

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF

DOCKET NO. 50-289  
LICENSE NO. DPR-50

METROPOLITAN EDISON COMPANY

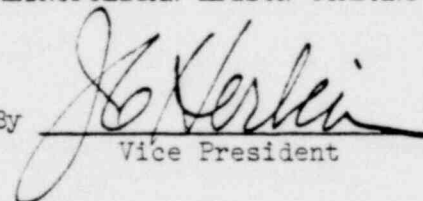
This is to certify that a copy of Technical Specification Change Request No. 66 to Appendix A of the Operating License for Three Mile Island Nuclear Station Unit 1, has, on the date given below, been filed with the U. S. Nuclear Regulatory Commission and been served on the chief executives of Londonderry Township, Dauphin County, Pennsylvania and Dauphin County, Pennsylvania by deposit in the United States mail, addressed as follows:

Mr. Weldon B. Arehart  
Board of Supervisors of  
Londonderry Township  
R. D. #1, Geyers Church Road  
Middletown, Pennsylvania 17057

Mr. Harry B. Reese, Jr.  
Board of County Commissioners  
of Dauphin County  
Dauphin County Court House  
Harrisburg, Pennsylvania 17120

METROPOLITAN EDISON COMPANY

By

  
Vice President

Dated: November 18, 1977

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METROPOLITAN EDISON COMPANY  
JERSEY CENTRAL POWER & LIGHT COMPANY

AND

PENNSYLVANIA ELECTRIC COMPANY  
THREE MILE ISLAND NUCLEAR STATION UNIT 1

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Operating License No. DPR-50  
Docket No. 50-289  
Technical Specification Change Request No. 66

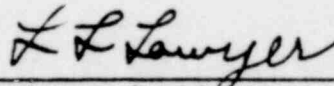
This Technical Specification Change Request is submitted in support of Licensee's request to change Appendix A to Operating License No. DPR-50 for Three Mile Island Nuclear Station Unit 1. As a part of this request, proposed replacement pages for Appendix A are also included.

METROPOLITAN EDISON COMPANY

By

  
Vice President

Sworn and subscribed to me this 18<sup>th</sup> day of November, 1977.



Notary Public  
NOTARY PUBLIC

Reading, Berks County, Pa.  
My Commission Expires Nov. 19, 1979

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Three Mile Island Nuclear Station, Unit 1  
Operating License No. DPR-50  
Docket No. 50-289

Technical Specification Change Request No. 66

The licensee requests that the attached revised page replace page 3-2 of the existing Technical Specification.

Reasons for Change Request

As stated in Event Report 77-04/1T, an error was discovered during an updating of the valves nameplate data. The incorrect value of the valves combined relief capacity was not calculated from values as listed on the valve nameplate.

Safety Analysis Justifying Change Request

This change has been reviewed and the RCS peak pressure was recomputed.

The CADD analysis for the worst case FWLB accident analyzed in support of TMI-1 operation with the high pressure trip set at 2405 psig and the pressurizer safety valves set at 2500 psig used a relief rate through the pressurizer code safety valves of 86 lbm/sec at 2500 psig, or 309,600 lbm/hr/valve. The resulting RCS peak pressure was 2749.5 psia.

The analysis was repeated, assuming a relief rate through the code relief valves of 78 lbm/sec at 2500 psig, or 280,800 lbm/hr/valve. The resulting RCS peak pressure is 2754 psia. The increase of 4 psia agrees with the estimate of 5 psia made by "MPR Associates, Inc.". This analysis supports operation of TMI-1 with the 2405 psig H.P.T. setpoint and the 2500 psig code safety valve setpoint. This analysis was performed assuming a trip string pressure delay time of 500 ms which is characteristic of the 59 PH sensor originally installed at TMI-1.

The same analysis was also performed assuming a string pressure delay time of 450 ms, which is characteristic of the Rosemount sensor which was installed at TMI-1 during the outage. This analysis resulted in peak RCS pressure of 2749.8 psia at the pump discharge. This is 0.3 psi more than the 2749.5 psia peak pressure calculated originally, assuming 86 lbm/sec relief rate at 2500 psig and a 500 ms string delay time.

Therefore, with a maximum possible change of 7 psig: (i) the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased; (ii) the possibility of an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created; (iii) the margin of safety defined in the basis for any technical specification is not reduced.

### Bases

The limitation on power operation with one idle RC pump in each loop has been imposed since the ECCS cooling performance has not been calculated in accordance with the Final Acceptance Criteria requirements specifically for this mode of reactor operation. A time period of 24 hours is allowed for operation with one idle RC pump in each loop to effect repairs of the idle pump(s) and to return the reactor to an acceptable combination of operating RC pumps. The 24 hours for this mode of operation is acceptable since this mode is expected to have considerable margin for the peak cladding temperature limit and since the likelihood of a LOCA within the 24 hour period is considered very remote.

A reactor coolant pump or decay heat removal pump is required to be in operation before the boron concentration is reduced by dilution with makeup water. Either pump will provide mixing which will prevent sudden positive reactivity changes caused by dilute coolant reaching the reactor. One decay heat removal pump will circulate the equivalent of the reactor coolant system volume in one half hour or less.

The decay heat removal system suction piping is designed for 300°F and 370 psig; thus, the system can remove decay heat when the reactor coolant system is below this temperature. (2, 3)

One pressurizer code safety valve is capable of preventing overpressurization when the reactor is not critical since its relieving capacity is greater than that required by the sum of the available heat sources which are pump energy, pressurizer heaters, and reactor decay heat. (4) Both pressurizer code safety valves are required to be in service prior to criticality to conform to the system design relief capabilities. The code safety valves prevent overpressure for a rod withdrawal or feedwater line break accidents. (5) The pressurizer code safety valve lift set point shall be set at 2500 psig  $\pm 1\%$  allowance for error and each valve shall be capable of relieving 280,800 lb/h of saturated steam at a pressure not greater than three percent above the set pressure.

### References

- (1) FSAR, Tables 9-10 and 4-3 through 4-7
- (2) FSAR, Sections 4.2.5.1 and 9.5.2.3
- (3) FSAR, Section 4.2.5.4
- (4) FSAR, Sections 4.3.10.4 and 4.2.4
- (5) FSAR, Section 4.3.7

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