OCT 0 6 1988

Docket No. 50-320

Mr. F. R. Standerfer
Vice President/Director
Three Mile Island Unit 2
GPU Nuclear Corporation
Post Office Box 480
Middletown, Pennsylvania 17057

Dear Mr. Standerfer:

DISTRIBUTION
Docket File ACRS(10)
NRC & Local PDRs Gray File
TMurley/JSniezek SVarga
FMiraglia BBoger
CRossi SNorris
MMasnik TBarnhart (4)
OGC-WF ARM/LFMB
EJordan PDI-4 RF
JPartlow LThonus
Panel File

SUBJECT: THREE MILE ISLAND NUCLEAR STATION UNIT 2 - APPROVAL OF EXEMPTIONS FROM 10 CFR 55 OPERATORS' LICENSES (TAC 67037)

We have completed our review of your December 28, 1987 (letter 4410-87-L-0187/0279P) request for exemptions from various portions of 10 CFR 55, "Operators' Licenses" pertaining to the requirements for a plant simulation facility and hourly requirements for maintaining an active license.

The staff has determined that an exemption from those portions of 10 CFR 55 pertaining to a plant simulation facility is appropriate and acceptable. An exemption from simulator requirements contained in 10 CFR 55.45(b)(1), 10 CFR 55.45(b)(2), 10 CFR 55.45(b)(4), 10 CFR 55.45(b)(5) and 10 CFR 55.59(a)(2) is enclosed.

Your December 28, 1987 letter also requested an exemption from the requirements of 10 CFR 55.53(e) and (f), "Conditions of Licenses" which specify the hourly requirements (watchstanding) for maintaining an active license. You requested that the hourly requirements be reduced. You justified this exemption by stating that research and test reactors, which are more similar to TMI-2's current situation, are permitted substantially fewer hours. Additionally you stated that your proposal to require only 8 hours of shift function to resume active status is consistent with 10 CFR 55.53(f)(2), which permits a reduction for senior operators limited to fuel handling. Since the primary objective at TMI-2 is defueling the facility this reduction should be applicable to all operators.

We find your proposed reduction in watchstanding requirements unacceptable. A review by staff subject matter experts confirms that the comparison between TMI-2 and a test/research reactor is not valid. Operators at TMI-2 perform a variety of functions different from those performed by test/research reactor operators. TMI-2 operators function largely to prevent criticality in a damaged reactor where all systems are not static. In addition your proposal would not provide adequate opportunity to remain cognizant of the day-to-day changes that occur at TMI-2 as defueling progresses. We also find that it is not valid to apply fuel handling senior reactor operator criteria to all licensed operators. One 8-hour shift does not provide an adequate enough sample of day-to-day control room activity to justify resumption of active license status.

DF01

changes that occur at TMI-2 as defueling progresses. We also find that it is not valid to apply fuel handling senior reactor operator criteria to all licensed operators. One 8-hour shift does not provide an adequate sample of day-to-day control room activity to justify resumption of active license status.

The staff, however, does recognize that the current status of TMI-2 justifies a reduction in the watchstanding requirements. In discussions with your staff our subject matter experts arrived at a mutually agreeable program requiring four 8-hour shifts per calendar quarter to maintain active status with two 8-hour shifts under appropriate supervision to resume active status if the requirement to maintain active status is not met.

The staff therefore has determined that an exemption from those portions of 10 CFR 55.53(e) and (f) is appropriate and acceptable. In lieu of the requirements contained in 10 CFR 55.53(e) and (f) the mutually agreed upon program shall be required. An exemption from the requirements contained in 10 CFR 55.53(e) and (f) is enclosed.

