

METROPOLITAN EDISON COMPANY  
JERSEY CENTRAL POWER & LIGHT COMPANY  
AND  
PENNSYLVANIA ELECTRIC COMPANY  
THREE MILE ISLAND NUCLEAR STATION, UNIT 1

---

Operating License No. DPR-50  
Docket No. 50-289  
Technical Specification Change Request No. 200

---

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.

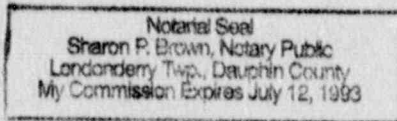
GPU NUCLEAR CORPORATION

BY: *[Signature]*

Vice President & Director, TMI-1

Sworn and subscribed  
to before me this 24<sup>th</sup>  
day of April, 1990.

*Sharon P. Brown*  
Notary Public



Member, Pennsylvania Association of Notaries

9005010237 900424  
PDR ADOCK 05000289  
P PDC

I. TECHNICAL SPECIFICATION CHANGE REQUEST (TSCR) NO. 200

GPUN requests that the following changed replacement pages be inserted into the existing Technical Specifications:

Revised pages 5-4 and 6-12; add new page 6-12a.

These pages are attached to this change request.

II. REASON FOR CHANGE

This change is requested to modify the TMI-1 Technical Specification Design Features Section for fuel assemblies. This change permits the substitution of Zircaloy-4 or stainless steel filler rods for fuel rods in fuel assemblies if justified by cycle-specific reload analyses using an NRC approved methodology. This change also requires that a special report describing the number of rods replaced be submitted to NRC if more than 30 rods in the core, or 10 rods in any assembly, are replaced per refueling. This change provides flexibility for improved fuel performance by permitting timely removal of fuel rods found to be leaking during a refueling outage or are determined to be possible sources of future leakage. This change request is consistent with the guidance contained in NRC Generic Letter 90-02, dated February 1, 1990, and incorporates a line-item improvement in Technical Specifications.

III. SAFETY EVALUATION JUSTIFYING CHANGE

TMI-1 Technical Specification Section 5.3.1.1 includes a design description for fuel assemblies which specifies that a fuel assembly contains 208 fuel rods arranged in a 15x15 lattice. This change to the Technical Specification permits the substitution of Zircaloy-4 or stainless steel filler rods for fuel rods in fuel assemblies if justified by cycle-specific reload analyses. Flexibility to deviate from the number of fuel rods per assembly is desirable to permit timely removal of fuel rods found to be leaking during a refueling outage or are determined to be possible sources of future leakage. This improvement in the fuel performance program will provide for reductions in future occupational radiation exposure and plant radiological releases.

The substitution of filler rods for fuel rods in fuel assemblies is required to be justified by cycle-specific reload analyses using an NRC-approved methodology. This requirement ensures conformance to the existing design limits and that safety analyses criteria are met before operation during the next fuel cycle. NRC-approved methodology includes those methodologies described in the Final Safety Analysis Report and as referenced in Technical Specification Section 6.9.5.2 for core operating limits.

Reconstitution of a limited number of fuel rods in fuel assemblies to be reinserted in the core has become a common industry practice. Latest generation fuel assemblies used at TMI-1 are specifically designed to allow reconstitution.



### III. SAFETY EVALUATION JUSTIFYING CHANGE (CONT'D.)

This change requires that a special report describing the number of rods replaced must be submitted to NRC if more than 30 rods in the core, or 10 rods in any assembly, are replaced during a refueling. This report is required within 30 days after cycle startup. This reporting requirement is added to Technical Specification 6.9.1.A.

### IV. NO SIGNIFICANT HAZARDS CONSIDERATIONS

GPUN has determined that this Technical Specification Change Request involves no significant hazards consideration as defined by NRC in 10CFR50.92.

1. Operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability of occurrence or the consequences of an accident previously evaluated. The proposed amendment permits the substitution of filler rods for fuel rods in fuel assemblies if justified by cycle-specific reload analyses using an NRC-approved methodology, in accordance with the guidance contained in NRC Generic Letter 90-02. Allowing this substitution for fuel rods that are found to be leaking during a refueling or are possible sources of future leakage will result in reductions in future occupational radiation exposure and plant radiological releases. Therefore, this change does not increase the probability of occurrence or the consequences of an accident previously evaluated.
2. Operation of the facility in accordance with the proposed amendment would not create the possibility of a new or different kind of accident from any accident previously evaluated. Substitution of filler rods is justified by cycle-specific reload analyses using an NRC-approved methodology. This change provides flexibility for improved fuel performance by permitting timely removal of fuel rods found to be leaking during a refueling or are determined to be possible sources of future leakage. Solid metal rods have been used in fuel assembly designs in the industry. Therefore, this change has no effect on the possibility of creating a new or different kind of accident from any accident previously evaluated.
3. Operation of the facility in accordance with the proposed amendment would not involve a significant reduction in a margin of safety. Substitution of filler rods will be justified by cycle-specific reload analyses using an NRC-approved methodology and applying the same safety and design criteria used for the initial fuel design. Therefore, it is concluded that operation of the facility in accordance with the proposed amendment does not involve a significant reduction in a margin of safety.

The Commission has provided guidelines pertaining to the application of the three standards by listing specific examples in 45FR14870. The proposed amendment is considered to be in the same category as example (iii) of amendments that are considered not likely to involve significant hazards consideration in that the proposed change permits a fuel assembly

IV. NO SIGNIFICANT HAZARDS CONSIDERATIONS (CONT'D.)

design change resulting from a nuclear reactor core reloading. This fuel assembly design change is not significantly different from those found acceptable to the NRC for previous cores at TMI-1 since the substitution of filler rods is justified by cycle-specific reload analyses using an NRC-approved methodology. No significant changes are made to the acceptance criteria for the technical specifications. Implementation of the proposed amendment in accordance with the guidance contained in NRC Generic Letter 90-02 incorporates a line-item improvement in Technical Specifications. Thus, operation of the facility in accordance with the proposed amendment involves no significant hazards considerations.

V. IMPLEMENTATION

It is requested that the amendment authorizing this change become effective upon issuance.