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Norman W. Curtis
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November 5, 1981

Mr. R. C. Haynes
Director, Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406



SUSQUEHANNA STEAM ELECTRIC STATION
INTERIM REPORT OF A DEFICIENCY INVOLVING THE DESIGN
OF EMERGENCY CORE COOLING PUMP CIRCUIT BREAKERS
ERs 100450/100508 FILE 821-10
PLA-956

Dear Mr. Haynes:

This letter serves to provide the Commission with a interim report of a design deficiency in the SSES emergency core cooling pump motor starting circuits. Design modifications to the circuits would have required manually resetting the 4.16 KV circuit breaker trips locally at the switchgear. The deficiency was originally reported by telephone to Mr. L. Narrow of NRC Region I by Mr. A. R. Sabol of PP&L on September 21, 1981.

The attachment to this letter contains a description of the problem and an analysis of safety implications. PP&L has initiated an investigation by Bechtel Project Engineering into the cause of this deficiency and will provide the Commission with a final report including cause and corrective action to prevent recurrence by January 1982.

Since the details of this report provide information relevant to the reporting requirements of 10 CFR 21, this correspondence is considered to also discharge any formal responsibility PP&L may have in compliance thereto.

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

JBW:sab

Attachment



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IE27

cc: Mr. Victor Stello (15)
Director-Office of Inspection & Enforcement
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. G. McDonald, Director (1)
Office of Management Information & Program Control
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. Gary Rhoads
U. S. Nuclear Regulatory Commission
P.O. Box 52
Shickshinny, PA 18655

ATTACHMENT TO PLA-956

# INTERIM REPORT
# ON
# DESIGN DEFICIENCIES IN 4.16KV CIRCUIT BREAKER CONTROL CIRCUITRY

## SUBJECT

Bechtel design modifications to the control circuits for Emergency Core Cooling System (ECCS) circuit breakers would have prevented their automatic operation after loss of offsite power trip.

## DESCRIPTION OF DEFICIENCY

These design modifications to the ECCS breaker control circuitry would have provided control logic to trip and lock open the 4.16KV feeder breakers and to maintain a trip signal to the 4.16KV incoming breakers following a loss of offsite power until manually reset at the switchgear. These design deficiencies were contained in Bechtel Engineering issued Design Change Packages (DCP's) 451.1, 451.2, 451.3, 451.4 and 008.43.

## ANALYSIS OF SAFETY IMPLICATIONS

For a design basis loss of cooling accident coincident with a loss of offsite power, operation of the residual heat removal and core spray pumps is required to provide sufficient reactor cooling. The aforementioned design deficiencies would prevent automatic starting of these pumps after power restoration to their respective supply buses. Therefore, the release of the DCP's approved for construction is considered a significant design deficiency reportable under 10 CFR 50.55(e).

## CORRECTIVE ACTION

Bechtel will issue revised design change packages in October, 1981 to rewire the subject schemes and eliminate the aforementioned deficiencies.