functioning	Monthly (6)
19. Low Pressure Turbine Rotor Inspection (5)	Visual and magnetic particle or liquid penetrant	Every five years
20. Boric Acid System	Storage Tank Temperature	Daily
21. Boric Acid System	Visual observation of piping temperatures (all $\geq 145^{\circ}\text{F}$)	Daily
22. Boric Acid Piping Heat Tracing	Electrical circuit operability	Monthly
23. PCRV Block Valves	Complete Valve Cycle	Quarterly (6)
24. Integrity of Post Accident Recovery Systems Outside Containment	Evaluate	Yearly
25. Containment Purge Supply and Exhaust Isolation Valves	Verify valves are locked closed	Monthly (9)

- || |
- (1) A radiochemical analysis for this purpose shall consist of a quantitative measurement of each radionuclide with half life of >30 minutes such that at least 95% of total activity of primary coolant is accounted for.
 - (2) E determination will be started when the gross activity analysis of a filtered sample indicates $\geq 10 \mu\text{c}/\text{cc}$ and will be redetermined if the primary coolant gross radioactivity of a filtered sample increases by more than 10 $\mu\text{c}/\text{cc}$.
 - (3) Drop tests shall be conducted at rated reactor coolant flow. Rods shall be dropped under both cold and hot conditions, but cold drop tests need not be timed.
 - (4) Drop tests will be conducted in the hot condition for rods on which maintenance was performed.
 - (5) As accessible without disassembly of rotor.
 - (6) Not required during periods of refueling shutdown.
 - (7) At least once per week during periods of refueling shutdown.
 - (8) At least three times per week (with maximum time of 72 hours between samples) during periods of refueling shutdown.
 - (9) Not required during periods of cold or refueling shutdown.