

Secondly, the penetration pressurization system is capable of continuously or periodically monitoring leakage from potential leak paths, such as penetrations, double gasketed seals, and spaces between certain containment isolation valves. Total leakage from the system is measured by summing the recorded flows in each of the four penetration headers. The penetration pressurization system is a qualified system for continuous or intermittent pressurization of individual or groups of containment penetrations as allowed in 10 CFR 50, Appendix J, Items III.B.1.(b), III.B.3.(b), and III.C.1.

A flow sensing device is located in each of the headers supplying make-up air to the four pressurized zones. A leakage rate alarm is provided in each of the four indicating channels to alert the operator in the control room. The flow measurement accuracy is within $\pm 1\%$. A flow of 0.04% of the containment volume per day at 42 psig is approximately 0.58 ft³/minute (2.34 scfm). The flowmeters are capable of indicating leakage well within these limits.

Containment isolation valves are designed to incorporate positive barriers to prevent or minimize leakage through the valves under design basis accident conditions. Several isolation valves are pressurized by the penetration pressurization system to prevent leakage. The remaining valves either receive Isolation Seal Water System water or are installed in systems that are part of a closed system within the containment or operate at system pressures greater than 42 psig in the post-accident condition. These design features provide positive means to prevent containment leakage through the containment isolation valves.

The limiting leakage rates from the recirculation heat removal system are judgment values based primarily on assuring that the components could operate without mechanical failure for a period on the order of 200 days after a design basis accident. The test pressure, 350 psig, achieved either by normal system operation or hydrostatically testing, gives an adequate margin over the highest pressure within the system after a design basis accident.