

Jersey Central Power & Light Company



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MEMBER OF THE
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March 3, 1977

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406



Dear Mr. O'Reilly:

Subject: Oyster Creek Nuclear Generating Station.
Docket No. 50-219
Item of Information -
Failure to Maintain Drywell to Torus Differential Pressure .

- References: (1) Letter dated August 2, 1976, Mr. I. R. Finfrock, Jr., JCP&L Co. to Mr. George Lear, NRC, (EA-76-737)
- (2) Letter dated October 14, 1976, Mr. I. R. Finfrock, Jr., JCP&L Co. to Mr. George Lear, NRC, (GD-76-035)

Two incidents at the Oyster Creek Nuclear Generating Station have been identified in which the requirements committed to in the referenced letters were not met, specifically in regard to the maintenance of the Drywell to Torus differential pressure relationship shown on the graph, "Required DW/WW Differential Pressure Relative to Downcomer Submergence," submitted with Reference (2). These incidents are not reportable in accordance with the requirements of our license; however, knowing the interest the NRC has in this area and because of pending technical specifications for maintaining Drywell/Torus differential pressure, this report is being submitted as an item of information.

The first incident occurred on Friday, February 4, 1977, at approximately 0955, when "B" recirculation pump was taken out of service to perform preventative maintenance on the MG set brushes. In connection with this maneuver, the cleanup system was taken out of service. Because of the large reduction in heat load on the RBCCW system, the drywell temperature dropped concurrently with the drop in RBCCW temperature. Subsequently, the drywell pressure dropped at such a rate that N₂ makeup to the drywell was not sufficient to maintain the Drywell to Torus differential pressure greater than that required. Torus water level at the time of the occurrence was 5.2 inches which corresponds to a downcomer

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submergence of 4.87 feet. Committed ΔP for this submergence is approximately 1.1 psid. The total amount of time the ΔP was below the required value was approximately 4-3/4 hours and the minimum value of ΔP during the occurrence was .99 psid. Corrective action taken was to restore the required ΔP as soon as possible.

On Saturday, February 12, 1977, at approximately 1425, Drywell to Torus differential pressure was found to be below the committed value. Previous to this, while putting the radwaste concentrator into service, drywell temperature started to increase because of this addition to the heat load of the RBCCW system. As a result, drywell pressure started to increase necessitating venting the pressure from the drywell. Subsequently, the drywell vent valves V-23-21 and V-23-22 were opened to relieve the pressure at which time drywell pressure slowly decreased below the committed value of 1.13 psid for a period of approximately 3 hours. Operator action was to close the vent valves to let pressure increase above the committed value. The minimum ΔP that occurred during this incident was .84 psid with a torus water level of 5.7 inches, corresponding to a downcomer submergence of 4.91 feet.

Of the two incidents, the second is of greatest concern considering the calculations provided in the report, "Oyster Creek Nuclear Generating Station Short Term Program Plant Unique Torus Support Systems Analysis" submitted with Reference (1). Using the data provided above (minimum $\Delta P = .84$ psid, torus water level 5.7 inches, corresponding to a downcomer submergence of 4.91 feet), calculations of strength ratios revealed the following:

- (1) The down loads for the outer columns as listed in Table 6-2 of that report are within the acceptable limits.
- (2) The down loads for inner columns as listed in Table 6-3 are acceptable with the exception of that listed for the Pin/Clevis. The strength ratio of this part was calculated to be .54 instead of .495 as listed in the report.
- (3) Up load strength ratios of Tables 6-4 and 6-5 were well within acceptable limits.

The safety significance of this event is considered to be minimal, since the only component of concern was the Pin/Clevis assembly. The increased loading due to the event would result in a strength ratio of 0.54 which is greater than the maximum allowable strength ratio of 0.50. Had a postulated LOCA occurred during the period of time ΔP was at this value, a margin of safety was still being maintained sufficient to preclude degradation of the containment suppression chamber structure support system.

In order to avoid occurrence of similar incidents, Standing Order No. 22 was initiated describing the need for maintaining the differential pressure and also providing a graph for computing the required Drywell to Torus differential

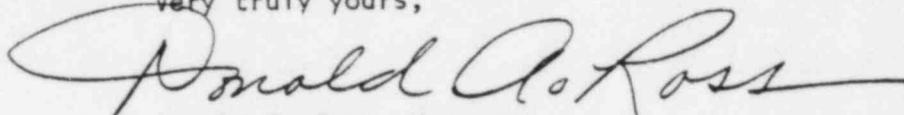
Mr. O'Reilly

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pressure using the torus water level. Appropriate changes will be made to operating procedures after approval of the new technical specification prescribing the necessary limits involved with this matter.

Very truly yours,

A handwritten signature in cursive script that reads "Donald A. Ross". The signature is written in dark ink and is positioned above the typed name and title.

Donald A. Ross, Manager
Generating Stations-Nuclear

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