

- (2) Results of laboratory carbon sample analysis show  $\geq 95\%$  radioactive methyl iodide removal efficiency when tested in accordance with ASTM D 3803-1989 (30°C, 95% relative humidity, at least 45.72 feet per minute charcoal bed face velocity).
- b. At least once per 18 months by demonstrating:
  - (1) That the pressure drop across a HEPA filter is equal to or less than the maximum allowable pressure drop indicated in Figure 4.5.1.
  - (2) The inlet heater is capable of at least 10.9 KW input.
  - (3) Operation with a total flow within 10% of design flow.
- c. At least once per 30 days on a STAGGERED TEST BASIS by operating each circuit for a minimum of 10 hours.
- d. Anytime the HEPA filter bank or the charcoal absorbers have been partially or completely replaced, the test per 4.5.H.1.a (as applicable) will be performed prior to returning the system to OPERABLE STATUS.
- e. Automatic initiation of each circuit every 18 months.

I. Inerting Surveillance

When an inert atmosphere is required in the primary containment, the oxygen concentration in the primary containment shall be checked at least weekly.

J. Drywell Coating Surveillance

Carbon steel test panels coated with Firebar D shall be placed inside the drywell near the reactor core midplane level. They shall be removed for visual observation and weight loss measurements during the first, second, fourth and eighth refueling outages.

K. Instrument Line Flow Check Valves Surveillance

The capability of a representative sample of instrument line flow check valves to isolate shall be tested at least once per 24 months. In addition, each time an instrument line is returned to service after any condition which could have produced a pressure flow disturbance in that line, the open position of the flow check valve in that line shall be verified. Such conditions include:

Surveillance of the suppression chamber-reactor building vacuum breaker consists of OPERABILITY checks and leakage tests (conducted as part of the containment leak-tightness tests). These vacuum breakers are normally in the closed position and open only during tests or an accident condition. As a result, a testing frequency of three months for OPERABILITY is considered justified for this equipment. Inspections and calibrations are performed during the REFUELING OUTAGES, this frequency being based on equipment quality, experience, and engineering judgement.

The 14 suppression chamber-drywell vacuum relief valves are designed to open to the full open position (the position that curtain area is equivalent to valve bore) with a force equivalent to a 0.5 psi differential acting on the suppression chamber face of the valve disk. This opening specification assures that the design limit of 2.0 psid between the drywell and external environment is not exceeded. Once each REFUELING OUTAGE, each valve is tested to assure that it will open fully in response to a force less than that specified. Also, it is inspected to assure that it closes freely and operates properly.

The containment design has been examined to establish the allowable bypass area between the drywell and suppression chamber as 10.5 in<sup>2</sup> (expressed as vacuum breaker open area). This is equivalent to one vacuum breaker disk off its seat 0.371 inch; this length corresponds to an angular displacement of 1.25°. A conservative allowance of 0.10 inch has been selected as the maximum permissible valve opening. Valve closure within this limit may be determined by light indication from two independent position detection and indication systems. Either system provides a control room alarm for a non-seated valve.

At the end of each refueling cycle, a leak rate test shall be performed to verify that significant leakage flow paths do not exist between the drywell and suppression chamber. The drywell pressure will be increased by at least 1 psi with respect to the suppression chamber pressure. The pressure transient (if any) will be monitored with a sensitive pressure gauge. If the drywell pressure cannot be increased by 1 psi over the suppression chamber pressure it would be because a significant leakage path exists; in the event, the leakage source will be identified and eliminated before POWER OPERATION is resumed. If the drywell pressure can be increased by 1 psi over the suppression chamber, the rate of change of the suppression chamber pressure must not exceed a rate equivalent to the rate of air flow from the drywell to the suppression chamber through a 2-inch orifice. In the event the rate of change of pressure exceeds this value, then the source of leakage will be identified and eliminated before POWER OPERATION is resumed.

The drywell suppression chamber vacuum breakers are exercised monthly and immediately following termination of discharge of steam into the suppression chamber. This monitoring of valve operability is intended to assure that valve operability and position indication system performance does not degrade between refueling inspections. When a vacuum breaker valve is exercised through an opening- closing cycle, the position indicating lights are designed to function as follows:

Full Closed	2 Green - On
(Closed to 0.10" open)	2 Red - Off
Open 0.10"	2 Green - Off
(0.10" open to full open)	2 Red - On

The operability of the instrument line flow check valves are demonstrated to assure isolation capability for excess flow and to assure the operability of the instrument sensor when required. The representative sample consists of an approximately equal number of EFCV's, such that each EFCV is tested at least every 10 years (nominal). The nominal 10 year interval is based on other performance-based testing programs, such as Inservice Testing (snubbers) and Option B to 10 CFR 50, Appendix J. EFCV test failures will be evaluated to determine if additional testing in that test interval is warranted to ensure overall reliability is maintained. Operating experience has demonstrated that these components are highly reliable and that failures to isolate are very infrequent. Therefore, testing of a representative sample was concluded to be acceptable from a reliability standpoint. (9)

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 continually monitored and also observed 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. Particular attention should be focused on structural discontinuities in the vicinity of the relief valve discharge since these are expected to be the points of highest stress.

#### References

- (1) Licensing Application, Amendment 32, Question 3
- (2) FDSAR, Volume I, Section V-1.1
- (3) GE-NE 770-07-1090, "Oyster Creek LOCA Drywell Pressure Response," February 1991
- (4) Deleted
- (5) FDSAR, Volume I, Sections V-1.5 and V-1.6
- (6) FDSAR, Volume I, Sections V-1.6 and XIII-3.4
- (7) FDSAR, Volume I, Section XIII-2
- (8) Licensing Application, Amendment 11, Question III-18
- (9) GE BWROG B21-00658-01, "Excess Flow Check Valve Testing Relaxation," dated November 1998