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U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

Gentlemen:

Subject: Three Mile Island Nuclear Station, Unit No. 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
Safety Evaluation for Compliance with 10 CFR 50.62
Anticipated Transient Without Scram (ATWS) (TAC No. 59151)

By letter dated December 7, 1989, the Staff transmitted the subject Safety Evaluation Report (SER) by the Office of Nuclear Reactor Regulation (NRR) to GPU Nuclear (GPUN) Corporation. This letter serves to clarify one statement in the SER with regard to Item No. 6 "Safety Related (1E) Power Supplies" (Page 6, at top), namely:

"The licensee stated that the AMSAC (HSPS and EHC/ETS) equipment and the RCS pressure signal loops for the DSS are powered by safety related (1E) power supplies (e.g., RTS vital buses) as approved in Reference 6 and discussed under Item 2."

Reference 6 of the SER is "NRC Letter, G. Holahan to L. C. Stalter (BWO), 'August 17, 1988 B&W/NRC ATWS Meeting,' September 7, 1988." Reference 6, Option 2, allows the use of shared vital power supply sources for the ATWS Mitigation System Actuation Circuitry (AMSAC) functions and Reactor Trip System (RTS) if a Failure Modes and Effects Analysis (FMEA) shows that common mode failures will not propagate through power supplies and disable the RTS. In this case, AMSAC must also be a Class 1E system. The SER reference to Reference 6 implies that the TMI-1 AMSAC is entirely Class 1E which is not the case.

As indicated in our submittal of October 4, 1989 (GPUN Letter No. C311-89-2058), the AMSAC functions, namely: Emergency Feedwater (EFW) initiation and turbine trip are performed by the Heat Sink Protection System (HSPS) and Electro-Hydraulic Control/Emergency Trip System (EHC/ETS), respectively. Figure 7 of that submittal depicts the ATWS power sources to these two (2) systems, and is attached for ease of reference.

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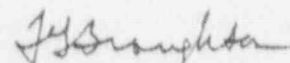
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HSPS is a Class 1E system and powered from a Class 1E supply. The EHC/ETS is not a Class 1E system, is not powered from a Class 1E supply, and is powered from an independent Permanent Magnet Generator (PMG), as shown on Figure 7, to meet the AMSAC power supply requirements. The only potential interface between the EHC/ETS system and the RTS is through a non-1E inverter that is fed backup power from a Class 1E station battery. Our submittal of October 4, 1989 provided a FMEA for this potential interface and determined that a fault on the EHC/ETS system will not propagate through this source so as to disable AMSAC or the RTS. This clarification has been discussed with the NRR Project Manager.

Sincerely,



T. G. Broughton
Vice President and Director, TMI-1

GMG/plp

cc: Administrator, Region 1
TMI-1 NRC Project Manager
Senior NRC Resident Inspector

ATWS POWER SOURCES (FIGURE 7)

