

August 31, 1988

Docket No. 50-310

Mr. F. R. Standerfer  
Vice President/Director  
Three Mile Island Unit 2  
GPU Nuclear Corporation  
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Dear Mr. Standerfer:

SUBJECT: THREE MILE ISLAND NUCLEAR STATION UNIT 2 - APPROVAL OF EXEMPTIONS  
FROM 10 CFR 55.59, "OPERATORS' LICENSES, REQUALIFICATION" (TAC 67035)

We have completed our review of Revision 3 to the TMI-2 Licensed Operator  
Requalification Training Program submitted by letter 4410-B7-L-D183/D278F  
dated December 28, 1987. Based on the results of our review, we have  
determined that the exceptions to 10 CFR 55.55 identified in your December 28,  
1987 submittal require exceptions. Enclosure 1 grants exemptions to  
10 CFR 55.59(c)(2) subsections (iv) and (v) eliminating the requirement for  
certain lecture subjects and 10 CFR 55.59(c)(3)(i) items (A) through (AA)  
eliminating the requirement for specific manipulation exercises as part of  
on-the-job training.

Revision 3 of the Requalification Training Program also identifies a number of  
areas in which there is a reduction in the scope of the program. Enclosure 2  
reviews the revisions to the program.

Attachment 2 to your December 28, 1987 letter proposes a reduction in  
watchstanding requirements of 10 CFR 55.53(e) and (f). The specific details  
of the reduction in watchstanding were included in a separate letter to the  
NRC also dated December 28, 1987 (letter 4410-B7-L-D187/D279P). The staff  
will evaluate the request for a reduction in the watchstanding requirements in  
its future response to that letter. Therefore, an exemption to the  
watchstanding requirements (10 CFR 55.53(e)) for TMI-2 is not granted at this  
time.

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Mr. F. R. Stenderfer

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As discussed in Enclosure 2 to this letter, the TMI-2 Licensed Operator Requalification Program, Rev. 3, is acceptable, and exemptions are granted to 10 CFR 55.59(c)(2) subsections (iv) and (v) and 10 CFR 55.59(c)(3)(i) items (A) through (AA).

The exemption has been forwarded to the Office of the Federal Register for publication.

Sincerely,

/s/

Michael T. Masnik, Senior Project Manager  
Project Directorate 1-4  
Division of Reactor Projects I/II

Enclosures:

1. Exemption
2. Safety Evaluation

cc w/enclosures:  
See next page

LA:FDI-4  
SMPTTS  
8/11/88

47741  
FM:FDI-4  
MMasnik  
8/12/88

FD:FDI-4  
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8/2/88

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8/12/88

SAV  
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11.

By letter dated December 28, 1987, which discussed Part 3 of the TPI-2 Licensed Operator Recertification Program, the licensee requested exemptions from requirements of 10 CFR 55.59, "Recertification." Specifically, the licensee requested exemption from the requirements of 10 CFR 55.59(c)(2), lectures, subjects (iv) and (v). Subsection (2) to 10 CFR 55.59(c) requires that the operator recertification program contain preplanned lectures on a regular and continuing basis throughout the license period in areas where emphasis in scope and depth of coverage is needed. Nine topics are listed in the regulations. The licensee has requested exemption from topics (iv) Plant protection systems and (v) Engineered safety systems.

The licensee has also requested exemption from 55.59(c)(3), On-the-Job Training, subsection (i), items (A) through (AP). The regulations require under 55.59(c)(3) that the recertification program include on-the-job training so that each licensed operator manipulates the plant controls and each licensed senior operator either manipulates the controls or directs the activities of individuals during plant control manipulations. The manipulation must consist of a set of specified manipulations corresponding to various plant evolutions applicable to the plant design. Section 10 CFR 55.59(c)(3)(i)(A) through (AP) specifies the various plant evolutions for which all operators will be required to manipulate the facility controls annually or in some cases biannually during the term of the licensed operator's or senior operator's

license. They can be performed at the plant or on a simulator. The manipulations required include plant startup, plant shutdown, manual control of feedwater, loss of coolant events, turbine trip, reactor trip, and loss of electric power.

