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SUBJECT: Rev to proposed Amend 122 to License NPF-14, implementing recommendations of NRC Bulletin 88-007, Suppl 1.

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JUN 22 1989

Director of Nuclear Reaction Regulation
Attention: Dr. W. R. Butler, Project Director
Project Directorate I-2
Division of Reactor Projects
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
REVISION TO PROPOSED AMENDMENT 122
TO LICENSE NO. NPF-14
PLA-3201 FILES A7-8C/A17-2/R41-2

Docket No. 50-387

References: 1. PLA-3154, H.W. Keiser to W.R. Butler, "Proposed Amendment 122 to License No. NPF-14: Unit 1 Stability," dated April 12, 1989.

Dear Dr. Butler:

The purpose of this letter is to submit a revision to Proposed Amendment 122 (Reference 1), which provided Technical Specifications which implemented the recommendations provided in NRC Bulletin 88-07, Supplement 1, "Power Oscillations in Boiling Water Reactors (BWRs)."

BACKGROUND

Due to improvements in calibration procedures for determining recirculation loop drive flow and core flow, a more accurate assessment of the actual plant drive flow/core flow relationship has been performed. This new assessment shows that the change to the actual plant drive flow/core flow relationship has resulted in a change in the APRM Rod Block line which increases the allowable region of operation for U1C5. Therefore, the power/flow conditions to be analyzed to determine the decay ratio boundaries of Regions I and II for U1C5 were changed to bound the revised allowable region of operation.

DESCRIPTION OF CHANGE

Provide new Figure 3.4.1.1.1-1, "Thermal Power Restrictions," based on redefined decay ratio boundaries extrapolated to rated power to eliminate future revisions to these boundaries due to changes in the drive flow/core flow relationship. The proposed new figure is attached.

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SAFETY ANALYSIS

ANF has performed additional UIC5 analyses to redefine the 0.75 and 0.90 decay ratio boundaries based on the revised APRM Rod Block line provided by PP&L. Table 1 lists the original and additional decay ratio calculations which have been performed for UIC5. The powers corresponding to a 0.75 decay ratio were determined for 45% and 47% flow by linear interpolation or extrapolation of the two calculated decay ratios at each of these flows. The powers corresponding to a 0.90 decay ratio were determined for 40% and 42% flow by linear interpolation or extrapolation of the two calculated decay ratios at each of these flows. The 0.75 and 0.90 decay ratio lines are defined by these interpolated and extrapolated points.

All other analyses performed to support UIC5 operation are performed at initial conditions which are unaffected by this change in the Unit 1 drive flow/core flow relationship. Therefore, those analyses remain bounding for UIC5 operation.

Based on the above, safe operation of Unit 1 during Cycle 5 is assured by the analyses provided for the UIC5 reload as supplemented by the redefined stability monitoring boundary.

NO SIGNIFICANT HAZARDS CONSIDERATIONS

The proposed change to Figure 3.4.1.1.1-1 does not:

- I. Involve a significant increase in the probability or consequences of an accident previously evaluated. The decay ratios used to develop the proposed changes to the figure were calculated with NRC approved methods. None of the actions required upon entry into Region I or II are proposed to be changed from the proposal submitted in Reference 1. Therefore, the actions based upon information in the figure will still ensure that the MCPR Safety Limit is not violated. Based on the above, the proposed revision to Figure 3.4.1.1.1-1 does not involve a significant increase in the probability or consequences of an accident previously evaluated.
- II. Create the possibility of a new or different kind of accident from any accident previously evaluated. The revision to the figure is consistent with NRC guidance which is specifically designed to ensure that a new event involving a reactor core instability event will not occur.
- III. Involve a significant reduction in a margin of safety. This change will continue to protect, as stated in Reference 1, the margin of safety to the MCPR Safety Limit. This revision to Reference 1 ensures that the Region I and Region II boundaries which provide that protection are appropriate for UIC5 based on new information which allowed a larger region of operation. Further steps were taken to conservatively extrapolate these boundaries to rated powers, thereby providing limits which will not have to change in response to future changes in the drive flow/core flow relationship. Based on the above, the proposed revision to Figure 3.4.1.1.1-1 will not involve a reduction in a margin of safety.

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IMPLEMENTATION

In the interim until Reference 1 (as revised by this letter) is approved, PP&L will ensure that the revised decay ratio boundary is implemented in UIC5 operating procedures.

Any question on this revision to Proposed Amendment 122 should be directed to Mr. R. Sgarro at (215) 770-7916.

Very truly yours,



H. W. Keiser

cc: NRC Document Control Desk (original)
NRC Region I
Mr. G. S. Barber, NRC Sr. Resident Inspector
Mr. M. C. Thadani, NRC Project Manager



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