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Regulatory

File Cy.

December 14, 1973



Mr. J. F. O'Leary, Director
 Directorate of Licensing
 Office of Regulation
 U.S. Atomic Energy Commission
 Washington, D.C. 20545

Subject: Proposed Change to Appendix A of DPR-19
 (Dresden Unit 2) - AEC Dkt 50-237

Dear Mr. O'Leary:

Pursuant to Section 50.59 of 10 CFR 50 and Paragraph 3.B of the Facility License DPR-19, Commonwealth Edison Company hereby submits a proposed change to Appendix A of DPR-19 (Dresden Unit 2). The purpose of this change is to modify the fuel densification specification as related to the gap conductance model.

The attached change reflects information submitted to the AEC by General Electric Company in their letter of December 12, 1973, from J. Hinds to V. Moore, "Plant Evaluations with GEGAP-III," and General Electric Reports NEDM-10735 and NEDO-20181.

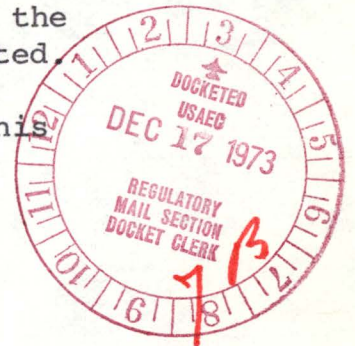
Transient analyses have been performed by General Electric Company using the models described in NEDM-10735 Supplement 6, with the exception that the gap conductances were used as analyzed in GEGAP-III with Atomic Energy Commission modifications. The conclusions are that the results are less severe than those previously reported.

Three signed originals and 37 copies of this proposed change are submitted for your use.

Very truly yours,

J. S. Abel

J. S. Abel
 Nuclear Licensing Administrator
 Boiling Water Reactors



SUBSCRIBED and SWORN to
 before me this 14th day
 of December, 1973.

