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June 11, 1987
NRC/TMI 87-047

Docket No. 50-320

Mr. F. R. Standerfer
Vice President/Director, TMI-2
GPU Nuclear Corporation
P. O. Box 480
Middletown, PA 17057

Dear Mr. Standerfer:

Subject: Defueling Water Cleanup System Fuel Transfer Canal/Spent Fuel Pool Cross-Connect to the Reactor Vessel Cleanup System

Reference: Letter 4410-87-L-0065, F. Standerfer to USNRC, Defueling Water Cleanup System Fuel Transfer Canal/Spent Fuel Pool Cross-Connect to the Reactor Vessel Cleanup System, dated May 21, 1987

The referenced letter submitted your safety evaluation of the proposed cross connection of the two subsystem portions of the Defueling Water Cleanup System (DWCS). The original approved design of the DWCS includes two independent systems, one of which was intended to process reactor vessel water, the other was intended to process fuel transfer canal (FTC) and spent fuel pool (SFP) water. Water chemistry conditions resulted in the system as designed being ineffective in filtering the water. As a result, the reactor vessel cleanup system was modified by the installation of a coagulant and filter aid feed system which has been successful in effectively filtering the reactor vessel water. Presently, there is a need to process the water in the FTC and SFP to maintain underwater visibility for defueling related operations. Your proposed cross connect of the two filtration systems would allow processing of FTC/SFP water in one train of the reactor vessel filtration system, thus eliminating the need to install a coagulant and filter aid feed system in the FTC/SFP filtration portion of the DWCS.

The proposed cross connection will be accomplished by a hose jumper from the discharge of DWC-P-3A (FTC cleanup pump) to the discharge of DWC-P-2B (reactor vessel cleanup pump). Appropriate valving will allow isolating the 'B' reactor vessel filtration train from the reactor coolant system and supplying water from the fuel transfer canal to that filter train. Effluent from the filters will be routed via a hose connected between valves DWC-V-357 and DWC-V-088 to return to the SFP.

We have reviewed your submittal and determined that the modifications deviate from the flow paths described in the original DWCS Technical Evaluation Report. However, we concur with your assessment that the likelihood of accidents and the consequences of those accidents with regard to impact of

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system leakage, boron dilution potential, and potential for inadvertent criticality are within the bounds of the analysis in the original approval.

We therefore approve your proposed system cross connect as described in your submittal and in Engineering Change Authorization 3525-87-0476. Operation of the system will be contingent upon our approval of the applicable procedures subject to Technical Specification 6.8.2.

Sincerely,

ORIGINAL SIGNED BY:
William D. Travers

William D. Travers, Director
TMI-2 Cleanup Project Directrate

cc: T. F. Demmitt
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