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May 9, 1985  
5211-85-2090

Office of Nuclear Reactor Regulation  
Attn: J. F. Stolz, Chief  
Operating Reactor Branch No. 4  
Division of Licensing  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Stolz:

Three Mile Island Nuclear Station Unit 1 (TMI-1)  
Operating License No. DPR-50  
Docket No. 50-289  
Subcooling Margin  
Configuration Factor

By letter dated September 7, 1983, GPU Nuclear Corporation presented the results of our evaluation of the "physical configuration factor" which is a bounding value for the difference between the indicated pressure at the hot leg pressure instrument and the actual pressure at the top of the hot leg. At that time, we projected the maximum physical configuration factor to be about  $1.3F^\circ$  for the Saturation Margin Monitoring System.

Since that time, we have completed the modifications planned for the Saturation Margin Monitoring System, and refined our calculations. Our refined calculations confirm a maximum physical configuration factor of less than  $1.3F^\circ$  for the pressure range of interest (i.e. above 200 psig) under all containment environmental conditions.

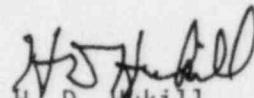
We also have evaluated the physical configuration factor associated with the use of incore thermocouples and RCS pressure instruments to determine margin to saturation (reactor coolant pumps off). For harsh environmental conditions,  $1.4F^\circ$  represents a bounding value for physical configuration factor at 175 psig. The physical configuration factor for nonharsh environment is  $1.5F^\circ$  at 175 psig.

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This confirms discussions with Mr. Owen Thompson of your staff on April 29, 1985.

Sincerely,

  
H. D. Hukill  
Director, TMI-1

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References: GPUN Letter 5211-83-250, H. D. Hukill to J. F. Stolz (NRC)  
"25°F Subcooling Margin," September 7, 1983.