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MAR 5 1980

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MEMORANDUM FOR: Harley Silver, Project Manager, TMI-1 Restart

THRU: G. R. Mazetis, Section Leader, Reactor Systems Branch, DSS

FROM: Jared Wermiel, Auxiliary Systems Branch, DSS

SUBJECT: ✓ TMI-1 RESTART REVIEW, APPLICATION OF SRP SECTION 10.4.9,  
"AUXILIARY FEEDWATER SYSTEM" REQUIREMENT FOR PIPE RUPTURE

As part of our review for restart of TMI-1, we are evaluating the present TMI-1 emergency feedwater (EFW) system design against the current requirements of SRP Section 10.4.9, Auxiliary Feedwater System. This review resulted in an SER open item concerning postulated pipe ruptures in the EFW pump discharge lines (Question 12, Supplement 1, Part 2 of the Restart Report). The enclosure is our evaluation of the licensee's response to this item. We find the existing EFW system acceptable.

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Jared Wermiel  
Auxiliary Systems Branch  
Division of Systems Safety

Enclosure:  
As stated

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TMI-1 SER SUPPLEMENT

Status Report, Page C1-10, Additional Items, No. 8: In Amendment 12, Met-Ed provided additional information to our concern with a pipe rupture in the EFW pump discharge line. The TMI emergency feedwater system does not meet all our present criteria, specifically, the system is not designed as a high energy system. The licensee points out that their EFW system is not used for startup and shutdown, but functions only under emergency and periodic testing conditions, thus reducing the probability of a pipe rupture. The licensee further indicates that the normal system operating stresses are substantially less than the minimum yield strength of the system piping, and therefore, a double-ended high energy pipe break is extremely improbable. In addition, Met-Ed has agreed to perform a volumetric nondestructive examination (NDE) prior to restart of 10 welds in the system piping with the highest combined stresses to verify that no undesirable flaws exist. We have also noted that B&W plants with the once-through steam generator have not experienced any water hammer phenomena in the EFW system which could impose additional stresses.

Based on the above design features, we agree with the licensee that the probability of an EFW system pipe rupture is sufficiently remote to accept the system design without modification in this area.