LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.7.B (cont'd)	4.7.B (cont'd)
4. If these conditions cannot be met, procedures shall be initiated immediately to establish reactor conditions for which the standby gas treatment system is not required.	4.a. At least once per operating cycle automatic initiation of each branch of the standby gas treatment system shall be demonstrated.
5. Use of the Standby Gas Treatment for purging/venting the primary containment with both the inboard and outboard exhaust isolation valves open in series from either the drywell (231MV and 246AV) and/or the Suppression Chamber (230MV and 245AV) is limited to 90 hours per calendar year when coolant temperature is greater than 212°F. During such time both Standby Gas Treatment Systems shall be operable and only one Standby Gas Treatment System is to be used for the purge/vent operation.	b. At least once per operating cycle manual operability of the bypass valve for filter cooling shall be demonstrated. c. When one standby gas treatment system becomes inoperable the other standby gas treatment system shall be demonstrated to be operable immediately and daily thereafter. A demonstration of diesel generator operability is not required by this specification.
C. <u>Secondary Containment</u>	C. <u>Secondary Containment</u>
1. Secondary containment integrity shall be maintained during all modes of plant operation except when all of the following conditions are met.	1. Secondary containment surveillance shall be performed as indicated below:

TABLE 3.7.4
PRIMARY CONTAINMENT TESTABLE ISOLATION VALVES

PEN. NO.	VALVE NUMBERS	TEST MEDIA
X-7A	MS-AO-80A and MS-AO-86A, Main Steam Isolation Valves	Air
X-7B	MS-AO-80B and MS-AO-86B, Main Steam Isolation Valves	Air
X-7C	MS-AO-80C and MS-AO-86C, Main Steam Isolation Valves	Air
X-7D	MS-AO-80D and MS-AO-86D, Main Steam Isolation valves	Air
X-8	MS-MO-74 and MS-MO-77, Main Steam Line Drain	Air
X-9A	RF-15CV and RF-16CV, Feedwater Check Valves	Air
X-9A	RCIC-AO-22, RCIC-MO-17, and RWCU-15CV, RCIC/RWCU Connection to Feedwater	Air
X-9B	RF-13CV and RF-14CV, Feedwater Check Valves	Air
X-9B	HPCI-AO-18 and HPCI-MO-57, HPCI Connection to Feedwater	Air
X-10	RCIC-MO-15 and RCIC-MO-16, RCIC Steam Line	Air
X-11	HPCI-MO-15 and HPCI-MO-16, HPCI Steam Line	Air
X-12	RHR-MO-17 and RHR-MO-18, RHR Suction Cooling	Air
X-13A	RHR-MO-25A and RHR-MO-27A, RHR Supply to RPV	Air
X-13B	RHR-MO-25B and RHR-MO-27B, RHR Supply to RPV	Air
X-14	RWCU-MO-15 and RWCU-MO-18, Inlet to RWCU System	Air
X-16A	CS-MO-11A and CS-MO-12A, Core Spray to RPV	Air
X-16B	CS-MO-11B and CS-MO-12B, Core Spray to RPV	Air
X-18	RW-732AV and RW-733AV, Drywell Equipment Sump Discharge	Air
X-19	RW-765AV and RW-766AV, Drywell Floor Drain Sump Discharge	Air
X-25 (Note 1)	PC-232MV and PC-238AV, Purge and Vent Supply to Drywell	Air
X-25	ACAD-1305MV and ACAD-1306MV, Supply to Drywell	Air
X-26 (Note 1)	PC-231MV, PC-246AV, and PC-306 MV Purge and Vent Exhaust from Drywell	Air
X-26	ACAD-1310MV, Bleed from Drywell	Air

TABLE 3.7.4 (page 2)