The exemption from both the simulator requirements and the watchstanding requirements is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/s/

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

Enclosure:
Exemption

cc w/enclosure:
See next page

*See previous concurrence

*LA:PDI-4	PM:PDI-4	*PD:PDI-4	*OGC	*ADR1	D[illegible]:DIR
SNorris	MMasnik:lm	JStolz		BABoger	SVarga
09/14/88	10/5/88	09/22/88	09/20/88	09/22/88	10/[illegible]/88

Mr. F. R. Standerfer
GPU Nuclear Corporation

Three Mile Island Nuclear Station
Unit No. 2

cc:

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Frank Lynch, Editorial
The Patriot
812 Market Street
Harrisburg, PA 17105

Dr. Judith H. Johnsrud
Environmental Coalition on Nuclear Power
433 Orlando Avenue
State College, PA 16801

Robert B. Borsum
Babcock & Wilcox
Nuclear Power Division
Suite 525
1700 Rockville Pike
Rockville, MD 20852

Ernest L. Blake, Jr., Esquire
Shaw, Pittman, Potts, and Trowbridge
2300 N Street, N.W.
Washington, DC 20037

Marvin I. Lewis
7801 Roosevelt Blvd. #62
Philadelphia, PA 19152

Secretary
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Jane Lee
183 Valley Road
Etters, PA 17319

Sally S. Klein, Chairperson
Dauphin County Board of Commissioners
Dauphin County Courthouse
Front and Market Streets
Harrisburg, PA 17101

Walter W. Cohen, Consumer
Advocate
Department of Justice
Strawberry Square, 14th Floor
Harrisburg, PA 17127

Thomas M. Gerusky, Director
Bureau of Radiation Protection
Department of Environmental Resources
P. O. Box 2063
Harrisburg, PA 17120

Mr. Edwin Kinter
Executive Vice President
GPU Nuclear Corporation
100 Interpace Parkway
Parsippany, NJ 07054

Ad Crable
Lancaster New Era
8 West King Street
Lancaster, PA 17601

U.S. Environmental Prot. Agency
Region III Office
Attn: EIS Coordinator
Curtis Building (Sixth Floor)
6th and Walnut Streets
Philadelphia, PA 19106

U.S. Department of Energy
P. O. Box 88
Middletown, PA 17057

David J. McGoff
Office of LWR Safety and Technology
NE-23
U.S. Department of Energy
Washington, DC 20545

Richard Conte
Senior Resident Inspector (TMI-1)
U.S.N.R.C.
Post Office Box 311
Middletown, Pennsylvania 17057

Mr. F. R. Standerfer
GPU Nuclear Corporation

Three Mile Island Nuclear Station
Unit No. 2

cc:

T. F. Demmitt
GPU Nuclear Corporation

R. E. Rogan
GPU Nuclear Corporation

G. Kuehn
GPU Nuclear Corporation

S. Levin
GPU Nuclear Corporation

J. J. Byrne
GPU Nuclear Corporation

A. W. Miller
GPU Nuclear Corporation

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
GPU NUCLEAR CORPORATION	)	Docket No. 50-320
	)	
(Three Mile Island Nuclear Station Unit 2)	)	

EXEMPTION

I.

GPU Nuclear Corporation, Metropolitan Edison Company, Jersey Central Power and Light Company and Pennsylvania Electric Company (collectively, the licensee) are the holders of Facility Operating License No. DPR-73, which had authorized operation of the Three Mile Island Nuclear Station, Unit 2 (TMI-2) at power levels up to 2772 megawatts thermal. The facility, which is located in Londonderry Township, Dauphin County, Pennsylvania, is a pressurized water reactor previously used for the commercial generation of electricity.

By Order for Modification of License, dated July 20, 1979, the licensee's authority to operate the facility was suspended and the licensee's authority was limited to maintenance of the facility in the present shutdown cooling mode (44 FR 45271). By further Order of the Director, Office of Nuclear Reactor Regulation, dated February 11, 1980, a new set of formal license requirements was imposed to reflect the post-accident condition of the facility and to assure the continued maintenance of the current safe, stable, long-term cooling condition of the facility (45 FR 11292). The license provides, among other things, that it is subject to all rules, regulations and Orders of the Commission now or hereafter in effect.

II.

By letter dated December 28, 1987, the licensee requested an exemption from the requirements 1) to administer the operating tests for operators and senior operators in a simulation facility, and 2) a reduction in the hourly requirements (watchstanding) for maintaining an active operator's license.

