



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/ 25

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

Preliminary Approval:

J. T. Carroll, Jr. 4/10/74
J. T. Carroll, Jr. Date

cc: Mr. A. Giambusso

Handwritten: 50-219

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Initial Telephone

Report Date:

4/9/74

Date of

Occurrence

4/9/74

Initial Written

Report Date:

4/10/74

Time of

Occurrence:

1040

OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74/25

IDENTIFICATION
OF OCCURRENCE:

Violation of the Technical Specifications, paragraph 3.5.A.1,
loss of primary containment integrity with the reactor criti-
cal and the reactor water temperature greater than 212°F.

This event is considered to be an abnormal occurrence as de-
fined in the Technical Specifications, paragraph 1.15B.

CONDITIONS PRIOR
TO OCCURRENCE:

<input checked="" type="checkbox"/> Steady State Power	<input type="checkbox"/> Routine Shutdown
<input type="checkbox"/> Hot Standby	<input type="checkbox"/> Operation
<input type="checkbox"/> Cold Shutdown	<input type="checkbox"/> Load Changes During
<input type="checkbox"/> Refueling Shutdown	<input type="checkbox"/> Routine Power Operation
<input type="checkbox"/> Routine Startup	<input type="checkbox"/> Other (Specify)
<input type="checkbox"/> Operation	

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

Power:	Reactor, 1849 MWt
	Electrical, 642 MWe
Flow:	Recirc., 61×10^6 lbm/hr
	Feedwater, 6.9×10^6 lbm/hr
Stack Gas:	34,895 μ Ci/sec

DESCRIPTION
OF OCCURRENCE:

At 1040 on April 9, 1974, a local leak rate test on the
reactor building to torus vacuum breakers was commenced and
it was discovered that pressure could not be placed between
V-26-15 and 16, the check and butterfly isolation valves. A
check of leakage of drywell atmosphere to the reactor building
was made. No leakage was indicated when a plastic bag was
taped over the vent pipe. When pressure was again applied,

the bag filled with air indicating that the outside (check) valve was leaking. The check valve was cycled several times and then forced to seat. Air was again admitted between the valves and no leakage was detected through the check valve, but the pressure would not exceed 17.5 psig. This indicated that the butterfly valve, V-26-16, was leaking. Upon inspection of V-26-16, it was found that the valve had not been in the fully closed position. The valve was fully closed manually and a successful leak test was performed.

The butterfly valve, V-26-16, was made inoperable, as permitted by Technical Specification 3.5.A.5.

APPARENT CAUSE
OF OCCURRENCE:

<input type="checkbox"/> Design	<input type="checkbox"/> Procedure
<input type="checkbox"/> Manufacture	<input type="checkbox"/> Unusual Service Condition
<input type="checkbox"/> Installation/	<input type="checkbox"/> Inc. Environmental
<input type="checkbox"/> Construction	<input checked="" type="checkbox"/> Component Failure
<input type="checkbox"/> Operator	<input type="checkbox"/> Other (Specify)

The cause for valves V-26-15 and V-26-16 not to seal properly is not known at this time.

ANALYSIS OF
OCCURRENCE:

An initial analysis of the data indicates that under accident conditions in the drywell (35 psig) the leakage rate through V-26-15 and V-26-16 would have been approximately 20% to 40% of the allowable leakage rate from the primary containment. Additional investigation is continuing.

CORRECTIVE
ACTION:

At 1408, a reactor shutdown was commenced. Both valves were subsequently properly seated, successfully leak tested, and made inoperable. At 1443, the reactor shutdown was terminated and power was increased to the initial value.

FAILURE DATA:

History of torus to reactor building vacuum breakers:

- 11/23/70 - V-26-18 failed to open during operability surveillance
- 12/18/70 - V-26-16 and V-26-18 failed to open during operability surveillance
- 1/12/71 - V-26-18 failed leakage rate test
- 1/13/71 - V-26-18 linkage tightened one turn, passed leakage test but valve would not open
- 1/14/71 - V-26-18 adjusted controller, passed leakage test and passed operability test
- 2/17/71 - V-26-16 and V-26-18 changed seats and both passed leakage tests
- 5/3/73 - V-26-18 failed leakage test. Linkage adjusted and valve passed leakage and operability tests.

Prepared by:

Paul C. Fickens

Date:

4/10/74

OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74/25

Report Date

April 19, 1974

Occurrence Date

April 9, 1974

Identification of Occurrence

Violation of the Technical Specifications, paragraph 3.5.A.1, loss of primary containment integrity with the reactor critical and the reactor water temperature greater than 212°F. Based on the criteria of Technical Specification 4.5.F.c, the torus vacuum breaker valves, V-26-15 and 16, could be considered inoperable. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15B.

