

OYSTER CREEK NUCLEAR GENERATING STATION
 FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
 Report No. 50-219/74/14

Report Date

March 1, 1974

Occurrence Date

February 22, 1974



Identification of Occurrence

Violation of the Technical Specifications, paragraph 3.5.A.3, failure of two torus to drywell vacuum breakers to demonstrate operability during weekly surveillance testing. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15B and D.

Conditions Prior to Occurrence

The plant was operating at steady-state power.

The major plant parameters at the time of the event were as follows:

Power:	Core, 1880 MWt
	Electric, 658 MWe
Flow:	Recirculation, 15.0×10^4 gpm
	Feedwater, 7.12×10^6 lb/hr
Stack Gas:	26,000 μ Ci/sec

Description of Occurrence

On Friday, February 22, 1974, at approximately 1400, while performing weekly surveillance testing on the fourteen torus to drywell vacuum breakers, it was found that two of the vacuum breakers (V-26-6 and 9) failed to demonstrate operability. V-26-6 failed to close without assistance for the last 1 inch of travel and V-26-9 did not move freely in both the opening and closing movements. This surveillance testing was being performed to satisfy the requirements of AEC's letter (D. J. Skovholt to R. H. Sims dated January 30, 1974). This operability testing basically consisted of (1) checking each valve to be fully closed; (2) manually opening each valve to the fully open position; (3) allowing it to close without assistance; and (4) checking each valve to be fully closed. Both valves were made operable immediately with the application of several successive opening and closing movements. Plant

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operation continued on the basis of the requirements of paragraph B.5 of the referenced letter, which allows continued operation if not more than 25% of these vacuum breakers are inoperable.

Apparent Cause of Occurrence

Design and unusual service condition are major factors contributing to the cause of this occurrence. It is believed that these failures are attributed to excess friction in the valve hinge pins. A similar failure was reported as Abnormal Occurrence Report No. 50-219/74/11 dated February 25, 1974.

Analysis of Occurrence

The drywell-torus vacuum breaker system is required to prevent water oscillation in the downcomers due to low steam flow rates in the downcomers and to provide protection against negative pressure conditions in the containment vessel. The significance of this event is minimal in that the bases of the Technical Specifications state that this condition has no deleterious effect on negative pressure protection since only about 25% of the available vacuum relief capacity is required for this protection.

The drywell-torus vacuum breaker valves are required to be closed during pipe break accidents (particularly small breaks) to assure proper steam condensation and prevent torus overpressure. These valves would have performed this function if required.

Corrective Action

Valves V-26-6 and 9 were freed immediately with repetitive opening and closing movements. Corrective action being taken is as discussed in a letter to Mr. Robert J. Schemel from Mr. D. A. Ross dated October 8, 1973. In that letter, it was noted that an apparent "growing" characteristic has been experienced with the teflon bushings at several facilities, including Oyster Creek. The bushing difficulty has been discussed with Atwood & Morrill Company and a long-term solution is under investigation in conjunction with General Electric Company.

Failure Data

Basic valve data are as follows:

Manufacturer	- Atwood & Morrill Company
Type	- Check Valve
Vent Area	- 1.75 square feet per valve