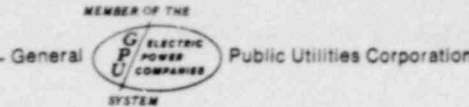


# Jersey Central Power & Light Company



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



OYSTER CREEK NUCLEAR GENERATING STATION  
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence  
Report No. 50-219/74/37

Report Date

July 19, 1974

Occurrence Date

July 12, 1974

Identification of Occurrence

Violation of the Technical Specifications, paragraph 2.3.7, main steam line low pressure switches RE23A, B, C, and D, 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 the major parameters as follows:

Power:	Reactor, 1893 MWt
	Electric, 640 MWe
Flow:	Recirculation, $16.0 \times 10^4$ gpm
	Feedwater, $7.07 \times 10^6$ lb/hr
Reactor Pressure:	1020 psig
Stack Gas:	15,000 $\mu$ Ci/sec

Description of Occurrence

On Friday, July 12, 1974, at 1000, 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 842, 848, 846, and 850 psig, respectively. These values are below the minimum required trip point of 860 psig which is derived by adding a 10 psig head correction factor to the Technical Specification limit of 850 psig.

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

	<u>"As Found" Settings</u>	<u>"As Left" Settings</u>
RE23A	842 psig	864 psig
RE23B	848 psig	860 psig
RE23C	846 psig	860 psig
RE23D	850 psig	860 psig

#### Apparent Cause of Occurrence

The recognized problem of switch repeatability is the cause of this occurrence. Design is considered to be the major contributing factor to this event.

#### 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 18 psig below the specified minimum value of 860 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 an 18 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 832 psig.

#### Corrective Action

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 personnel as described in Abnormal Occurrence No. 50-219/74/35.

Failure Data

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

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