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AUTH.NAME AUTHOR AFFILIATION
CURTIS,N.W. Pennsylvania Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
BUTLER,W.R. Licensing Branch 2

SUBJECT: Revised application for proposed Amends 66 & 19 to Licenses NPF-14 & NPF-22,respectively supporting operation w/recirculation loop out of svc.Revised NSHC & updated attachments to NW Curtis 850411 ltr encl.

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SEP 11 1985

Director of Nuclear Reactor Regulation
Attention: Dr. W. R. Butler, Chief
Licensing Branch No. 2
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUSQUEHANNA STEAM ELECTRIC STATION
ADDITIONAL INFORMATION FOR PROPOSED
AMENDMENT NO. 66 TO NPF-14 AND PROPOSED
AMENDMENT NO. 19 TO NPF-22
ER 100450 FILE 841-8 Docket Nos. 50-387
PLA-2522 50-388

Reference: PLA-2440, N. W. Curtis to A. Schwencer, dated April 11, 1985.

Dear Dr. Butler:

Via the referenced letter, PP&L submitted proposed changes to the Susquehanna SES Units 1 and 2 Technical Specifications in support of operation with one recirculation loop out of service. Based on a request from your staff, attached please find a revised No Significant Hazards Considerations section. For your convenience, we have also included an update of the attachments to the referenced letter, due to license amendments that have occurred since the original submittal.

Any questions on these documents should be directed to Mr. R. Sgarro at (215) 770-7855.

Very truly yours,

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

Attachments

cc: M. J. Campagnone - USNRC
R. H. Jacobs - USNRC

T. M. Gerusky, Director
Bureau of Radiation Protection
Pa. Dept. of Environmental Resources
P.O. Box 2063
Harrisburg, PA 17120

A001
1/1

[illegible]

NO SIGNIFICANT HAZARDS CONSIDERATIONS

Proposed amendments 66 to NPF-14 and 19 to NPF-22 can be considered not likely to involve significant hazards considerations per the example provided in 48FR14870, paragraph (vi):

> "A change which either may result in some increase to the probability or consequences of a previously-analyzed accident or may reduce in some way a safety margin, but where the results of the change are clearly within all acceptable criteria with respect to the system or component specified in the Standard Review Plan: for example, a change resulting from the application of a small refinement of a previously used calculational model or design method."

This conclusion is based on the following:

I. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated. Specifically:

   a. A review of the limiting Anticipated Operational Occurrences (AOOs) was performed by GE to demonstrate adequate margin to the MCPR Safety Limit. A review of the values used in the statistical analysis of the determination of the fuel cladding safety limit was performed. Increased uncertainties for the total core flow and TIP readings resulted in a 0.01 increase in the MCPR safety limit. Although the MCPR increased by 0.01, the analysis of the AOOs demonstrated there is enough margin not to increase the MCPR operating limit or the flow dependent MCPR limit.

   b. A review of the LOCA event was performed both by GE and ENC. The analysis of the limiting recirculating pump discharge pipe break, while in SLO, results in a longer (+11 sec) peak node uncovered time. To maintain the same peak clad temperature as in two loop operation, the analysis shows the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) needs to be reduced by a factor of 0.81. The containment response for a DBA recirculation line break in SLO is bounded by the rated power two-loop operation analysis presented in the FSAR.

   c. Thermal-hydraulic stability was evaluated for its adequacy with respect to General Design Criteria 12 (10CFR50, Appendix A). It is shown that SLO satisfies this stability criterion. In addition, SSES Technical Specifications have implemented surveillance requirements for detecting and suppressing power oscillations.

   d. The fuel thermal and mechanical duty for transients occurring during SLO was determined to be bounded by the fuel design bases. Based on vessel internal vibration, the operating loop pump is limited to 90% of rated speed. GE also performed a vibration analysis and a review of test data taken during SLO on jet pumps with and without restrainer set screw gaps. The results show that on Unit 1, with postulated jet pump gaps, the recirculation pumps can operate up to 80% of rated speed in SLO.

[illegible]

e. ENC performed a review of SLO for SSES Unit 1. The ENC review centered on the compatibility between ENC 8x8 and GE 8x8 fuel. The review of the two-loop analyses shows comparable results for operational transients between ENC 8x8 and GE 8x8 and somewhat higher MAPLHGR limits with ENC methodology. Consequently, the ENC review shows the GE SLO analysis is conservative for ENC fuel.

II. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated. Although this change allows extended operation in a configuration that was previously allowed only for a limited period, analysis has shown (as described in I above) that operation with one recirculation loop out of service is within existing analyses based on the proposed revised Technical Specification requirements.

III. The proposed change does not involve a significant reduction is a margin of safety. The basis for this statement is outlined in I above for each element of the safety analyses which is affected.