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## Babcock & Wilcox

Power Generation Group

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May 20, 1977

Mr. R. M. Klingaman  
Manager, Generation Engineering  
Metropolitan Edison Company  
P.O. Box 542  
Reading, Pennsylvania 19603

Subject: Three Mile Island Nuclear Station - Unit No. 1  
Containment Flooding Incident

Dear Mr. Klingaman:

B&W wishes to inform you of an incident that occurred during the preoperational testing of a nuclear power plant with a B&W NSSS which you should review for applicability to your design.

On October 15, 1976, during preoperational testing at the Davis-Besse Nuclear Plant, the containment emergency sump isolation valves were inadvertently opened allowing water from the BWST to drain into the containment building. By the time the valves were closed (approximately two minutes elapsed time), 40,000 gallons of water had drained into the containment building, wetting the bottom of the then cold reactor vessel.

B&W is concerned that adequate measures be undertaken to preclude such an event particularly when the reactor coolant system is at operating temperature and pressure. B&W's analysis on RC components assumes that the reactor building is dry when the system is at temperature and pressure, i.e., that no flooding of any portion of the components and supports is allowed to occur under non-faulted conditions. For this reason, B&W recommends that you review your plant layout to determine the following:

1. Whether an inadvertent opening of the sump isolation valves would allow BWST water to drain into the containment building or whether other valves in the decay heat or BWST piping would present such flow to the containment.
2. Whether your specific containment design would preclude wetting portions of the NSSS or its supports in the event of such containment flooding.

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Def. Est. For ID 204  
PM. Est. In Ev  
Charles Shapiro CSR 7/8/81  
Doyle Reporting Inc. C-1

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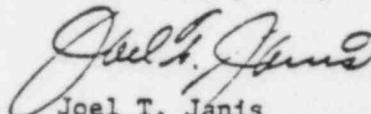
MAY 20, 1977

If component wetting would occur in your plant, B&W recommends that design modifications be made to preclude containment flooding. The following design modifications are suggested:

1. Addition of check valves in common header to prevent flow from BWST to sump.
2. Addition of valve interlock to prevent opening of sump isolation valves when the BWST isolation valves are open.

If you have any questions or require additional information, please advise.

Very truly yours,



Joel T. Janis  
Service Manager

JTJ/hh

cc: GP Miller  
JP O'Hanlon  
CR Montgomery  
LC Rogers  
SL Smith