

July 14, 1994

Docket No. 50-289

Mr. T. Gary Broughton, Vice President
and Director - TMI-1
GPU Nuclear Corporation
Post Office Box 480
Middletown, Pennsylvania 17057

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Dear Mr. Broughton:

SUBJECT: ISSUANCE OF AMENDMENT - TSCR NO. 238 (TAC NO. M89458)

The Commission has issued the enclosed Amendment No. 187 to Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1, in response to your letter dated April 11, 1994.

The amendment revises the TMI-1 Technical Specifications (TS) to relocate the detailed inspection criteria, methods and frequencies of the containment tendon surveillance program to the Updated Final Safety Analysis Report (UFSAR) and provide a direct reference to the existing tendon surveillance program in the TS. The most recent update to the TMI-1 UFSAR (March 1994) incorporated the detailed description of the tendon surveillance program. Also, TS Section 4.4.2.1.3, Containment Surfaces, is deleted as this requirement is redundant to the requirement contained in TS Section 4.4.1.4. These changes are also consistent with NUREG-1430, "Standard Technical Specifications for Babcock and Wilcox Plants."

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,
Original signed by:

Ronald W. Hernan, Senior Project Manager
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 187 to DPR-50
2. Safety Evaluation

cc w/enclosures:
See next page

OFFICE	LA:PDI-4	PDI-4	PM:PDI-4	D:PDI-4	OGC
NAME	SNorris	CChung	RHernan	JStolz	
DATE	6/20/94	6/20/94	6/20/94	6/20/94	6/27/94

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DFOI

Mr. T. Gary Broughton
GPU Nuclear Corporation

Three Mile Island Nuclear Station,
Unit No. 1

cc:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

METROPOLITAN EDISON COMPANY

JERSEY CENTRAL POWER & LIGHT COMPANY

PENNSYLVANIA ELECTRIC COMPANY

GPU NUCLEAR CORPORATION

DOCKET NO. 50-289

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 187
License No. DPR-50

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by GPU Nuclear Corporation, et al. (the licensee), dated April 11, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

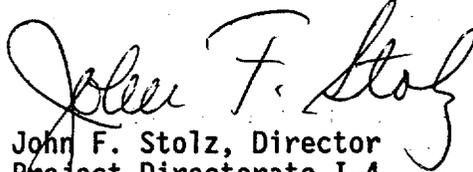
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.c.(2) of Facility Operating License No. DPR-50 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 187, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance, to be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, Director
Project Directorate I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 14, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 187

FACILITY OPERATING LICENSE NO. DPR-50

DOCKET NO. 50-289

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number and contain vertical lines indicating the area of change.

Remove

3-95
4-35
4-35a (Deleted)
4-36
4-37

Insert

3-95
4-35

4-36
4-37

3.19 CONTAINMENT SYSTEMS

3.19.1 CONTAINMENT STRUCTURAL INTEGRITY

Applicability:

Applies to the structural integrity of the reactor building.

OBJECTIVE:

To verify containment structural integrity in accordance with the inservice tendon surveillance program for the reactor building prestressing system.

Specification

3.19.1.1 With the structural integrity of the containment not conforming to the inservice tendon surveillance program requirements of 4.4.2.1 for the tendon lift off forces, perform an engineering evaluation of the structural integrity of the containment to determine if COLD SHUTDOWN is required. The margins available in the containment design may be considered during the investigation. If the acceptability of the containment tendons cannot be established within 48 hours, restore the structural integrity to within the limits within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

3.19.1.2 DELETED

4.4.2 Structural Integrity

Specification

4.4.2.1 Inservice Tendon Surveillance Requirements

The surveillance program for structural integrity and corrosion protection conforms to the recommendations of the U.S. NRC Regulatory Guide 1.35, "Inservice Surveillance of Ungouted Tendons in Prestressed Concrete Containment Structures." The detailed surveillance program for the prestressing system tendons shall be based on periodic inspection and mechanical tests to be performed on selected tendons.

4.4.2.1.1 DELETED

4.4.2.1.2 DELETED

4.4.2.1.3 DELETED

4.4.2.1.4 Tendon Surveillance Previous Inspections

The tendon surveillance shall include the reexamination of all abnormalities (i.e., concrete scaling, cracking, grease leakage, etc.) discovered in the previous inspection to determine whether conditions have stabilized. The inspection program shall be modified accordingly if obvious deteriorating conditions are observed.

