CONTAINMENT SYSTEMS

3/4.6.4 VACUUM RELIEF

SUPPRESSION CHAMBER - DRYWELL VACUUM BREAKERS

LIMITING CONDITION FOR OPERATION

3.6.4.1 ~~Each pair~~ SEVEN OF THE NINE PAIRS of suppression chamber - drywell vacuum breakers shall be OPERABLE and ~~closed~~ ALL NINE PAIRS SHALL BE CLOSED.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

a. With one or more vacuum breakers in up to two pairs of Suppression Chamber - Drywell vacuum breakers inoperable for opening, verify both vacuum breakers of each pair to be closed within two (2) hours.

b. With one or more vacuum breakers in ~~one~~ THREE OR MORE pairs of suppression chamber - drywell vacuum breakers inoperable for opening but known to be closed, restore the inoperable pairs of vacuum breakers SUCH THAT A MINIMUM OF SEVEN PAIRS ARE IN AN ~~to~~ OPERABLE status within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

c. With one suppression chamber - drywell vacuum breaker open, verify the other vacuum breaker in the pair to be closed within 2 hours; restore the open vacuum breaker to the closed position within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

d. With one CLOSED position indicator of any suppression chamber - drywell vacuum breaker inoperable:

1. Verify the other vacuum breaker in the pair to be closed within 2 hours and at least once per 15 days thereafter, or

2. Verify the vacuum breaker(s) with the inoperable position indicator to be closed by conducting a test which demonstrates that the ΔP is maintained at greater than or equal to 0.5 psi for 1 hour without makeup within 24 hours and at least once per 15 days thereafter.

3. Otherwise, be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each suppression chamber - drywell vacuum breaker shall be:

a. Verified closed at least once per 7 days (REGARDLESS OF OPERABILITY).

b. Demonstrated OPERABLE:

1. At least once per ~~31 days and within 2 hours after any discharge of steam to the suppression chamber from the safety/relief valves~~ 92 days per Specification 4.0.5, by cycling each vacuum breaker ~~through at least one complete cycle of full travel~~ and verifying each valve to be in the fully closed position.

2. At least once per ~~31~~ 92 days by verifying both position indicators OPERABLE by observing expected valve movement during the cycling test.

3. At least once per 18 months by;

a) Verifying the opening setpoint, from the closed position, to be less than or equal to 0.5 psid, and

b) Verifying both position indicators OPERABLE by performance of a CHANNEL CALIBRATION.

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DEPRESSURIZATION SYSTEMS (Continued)

Because of the large volume and thermal capacity of the suppression pool, the volume and temperature normally changes very slowly and monitoring these parameters daily is sufficient to establish any temperature trends. By requiring the suppression pool temperature to be frequently recorded during periods of significant heat addition, the temperature trends will be closely followed so that appropriate action can be taken. The requirement for an external visual examination following any event where potentially high loadings could occur provides assurance that no significant damage was encountered.

In addition to the limits on temperature of the suppression chamber pool water, operating procedures define the action to be taken in the event a safety/relief valve inadvertently opens or sticks open. As a minimum this action shall include: (1) use of all available means to close the valve, (2) initiate suppression pool water cooling, (3) initiate reactor shutdown, and (4) if other safety/relief valves are used to depressurize the reactor, their discharge shall be separated from that of the stuck-open safety/relief valve to assure mixing and uniformity of energy insertion to the pool.

3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES

The OPERABILITY of the primary containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment. Containment isolation within the time limits specified ensures for those isolation valves designed to close automatically that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

3/4.6.4 VACUUM RELIEF

Vacuum relief breakers are provided to equalize the pressure between the suppression chamber and drywell and between the reactor building and suppression chamber. This system will maintain the structural integrity of the primary containment under conditions of large differential pressures.

The vacuum breakers between the suppression chamber and the drywell must not be inoperable in the open position since this would allow bypassing of the suppression pool in case of an accident. There are nine pairs of valves to provide redundancy and capacity so that operation may continue ~~for up to 72 hours~~ indefinitely with no more than ~~one~~ two pairs of vacuum breakers inoperable in the closed position.