### iii.

TMI-2 is currently in a post-accident, cold shutdown, long-term decay mode, with sufficient decay heat removal assured by direct heat loss from the reactor coolant system to the reactor building atmosphere. The licensee is presently engaged in defueling the damaged reactor, decontaminating the facility and readying the plant for long-term storage. The requirements to maintain safety related systems have been deleted from the TMI-2 operating license. The present unconventional configuration of the TMI-2 plant does not allow the conventional evolutions normal to an operating facility.

The licensee has requested exemption from the requirement to include preplanned lectures in the requalification program throughout the individual's license period on Plant Protection Systems and Engineering Safety Systems.

The Reactor Protection and the Engineering Safety Features Actuation System constitute the Plant Protection Systems at TMI-2. Both of these systems have been disabled. The Reactor Protection System is currently used only for plant monitoring. The monitoring capability of the portions of the system that are still functioning are addressed in the "Plant Instrumentation and Control Systems" lecture.

There currently is no requirement in the TMI-2 license to maintain the the Engineered Safety Features Actuation System and no training or this system is included in the recertification program.

The licensee has also requested that they be exempted from control manipulations required by 10 CFR 55.59(c)(3)(1), subsections (A) through (AA). In lieu of the requirements to perform the specific manipulations required by the regulations, the licensee has included in the TMI-2 Licensed Operator Recertification Training Program abnormal and emergency evolutions that are applicable to TMI-2 in its current condition. These evolutions provide a more meaningful recertification training program for the TMI-2 licensed operators. The licensee believes that the current recertification program, which specifies completion of specific evolutions through the plant drill program, satisfies the intent of the regulation.

Verification by an NRC subject matter expert has confirmed that exemptions to the requirements of 10 CFR 55.59(c)(2) and 10 CFR 55.59(c)(3)(1) are appropriate and relevant to the present condition of TMI-2.

#### IV.

Accordingly, the Commission has determined that pursuant to 10 CFR 55.11, these exemptions are authorized by law, will not endanger life or property property and are otherwise in the public interest.

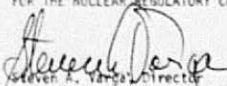


Accordingly, the Commission hereby grants exemption from the requirements of 10 CFR 55.59(c)(2), subsections (iv) and (v), and 10 CFR Part 55.59(c)(3)(4) items (A) through (AA).

Pursuant to 10 CFR 51.32, the Commission has determined that granting of this exemption will have no significant impact on the environment (53 FR 33552).

This exemption is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Yargo, Director  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Dated at Bethesda, Maryland  
this 31st day of August, 1988.

SAFETY EVALUATION OF REVISION 3, TM1-2  
LICENSED OPERATOR REQUALIFICATION PROGRAM

BACKGROUND

By letter dated December 28, 1987, GPU Nuclear Corporation requested a review of Revision 3 of the TM1-2 Licensed Operator Recalification Program. Since there is a reduction in scope of the program, this review is required in accordance with 10 CFR 50.54 (1-1). The staff's review of the revisions to the program follows.

Lectures

In requesting an exemption from the lecture requirements of 10 CFR 55.59 (c)(2), the licensee states:

10 CFR 55.59(c)(2), "Recalification Program Requirements," subsections (iv) and (v) respectively require lecture topics for "Plant Protection Systems" and "Engineered Safety Systems" as part of the licensed operator recalification program.

In lieu of this requirement, the monitoring capabilities of the TM1-2 installed systems are addressed under "Plant Instrumentation and Control Systems" in Attachment 1 to the Licensed Operator Recalification Training Program. The Reactor Protection Systems at TM1-2 have been disabled and are used for plant monitoring.

The "Engineered Safety Systems" at TM1-2 have also been disabled and training on these systems is not included in this program. This exception was previously contained in Revision 2 to the TM1-2 Licensed Operator Recalification Training Program (reference GPU Nuclear Corporation letter 4410-B4-2-0138 dated September 15, 1984).

This exception was approved in Revision 2 to the program and is acceptable as part of Revision 3 as it is consistent with the current condition of the plant.

