

Jersey Central Power & Light Company



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

General



Public Utilities Corporation

August 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. 50-219/74-44

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 1

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Jersey Central Power & Light Company



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General



Public Utilities Corporation

OYSTER CREEK NUCLEAR GENERATING STATION FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74-44

Report Date

August 19, 1974

Occurrence Date

August 9, 1974

Identification of Occurrence

Violation of the Technical Specifications, paragraph 2.3.7, main steam line low pressure switches RE23A, RE23B, RE23C, and RE23D 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, 1910 MWt
	Electric, 650 MWe
Flow:	Recirculation, 59.3×10^6 lb/hr
	Feedwater, 7.133×10^6 lb/hr
Reactor Pressure:	1020 psig
Stack Gas:	27,500 μ Ci/sec

Description of Occurrence

On Friday, August 9, 1974, at 1000, while performing a routine surveillance test on the four main steam line low pressure switches, it was discovered that switches RE23A, RE23B, RE23C, and RE23D tripped at 850 psig, 855 psig, 850 psig, and 847 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:

	<u>"As Found" Settings</u>	<u>"As Left" Settings</u>
RE23A	850 psig	863 psig
RE23B	855 psig	860 psig
RE23C	850 psig	860 psig
RE23D	847 psig	863 psig

Apparent Cause of Occurrence

The cause of this occurrence is switch repeatability.

Analysis of Occurrence

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 reactor pressure approximately 13 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 13 psig lower than normal reactor isolation and scram set point 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 approximately a 2°F difference between the saturation temperature for 850 psig and 837 psig.

Corrective Action

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

Set point accuracy and tolerance in not only these instruments but in others as well are under investigation by Jersey Central Power & Light Company, GPU Service Corporation, and General Electric Company.

While this investigation is being completed, the Plant Operations Review Committee has approved the use of in line sintered metal snubbers in the instrument sensing lines to dampen the steam line pressure variations while still providing proper response to transient conditions. Elimination of this hydraulic noise will allow the set point of switches to be raised to allow increased margin above the Technical Specification limit. The Plant Operations Review Committee has transmitted this proposal to the General Office Review Board for final approval.

Manufacturer data pertinent to these switches are as follows:

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

Previous abnormal occurrence reports involving these switches are:

1. Letter to Mr. A. Giambusso from 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. 74-219/74-42
11. Abnormal Occurrence Report No. 74-219/74-43