PRIMARY CONTAINMENT TESTABLE ISOLATION VALVES

PEN. NO.	VALVE NUMBERS	TEST MEDIA
X-39A	RHR-MO-26A and RHR-MO-31A, Drywell Spray Header Supply	Air
X-39B	RHR-MO-26B and RHR-MO-31B, Drywell Spray Header Supply	Air
X-39B	ACAD-1311MV and ACAD-1312MV, Supply to Drywell	Air
X-41	RRV-740AV and RRV-741AV, Reactor Water Sample Line	Air
X-42	SLC-12CV and SLC-13CV, Standby Liquid Control	Air
X-205 (Note 1)	PC-233MV and PC-237AV, Purge and Vent Supply to Torus	Air
X-205	PC-13CV and PC-243AV, Torus Vacuum Relief	Air
X-205	PC-14CV and PC-244AV, Torus Vacuum Relief	Air
X-205	ACAD-1303MV and ACAD-1304MV, Supply to Torus	Air
X-210A	RCIC-MO-27 and RCIC-13CV, RCIC Minimum Flow Line	Air
X-210A	RHR-MO-21A, RHR to Torus	Air
X-210A	RHR-MO-16A, RHR-10CV, and RHR-12CV, RHR Minimum Flow Line	Air
X-210B	RHR-MO-21B, RHR to Torus	Air
X-210B	HPCI-17CV and HPCI-MO-25, HPCI Minimum Flow Line	Air
X-210B	RHR-MO-16B, RHR-11CV, and RHR-13CV, RHR Minimum Flow Line	Air
X-210A and 211A	RHR-MO-34A, RHR-MO-38A, and RHR-MO-39A, RHR to Torus	Air
X-210B and 211B	RHR-MO-34B, RHR-MO-38B, and RHR-MO-39B, RHR to Torus	Air
X-211B	ACAD-1301MV and ACAD-1302MV, Supply to Torus	Air
X-212	RCIC-15CV and RCIC-37, RCIC Turbine Exhaust	Air
X-214	HPCI-15CV and HPCI-44, HPCI Turbine Exhaust	Air
X-214	HPCI-AO-70 and HPCI-AO-71, HPCI Turbine Exhaust Drain	Air
X-214	RHR-MO-166A and RHR-MO-167A RHR Heat Exch. Vent	Air
X-214	RHR-MO-166B and RHR-MO-167B RHR Heat Exch. Vent	Air
X-220 (Note 1)	PC-230MV, PC-245AV, and PC-305MV Purge and Vent Exhaust from Torus	Air
X-220	ACAD-1308MV, Bleed from Torus	Air
X-221	RCIC-12CV and RCIC-42, RCIC Vacuum Line	Air
X-222	HPCI-50 and HPCI-16CV, HPCI Turbine Drain	Air

TABLE 3.7.4 (page 3)

PRIMARY CONTAINMENT TESTABLE ISOLATION VALVES

PEN. NO.	VALVE NUMBERS	TEST MEDIA
X-223A	CS-MO-26A and CS-MO-5A, Core Spray Test and Minimum Flow	Air
X-223B	CS-MO-26B and CS-MO-5B, Core Spray Test and Minimum Flow	Air
X-225A-D	RHR-MO-13A, RHR-MO-13C, RHR-MO-13B, RHR-MO-13D, RHR Suction From Torus	Air
X-224	RCIC-MO-41, RCIC Suction From Torus	Air
X-226	HPCI-MO-58, HPCI Suction From Torus	Air
X-227A, B	CS-MO-7A and CS-MO-7B, Core Spray Suction From Torus	Air

Notes to Table 3.7.4

1. Once per operating cycle, while shutdown, the devices which limit the maximum opening angle shall be verified functional for the following valves:

   PC-230MV
   PC-231MV
   PC-232MV
   PC-233MV

3.7.A & 4.7.A BASES (cont'd)

The primary containment is normally slightly pressurized during periods of reactor operation. Nitrogen used for inerting could leak out of the containment but air could not leak in to increase oxygen concentration. Once the containment is filled with nitrogen to the required concentration, no monitoring of oxygen concentration is necessary. However, at least twice a week the oxygen concentration will be determined as added assurance.

