

# Jersey Central Power & Light Company



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

General



Public Utilities Corporation

May 1, 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. 50-219/74/29

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

cs  
Enclosures

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

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OYSTER CREEK NUCLEAR GENERATING STATION  
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence  
Report No. 50-219/74/28

Report Date

May 1, 1974

Occurrence Date

April 23, 1974

Identification of Occurrence

Violation of the Technical Specifications, paragraph 2.3.4, Electromatic Relief Valve Pressure Switches, 1A83B and 1A83D, were found to trip at pressures in excess of the maximum allowable value of 1070 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 shut down for refueling.

The reactor mode switch was in the REFUEL position with reactor coolant temperature approximately 100°F.

Description of Occurrence

On Tuesday, April 23, 1974, while performing surveillance on the five Electromatic Relief Valve Pressure Switches, it was found that 1A83B and 1A83D tripped at 1090 psig and 1096 psig, respectively. These values are in excess of the maximum allowable trip points of 1084 psig and 1082 psig, respectively, which are derived by adding appropriate head correction factors to the Technical Specification limit of 1070 psig. Switches 1A83B and 1A83D are associated with valves NR108B and NR108D, respectively.

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

<u>Switch</u>	<u>Associated Valve</u>	<u>"Desired" Setting</u>	<u>"As Found" Setting</u>	<u>"As Left" Setting</u>
1A83A	NR108A	1079 psig	1079 psig	1079 psig
1A83B	NR108B	1084 psig	1090 psig	1084 psig
1A83C	NR108C	1077 psig	1077 psig	1077 psig
1A83D	NR108D	1082 psig	1096 psig	1082 psig
1A83E	NR108E	1082 psig	1082 psig	1082 psig

Apparent Cause of Occurrence

Set point repeatability has been tentatively identified as the cause of this occurrence.

Analysis of Occurrence

The relief valves are provided to remove sufficient energy from the primary system to prevent the safety valves from lifting during a transient. The limiting pressure transient is that which is produced upon a turbine trip from rated design power with a failure of the bypass system to function. Under these conditions, the five (5) relief valves are required to operate in order to prevent the pressure excursion from reaching the lowest set point of the primary system safety valves. It should be noted that a 25 psi margin exists between the resulting peak pressure and the lowest safety valve set point as added assurance that the safety valves will not lift during this transient. With valves NR108B and NR108D actuating at 6 psig and 14 psig, respectively, above the maximum allowable trip point of 1070 psig, and assuming the most limiting pressure transient had occurred, the lowest set point safety valve or valves may have been required to actuate in order to limit the pressure transient. Since the safety valve capacity is based upon providing sufficient vessel over-pressure protection upon failure of all pressure relieving devices, in addition to a failure of the reactor to scram, over-pressurization of the vessel would not have occurred.

Corrective Action

The involved pressure switches, 1A83B and 1A83D, were immediately reset to trip at allowable pressure levels. Until the problem of set point repeatability is solved, the Electromatic Relief Valve Pressure Switches will be surveilled each time the reactor is shut down and the reactor coolant temperature is reduced to <212°F.

Discussions with the Nuclear Steam Supply System vendor into the possibility of employing set points with instrument accuracy deviations taken into account for Technical Specification surveillances will continue. The successful termination of these discussions lies in the ability of the vendor to supply transient analysis information and to determine precisely the conservatisms utilized in those analyses that are relevant to the instrument set point analysis.

Failure Data

This is the first abnormal occurrence report of the failure of these switches to trip at their preset trip point.

