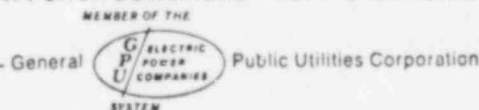


# Jersey Central Power & Light Company



*File*

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



August 2, 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. 50-219/74/42

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,

*Ivan R. Finfrock, Jr.*  
Ivan R. Finfrock, Jr.  
Vice President

cs  
Enclosures

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

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PDR ADOCK 05000219  
S PDR

*Handwritten signature and date 5/2/79*

# Jersey Central Power & Light Company



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

General



Public Utilities Corporation

## OYSTER CREEK NUCLEAR GENERATING STATION FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence  
Report No. 50-219/74/42

### Report Date

August 2, 1974

### Occurrence Date

July 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, 1898 MWt
	Electric, 653 MWe
Flow:	Recirculation, $15.8 \times 10^4$ gpm
	Feedwater, $7.05 \times 10^6$ lb/hr
Reactor Pressure:	1020 psig
Stack Gas:	13,065 $\mu$ Ci/sec

### Description of Occurrence

On Thursday, July 25, 1974, at 1015, 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 849, 854, 859, and 855 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	849 psig	861 psig
RE23B	854 psig	860 psig
RE23C	859 psig	862 psig
RE23D	855 psig	862 psig

#### Apparent Cause of Occurrence

The cause of this occurrence is the recognized problem of 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 11 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 spig or for power operation greater than 354 MWt with less than 10% recirculation flow. Therefore, the consequences of a 11 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 less than 2°F difference between the saturation temperature for 850 psig and 839 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. This investigation was described in detail 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 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
8. Abnormal Occurrence Report No. 50-219/74/37
9. Abnormal Occurrence Report No. 50-219/74/41

OYSTER CREEK NUCLEAR GENERATING STATION  
FORKED RIVER, NEW JERSEY 08731Abnormal Occurrence  
Report No. 50-219/74/ 42IDENTIFICATION  
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 de-  
fined in the Technical Specifications, paragraph 1.15A.

CONDITIONS PRIOR  
TO OCCURRENCE:

<input checked="" type="checkbox"/> Steady State Power	<input type="checkbox"/> Routine Shutdown
<input type="checkbox"/> Hot Standby	<input type="checkbox"/> Operation
<input type="checkbox"/> Cold Shutdown	<input type="checkbox"/> Load Changes During
<input type="checkbox"/> Refueling Shutdown	<input type="checkbox"/> Routine Power Operation
<input type="checkbox"/> Routine Startup	<input type="checkbox"/> Other (Specify)
<input type="checkbox"/> Operation	

Power: Reactor, 1898 MWt  
Elec., 653 MWe  
Flow: Recirc.,  $15.8 \times 10^4$  gpm  
Feed.,  $7.05 \times 10^6$  lb/hr  
Reactor Pressure: 1020 psig  
Stack Gas: 13,065  $\mu$ Ci/sec

DESCRIPTION OF  
OCCURRENCE:

On Thursday, July 25, 1974, at 1015, 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 849, 854, 859, and 855 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.

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

	<u>"As Found" Settings</u>	<u>"As Left" Settings</u>
RE23A	849 psig	861 psig
RE23B	854 psig	860 psig
RE23C	859 psig	862 psig
RE23D	855 psig	862 psig

APPARENT CAUSE  
OF OCCURRENCE:

<input checked="" type="checkbox"/> Design	<input type="checkbox"/> Procedure
<input type="checkbox"/> Manufacture	<input type="checkbox"/> Unusual Service Condition
<input type="checkbox"/> Installation/	<input type="checkbox"/> Inc. Environmental
<input type="checkbox"/> Construction	<input type="checkbox"/> Component Failure
<input type="checkbox"/> Operator	<input type="checkbox"/> Other (Specify)

The cause of this occurrence is switch repeatability, which is a recognized problem.

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 11 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 psig with less than 10% recirculation flow. Therefore, the consequences of a 11 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 2°F difference between the saturation temperature for 850 psig and 839 psig.

**CORRECTIVE  
ACTION:**

Setpoint accuracy and tolerance in not only these instruments but in others as well is under investigation by Company and GPU personnel with General Electric Company.

**FAILURE DATA:**

Manufacturer data pertinent to these switches are as follows:

Meletron Corp. (subsidiary of Barksdale)  
Los Angeles, California  
Pressure Actuated Switch  
Model 372  
Catalog #372-6SS49A-293  
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3. Abnormal Occurrence Report No. 74-9.



Abnormal Occurrence

Report No. 50-219/74/42

Page 4

4. Abnormal Occurrence Report No. 74-10.
  5. Abnormal Occurrence Report No. 74-12.
  6. Abnormal Occurrence Report No. 74-22.
  7. Abnormal Occurrence Report No. 74-35.
  8. Abnormal Occurrence Report No. 74-37.
  9. Abnormal Occurrence Report No. 74-41.
- 

Prepared by: *E. [Signature]*

Date: 7/25/74



To:

James P. O'Reilly  
Directorate of Regulatory Operations  
Region 1  
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 07631

Subject:

Abnormal Occurrence Report No. 50-219/74/42

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

Preliminary Approval:

*J. T. Carroll, Jr.*  
J. T. Carroll, Jr.

7/25/74

Date

cc: Mr. A. Giambusso

U.S. ATOMIC ENERGY COM.  
DIVISION OF COMPLIANCE

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