



METROPOLITAN EDISON COMPANY SUBS. DIARY OF GENERAL PUBLIC UTILITIES CORPORATION

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March 29, 1978
GEL 0547



Director of Nuclear Reactor Regulation
Attn: Mr. S. A. Varga, Chief
Light Water Reactors Branch 4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Sir:

Three Mile Island Nuclear Station Unit 2 (TMI-2)
Docket No. 50-320
License No. DPR-73
Power Operation With Three
Reactor Coolant Pumps

As a result of the failure of the anti-rotational device on reactor coolant pump 2A at TMI-2, we intend to operate the plant using three reactor coolant pumps. The affected pump is presently blocked in position so that it cannot rotate in either the forward or reverse direction. At present, we expect to replace the clutch on this pump at the earliest convenient time, but probably no more than six weeks from now. In the meantime, we evaluated the effects of three pump operation for safety concerns and/or potential unreviewed safety issues. Based upon review of docketed material for plants of similar design and power level, we concluded that three pump operation within the present technical specifications presents neither safety concerns nor any violation of safety limits for any 10CFR Chapter 15 transient or accident. These conclusions are valid for plant operation whether the pump is blocked or in a normal idle condition and restrained from reverse movement by the anti-rotational device.

Subsequent to our evaluation, the NRC Staff asked questions about the operation of the plant in this condition. The major item was that localized peaking factors F_q might be sufficiently high to cause localized fuel damage as a result of certain transients.

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Due to the operation of TMI-2 as a chemical shift controlled plant (i.e. rods are nearly completely withdrawn from the core) and technical specifications limits on power level as a function of the number of operating pumps, local fuel damage is considered extremely unlikely. Nevertheless, we agree that it is appropriate to operate the plant using the following limits:

$$F_d \leq \frac{2.35}{\rho}$$

where

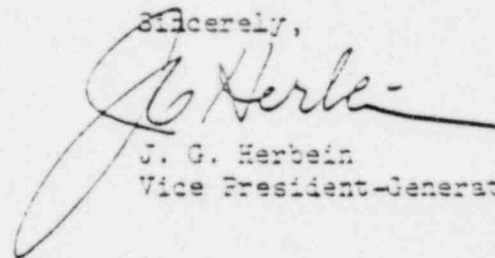
F_d = the radial x axial peaking factor, and

ρ = thermal power

Maximum allowable thermal power for the existing pump combination

as requested by the Staff.

Sincerely,



J. G. Herbein
Vice President-Generation

JGH:CWS:dkf