TABLE 3.2.2

PRIMARY CONTAINMENT ISOLATION INSTRUMENTATION

Minimum Number of Operable Instrument Channels per Trip System	Trip Function	Trip Setting	Required Action When Minimum Conditions for Operations are Not Satisfied (Note 2)
2	Low-Low Reactor Vessel Water Level	≥82.5" above the top of enriched fuel	A
2 of 4 in each of 2 channels	High Main Steam Line Area Temperature	≤212°F	B
2/steam line	High Main Steam Line Flow	≤140% of rated flow	B
2/(Note 1)	Low Main Steam Line Pressure	≥850 psig	B
2/(Note 6)	High Main Steam Line Flow	≤40% of rated flow	B
2	Low Reactor Vessel Water Level	Same as Reactor Protection System	A
2	High Main Steam Line Radiation (7) (8)	≤3 X background at rated power (9)	B
2	High Drywell Pressure	Same as Reactor Protection System	A
2/(Note 10)	Condenser Low Vacuum	≥12" Hg absolute	A
1	Trip System Logic	--	A

3.2 (Cont'd)

The low-low reactor water level instrumentation is set to trip when reactor water level is 82.5" H_2O indicated on the reactor water level instrumentation above the top of the enriched fuel. This trip initiates closure of the Group 1 primary containment isolation valves and also activates the ECCS and starts the standby diesel generator system. This trip setting level was chosen to be low enough to prevent spurious operation, but high enough to initiate ECCS operation and primary system isolation so that no melting of the fuel cladding will occur and so that post-accident cooling can be accomplished and the limits of 10CFR100 will not be violated. For the complete circumferential break of a 28-inch recirculation line and with the trip setting given above, ECCS initiation and primary system isolation are initiated in time to meet the above criteria. The instrumentation also covers the full range of spectrum of breaks and meets the above criteria.

The high drywell pressure instrumentation is a backup to the water level instrumentation and in addition to initiating ECCS it causes isolation of Group 2, 3, and 4 isolation valves. For the complete circumferential break discussed above, this instrumentation will initiate ECCS operation at about the same time as the low-low water level instrumentation, thus the results given above are applicable here also. Group 2 isolation valves include the drywell vent, purge, and sump isolation valves. High drywell pressure activates only these valves because high drywell pressure could occur as the result of non-safety-related causes such as not purging the drywell air during startup. Total system isolation is not desirable for these conditions and only the valves in Group 2 are required to close. The water level instrumentation initiates protection for the full spectrum of loss-of-coolant accidents and causes a trip of all primary system isolation valves.

Venturis are provided in the main steam lines as a means of measuring steam flow and also limiting the loss of mass inventory from the vessel during a steam line break accident. In addition to monitoring steam flow, instrumentation is provided which causes a trip of Group 1 isolation valves. The primary function of the instrumentation is to detect a break in the main steam line, thus only Group 1 valves are closed. For the worst case accident, main steam line break outside the drywell, this trip setting of 140 percent of rated steam flow in conjunction with the flow limiters and main steam line valve closure limit the mass inventory loss such that fuel is not uncovered, cladding temperatures remain less than 1295°F and release of radioactivity to the environs is well below 10CFR100.

Temperature monitoring instrumentation is provided in the main steam line tunnel to detect leaks in this area. Trips are provided on this instrumentation and when exceeded cause closure of Group 1 isolation valves. Its setting of ambient plus 95°F is low enough to detect leaks of the order of 5 to 10 gpm; thus, it is capable of covering the entire spectrum of breaks. For large breaks, it is a backup to high steam flow instrumentation discussed above, and for small breaks with the resultant small release of radioactivity, gives isolation before the limits of 10CFR100 are exceeded.

3.7 LIMITING CONDITIONS FOR OPERATION	4.7 SURVEILLANCE REQUIREMENTS
	(2) The instrument line flow check valves shall be tested for proper operation.
	b. At least once per quarter:
	(1) All normally open power-operated isolation valves (except for main steam isolation valves) shall be fully closed and reopened.
	(2) With the reactor power less than 75 percent of rated, trip all main steam isolation valves (one at a time) and verify closure time.
	c. At least twice per week:
	(1) The main steam line isolation valves shall be exercised by partial closure and subsequent reopening.
2. In the event any isolation valve specified in Table 4.7.2 becomes inoperable, reactor power operation may continue provided at least one valve in each line having an inoperable valve is in the mode corresponding to the isolated condition.	2. Whenever an isolation valve listed in 4.7.2 is inoperable, the position of at least one other valve in each line having an inoperable valve shall be logged daily.
3. If Specification 3.7.D.1 and 3.7 D.2 cannot be met, an orderly shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours.	