UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 10 TO LICENSE NO. DPR-50

METROPOLITAN EDISON COMPANY

JERSEY CENTRAL POWER AND LIGHT COMPANY

PENNSYLVANIA ELECTRIC COMPANY

THREE MILE ISLAND NUCLEAR STATION, UNIT 1

DOCKET NO. 50-289

Introduction

By letter dated January 9, 1976, Metropolitan Edison Company (MetEd) proposed changes to the Technical Specifications appended to Facility Operating License No. DPR-50 for Three Mile Island Nuclear Station, Unit 1 (TMI-1). MetEd requested changes to clarify certain figures and wording in the Technical Specifications relating to Control Rod Group Withdrawal Limits.

Discussion

MetEd is presently operating TMI-1 with control rod group withdrawal vs power limits that vary as a function of exposure. One set of limits (Figure 3.5-2B in the Technical Specifications) is valid for up to 440 effective full power days (EFPD) and another set of limits is valid after 440 EFPD (Figure 3.5-2C). These limits are normally defined in the Technical Specifications such that the change of limits can occur over a time range (440 EFPD ±10) rather than on a specific day. This provides the licensee some flexibility in reducing the reactor power and making the change. The analyses are also done to consider the effect of the potential variation in exposure.

conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date:
January 15, 1976

In the case of TMI-1 the exposure time range was not included in the original Technical Specifications. However, the analysis had been done to validate that the exposure variation of ±10 EFPD for TMI-1 is acceptable and that the existing applicable limits can accommodate this exposure variation. MetEd has now determined that the time for limit change (440 EFPD) is inconvenient (occurring at mid-week rather than during a lower power demand period) and has requested that the range of time considered in the analysis (±10 EFPD) be included in the Technical Specifications.

Evaluation

The rod group withdrawal limits vs power curves exist to insure that the fuel assembly maximum linear heat generation rate is not exceeded as a result of control rod pattern or movement during reactor operations. The factors governing fuel power density and linear heat generation rate vary as a function of exposure and, hence, it is necessary to redefine control rod withdrawal limits as a function of exposure. In the case of TMI-1 the time period for the limit change occurred at 440 EFPD.

MetEd then generated one set of limits for up to 440 EFPD and another set of limits for exposures greater than 440 EFPD. In order to provide flexibility for the limit changes MetEd further did the analysis to confirm that both sets of limits remained valid for exposures of 440 EFPD ± 10. We have reviewed the original MetEd curves for TMI-1 and the proposed changes and concur that the exposure variation requested is consistent with the original analysis and is acceptable.

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR §51.5(d)(4) that an environmental statement, negative declaration, or environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the change does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the change does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3)such activities will be