Manufacturer data pertinent to these switches are as follows:

Manufacturer:	Dresser
Type:	1539VX
Serial Nos.:	BK3339 (1A83B)
	BK3338 (1A83D)

Initial Telephone  
Report Date: 4/25/74

Date of  
Occurrence: 4/23/74

Initial Written  
Report Date: 4/26/74

Time of  
Occurrence: 1720

OYSTER CREEK NUCLEAR GENERATING STATION  
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence  
Report No. 50-219/74/29

IDENTIFICATION  
OF OCCURRENCE:

Violation of the Technical Specifications, paragraph 2.3.4,  
Electromatic Relief Valve Pressure Switches, 1A83B and  
1A83D, were found to trip at pressures in excess of the maxi-  
mum allowable value of 1070 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 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 checked="" type="checkbox"/> Refueling Shutdown	<input type="checkbox"/> Routine Power Operation
<input type="checkbox"/> Routine Startup	<input type="checkbox"/> Other (Specify)
<input type="checkbox"/> Operation	

The reactor mode switch was in the REFUEL position with  
reactor coolant temperature approximately 100°F.

DESCRIPTION  
OF OCCURRENCE:

On Tuesday, April 23, 1974, while performing surveillance  
on the five Electromatic Relief Valve Pressure Switches, it  
was found that 1A83B and 1A83D tripped at 1090 psig and  
1096 psig, respectively. These values are in excess of the  
maximum allowable trip points of 1084 psig and 1082 psig,  
respectively, which are derived by adding appropriate head  
correction factors to the Technical Specification limit of  
1070 psig. It is noted here that switches 1A83B and 1A83D  
are associated with valves NR108B and NR108D, respectively.

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

<u>Switch</u>	<u>Associated Valve</u>	<u>"As Found" Setting</u>	<u>"As Left" Setting</u>
1A83A	NR108A	1079 psig	1079 psig
1A83B	NR108B	1090 psig	1084 psig
1A83C	NR108C	1077 psig	1077 psig
1A83D	NR108D	1096 psig	1082 psig
1A83E	NR108E	1082 psig	1082 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)

Instrument drift has been tentatively identified as the cause of this occurrence.

ANALYSIS OF  
OCCURRENCE:

The relief valves are provided to remove sufficient energy from the primary system to prevent the safety valves from lifting during a transient. The limiting pressure transient is that which is produced upon a turbine trip from rated design power with a failure of the bypass system to function. Under these conditions, the five (5) relief valves are required to operate in order to prevent reaching the lowest set point of the primary system safety valves. It should be noted that a 25 psi margin exists between the resulting peak pressure and the lowest safety valve set point as added assurance that the safety valves will not lift during this transient. With valves NR108B and NR108D actuating at 6 psig and 14 psig, respectively, above the maximum allowable trip point of 1070 psig, and assuming the most limiting

pressure transient had occurred, the lowest set point safety valve or valves may have been required to actuate in order to limit the pressure transient. Since the safety valve capacity is based upon providing sufficient vessel over-pressure protection upon failure of all pressure release devices, in addition to a failure of the reactor to scram, over-pressurization of the vessel would not have occurred.

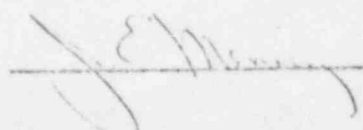
CORRECTIVE  
ACTION:

The involved pressure switches, 1A83B and 1A83D, were immediately reset to trip at allowable pressure levels. Additional items of corrective action will be determined following review of this occurrence by the Plant Operations Review Committee.

FAILURE DATA:

Manufacturer data pertinent to these switches are as follows:

Manufacturer - Dresser  
Type - 1539VX  
Serial Nos. - BK3339 (1A83B)  
                  BK3338 (1A83D)

Prepared by: 

Date: 4/26/74




To: James P. O'Reilly  
Directorate of Regulatory Operations  
Region I  
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 08731

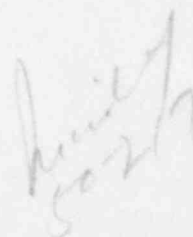
Subject: Abnormal Occurrence Report No. 50-219/74/29

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

Preliminary Approval:

 4/26/74  
J. T. Carroll, Jr. Date

cc: Mr. A. Giambusso ✓

  
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