4.4.2.1.5 Inspection for Crack Growth at Dome Tendons in the Ring Girder Anchorage Areas

Concrete around the dome tendon anchorage areas shall be inspected for crack growth during ten and 15 year inspections by monitoring cracks greater than 0.005 inch in width. Select as a minimum nine dome tendon anchoring areas having concrete cracks with crack widths 0.005 inch. In the selection of dome tendon anchoring areas to be monitored, preference shall be given to those areas having cracks greater than 0.005 inch in width. The width, depth (if depths can be measured with simple existing plant instruments, (i.e., feeler gauges, wires) and length of the selected cracks shall be measured and mapped by charting. This inspection may be discontinued, if the concrete cracks show no sign of growth. If, however, these inspections indicate crack growth, an investigation of the causes and safety impact should be performed.

4.4.2.1.6 Reports

- a. Within 3 months after the completion of each tendon surveillance a special report shall be submitted to the NRC Region I Administrator. This Report will include a section dealing with trends for the rate of prestress loss as compared to the predicted rate for the duration of the plant life (after an adequate number of surveillances have been completed).
- b. Reports submitted in accordance with 10 CFR 50.73 shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and any corrective actions taken.

4.4.3 DELETED

BASES

For ungrouted, post-tensioned tendons, this surveillance requirement ensures that the structural integrity of the containment will be maintained in accordance with the provisions of the TMI-1 Reactor Building Structural Integrity Tendon Surveillance Program. Testing and frequency are consistent with the recommendations of Regulatory Guide 1.35, as described in the FSAR.

The modified visual inspection requirements pertaining to the dome tendons in the ring girder were implemented as a result of: 1) discovery of ring girder voids in 1977 and the potential that more undetected voids in the ring girder could exist, and 2) the number of dome tendon bearing areas having cracks appeared to be growing with time (Reference Amendment No. 59).

REFERENCES

- (1) UFSAR, Section 5.7.5 - Tendon Stress Surveillances



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 187 TO FACILITY OPERATING LICENSE NO. DPR-50
METROPOLITAN EDISON COMPANY
JERSEY CENTRAL POWER & LIGHT COMPANY
PENNSYLVANIA ELECTRIC COMPANY
GPU NUCLEAR CORPORATION
THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 1
DOCKET NO. 50-289

1.0 INTRODUCTION

By letter dated April 11, 1994, the GPU Nuclear Corporation (the licensee) submitted a request for changes to the Three Mile Island Nuclear Station, Unit No. 1 (TMI-1) Technical Specifications (TS). The requested changes would relocate the detailed requirements and criteria of the tendon surveillance program to the TMI-1 Updated Final Safety Analysis Report (UFSAR). The NRC issued Revision 3 of Regulatory Guide 1.35, "Inservice Inspection of UngROUTed Tendons in Prestressed Concrete Containments," in July 1990. The licensee plans to incorporate the Regulatory Guide provisions into the TMI-1 tendon surveillance program. Approval of this change request is needed to facilitate implementation of these revisions to the surveillance program prior to the next scheduled tendon inspection in September 1994.

2.0 EVALUATION

Section 50.36 of Title 10 of the Code of Federal Regulations establishes the regulatory requirements related to the contents of TS. The rule requires that TS include items in five specific categories, including (1) safety limits, limiting safety system settings, and control settings; (2) limiting conditions for operation; (3) surveillance requirements; (4) design features; and (5) administrative controls. However, the rule does not specify the particular requirements to be included in a plant's TS. The NRC developed guidance criteria, as described in the "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," (58 FR 39132) (Final Policy Statement) which can be used to determine which of the design conditions and associated surveillances need to be located in the TS. The Final Policy Statement approved the statement of the Atomic Safety and Licensing Appeal Board in Portland General Electric Co. (Trojan Nuclear Plant), ALAB-531, 9 NRC 263,273 (1979), as to the basis for requiring matters to be included in the TS. The Appeal Board stated:

"... there is neither a statutory nor a regulatory requirement that every

operational detail set forth in an applicant's safety analysis report (or equivalent) be subject to a technical specification, to be included in the license as an absolute condition of operation which is legally binding upon the licensee unless and until changed with specific Commission approval. Rather, as best we can discern it, the contemplation of both the Act and the regulations is that technical specifications are to be reserved for those matters as to which the imposition of rigid conditions or limitations upon reactor operation is deemed necessary to obviate the possibility of an event giving rise to an immediate threat to the public health and safety."

