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MAY 31 1984

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MEMORANDUM FOR: Karl V. Seyfrit, Chief
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THRU: Stuart D. Rubin, Lead Engineer
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FROM: Peter Lam, Systems Engineer
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SUBJECT: STUCK OPEN ISOLATION CHECK VALVE ON THE RESIDUAL
HEAT REMOVAL SYSTEM AT HATCH UNIT 2

Enclosed is an Engineering Evaluation Report for an event at Hatch 2 in which an isolation check valve on a 24-inch injection line of the residual heat removal system was held open by its air actuator for a four-month period of power operation. The principal cause of the event was a maintenance error on the air actuator. Important secondary factors which allowed the error to remain undetected were inadequate post-maintenance testing of the check valve and inadequate surveillance of indications in the control room pertaining to the valve position and actuator travel.

The study concludes that the open check valve substantially degraded the isolation boundaries installed between the high-pressure reactor coolant system and the low-pressure residual heat removal system during the four-month period. The mispositioned valve thereby resulted in a significant increase in plant risk during the period because it significantly increased the probability of an interfacing loss-of-coolant accident. Such an accident would involve the sudden discharge of high-pressure reactor coolant outside the primary containment and would also disable the low-pressure residual heat removal system.

It is suggested that this event be considered for inclusion in a future issue of Power Reactor Events. In addition to the usual distribution, it is also suggested that the report be sent to the Integrated Maintenance Task Group within the Office of Nuclear Reactor Regulation for information.

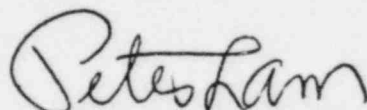
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In light of the potentially severe consequence of an interfacing loss-of-coolant accident and the important contribution of human errors to the degradation of high-pressure/low-pressure system boundaries, it is suggested that the Office of Inspection and Enforcement consider issuing an Information Notice on this and a related event at Pilgrim which is also briefly discussed in the evaluation. Finally, this evaluation proposes that an industry group, such as the Institute of Nuclear Power Operations, define good industry practice for disabling testable check valve air actuators and their associated position indications in instances when flow testing is performed in accordance with ASME Section XI.



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Enclosure:
As stated