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 CLARK, R.A. Operating Reactors Branch 3

Acc 8106220291

SUBJECT: Forwards YAEC-1241, "Thermal-Hydraulic Analysis of PWR Fuel Element Transients Using CHIC-KIN Code." Mods to CHIC-KIN program do not require NRC review.

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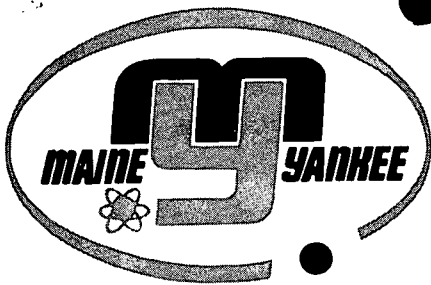
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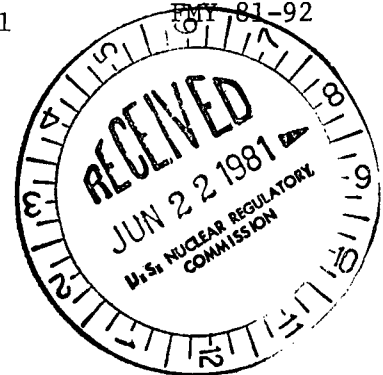


MAINE YANKEE ATOMIC POWER COMPANY
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June 17, 1981

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FMY 81-92



United States Nuclear Regulatory Commission
Washington, D. C. 20555

Attention: Office of Nuclear Reactor Regulation
Division of Licensing
Operating Reactors Branch 3
Mr. Robert A. Clark, Branch Chief

- References:
- (1) License No. DPR-36 (Docket No. 50-309)
 - (2) WAPD-TM-479, CHIC-KIN, A FORTRAN Program for Intermediate and Fast Transients in a Water Moderated Reactor, J. A. Redfield, January 1965
 - (3) YAEC-1259, Maine Yankee Cycle 6 Core Performance Analysis, A. S. DiGiovine et al., 1981, Submitted by MYAPC letter to USNRC (FMY 81-65), dated April 28, 1981
 - (4) TREE-NUREG-1180, February 1978, MATPRO-VERSION 10, A Handbook of Material Properties for Use in the Analysis of Light Water Reactor Fuel Rod Behavior, by EG&G, Inc.
 - (5) YAEC-1241, Thermal-Hydraulic Analysis of PWR Fuel-Element Transients Using the CHIC-KIN Code, Robert E. Helfrich, March 1981.

Subject: CHIC-KIN Computer Program Modifications

Dear Sir:

Pursuant to your request, Maine Yankee hereby documents that the modifications to the CHIC-KIN program are of a nature which do not require NRC review. As you are aware, the CHIC-KIN program, Reference (2), has been used to analyze the CEA ejected rod and RCP seized rotor accidents in the Maine Yankee safety analysis.

The program modifications described in Reference (3) were essentially adaptations of several user convenience features, and included the incorporation of several MATPRO-VERSION 10 system material property subroutines, Reference (4), to allow CHIC-KIN to select and vary fuel and clad thermal properties as a function of temperature. However, the solution technique used in CHIC-KIN remains unchanged.

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U. S. Nuclear Regulatory Commission
Attention: Mr. Robert A. Clark, Branch Chief

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During conversations with your staff in November, 1980, in preparation for Cycle 6 reload analysis activities, our modification of CHIC-KIN was discussed. Messrs. Speis, Sheron and Meyer of your staff indicated that formal review of the modifications would not be necessary, and that Maine Yankee need only provide a brief description of the changes in the Cycle 6 Core Performance Analysis, which was done in Reference (3).

We have enclosed a copy of YAEK-1241, Reference (5) for your use and information.

We trust this information is satisfactory; however, should you desire additional information, please feel free to contact us.

Very truly yours,

MAINE YANKEE ATOMIC POWER COMPANY



R. H. Groce
Senior Engineer - Licensing

RHG/kab

Enclosure