

PDR

JUN 01 1984

MEMORANDUM FOR: Harold R. Denton, Director
Office of Nuclear Reactor Regulation

FROM: C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

SUBJECT: STUCK OPEN ISOLATION CHECK VALVE ON THE
RESIDUAL HEAT REMOVAL SYSTEM AT HATCH UNIT 2

Enclosed please find a recently completed Engineering Evaluation Report on the above subject for your information. The event is judged to have safety significance because the open check valve substantially degraded the isolation barriers between the high-pressure reactor coolant system and the low-pressure residual heat removal system. This in turn led to a significant increase in reactor accident risks at Hatch Unit 2 because the mispositioned valve significantly increased the probability of an interfacing loss-of-coolant accident. Such an accident which in this situation would be caused by a single failure of the normally closed motor-operated injection valve would involve the sudden discharge of high-pressure reactor coolant outside the primary containment and would also likely disable the low-pressure residual heat removal system.

Our evaluation determined that the stuck open isolation check valve on the low pressure coolant injection line at Hatch Unit 2 was caused by a series of human errors. They involved a maintenance error on the air actuator of the valve; inadequate post-maintenance testing; and inadequate surveillance of control room indications related to valve disk position and actuator travel. We believe that the lessons learned from this event regarding such human errors related to maintenance and post-maintenance testing of the isolation check valve would be of interest to the Integrated Maintenance Task Group within your office.

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By a separate memorandum, we are suggesting that the Office of Inspection and Enforcement prepare an information notice on this and a related event at Pilgrim. If you have questions or comments, please contact Peter Lam (x24438) of my staff.

Original signed by:
C. J. Heltemes, Jr.

C. J. Heltemes, Jr., Director
Office for Analysis and Evaluation
of Operational Data

Enclosure:
As stated

cc w/o enclosure:
R. C. DeYoung, IE
W. T. Russell, NRR
J. Sniezek, DEDROGR

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