



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
631 PARK AVENUE  
KING OF PRUSSIA, PENNSYLVANIA 19406

APR 23 1979

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Docket Nos. 50-352  
50-353

Philadelphia Electric Company  
Attention: Mr. V. S. Boyer  
Vice President  
Engineering and Research  
2301 Market Street  
Philadelphia, PA 19101

Gentlemen:

The enclosed Bulletin 79-05B is forwarded to you for information. No written response is required. We have also enclosed copies of recommendations of the ACRS to the Commission for your information. If you desire additional information regarding this matter, please contact this office.

Sincerely,

  
for Boyce H. Grier  
Director

Enclosures:

1. IE Bulletin No. 79-05B  
with Enclosure
2. ACRS Recommendations to the  
Commission dated April 18, 1979  
and April 20, 1979 (Typed Copy)

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
WASHINGTON, DC 20555

IE Bulletin 79-05B  
April 21, 1979  
Page 1 of 4

NUCLEAR INCIDENT AT THREE MILE ISLAND - SUPPLEMENT

Description of Circumstances:

Continued NRC evaluation of the nuclear incident at Three Mile Island Unit 2 has identified measures in addition to those discussed in IE Bulletin 79-05 and 79-05A which should be acted upon by licensees with reactors designed by B&W. As discussed in Item 4.c. of Actions to be taken by Licensees in IEB 79-05A, the preferred mode of core cooling following a transient or accident is to provide forced flow using reactor coolant pumps.

It appears that natural circulation was not successfully achieved upon securing the reactor coolant pumps during the first two hours of the Three Mile Island (TMI) No. 2 incident of March 28, 1979. Initiation of natural circulation was inhibited by significant coolant voids, possibly aggravated by release of noncondensable gases, in the primary coolant system. To avoid this potential for interference with natural circulation, the operator should ensure that the primary system is subcooled, and remains subcooled, before any attempt is made to establish natural circulation.

Natural circulation in Babcock and Wilcox reactor systems is enhanced by maintaining a relatively high water level on the secondary side of the once through steam generators (OTSG). It is also promoted by injection of auxiliary feedwater at the upper nozzles in the OTSGs. The integrated Control System automatically sets the OTSG level setpoint to 50% on the operating range when all reactor coolant pumps (RCP) are secured. However, in unusual or abnormal situations, manual actions by the operator to increase steam generator level will enhance natural circulation capability in anticipation of a possible loss of operation of the reactor coolant pumps. As stated previously, forced flow of primary coolant through the core is preferred to natural circulation.

Other means of reducing the possibility of void formation in the reactor coolant system are:

- A. Minimize the operation of the  
the pressurizer and thereby  
reduction by a blowdown thro

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