Jersey Central Power & Light Company

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

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

OYSTER CREEK NUCLEAR GENERATING STATION
FORKED RIVER, NEW JERSEY 08731

Abnormal Occurrence
Report No. 50-219/74/39

Report Date

July 23, 1974

Occurrence Date

July 14, 1974

Identification of Occurrence

Violation of the Technical Specifications, paragraph 2.3.4, electromatic relief valve pressure switches 1A83A, 1A83B, 1A83C, and 1A83E 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 reactor mode switch was in the REFUEL position with reactor coolant temperature approximately 150°F.

Description of Occurrence

On Sunday, July 14, 1974, while performing surveillance on the five electromatic relief valve pressure switches, it was found that switches 1A83A, 1A83B, 1A83C, and 1A83E tripped at 1083 psig, 1094 psig, 1085 psig, and 1089 psig, respectively. These values are in excess of the maximum allowable trip points indicated below which are derived by adding appropriate head correction factors to the Technical Specification limit of 1070 psig. These trip point values are within the design limitations of the switch. The electromatic relief valve pressure switches were immediately recalibrated to their correct set points as indicated below:

Switch	Associated Valve	"Desired" Setting	"As Found" Setting	"As Left" Setting
1A83A	NR108A	1079 psig	1083 psig	1079 psig
1A83B	NR108B	1084 psig	1094 psig	1084 psig
1A83C	NR108C	1077 psig	1085 psig	1077 psig
1A83D	NR108D	1082 psig	1080 psig	1082 psig
1A83E	NR108E	1082 psig	1089 psig	1082 psig

Apparent Cause of Occurrence

The cause of this occurrence is the lack of allowance for set point tolerances in the Technical Specifications.

Analysis of Occurrence

The relief valves function 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 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 NR108A, NR108B, NR108C, and NR108E actuating at from 4 psig to 10 psig 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 overpressure protection upon failure of all pressure relieving devices, in addition to a failure of the reactor to scram, overpressurization of the vessel would not have occurred.

Corrective Action

These switches were reset and surveilled satisfactorily. Jersey Central Power & Light Company, GPU Service Corporation, and General Electric Company personnel, as stated in Abnormal Occurrence Report No. 50-219/74/35, are continuing to investigate this generic problem of set point tolerance.

Failure Data

Manufacturer data pertinent to these switches:

Manufacturer - Dresser
Type - 1539VX
Serial Numbers - 1A83A - BK3337
1A83B - BK3339
1A83C - BK3340
1A83E - BN7126

Reference: Abnormal Occurrence Report No. 50-219/74/29 dated April 23, 1974