Jersey Central Power & Light Company

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

MEMBER OF THE General GPU ELECTRIC POWER COMPANIES SYSTEM Public Utilities Corporation

November 4, 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. 50-219/74-56

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

Donald A. Ross
Manager, Generating Stations-Nuclear

cs
Enclosures

cc: Mr. J. P. O'Reilly, Director
Directorate of Regulatory Operations, Region 1

50-219 11350
incident

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OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74-56

Report Date

November 4, 1974

Occurrence Date

October 25, 1974

Identification of Occurrence

Violation of the Technical Specifications, paragraph 2.3.7, main steam line low pressure switches RE23A, B, C, and D were found to trip at pressures less than the minimum required value of 860 psig. This event is considered to be an abnormal occurrence as defined in the Technical Specifications, paragraph 1.15A.

Conditions Prior to Occurrence

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

Power:	Reactor, 1912 MWt
	Electric, 662 MWe
Flow:	Recirculation, 59.9 x 10^6 lb/hr
	Feedwater, 7.15 x 10^6 lb/hr
Stack Gas:	17,259 μCi/sec

Description of Occurrence

On Friday, October 25, 1974, at 1320, while performing a routine surveillance test on the four main steam line low pressure switches, it was discovered that switches RE23A, B, C, and D tripped at 850, 855, 854 and 857 psig, respectively. These values are below the minimum required trip point of 860 psig, which is derived by adding to the Technical Specification limit of 850 psig, a 10 psig head correction factor.

The "as found" and "as left" switch settings were:

	"As Found" Settings	"As Left" Settings
RE23A	850 psig	860 psig
RE23B	855 psig	861 psig
RE23C	854 psig	861 psig
RE23D	857 psig	862 psig

Apparent Cause of Occurrence

The cause of this occurrence is the recognized problem of switch repeatability.

Analysis of Occurrence

Four pressure switches in the reactor protection system (RPS) are provided to isolate the reactor in the event of low main steam line pressure. Two of these switches (RE23A and RE23C) are in RPS Channel 1, and the other two switches (RE23B and RE23D) are in RPS Channel 2. Low pressure signals from two pressure switches, one in each RPS channel, are required to effect main steam isolation valve closure. A review of the "as found" switch settings indicates that reactor isolation would have occurred at a pressure of 854 psig had a main steam line low pressure condition existed.

As indicated in the bases of the Technical Specifications, "The low pressure isolation of the Main Steam Lines at 850 psig was provided to give protection against fast reactor depressurization and the resultant rapid cooldown of the vessel. Advantage was taken of the scram feature which occurs when the Main Steam Isolation Valves are closed to provide for reactor shutdown so that high power operation at low reactor pressure does not occur, thus providing protection for the fuel cladding integrity safety limit."

The adverse consequences of reactor isolation occurring at a reactor pressure approximately 6 psig below the specified minimum value of 850 psig is limited to those effects attendant to a greater than normal reactor cooldown rate. The fuel cladding integrity safety limit only comes into effect for power operation at reactor pressures less than 600 psig or for power operation greater than 354 MWt with less than 10% recirculation flow. Therefore, the consequences of a 6 psig lower than normal reactor isolation and scram setpoint has no threatening effect whatsoever on the fuel cladding integrity.

The effects of a too rapid cooldown due to the lower isolation pressure are inconsequential since there is less than a 1°F difference between the saturation temperature for 850 psig and 844 psig.

Corrective Action

Steam line pressure variations during daily stop valve testing make it impractical to include in the switch setpoint the normal setpoint variations needed to provide a sufficient margin above the Technical Specification limit.

The plant has received from General Electric Company information supporting a Technical Specification Change Request which will encompass changing the present 850 psig setpoint of the Main Steam Line Low Pressure Switches to a lower set-point.

This proposal was received on September 27, 1974, and has been evaluated by the plant staff. A Technical Specification Change Request was approved by the Plant Operations Review Committee on October 28, 1974. This Change Request will be submitted to the General Office Review Board for review at their mid-November meeting and will be submitted to the Commission subsequent to this review.

Failure Data

Previous abnormal occurrence reports involving these switches are:

1. Letter to Mr. A. Giambusso from Mr. D. A. Ross, dated December 24, 1973.
2. Abnormal Occurrence Report No. 50-219/74-1
3. Abnormal Occurrence Report No. 50-219/74-9
4. Abnormal Occurrence Report No. 50-219/74-10
5. Abnormal Occurrence Report No. 50-219/74-12
6. Abnormal Occurrence Report No. 50-219/74-22
7. Abnormal Occurrence Report No. 50-219/74-35
8. Abnormal Occurrence Report No. 50 219/74-37
9. Abnormal Occurrence Report No. 50-219/74-41
10. Abnormal Occurrence Report No. 50-219/74-42
11. Abnormal Occurrence Report No. 50-219/74-43
12. Abnormal Occurrence Report No. 50-219/74-49
13. Abnormal Occurrence Report No. 50-219/74-51
14. Abnormal Occurrence Report No. 50-219/74-52

Manufacturer data pertinent to these switches are as follows:

Meletron Corporation (subsidiary of Barksdale)
Los Angeles, California
Pressure Actuated Switch, Model No. 372
Catalog No. 372-6SS49A-293
Range 20-1400 psig
Proof psi 1750 G