Briefly stated, the guidance criteria provided by the Final Policy Statement are (1) detection of abnormal degradation of the reactor coolant pressure boundary, (2) bounding conditions for design basis accidents and transients, (3) primary success paths to prevent or mitigate design basis accidents and transients, and (4) functions determined to be important to risk or operating experience. The Commission's Final Policy Statement acknowledged that items which are relocated from the TS to licensee-controlled documents such as the UFSAR would in turn be controlled in accordance with the requirements of 10 CFR 50.59, "Changes, tests and experiments." 10 CFR 50.59 provides criteria to determine when facility or operating changes planned by a licensee require prior Commission approval in the form of a license amendment in order to address any unreviewed safety questions.

Prior to issuing NUREG-1430, "Standard Technical Specifications for Babcock and Wilcox Plants" in September 1992, the staff concluded that neither 10 CFR 50.36 nor the Commission's Final Policy Statement require the detailed containment tendon surveillance program requirements to be retained in TS. Surveillance Requirement SR 3.6.1.2 in NUREG-1430 contains only the words "verify containment structural integrity in accordance with the Containment Tendon Surveillance Program." Nowhere else in NUREG-1430 is there any reference to containment tendons. In other words, the staff has already evaluated and approved removing the detailed tendon surveillance requirements from the TS and specifying those requirements in a licensee-controlled document, such as proposed by the licensee in the subject request.

The staff's review of the proposed TMI-1 TS change determined that relocation of the containment tendon surveillance program requirements to the UFSAR does not eliminate the requirements for the licensee to ensure that the containment tendons are capable of performing their safety function. The licensee must continue to evaluate any changes to the surveillance program in accordance with 10 CFR 50.59. Should the licensee's determination conclude that an unreviewed safety question is involved, due to either (1) an increase in the probability or consequences of accidents or malfunctions of equipment important to safety, (2) the creation of a possibility for an accident or malfunction of a different type than any evaluated previously, or (3) a reduction in the margin of safety, NRC approval and a license amendment would be required prior to implementation of the change. NRC inspection and enforcement programs also enable the staff to monitor facility changes and licensee adherence to UFSAR commitments and to take any remedial action that may be appropriate.

The action statement associated with TS Section 3.19.1.1, regarding plant shutdown if containment structural integrity cannot be restored to within limits, is not changed by this request nor are the reporting requirements in TS Section 3.19.1 and 4.4.2.1.6 affected. The staff has determined that the detailed containment tendon surveillance program requirements are operational details related to the licensee's safety analyses which are adequately controlled by the requirements of 10 CFR 50.59. Therefore, the continued processing of license amendments related to revisions of the affected detailed containment tendon surveillance program requirements, where the revisions to those requirements do not involve an unreviewed safety question under 10 CFR 50.59, would afford no significant benefit with regard to protecting the public health and safety. Further the requirements do not constitute a condition or limitation on operation necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety, in that the ability of the containment tendons to perform their safety functions is not adversely impacted by relocation of the surveillance program from the TS to the UFSAR.

The staff also finds that relocation of the detailed surveillance program requirements and criteria to the UFSAR is consistent with NUREG-1430. The licensee's Inservice Tendon Surveillance Program, conducted in accordance with TMI-1 Surveillance Procedure SP 1301-9.1, will conform to the NRC Regulatory Guide 1.35, Revision 3 prior to the next inspection.

The staff has concluded, therefore, that relocation of the detailed containment tendon surveillance program requirements is acceptable because (1) their inclusion in TS is not specifically required by 10 CFR 50.36 or other regulations, (2) the detailed containment tendon surveillance program requirements, following their relocation to the UFSAR, will be adequately controlled by 10 CFR 50.59, (3) their inclusion in the TS is not required to avert an immediate threat to the public health and safety, (4) changes that are deemed to involve an unreviewed safety question will require prior NRC approval in accordance with 10 CFR 50.59(c), and (5) this request is entirely consistent with NUREG-1430, which has previously been reviewed and approved by the NRC staff.

In addition to the above changes, the licensee proposes that TS Section 4.4.2.1.3, Containment Surfaces and TS Section 3.19.1.2 be deleted. The staff finds that it is an administrative change since both TS Section 4.4.2.1.3 and TS Section 3.19.1.2 are redundant statements which have been stated elsewhere in the TS. Therefore, the staff also finds these changes acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendment. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts or types of effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (59 FR 29627). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: C. Chung

Date: July 14, 1994