D 04/21/78

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NRC METROPOL EDISON DATE RCVD: 04/21/78

DOCTYPE: LETTER NOTARIZED: NO COPIES RECEIVED:
SUBJECT LTR 1 ENCL 1
ADVISING CORRECTED DATA TO APPLICANT'S LTR OF 03/27/78 SUPPORTING CONCLUSION
THAT VARIATIONS IN MODERATOR AND DOPPLER COEFFICIENTS HAVE NO SIGNIFICANT
EFFECT ON PEAK PRESSURE. IS NO LONGER NECESSARY. W/ATT.

PLANT NAME: THREE MILE ISLAND - UNIT 1 REVIEWER INITIAL: XJM
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GENERAL DISTRIBUTION FOR AFTER ISSUANCE OF OPERATING LICENSE
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1485 304

DISTRIBUTION: LTR 40 ENCL 39 CONTROL [illegible]
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METROPOLITAN EDISON COMPANY

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April 17, 1978
GQL 0669

Director of Nuclear Reactor Regulations
Attn: R. W. Reid, Chief
Operating Reactors Branch No. 4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Sir:

Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
High Pressure Trip and Pressurizer Code Safety Valve Settings

Your letter of April 6, 1977, issuing Amendment No. 28 to Met-Ed Operating License No. DPR-50 for TMI-1, approved an increase in the settings for the High Pressure Trip and Pressurizer Code Safety Valves through Cycle 3 only. Also, your letter stated that to eliminate the need to address these settings separately for future cycles, Met-Ed should commit to add the Feedwater Line Break accident to those accidents already regularly considered in connection with each reload.

On March 27, 1978, we submitted data to support our conclusion that variations in Moderator and Doppler coefficients have no significant effect on peak pressure.

Subsequent to our submittal of March 27, 1978, your Mr. G. B. Zwetzig identified an error in our submittal and requested that we provide the corrected data and sample calculations. He further stated that NRC approval is contingent upon our commitment to provide a bounding analysis justifying the increased settings for future cycles.

Babcock and Wilcox has performed the bounding analysis to justify the increased settings for Cycle 4 as well as future cycles. The results shown in the attached figure, indicate that the peak RC system pressure is less than 2750 psig for Moderator coefficients more negative than -0.6×10^{-4} $\Delta k/k/^{\circ}F$. This acceptable range includes the present Cycle 4 Moderator coefficient of -0.63×10^{-4} $\Delta k/k/^{\circ}F$.

The analysis is based on a model consistent with previous cycles with the additional conservatism of using a 45 psi instrument error associated with the Rosemont pressure transmitters under degraded environmental conditions.

1485 305

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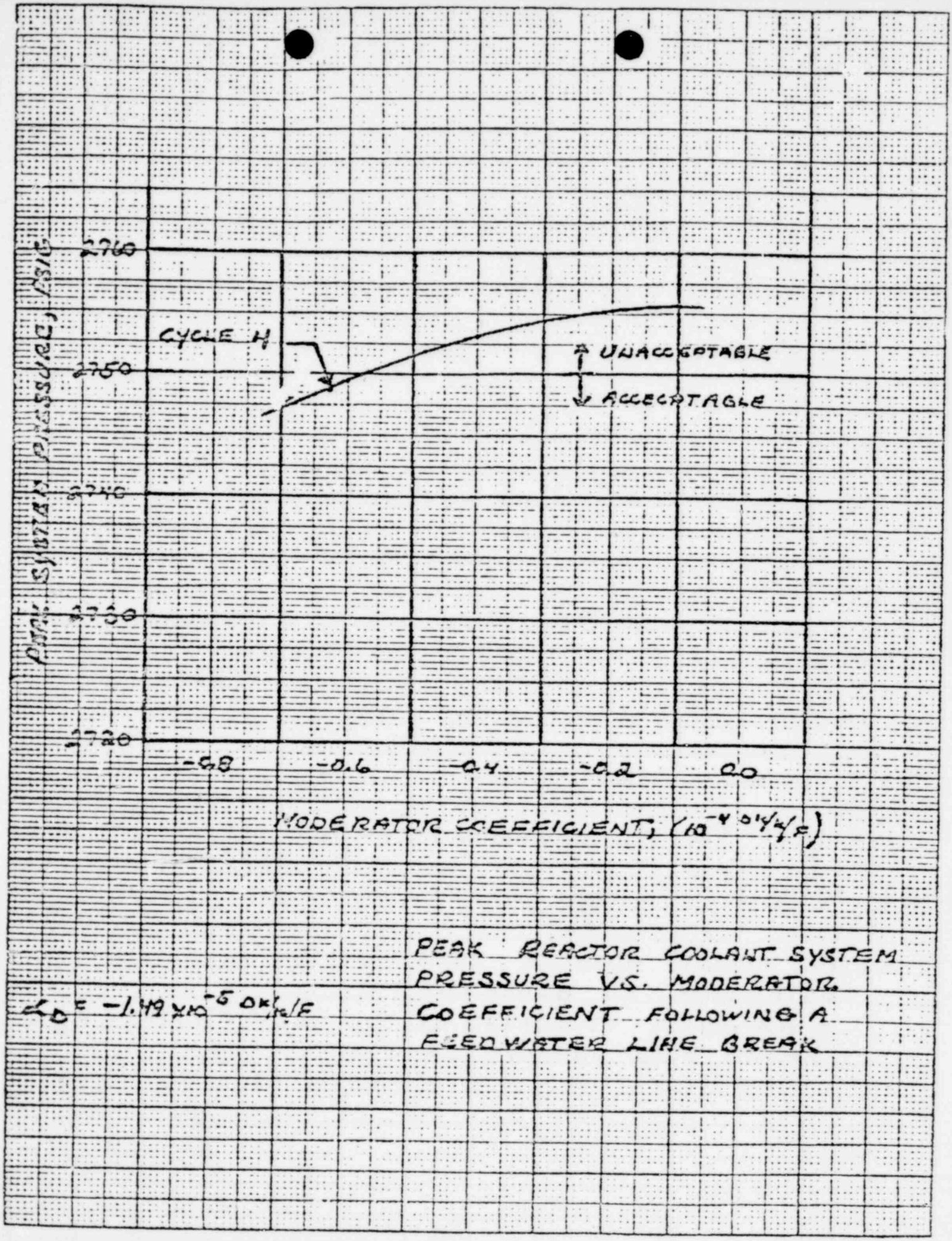
The analysis is insensitive to Doppler coefficient since the fuel temperature changes (increases) by only a few degrees prior to development of peak system pressure. This analysis is based on a Doppler coefficient of -1.49×10^{-5} $\Delta k/k/^{o}F$ which should be conservative with respect to subsequent cycles.

In view of the bounding analysis having been performed and the results submitted herewith, Met-Ed feels that the corrected data to our letter of March 27, 1978 is no longer necessary.

Sincerely,

J. G. Herbein
Vice President-Generation

JGH:DGM:cjg



$L_D = -1.49 \times 10^{-5}$ Δk/k/E

PEAK REACTOR COOLANT SYSTEM PRESSURE VS. MODERATOR COEFFICIENT FOLLOWING A FEEDWATER LINE BREAK

POOR ORIGINAL