

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

SAFETY EVALUATION BY OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 6 TO LICENSE NO. DPR-50

CHANGE NO. 6 TO TECHNICAL SPECIFICATIONS

METROPOLITAN EDISON COMPANY

THREE MILE ISLAND NUCLEAR STATION UNIT 1

DOCKET NO. 50-289

Introduction

By letter dated May 14, 1975, and supplemented by letters dated June 9, 1975 and June 16, 1975, Metropolitan Edison Company proposed an amendment to Facility Operating License No. DPR-50 for Three Mile Island Nuclear Station Unit 1. The proposed amendment involves changes to the Technical Specifications which would:

- a. Revise certain requirements of the Tendon Surveillance Program related to (1) frequency of inspection, (2) selection of tendons for inspection, (3) conduct of the inspection, and (4) procedures for reporting abnormal inspection results.
- b. Change the allowable deviation for strain gage readings taken during the Ring Girder Inspection Program from $\pm .004$ in/in to $\pm .0004$ in/in.
- c. Require that deviations from allowable tolerances for Ring Girder Inspection Tests be reported to the Station/Unit Superintendent rather than the Engineer.

Discussion

Subsequent to the issuance of the Facility Operating License for Three Mile Island Nuclear Station Unit 1, the NRC staff revised Regulatory Guide 1.35, "Inservice Inspection of UngROUTED Tendons in Prestressed Concrete Containment Structures". This revision resulted from positions developed through discussions with the American Concrete Institute/American Society of Mechanical Engineers Subgroup on Inservice Inspections of Concrete Pressure Components for Nuclear Service and reflects the current state of engineering knowledge with respect to tendon inspection requirements.



By means of the proposed Technical Specifications changes, the licensee intends to ensure that its Tendon Surveillance Program is consistent with the provisions of Regulatory Guide 1.35, Revision 1.

Evaluation

Our evaluation of the proposed Technical Specifications changes is as follows:

A. Changes associated with the Tendon Surveillance Program Requirements

- (1) The present Technical Specifications require that inservice inspection testing of tendons be performed one, two, and three years after the Structural Integrity Test and every five years thereafter. The proposal would change the frequency of inspection testing to one, three and five years after the Structural Integrity Test and every five years thereafter. The proposed change in frequency would provide a more uniform schedule for examination of tendon performance over the early stage of the unit's operational life; and, based on industry wide past experience, this examination schedule is as likely to reveal a failure in tendon performance as the previous examination schedule.
- (2) The present Technical Specifications designate specific tendons for testing during each required inspection. The licensee has determined that some of the tendons presently designated for inspection are inaccessible to its testing equipment. As a result, they have proposed the designation of different tendons for testing. The proposed tendons have been selected on a random but representative basis so that the sample group will change somewhat for each inspection. This selection method reflects the current criteria accepted by the NRC staff as expressed in Regulatory 1.35, Revision 1.
- (3) The proposed change to the Technical Specifications includes a provision which would permit a reduction of the number of tendons designated for inspection after the first three inspections by approximately one-half. Such a reduction would occur only when supported by satisfactory operational experience with the tendons in the containment building as evidenced by the results of the first three inspections. This proposal is based upon industry-wide experience with tendons in prestressed concrete buildings now reflected in Regulatory Guide 1.35, Revision 1. This experience and its use in preparing the proposed changes have accounted for the fact that corrosion effects on tendons are most likely to occur during the first five years of operation.

- (4) The proposed changes which are related to the conduct of the tendon inspections are minor in nature and involve: acceptance criteria for grease samples, additions to the examples of potential problem areas which should be checked during inspections, and nomenclature. The proposed changes reflect sound engineering judgement and practices.
- (5) The proposed change which is related to procedures for reporting abnormal inspection results would require that tendon surveillance inspection test results be submitted to the U. S. Nuclear Regulatory Commission within 3 months of the completion of the tests rather than within 6 months as is currently required. This is a more conservative plan for communication of information.
- (6) The proposed changes provide for a Tendon Surveillance Program which is consistent with Regulatory Guide 1.35, Revision 1.

B. Changes Associated with Ring Girder Inspection Tests:

- (1) The proposed change associated with the allowable deviation for strain gage readings would correct an existing typographical error from $+ .004$ in/in to $+ .0004$ in/in. Moreover, this proposal would provide a more conservative tolerance specification.
- (2) The present Technical Specifications require that deviations from allowable tolerances during Ring Girder Inspection testing be reported to the plant Engineer. The proposed change would designate the Station/Unit Superintendent as the individual responsible for evaluating and resolving unacceptable deviations rather than the plant Engineer. This proposal would provide for attention to such discrepancies at a higher management level.

Summary

Based upon our evaluation, we have concluded that the proposed Technical Specification changes are acceptable.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the changes do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the changes do 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 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.

Dated: JUL 1 1975