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: Preliminary Abnormal Occurrence Report No. 73-27.

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

Preliminary Approval:

J. T. Carroll, Jr. 10/18/73
J. T. Carroll, Jr. Date

cc: Mr. A. Giambusso

B/104

Abnormal Occurrence

Report No. 73-27

SUBJECT: Failure of 3/4" nipple connecting the relief valve to 1-3 containment spray HX emergency service water side.

This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15D. Notification of this event, as required by the Technical Specifications, paragraph 6.6.2.a, was made to AEC Region I, Directorate of Regulatory Operations, verbally to Mr. E. Greenman on Wednesday, October 17, 1973, at 3:30 p.m., and by telecopier on Thursday, October 18, 1973 at 9:10 a.m.

SITUATION: During surveillance testing of #2 containment spray system, the operator assigned to visually check the system noticed water issuing from under the HX insulation. He called the Shift Foreman who made a closer examination and discovered the water coming from the service water relief valve nipple.

CAUSE: The cause appears to be corrosion of the nipple.

REMEDIAL ACTION:

The system was shutdown and the redundant system tested. At present, the system is being drained and tagged to make repairs as found necessary.

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SAFETY SIGNIFICANCE:

The significance of this event would be the loss of redundancy of one containment spray system. Proper cooling capacity is capable with one set of pumps in one system and the number one system had availability of two sets of pumps; one set which would start automatically and the second set able to be started by operator action.

Prepared by: O. T. Lee Date: 10/17/73

Jersey Central Power & Light Company

MADISON AVENUE AT PUNCH BOWL ROAD • MORRISTOWN, N. J. 07960 • 201-539-6111

MEMBER OF THE General G P U ELECTRIC POWER COMPANIES SYSTEM Public Utilities Corporation

October 16, 1973



Mr. 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
APRM Set Point

The purpose of this letter is to report a failure to set to average power range monitor scram and rod block set points to the conservative values specified in Technical Specifications 2.3(1)(a) and 2.3(2)(a). This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15.A. Notification of this event, as required by the Technical Specifications, paragraph 6.6.2.a, was made to AEC Region I, Directorate of Regulatory Operations by telephone on October 10, 1973, and by telecopier on October 11, 1973.

On October 6, 1973 at 2:00 p.m., the reactor startup to full power had been halted due to a lack of in-service condensate demineralizers. The core thermal output at this time was approximately 567 MWt and the recirculation flow rate was $30 \times 10^6$ lbs/hr. At this time, the maximum total peaking factor (PF) was estimated to be 4.54 and the average power range monitors (APRM's) were set conservatively such that 100% on the APRM's corresponded to 1200 MWt. This is equivalent to reducing the neutron flux scram by the amount 3.01/PF as specified in Technical Specifications 2.3.1.a, with some added margin. The 100%/1200 MWt setting allows for a neutron flux peaking up to a value of 4.84.

At 5:30 p.m., after a heat balance calculation, the setting of the APRM's was inadvertently set such that 100% of the APRM's corresponded to 1400 MWt which accounts for peaking factors of only 4.15. Thus, the limiting safety system setting for the APRM neutron flux scram and rod block were set less conservatively than specified in the Technical Specifications 2.3.1.a and 2.3.2.a.

Near the conclusion of the reactor core operations, the engineer assisting in core monitoring performed a "quick" heat balance and performed the final peaking factor checks. He determined the maximum peak location and value

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and as a result advised the control room operator to adjust the APRM's to the conservative 100% - 1200 MWt setting. The control room operator made the recommended adjustment and entered the new setting in the control room log.

Four errors on the part of four individuals then occurred:

1. Prior to leaving the plant, the engineer failed to notify the shift foreman, whose presence was required in another part of the plant at the time, of the final condition of the reactor core.

2. Upon reviewing the control room log at the end of the shift, the shift foreman failed to notice the relevant log entry.

3. The control room operator failed to notify both the shift foreman upon his return to the control room and the relief control room operator of the new APRM setting.

4. The relieving control room operator failed to review the prior shift log entries.

As a result of the "quick" heat balance, no documentation of the correct setting was provided on a heat balance power range work sheet. The relieving control room operator, after performing the he balance power range for his shift, used the last documented heat balance a the basis for the APRM setting. This setting was in agreement with the value forwarded to the relieving shift foreman. The final result was the 100% = 1400 MWt setting of the APRM's.

At 10:30 a.m. on October 7, 1973, the reactor neutron flux peaking factor was estimated as required in Technical Specifications 4.1, Table 4.1.1., Note 2, and found to be 4.71. The APRM's were then correctly adjusted to the conservative 100%/1200 MWt setting.

Based on the neutron flux peaking factor of 4.71, as estimated at the time of the correction, the safety limit can be shown to be at 1228 MWt for the recirculation flow rate of $30 \times 10^6$ lbs/hr. Using the 100%/1400 MWt setting of the APRM's, the reactor at this condition would have scrammed at 1200 MWt, if required. Thus, the safety limit would not have been exceeded.

To prevent a reoccurrence of this incident, the following actions will be taken:

1. The technical supervisor will issue a memorandum to the appropriate engineers re-emphasizing their advisory capacity in core operations and the necessity of informing the shift foreman of plant status following any control rod manipulation or power level changes.

2. The operations supervisor will review with the shift foremen all requirements for reading and initialing control room log book entries. This will be accomplished via a memorandum from the operations supervisor.

Enclosed are forty (40) copies of this report.

Very truly yours,

Donald A. Ross

Donald A. Ross
Manager, Nuclear Generating Stations

DAR:cs
Enclosures

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