Conditions Prior to Occurrence

The plant was operating at steady-state power.

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

Power:	Reactor, 1849 MWt
	Electric, 642 MWe
Flow:	Recirculation, 61×10^6 lb/hr
	Feedwater, 6.9×10^6 lb/hr
Stack Gas:	34,895 μ Ci/sec

Description of Occurrence

At 1040 on April 9, 1974, a local leak rate test on the reactor building to torus vacuum breakers was commenced and it was discovered that pressure could not be placed between V-26-15 and 16, the check and butterfly isolation valves. A check of leakage of drywell atmosphere to the reactor building was made. No leakage was indicated when a plastic bag was taped over the vent pipe. When pressure was again applied, the bag filled with air indicating that the outside (check) valve was leaking. The check valve was cycled several times and then forced to seat. Air was again admitted between the valves and no leakage was detected through the check valve, but the pressure would not exceed 17.5 psig. This indicated that the butterfly valve, V-26-16, was leaking. Upon inspection of V-26-16, it was found that the valve had not been in the fully closed position. The valve was fully closed manually and a successful leak test was performed.

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The butterfly valve, V-26-16, was made inoperable, as permitted by Technical Specification 3.5.A.5.

Apparent Cause of Occurrence

The cause of this occurrence is attributed to component failure. The reason for valves V-26-15 and V-26-16 not to seal properly is not known at this time.

Analysis of Occurrence

Prior to the forced seating of check valve V-26-15, pressure could not be placed between the two valves, V-26-15 and 16, making a determination of leakage rate impossible. It was determined, however, that at normal drywell and torus pressure, no leakage from the torus to the reactor building was present.

After the forced seating of V-26-15, a valid leakage rate test at 35 psig could not be performed since the maximum attainable pressure between the valves was only approximately 17.5 psig. The inability to reach 35 psig was due to the small size of the test penetration on valve V-26-15 and also leakage through V-26-16.

The leakage rate at 17.5 psig was estimated from available data and extrapolated to 20 psig (Pt). This estimation showed that the leakage rate was less than 40% of the allowable drywell leakage rate.

Corrective Action

Check valve V-26-15 was manually forced to seat properly. At 1408, after it was determined that V-26-16 was also leaking, a reactor shutdown was commenced. V-26-16, the air-operated butterfly valve, which was found not to be fully in the closed position, was properly seated and a leak rate test was begun.

At approximately 1440, results of the test were obtained indicating a satisfactory leak rate and proper primary containment integrity.

Since both V-26-15 and V-26-16 had to be closed using manual assistance and it was felt that V-26-16 might not open without manual assistance if required, this vacuum breaker valve set was considered inoperable as allowed by Technical Specification 3.5.A.5. V-26-16 was, therefore, disabled to ensure that it would remain in the closed position.

At 1443, the shutdown was terminated and a return to the initial power level was commenced.

The following PORC recommendations made upon review of the occurrence will be implemented:

1. A Study of the suitability of butterfly valves for this application be conducted by Generation Engineering.
2. V-26-15 (check valve) be disassembled, inspected, and cleaned during the 1974 refueling outage. While disassembled, V-26-16 be internally inspected.
3. Revise the surveillance test procedure to reflect use of the shaft position indicator in determining that the butterfly valves are fully closed after operability testing.

Failure Data

History of torus to reactor building vacuum breakers:

- 11/23/70 - V-26-18 failed to open during operability surveillance
- 12/18/70 - V-26-16 and V-26-18 failed to open during operability surveillance
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- 5/3/73 - V-26-18 failed leakage test. Linkage adjusted and valve passed leakage and operability tests.

Jersey Central Power & Light Company



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General



Public Utilities Corporation

April 19, 1974



Mr. A. Giambusso
Deputy Director for Reactor Projects
Directorate of Licensing
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Abnormal Occurrence Report No. 50-219/74/25

The purpose of this letter is to forward to you the attached Abnormal Occurrence Report in compliance with paragraph 6.6.2.a of the Technical Specifications.

Enclosed are forty copies of this submittal.

Very truly yours,

Donald A. Ross
Manager, Nuclear Generating Stations

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Enclosures

cc: Mr. J. P. O'Reilly, Director
Directorate of Regulatory Operations, Region I

Handwritten: 50-219

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