

Jersey Central Power & Light Company



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

General



Public Utilities Corporation

June 6, 1975



Mr. A. Giambusso
Director, Division of Reactor Licensing
Office of Nuclear Reactor Regulation
United States Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Giambusso:

Subject: Oyster Creek Station
Docket No. 50-219
Abnormal Occurrence Report No. 50-219/75-15

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.

Very truly yours,

Donald A. Ross, Manager
Generating Stations-Nuclear

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Enclosures

cc: Mr. J. P. O'Reilly, Director
Office of Inspection and Enforcement, Region 1

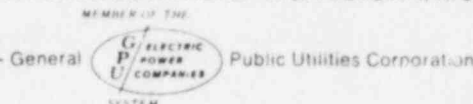
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OYSTER CREEK NUCLEAR GENERATING STATION
Forked River, New Jersey 08731

Abnormal Occurrence
Report No. 50-219/75-15

Report Date

June 6, 1975

Occurrence Date

May 30, 1975

Identification of Occurrence

Violation of Technical Specifications, paragraphs 2.3.1.a and 2.3.2.a, which specifies limiting safety system settings for the APRM scram and rod block. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15.A.

Conditions Prior to Occurrence

The plant was operating at steady state power with major parameters as follows:

Power:	Core, 1378 MWt
	Electric, 448 MWe(g)
Flow:	Recirculation, 47.7×10^6 lbm/hr
	Feedwater, 4.99×10^6 lbm/hr
Reactor Pressure:	1020 psig
Stack Gas:	8,740 μ ci/sec

Description of Occurrence

During the initial startup for Cycle V operation, while at 53% power on May 28, 1975, a full set of TIP traces was collected and calculations were performed to evaluate core thermal hydraulic parameters. Based on these results, control rod withdrawal was continued and power was increased to 1378 MWt (71% of rated).

Again, on May 30, 1975, a full set of TIP traces was collected. The calculations indicated that the total peaking factor in one (1) core location was in excess of the value of PF_0 given in Technical Specification 2.1.A.1. It was then determined that the APRM scram and rod block settings were not in accordance with Specifications 2.3.1.a and 2.3.2.a. Details are as follows:

Core Location	Fuel Type	Peaking Factor	PF_0	Required Settings		Actual Settings	
				Scram	Rod Block	Scram	Rod Block
27-18*	IIIE	2.92	2.74	88%	73.96%	89.7%	80.8%

Upon Recognition, corrective action was taken and the APRM settings lowered to the required settings. This was accomplished by inserting two (2) groups of control rods and lowering the APRM scram and rod block settings per Specifications 2.3.1.a and 2.3.2.a. Further margin was then obtained by increasing reactor power.

Apparent Cause of Occurrence

This event occurred during the initial startup in Cycle V. Lack of operating experience with the new core loading and with the considerably tighter license restrictions caused this abnormal occurrence.

Analysis of Occurrence

Total peaking factor is, in itself, not an indication of the core thermal performance. The limits specified in the Technical Specifications are used for evaluating the effects of abnormal operating occurrences and for formulation of a safety limit curve (Technical Specification Figure 2.1.1). The parameters which are truly indicative of the core performance are: 1) average planar linear heat generation rate; 2) maximum linear heat generation rate; 3) critical power ratio; and 4) assembly averaged power-void relationship. All of these parameters were within the limits specified by the Technical Specifications. The critical power ratio was determined to be 2.488 for the assembly. The APRM scram was set at 89.7% of the rated power or 1731 MWt. The safety limit associated with the actual power distribution in the assembly (i.e., the power level at which the CPR = 1.37) was calculated to be 1.82 times the operating power or 2502 MWt. The APRM scram was set at 69% of the safety limit and was, therefore, fully adequate to protect against the occurrence of a critical heat flux during anticipated transients. In this case then, it may be concluded that the total peaking factor limits are not required to protect the reactor core.

Corrective Action

Considering the circumstances leading to this event, it is concluded that no further corrective action is required. Violations of core related Technical Specification limits occur infrequently and are normally associated with power level or power shape alterations. Routine surveillance required by the Technical Engineering Department have been adequate to prevent violation of these limits or to restore operation to within the required limits in a relatively short period of time.

* This is a monitored core location, indicative of the performance of three (3) additional fuel assemblies in symmetrical locations.