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April 28, 1980

Mr. Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors
U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUBJECT: Peach Bottom 2 Reload 4 Application For
Amendment of Facility Operating License DPR-44

References: "Application For Amendment of Facility
Operating License DPR-44", Philadelphia
Electric Company submitted to the Nuclear
Regulatory Commission for Peach Bottom 2
Reload 4, 3/3/80

Attachment: Revised Pages 11, 20, 111, 133c, 140e,
144, and 241 "Application for Amendment
of Facility Operating License DPR-44".

Dear Mr. Ippolito:

Enclosed you will find corrected pages for the
referenced license amendment request in accordance with recent
discussions between Philadelphia Electric Company and your staff
in conjunction with the current NRC technical review of the Peach
Bottom 2 Reload 4 license amendment request.

Pages 11, 20, 140e, 144, and 241 are provided to correct
typographical errors which appear in the referenced license
amendment document. Page 111 and 133c are provided to correct a
recently discovered discrepancy between the Technical
Specification scram delay times and the scram delay times as used
in the reload transient analyses. In addition, the enclosed
pages 111 and 133c have been corrected for typographical errors
as discussed with your staff during their review of the license

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amendment requests. The technical basis for the latter corrections is provided below.

Technical Basis for Changes to Pages 111 and 133c

Philadelphia Electric Company has recently been informed by General Electric that the Peach Bottom 2 Reload 4 license amendment transient analyses were performed using a 50 millisecond Reactor Protection System delay time, i.e. the time between the opening of the sensor contact up to and including the opening of the trip actuator. Per Peach Bottom Technical Specification 3.1 (Limiting Condition of Operation), the RPS delay time is specified as to not exceed 100 milliseconds. Per Peach Bottom Technical Specification Bases 2.1 (paragraph 3), it is indicated that for safety analyses purposes the scram delay time allowed by analyses is conservatively set equal to the longest delay acceptable by the Technical Specifications. In light of the above information, the Philadelphia Electric Company proposes to adjust, as necessary, the plant operating MCPR limits in accordance with analyses results provided by General Electric. These results also address vessel overpressurization and spring safety valve lift margin. The results are provided below.

With regard to page 111, the total high neutron flux scram delay, assumed in the analytical treatment of high flux scram transients, has been corrected to a value of 340 milliseconds. This value consists of sensor delay (40 milliseconds), RPS circuit delay (100 milliseconds), and control rod motion delay (200 milliseconds).

MCPR

According to the General Electric analyses, the Δ CPR resulting from the use of 100 milliseconds in the transient analyses is increased no more than 0.03 for both Turbine and Generator Trip events. As shown in table 9 (Core Wide Transient Analysis Results), and Table 10 (Local Rod Withdrawal Error With Limiting Instrument Failure Transient Summary) of NEDO-24237, the limiting transients, over the exposure range BOC 5 to EOC 5 - 1000 MWD/t, are the Rod Withdrawal Error for 8X8, 8X8R, and LTA and "Bundle Loading Error" event for P8X8R. Applying a 0.03 Δ CPR correction to the affected transients to account for a 100 millisecond delay rather than 50 millisecond does not result in a more limiting transient event. Therefore, the Operating MCPR Limits shown in Table 11 of NEDO-24237 over this exposure range remain unchanged.

Applying a 0.03 Δ CPR correction to the affected transients over the exposure range EOC 5 - 1000 MWD/t to EOC 5 results in the "Generator Load Rejection with No Bypass" transient becoming the limiting transient event. Therefore, the Operating MCPR Limits given in Table 11 of NEDO-24237 over this exposure range should be modified to the following:

<u>Fuel type</u>	<u>Before</u>	<u>After</u>
8X5	1.28	1.31
8'8R/LTA	1.28	1.31
F8X8R	1.30	1.33

Overpressurization

The overpressurization analysis summary presented in Table 12 of NEDO-24237 is based on 50 millisecond rather than the Technical Specification value of 100 millisecond. The effect of the increased delay is to increase the peak steam line and vessel pressures by 5 psi. Because this would only increase the peak vessel pressure from 1299 to 1304 psig, considerable margin (71 psi) exists to the allowable limit of 1375 psig.

Margin to Safety Valve Setpoints

With regard to the "Generator Load Rejection with No Bypass" transient presented in Table 9 of NEDO-24237, General Electric has advised Philadelphia Electric that this analysis, based on 100 millisecond time delay, results in a peak steam line pressure of less than 1205 psig if initiated from 100% power over the exposure range BOC 5 to EOC 5 - 1000 MWD/t. Therefore, 25 psi margin is maintained to the safety valve setpoints.

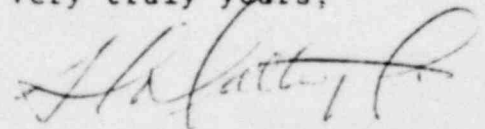
Over the exposure range EOC 5 - 1000 MWD/t to EOC 5, the peak steam line pressure, resulting from the use of 100 millisecond RPS delay in the "Generator Load Rejection with No Bypass (limiting transient), results in increasing the peak steam line pressure presented in Table 9 of NEDO-24237 from 1195 to 1200 psig when initiated from 100% power. Therefore, margin requirements to setpoints are met.

Conclusion

The overall result on the Peach Bottom 2 Reload 4 Safety Analysis from the use of a 100 millisecond rather than 50 millisecond RPS delay is to require an increase in the MCPR operating limits over the exposure range EOC 5 - 1000 MWD/t to EOC 5. In addition, to correct for previously transmitted typographical errors, revisions to the MCPR operating limits previously transmitted for the exposure range BOC 5 to EOC 5 - 1000 MWD/t are required. The enclosed revisions to pages 111 and 133c provide the required changes.

If you require additional information regarding the reload license amendment submittal, please contact us.

Very truly yours,



Attachment