If the differential pressure of Specification 3.5.A.9a cannot be maintained, and the differential pressure cannot be restored within the subesequent 6 hour period, an orderly shutdown shall be initiated and the reactor shall be in the shutdown condition within the next 6 hours and the cold shutdown condition within the following 18 hours.

Instrumentation to measure the drywell to suppression chamber differential pressure and the torus water level shall be operable at any time the differential pressure is required to be maintained by Specification 3.5.A.9.a. Operation may continue for up to thirty days with one instrument out of service. If both differential pressure or both water level instruments are not operable, or if one instrument is out of service for more than thirty days, and such indication cannot be restored in the next 6 hours, the reactor shall be in the shutdown condition within the following 18 hours.

B. Secondary Containment

1. Secondary containment integrity shall be maintained at all times unless all of the following conditions are met:

   a. The reactor is subcritical and Specification 3.2.A is met.

   b. The reactor is in the cold shutdown condition.

   c. The reactor vesel head or the drywell head are in place.

   d. No work is being performed on the reactor or its connected systems in the reactor building which could result in inadvertent releases of radioactive material.

   e. No operations are being performed in, above, or around the spent fuel storage pool that could cause release of radioactive materials.

1.1 Upon the loss of secondary containment integrity, restore secondary containment integrity within 4 hours, or;

   a. During Power Operation:

      1) Be in cold shutdown within the following 36 hours.

      2) Cease all work on the reactor or its connected systems in the reactor building which could result in inadvertent releases of radioactive materials.

      3) Cease all operations in, above or around the Spent Fuel Storage Pool that could cause release of radioactive materials.

   b. During refueling:

      1) Cease fuel handling operations or activities which could

reduce the shutdown margin (excluding reactor coolant temperature changes).

2) Cease all work on the reactor or its connected systems in the reactor building which could result in inadvertant releases of radioactive materials.

3) Cease all operations in, above or around the Spent Fuel Storage Pool that could cause release of radioactive materials.

2. Two separate and independent standby gas treatment system circuits shall be operable when secondary containment is required except as specified by Specification 3.5.B.3.

3. With one standby gas treatment system circuit inoperable:

   a. During Power Operation:

      1. Demonstrate the operability of the other standby gas treatment system circuit within 2 hours, and

      2. Continue to demonstrate the operability of the standby gas treatment system circuit once per 24 hours until the inoperable standby gas treatment circuit is returned to operable status.

      3. Restore the inoperable standby gas treatment circuit to operable status within 7 days or be subcritical with reactor coolant temperature less than 212°F within the next 36 hours.

   b. During Refueling:

      1. Demonstrate the operability of the redundant standby gas treatment system within 2 hours, and

      2. Continue to demonstrate the operability of the redundant standby gas treatment system once per 7 days until the inoperable system is returned to operable status.

      3. Restore the inoperable standby gas treatment system to operable status within 30 days or cease all spent fuel handling, core alterations or operation that could reduce the shutdown margin (excluding reactor coolant temperature changes).

4. If Specifications 3.5.B.2 and 3.5.B.3 are not met, reactor shutdown shall be initiated and the reactor shall be in the cold shutdown condition within 24 hours and the condition of Specification 3.5.B.1 shall be met.

Bases:

Specifications are placed on the operating status of the containment systems to assure their availability to control the release of any radioactive materials from irradiated fuel in the event of an accident condition. The primary containment system (1) provides a barrier against uncontrolled release of fission products to the environs in the event of a break in the reactor coolant systems.

Whenever the reactor coolant water temperature is above 212°F, failure of the reactor coolant system would cause rapid expulsion of the coolant from the reactor with an associated pressure rise in the primary containment. Primary containment is required, therefore, to contain the thermal energy of the expelled coolant

containment is required during fuel handling operations and whenever work is being performed on the reactor or its connected systems in the reactor building since their operation could result in inadvertent release of radioactive material.

When secondary containment is not maintained, the additional restrictions on operation and maintenance give assurance that the probability of inadvertent releases of radioactive material will be minimized. Maintenance will not be performed on systems which connect to the reactor vessel lower than the top of the active fuel unless the system is isolated by at least one locked closed isolation valve.

The standby gas treatment system (6) filters and exhausts the reactor building atmosphere to the stack during secondary containment isolation conditions, with a minimum release of radioactive materials from the reactor building to the environs.

Two separate filter trains are provided each having 100% capacity. (6) If one filter train becomes inoperable, there is no immediate threat to secondary containment and reactor operation may continue while repairs are being made. Since the test interval for this system is one month (Specification 4.5), the time out-of-service allowance of 7 days is based on considerations presented in the Bases in Specification 3.2 for a one-out-of-two system.

References: (1) FDSAR, Volume I, Section V-1
(2) FDSAR, Volume I, Section V-1.4.1
(3) FDSAR, Volume I, Section V-1.7
(4) Licensing Application, Amendment 11, Question III-25
(5) FDSAR, Volume I, Section V-2
(6) FDSAR, Volume I, Section V-2.4
(7) Licensing Application, Amendment 42
(8) Licensing Applciation, Amendment 32, Question 3
(9) Robbins, C. H., "Tests on a Full Scale 1/48 Segment of the Humboldt Bay Pressure Suppression Containment," GEAP-3596, November 17, 1960.
(10) Bodega Bay Preliminary Hazards Summary Report, Appendix I, Docket 50-205, December 28, 1962.
(11) Report H. R. Erickson, Bergen-Paterson to K. R. Goller, NRC, October 7, 1974. Subject: Hydraulic Shock Sway Arrestors.

In conjunction with the Mark I Containment Short Term Program, a plant unique analysis was performed on August 2, 1976, which demonstrated a factor of safety of at least two for the weakest element in the suppression chamber support system. The maintenance of a drywell-suppression chamber differential pressure within the range shown on Figure 3.5-1 with a suppression chamber water level corresponding to a downcomer submergence range of 3.0 to 5.3 feet will assure the integrity of the suppression chamber when subjected to post-LOCA suppression pool hydrodynamic forces.