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To: James P. O'Reilly
Directorate of Regulatory Operations
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

From: Jersey Central Power & Light Company
Oyster Creek Nuclear Generating Station Docket #50-219
Forked River, New Jersey 08731

Subject: Abnormal Occurrence Report No. 50-219/74/ 16

The following is a preliminary report being submitted in compliance with the Technical Specifications paragraph 6.6.2.

Preliminary Approval:

J. T. Carroll, Jr. 3/7/74
J. T. Carroll, Jr. Date

cc: Mr. A. Giambusso

B/605

I 2087

Initial Telephone Report Date: 3/7/74 Date of Occurrence: 3/7/74

Initial Written Report Date: 3/7/74 Time of Occurrence: 1000

OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74/16

IDENTIFICATION OF OCCURRENCE: Violation of the Technical Specifications, paragraph 3.5.A.3, failure of four 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 & D.

CONDITIONS PRIOR TO OCCURRENCE:

X	Steady State Power	____	Routine Shutdown Operation
____	Hot Standby	____	Load Changes During Routine Power Operation
____	Cold Shutdown	____	Other (Specify)
____	Refueling Shutdown		
____	Routine Startup Operation		

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

Power: Core, 1870 MWt
Elec., 653 MWe
Flow: Recirc., 15.7×10^4 gpm
Feed., 7.14×10^6 lb/hr
Stack Gas: 33,000 μCi/sec

DESCRIPTION OF OCCURRENCE: On Thursday, March 7, 1974 at approximately 1000, while performing weekly surveillance testing on the fourteen torus to drywell vacuum breakers, it was found that four of the vacuum breakers (V-26-4, 5, 6, and 12) failed to demonstrate operability. This surveillance testing was being performed to satisfy the requirements of AEC 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; and (3) allowing it to close without assistance; and then (4) checking each valve to be fully closed. V-26-4 was found to open freely, however, some hesitation in the valve movement was observed after the valve was released in the fully open position. Once the closing motion began, the valve appeared to move freely to the fully seated position. Valves V-26-5, 6, and 12 all opened freely but required assistance in the closing movements. Plant shutdown commenced as soon as these discrepancies were identified since the requirements of paragraph 3.5.A.3 of the Technical Specifications could not be satisfied. By approximately 1130, these valves were determined to again be operable following the application of successive manual actuations to each valve. However, based on the recent history of failures of the torus-drywell vacuum breaker valves, it was decided to continue with the plant shutdown and effect more permanent repairs on the valves following the shutdown. It is noted here that Valve V-26-9 was locked in the closed position on February 28, 1974 following its failure to demonstrate operability. This failure was reported as Abnormal Occurrence Report No. 74-15, dated February 28, 1974.

APPARENT CAUSE OF OCCURRENCE:

X Design	____ Procedure
____ Manufacture	____ Unusual Service Condition
____ Installation/ Construction	____ Inc. Environmental
____ Operator	____ Component Failure
	____ Other (Specify)

It is believed that these failures are attributed to excess friction in the valve hinge pins. Similar failures have been reported as Abnormal Occurrence Report No. 74-11, dated February 15, 1974; Abnormal Occurrence Report No. 74-14, dated February 22, 1974; and Abnormal Occurrence Report No. 74-15, dated February 28, 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 deliterious 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: These valves (V-26-4, 5, 6, and 12) and Valve V-26-9 will be inspected following plant shutdown. The nature and extent of the repair work will be determined following these inspections.

Additional 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
Type - Check Valve
Vent Area - 1.75 square feet per valve

Prepared by: _____ Date: 3/7/74