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RECIP. NAME RECIPIENT AFFILIATION
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SUBJECT: Provides notification of large break loss of coolant
accident model changes or errors reported by Westinghouse,
meeting definition of significant as defined in 10CFR50.46.

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September 18, 1995

AEP:NRC:1118J

Docket Nos.: 50-315
50-316

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Donald C. Cook Nuclear Plant Units 1 and 2
REPORT OF LOCA EVALUATION MODEL CHANGES

Pursuant to the requirements of 10CFR50.46(a)(3)(ii), this letter provides notification of large break loss of coolant accident (LBLOCA) model changes or errors reported to us by Westinghouse Electric Corporation (Westinghouse) that meet the definition of significant as defined in 10CFR50.46.

Attachment 1, which was provided to us by Westinghouse, contains two letters from Westinghouse to the NRC staff. One of these notifies the staff of a change from current Westinghouse methodology for addressing power shape to a new methodology. The second describes a modification to the evaluation model which, in the case of Cook Nuclear Plant, will be used to compensate for the PCT penalties associated with the change of power distribution methodologies. The change from the Power Shape Sensitivity Model (PSSM) to the new methodology, Explicit Shape Analysis for PCT Effects (ESHAPE) methodology, is a penalty for the LBLOCA analyses of record for Cook Nuclear Plant. Most of this penalty is offset by the evaluated benefit for hot leg nozzle gap flow which is described in the second letter from Westinghouse.

Attachment 2 contains the LBLOCA peak clad temperatures calculated specifically for Cook Nuclear Plant Units 1 and 2. In all cases, the calculated peak clad temperatures remain within the 10 CFR 50.46 limit of 2200°F. The modeling of small break LOCA (SBLOCA) for Cook Nuclear Plant is not affected by the changes noted above; therefore, no new SBLOCA rackups are provided in this correspondence.

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A revised Unit 1 high head safety injection (HHSI) cross-tie open SBLOCA run, addressed in our letter designated AEP:NRC:1118G, has been completed and reviewed internally. HHSI cross-ties closed SBLOCA analyses were reviewed and approved in conjunction with Amendment 182 to Facility Operating License DPR-58 and Amendment 167 to Facility Operating License DPR-74. These amendments approved an increase in main steam safety valve setpoint tolerance. The SBLOCA analyses supporting these amendments and related cross-tie open analyses became the basis for Cook Nuclear Plant 10 CFR 50.46 reports starting with the letter identified as AEP:NRC:1118H. Although we are not specifically submitting the revised Unit 1 cross-tie open case as part of our license basis, the results of the new analysis will be used to update the UFSAR reference to a Unit 1 cross-ties open SBLOCA run. It will also provide the basis for future Unit 1 HHSI cross-ties open 10 CFR 50.46 reports.

Currently, both LBLOCA and SBLOCA reanalyses are being reviewed by NRC staff in conjunction with evaluations and analyses to support an increase in allowable steam generator tube plugging (SGTP) for Unit 1. This work was submitted to the staff in May 1995 with our letter identified as AEP:NRC:1207. A specific letter explaining the effect of the revised power shape on the increased SGTP LOCA analyses will be submitted in the near future.

New LBLOCA and SBLOCA analyses of record for Unit 2 will be included as part of a planned uprating effort. The submission of the results of these new Unit 2 analyses is planned for 1996.

Sincerely,



E. E. Fitzpatrick
Vice President

slc

Attachments

cc: A. A. Blind
G. Charnoff
J. B. Martin
H. J. Miller
NFEM Section Chief
NRC Resident Inspector - Bridgman
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ATTACHMENT 1 TO AEP:NRG:1118J
WESTINGHOUSE ELECTRIC CORPORATION
DESCRIPTION OF LOCA MODEL CHANGES