The 500 gallon conservative limit on the nitrogen storage tank assures that adequate time is available to get the tank refilled assuming normal plant operation. The estimated maximum makeup rate is 1500 SCFD which would require about 160 gallons for a 10 day makeup requirement. The normal leak rate should be about 200 SCFD.

3.7.B & 3.7.C STANDBY GAS TREATMENT SYSTEM AND SECONDARY CONTAINMENT

The secondary containment is designed to minimize any ground level release of radioactive materials which might result from a serious accident. The reactor building provides secondary containment during reactor operation when the drywell is sealed and in service. The reactor building provides primary containment when the reactor is shut down and the drywell is open, as during refueling. Because the secondary containment is an integral part of the complete containment system, secondary containment is required at all times that primary containment is required as well as during refueling. Secondary containment may be broken for short periods of time to allow access to the reactor building roof to perform necessary inspections and maintenance.

The standby gas treatment system is designed to filter and exhaust the reactor building atmosphere to the stack during secondary containment isolation conditions. Both standby gas treatment system fans are designed to automatically start upon containment isolation and to maintain the reactor building pressure to the design negative pressure so that all leakage should be in-leakage. Should one system fail to start, the redundant system is designed to start automatically. Each of the two fans has 100 percent capacity.

The intent of Specification 3.7.B.5 is to minimize the amount of time a SBGT system is on line while coolant temperature is greater than 212°F and both inboard and outboard exhaust isolation valves from the drywell and/or torus are open in series. The concern is to decrease the probability of damage to the SBGT filters that would occur from excessive differential pressure caused by a LOCA with the main isolation exhaust valves open in series. Even if this should occur, the other SBGT system will be operable and available for use. This specification does allow purge/venting with the inboard exhaust bypass valve and the outboard exhaust valve both open in series and the time does not count against the yearly limit. The NRC has accepted the determination that due to the small size of the bypass valve, there is no chance of damage to the filters if a LOCA occurs while purging/venting the containment through the bypass with a SBGT system on line. For the purpose of Specification 3.7.B.5, the term "calendar year" is a period of time beginning on January 1 and ending on December 31 for each numbered year.

results in a failure probability of 1.1×10^{-7} that a line will not isolate. More frequent testing for valve operability results in a greater assurance that the valve will be operable when needed.

In order to assure that the doses that may result from a steam line break do not exceed the 10CFR100 guidelines, it is necessary that no fuel rod perforation resulting from the accident occur prior to closure of the main steam line isolation valves. Analyses indicate that fuel rod cladding perforations would be avoided for main steam valve closure times, including instrument delay, as long as 10.5 seconds.

The primary containment is penetrated by several small diameter instrument lines connected to the reactor coolant system. Each instrument line contains a 0.25 inch restricting orifice inside the primary containment and an excess flow check valve outside the primary containment. A program for periodic testing and examination of the excess flow check valves is performed as follows:

1. Vessel at pressure sufficient to actuate valves. This could be at time of vessel hydro following a refueling outage.

2. Isolate sensing line from its instrument at the instrument manifold.

3. Provide means for observing and collecting the instrument drain or vent valve flow.

4. Open vent or drain valve.

   a. Observe flow cessation and any leakage rate.

   b. Reset valve after test completion.

5. The head seal leak detection line cannot be tested in this manner. This valve will not be exposed to primary system pressure except under unlikely conditions of seal failure where it could be partially pressurized to reactor pressure. Any leakage path is restricted at the source and therefore this valve need not be tested. This valve is in a sensing line that is not safety related.

6. Valves will be accepted if a marked decrease in flow rate is observed and the leakage rate is acceptable.

The operators for containment vent/purge valves PC-230MV, PC-231MV, PC-232MV, and PC-233MV have devices in place to limit the maximum opening angle to 60 degrees. This has been done to ensure these valves are able to close against the maximum differential pressure expected to occur during a design basis LOCA.