On the Job Training

The licensee has requested exceptions to the control manipulations required by 10 CFR 55.59(c)(3)(i), subsections (A) to (AA) as follows:

In lieu of the above requirement, Attachment 2 to the TMI-2 Licensed Operator Requalification Training Program identifies the abnormal and emergency evolutions that are applicable to TMI-2. These evolutions provide a more meaningful requalification training program for the TMI-2 licensed operators. Additionally, the requalification program specifies completion of the evolutions through the plant drill program. EPW Nuclear believes this to be acceptable per 10 CFR 55.59 (c)(4)(iv), "Evaluation," which states: "The requalification program must include... (iv) simulation of emergency or abnormal conditions that may be accomplished by using the control panel of the facility involved or by using a simulator. Where the control panel of the facility is used for simulation, the action taken or to be taken for the emergency or abnormal conditions shall be discussed; actual manipulation of the plant controls is not required."

Verification by a subject matter expert has confirmed that these exceptions are appropriate and relevant to the present condition of TMI-2. They are, therefore, acceptable.

Program Hours of Instruction

Revision 2 of licensee's operator requalification training program required approximately 200 hours of instruction per year. The proposed revision (revision 3) does not specify a minimum time requirement. The time scheduled will be appropriate to the time needed to accomplish the program requirements, which licensee indicates is a performance-based approach consistent with the current condition of TMI-2. Since the licensee's approach does appear to be performance based and 10 CFR 55.59 does not specify any minimum time requirement for the training program, this change to the program is acceptable.

### Reactivity Manipulations

Revision 2 of the requalification training program requires that each licensee perform a variety of reactivity manipulations, including:

- \* Observation of subcritical multiplication.
- \* Observation of reactivity feedback from nuclear heat during startup.
- \* Demonstration of the effects of fuel displacement in subcritical multiplication and observed effects on nuclear instrumentation.

Licensee proposes to delete the requirement to perform these three manipulations and has stated:

Experience gained through defueling operations has demonstrated that fuel movements have no observable effect on subcritical multiplication or nuclear instrumentation. Classroom lectures on the theory and principles of subcritical reactors are considered to be adequate training coverage of these topics.

Verification by subject matter expert confirms that performing the above reactivity manipulations is no longer necessary due to the current condition of the TMI-2 reactor. This reduction in scope is, therefore, acceptable.

### Research Reactor Training Time

Revision 2 of the licensee's requalification program required 20 hours per year of research reactor or basic principles training simulator training. The purpose of this requirement was to perform the reactivity manipulations mentioned above. Since these manipulations no longer need to be performed, the

need for this simulator training is obviated. The deletion of this requirement in Revision 3 is, therefore, acceptable.

#### Written Examination

Revision 2 of the requalification program required administration of an annual written requalification examination. In Revision 3, the period for administration of this examination has been increased to biennial. This change is consistent with 10 CFR 55.59(a)(1) and is, therefore, acceptable.

#### Fuel Handling Senior Reactor Operator (FHSRO) Training Program

Licensee's submittal indicates that the FHSRO training program has been deleted because the initial training for this specific position has been completed. In addition, the requalification training for the FHSRO position has been incorporated into the TMI-2 licensed operator requalification training program. This reduction in scope is acceptable since the status of TMI-2 precludes the need for future initial training for the FHSRO position.

The licensee also states that the required reactivity manipulations included in the initial training program are not contained in the requalification program. The purpose of these manipulations was to maintain familiarity with plant systems, controls, and procedures. The licensee has determined that these individuals holding the FHSRO license perform these evolutions on a frequent basis and have done so throughout the TMI-2 defueling experience. In that this is a performance-based approach to skill acquisition and maintenance, the staff finds it acceptable.

Licensee has also reduced the frequency of administration of the written examination from annual to biennial. This change is consistent with 10 CFR 55.59 (a)(1).

Watchstanding

In its submittal dated December 28, 1967, the licensee proposes a reduction in the watchstanding requirements of 10 CFR 55.31 (e) and (f). However, the licensee stated that the actual details of the request for such exemption would be submitted under separate cover. The staff will therefore evaluate the merits of the request by separate memorandum.