

50-289

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## DESCRIPTION

LTR DESCRIBING RO 50-289/76-09/1T ON 2-21-76  
RE INADEQUATE MAKE-UP PUMP A RELATED PROCEDURAL  
CONTROLS CAUSED A REDUCTION IN THE DEGREE OF  
REDUNDANCY PROVIDED IN AN ENGINEERED SAFETY  
SYSTEM.

## ENCLOSURE

POOR ORIGINAL

PLANT NAME: Three Mile Island

NOTE: IF PERSONNEL EXPOSURE IS INVOLVED  
SEND DIRECTLY TO KREGER/J. COLLINS

## SAFETY

## FOR ACTION/INFORMATION

## ENVIRO

3-17-76 RB

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## CONTROL NUMBER

2446

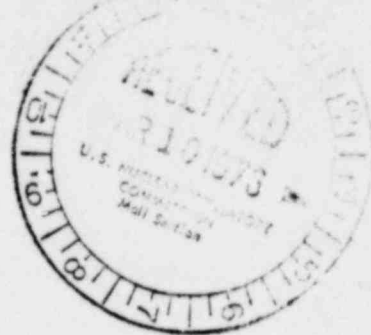


METROPOLITAN EDISON COMPANY

POST OFFICE BOX 542 READING, PENNSYLVANIA 19603

TELEPHONE 215-929-3601

March 6, 1976  
GQL 0299



Director of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Sir:

Docket No. 50-289  
Operating License No. DPR-50

In accordance with the Technical Specifications of our Three Mile Island Nuclear Station Unit 1 (TMI-1), we are reporting the following reportable occurrence:

- (1) Report Number: ER 76-09/1T
- (2a) Report Date: March 6, 1976
- (2b) Event Date: February 21, 1976
- (3) Facility: Three Mile Island Nuclear Station Unit 1
- (4) Identification of Event:

Title: Inadequate Make-Up Pump A Related Procedural Controls

Type: A reportable event as defined by Technical Specification 6.9.2B.(3) in that the Inadequate Make-Up Pump A related Procedural Controls caused a reduction in the degree of redundancy provided in an engineered safety feature system.

- (5) Conditions Prior to Event:

Power: Core: 0%  
Electrical: 0 MWe  
RC Flow:  $62 \times 10^6$  lbs./hr.  
RC Pressure: 2155 psig  
RC Temp.: 500°F  
PRZR Level: 100 inches  
PRZR Temp.: 645°F

2446

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(6) Description of Event:

At approximately 0140 hours on February 21, 1976 during the pretest system lineup of the refueling interval "ES System and Power Transfer Test" the "A" Makeup and Purification Pump was started. The test procedure SP 1303-11.10 allowed for operation of either the "A" or "B" Makeup Pump to perform the "B" actuation portion of the test, however, the pretest system lineup was written for operation of the "B" Makeup Pump. Thus when the operator closed the suction cross connect valves MU-V68A and MU-V68B in accordance with procedure the pump suction was isolated from the makeup tank which caused the failure of the pump.

In addition, some reactor coolant leaked out of the pump seal as a result of the failure and the degassing of the liquid from the spill resulted in a release of radioactive gas to the Auxiliary Building Exhaust System. The release amounted to a total of 0.166 curies of noble gas.

(7) Designation of Apparent Cause of Event:

The cause of the event has been determined to be procedure and personnel in that the procedure allowed for operation of either the "A" or "B" Makeup Pumps, but the pretest lineup for valve position was written only for operation of the "B" Makeup Pump, which is the normally running pump. The personnel involved with running the test and pretest lineup failed to recognize that when they picked the option to run the "A" makeup pump, the pretest valve lineup was not correct.

(8) Analysis of Event:

It has been determined that this event did not constitute a threat to the health and safety of the public in that:

- a. The "B" and "C" pumps were still operable to perform their Engineered Safeguards function.
- b. The reactor was shutdown and the plant was in the cooldown mode in preparation for refueling when the failure occurred, which reduced the safety impact of the loss of the redundant pump.
- c. The average release rate over the 56 minute period of this release was  $1.64 \times 10^2$  m<sup>3</sup>/sec. with a total release of noble gas of .166 curies. The radioactive material released was predominantly Xe<sup>133</sup> based on previous samples. The instantaneous noble gas release rate was  $2.95 \times 10^2$  m<sup>3</sup>/sec., which is below the Technical Specification limit of  $1.2 \times 10^5$  m<sup>3</sup>/sec.

(9) Corrective Action:

Immediate: The surveillance procedure was thoroughly reviewed by the Plant Operation Review Committee and changed to allow continuance of testing using the "B" and "C" Makeup Pumps as the ES selected pumps. The test was then run and successfully completed.

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Long Term: (a) The test procedure will be changed to eliminate the procedure error to prevent future occurrences of this type.

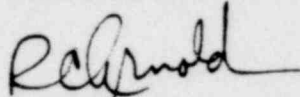
(b) Specific instructions will be promulgated within the Operations Department that will require an operator to notify the Control Room and obtain permission to change the position of valves associated with the Makeup Pumps immediately prior to making that change.

(10) Failure Data:

None

Similar Events: ER 74-9, 74-10

Sincerely,



R. C. Arnold  
Vice President

RCA:JJM:ilm

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