

50-289



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

WASHINGTON, D.C. 20555-0001

May 27, 1997

Mr. James W. Langenbach, Vice President  
and Director - TMI  
GPU Nuclear Corporation  
P.O. Box 480  
Middletown, PA 17057

**SUBJECT: EXEMPTION FROM THE REQUIREMENTS OF 10 CFR 70.24 - THREE MILE ISLAND  
NUCLEAR GENERATING STATION, UNIT NO. 1 (TAC NO. M97961)**

Dear Mr. Langenbach:

By letter dated February 7, 1997, as supplemented March 26, 1997, you requested an exemption from the requirements of 10 CFR 70.24. The staff is currently reviewing your request. To accelerate the processing of this request, please respond to this letter under oath or affirmation verifying that Three Mile Island, Unit 1, meets the following eight criteria for granting exemptions from this rule:

1. Plant procedures do not permit more than 1 PWR fuel assembly or 3 BWR fuel assemblies to be in storage or transit between their associated shipping cask or storage rack at one time.
2. The requirement is met that k-effective not exceed 0.95, at a 95% probability, 95% confidence level with the fresh fuel storage racks filled with fuel of the maximum permissible U-235 enrichment and flooded with pure water.
3. The requirement is met that k-effective not exceed 0.98, at a 95% probability, 95% confidence level with the fresh fuel storage racks filled with fuel of the maximum permissible U-235 enrichment and flooded with moderator at the (low) density corresponding to optimum moderation.
4. The requirement is met that k-effective not exceed 0.95, at a 95% probability, 95% confidence level with the spent fuel storage racks filled with fuel of the maximum permissible U-235 enrichment and flooded with pure water.
5. The quantity of forms of special nuclear material, other than nuclear fuel, such as sources or detectors, that are stored onsite in one area, is less than that necessary for a critical mass.
6. Radiation monitors, as required by GDC 63, are provided in fuel storage and handling areas to detect excessive radiation levels and to initiate appropriate safety actions.
7. The maximum nominal U-235 enrichment is 5 wt%.
8. Training is provided to the appropriate personnel for safely handling fresh fuel.

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Three Mile Island Nuclear Station, Unit No. 1

cc:

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Mr. James W. Langebach

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For each criterion that you do not meet, please explain why meeting that criterion is not necessary in the case of Three Mile Island, Unit 1, so that we may continue to review your exemption request.

Sincerely,

Original signed by

Bart C. Buckley, Senior Project Manager  
Project Directorate I-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket No. 50-289

cc: See next page

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