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FROM: Metropolitan Edison Co. Reading, Pennsylvania R.C. Arnold			DATE OF DOC 9-5-75	DATE REC'D 9-9-75	LTR XXX	TWX	RPT	OTHER
TO: NRC			ORIG None	CC	OTHER	SENT AEC PDR <u>XXX</u> SENT LOCAL PDR <u>XXX</u>		
CLASS	UNCLASS XXX	PROP INFO	INPUT	NO CYS REC'D 1		DOCKET NO: 50-289		

**DESCRIPTION:**  
Abnormal Occurrence # 75-29, on 8-27-75  
Concerning Failure of an Engineered Safeguards  
operated Reactor Building Containment Isolation  
Valve (AH-V-ID) to close fully.....

**ENCLOSURES:**

(1 Copy Enclosure Received)

**PLANT NAME:** Three Mile Island # 1

**FOR ACTION/INFORMATION**

SAB 9-10-75

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METROPOLITAN EDISON COMPANY SUBSIDIARY OF GENERAL PUBLIC UTILITIES CORPORATION

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September 5, 1975  
GQL 1481

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

Regulatory

File Cy.



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 abnormal occurrence.

- (1) Report Number: AO 50-289/75-29
- (2a) Report Date: September 5, 1975
- (2b) Occurrence Date: August 27, 1975
- (3) Facility: Three Mile Island Nuclear Station Unit 1
- (4) Identification of Occurrence:



Title: Failure of an Engineered Safeguards operated Reactor Building Containment Isolation Valve (AH-V-1D) to close fully.

Type: An abnormal occurrence as defined by the Technical Specifications, paragraph 1.8d, in that failure of containment isolation valve AH-V-1D to close fully constituted a failure of one component of an engineered safety feature that threatened to cause the feature to be incapable of performing its intended function.

- (5) Conditions Prior to Occurrence:

Power: Core: 98%

Elect.: 825 MW<sub>e</sub> (Gross)

RC Flow:  $139 \times 10^6$  lb/hr

RC Press.: 2155 psig

RC Temp.: 579°F

PRZR Level: 245 inches

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PRZR Temp.: 655°F

(6) Description of Occurrence:

On August 27, 1975, at 0900 hours while placing various components in the required pretest position for a periodic Engineered Safeguards test, the valve position indication for Reactor Building Purge Supply Valve AH-V-1D indicated that the valve was not fully closed.

The operator attempted to open the valve, which is the required pretest position, but the valve did not fully open. The operator then closed the valve by use of the close pushbutton and the valve fully closed.

It should be noted on August 26, 1975, a Reactor Building Purge was terminated at approximately 2045 hours. At this time the AH-V-1D valve position indication showed that the valve was not fully closed. Valve position following purge termination was physically verified by an operator who erroneously judged that AH-V-1D was fully closed.

Immediately the in-series Reactor Building Purge Supply Valve (AH-V-1C) was verified as closed and tested to insure operability.

(7) Designation of Apparent Cause of Occurrence:

The operating cylinders on the "Robotarm" actuator were found to have corrosion on the internal surfaces. There has been no periodic lubrication of the cylinders and the air supply to the valve is not supplied with an oiler.

Binding of the cylinders due to corrosion and inadequate lubrication is considered to have caused the failure of the valve to close fully.

(8) Analysis of Occurrence:

The in-series (redundant) valve (AH-V-1C) was verified operable and in the proper position. Containment integrity was maintained. Therefore, there was no potential threat to the health and safety of the public as a result of this occurrence.

(9) Corrective Actions:

In addition to previously mentioned corrective actions, immediate corrective actions were taken as follows:

- a. Lubricated the Robotarm Actuator
- b. Inspected valve butterfly and seating surfaces
- c. Cycled the valve full open with 110 psig nitrogen pressure
- d. Re-checked valve operation with normal instrument air supply and verified full and smooth travel consistently.
- e. Lubricated and cycled AH-V-1A (purge exhaust valve actuator)

1476 171

Long term corrective actions are:

- a. The Manufacturer's representative is being consulted to obtain his evaluation of cause for the failure and to determine corrective measures.
- b. Markings will be placed prominently on the valve actuators to indicate when the valves are fully closed.

The Plant Operations Review Committee and the Station Superintendent have reviewed and approved the above listed corrective actions and have taken steps to ensure completion of the yet to be completed long term corrective actions.

(10) Failure Data:

Pratt 48" Butterfly Valve  
Bettis Corporation  
Robotarm Actuator  
80889 BK DC  
1074-15R75

Similar Occurrences: None

Sincerely,

Signed - R. C. Arnold

R. C. Arnold  
Vice President

RCA:CWS:tas

cc: Office of Inspection and Enforcement, Region 1

File: 7.7.3.5.1  
20.1.1

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