Brenda Panmer
 Notary Public

8936

Edo 2.1

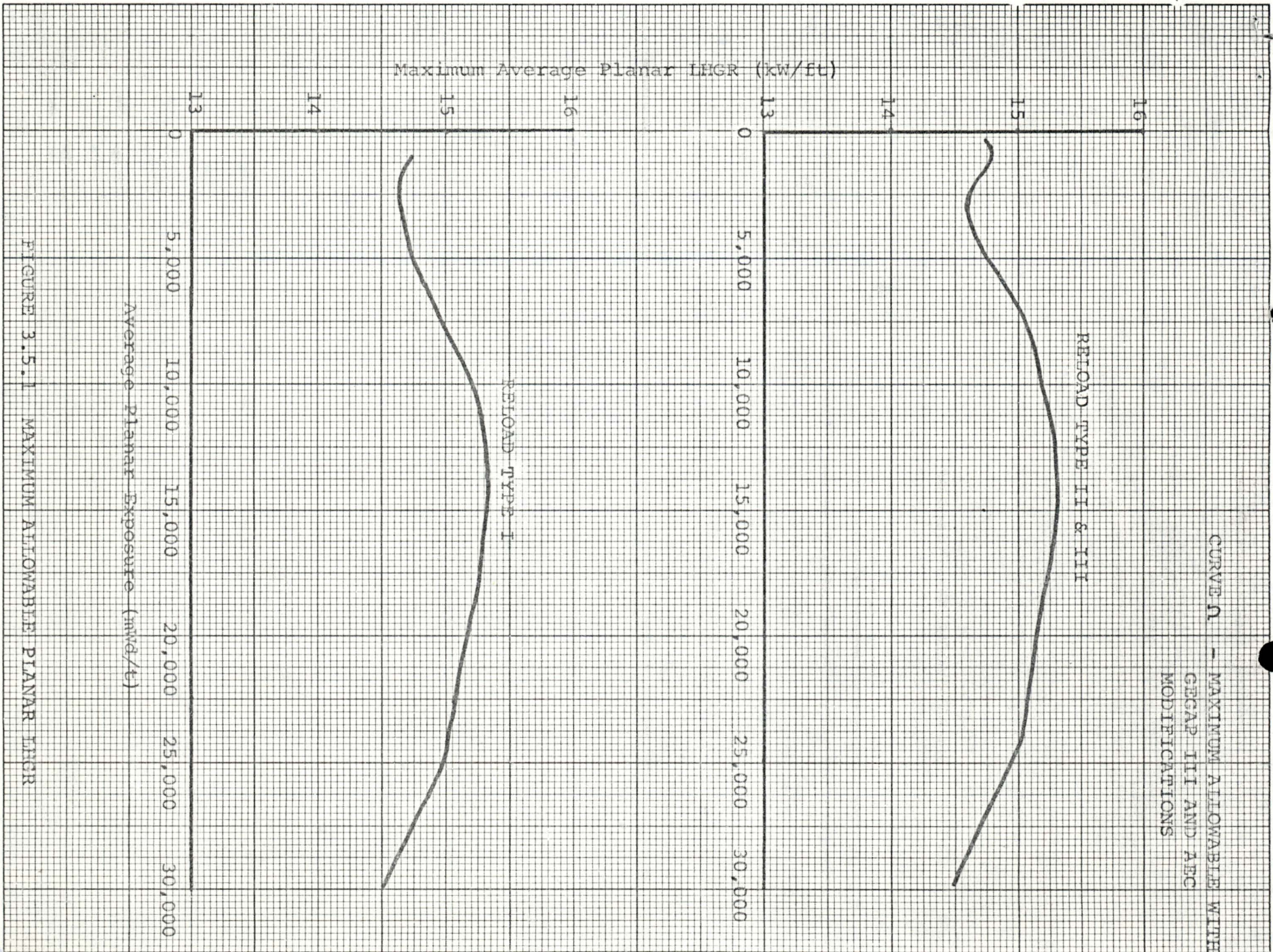


FIGURE 3.5.1 MAXIMUM ALLOWABLE PLANAR LEGR

Average Planar Exposure (mrad/t)

RELOAD TYPE I

RELOAD TYPE II & III

CURVE A - MAXIMUM ALLOWABLE WITH
GEGAP III AND AEGC
MODIFICATIONS

3.5.1 Average Planar LHGR

This specification assures that the peak cladding temperature following the postulated design basis loss-of-coolant accident will not exceed the 2300°F limit specified in the Interim Acceptance Criteria (IAC) issued in June 1971 considering the postulated effects of fuel pellet densification.

The peak cladding temperature following a postulated loss-of-coolant accident is primarily a function of the average heat generation rate of all the rods of a fuel assembly at any axial location and is only dependent secondarily on the rod to rod power distribution within an assembly. Since expected local variations in power distribution within a fuel assembly affect the calculated peak clad temperature by less than $\pm 20^\circ\text{F}$ relative to the peak temperature for a typical fuel design, the limit on the average linear heat generation rate is sufficient to assure that calculated temperatures are below the IAC limit.

The maximum average planar LHGR shown in Figure 3.5.1 is the same as that shown on the curve labeled " Ω " (omega) on Figures 3-H and 4-H in the General Electric letter of J. A. Hinds to V. A. Moore, "Plant Evaluations with GEGAP-III," dated December 12, 1973, based on calculations employing the models described in the General Electric reports NEDM-10735 as modified by the General Electric report NEDO-20181.

2062.3

3.5.J Local LHGR

This specification assures that the linear heat generation rate in any rod is less than the design linear heat generation even if fuel pellet densification is postulated. The power spike penalty specified is based on the analysis presented in Section 3.2.1 of the GE topical report NEDM-10735 Supplement 6, and assumes a linearly increasing variation in axial gaps between core bottom and top, and assures with a 95% confidence, that no more than one fuel rod exceeds the design linear heat generation rate due to power spiking.

2062.4