Exemption from the requirement to administer the operating tests for operators and senior operators in a simulation facility would eliminate the licensee's need for an NRC approved or certified simulation facility. The licensee therefore requested in the December 28, 1987 submittal an exemption from the requirement to submit a plan for the development of a simulation facility or an application for use of a simulation facility.

Requirements for the content of operating tests are contained in 10 CFR 55.54. Also 10 CFR 55.45(b)(1) "Administration" requires that the operating test be administered in a plant walkthrough and in a simulation facility. The term "simulation facility" is defined in 10 CFR 55.4 as "one or more of the following components, alone or in combination, used for the partial conduct of operating test for operators, senior operators and candidates: 1. The plant, 2. A plant-referenced simulator, 3. Another simulation device." A schedule for implementing this requirement is contained in 10 CFR 55.45(b)(2) "Schedule for facility licensees." This section requires that within one year after the effective date of this part [May 26, 1987] each facility shall submit a plan for the development of its simulation facility. The licensee has also requested an exemption from this requirement consistent with their request for an exemption from the requirement to use a simulation facility to license operators.

Application and certification requirements for a simulator facility are given in 10 CFR 55.45(b)(4) and 10 CFR 55.45(b)(5) respectively. Again the licensee has also requested an exemption from these requirements consistent with their request for an exemption from the requirement to use a simulator facility in licensing operators.

Requalification requirements for operators are given in 10 CFR 55.59 "Requalification." 10 CFR 55.59(a)(2) "Requalification Requirements" requires that each individual possessing an operator license shall pass a comprehensive requalification written examination and an operating test. 10 CFR 55.45(b)(1) requires that a simulation facility be utilized in the conduct of the operating test. Thus, the licensee requests an exemption from the requirement to utilize a simulation facility in satisfying the requirements of 10 CFR 55.59(a)(2).

The licensee also requested in the December 28, 1987 letter an exemption from the hourly or watchstanding requirements for maintaining an active operator's license. The hourly watchstanding requirements for maintenance of an operator's license are contained in 10 CFR 55.53(e) and (f). To maintain active status 10 CFR 55.53(e) requires in part that the licensee actively perform the functions of an operator or senior operator on a minimum of seven 8-hour or five 12-hour shifts per calendar quarter. If this requirement is not met, before resumption of functions authorized by a license, 10 CFR 55.53(f) requires, in part, that the licensee has completed a minimum of 40 hours of shift functions under the direction of an operator or senior operator as appropriate and in the position to which the individual will be assigned. The licensee proposed a substantial reduction in both above stated watchstanding requirements.

The licensee, after discussions with the NRC staff, has revised their request for reduction in watchstanding requirements from their original proposal contained in the December 28, 1987 letter. The licensee now proposes the watchstanding requirement to maintain an active operator's license as described in 10 CFR 55.53(e) be reduced from a minimum of seven 8-hour shifts to four 8-hour shifts per calendar quarter. The licensee also proposed to reduce the watchstanding requirement to resume active status if the watchstanding requirement to maintain active status is not met from 40 hours of shift function, as presently required by 10 CFR 55.53(f), to two 8-hour shifts.

III.

TMI-2 is currently in a post-accident, cold shutdown, long-term cleanup 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. As of the end of June 1988 approximately 65% of the fuel contained in the reactor vessel has been removed. Defueling the facility has progressed to the regions below the location of the original core volume. Defueling activities within the reactor building will be completed early in calendar year 1989. At that time, once the possibility of a criticality is precluded the licensee will no longer be required to man the control room with licensed operators. The requirements to maintain safety related plant systems has already been deleted from the operating license and the control room is now principally used as a central location to monitor plant conditions. The present unconventional configuration

of the TMI-2 plant and its continuing changing nature as defueling and decontamination progresses does not allow testing of licensed operators on evolutions normal to an operating facility.

The licensee has requested exemption from the requirements to use a simulation facility for licensed operator testing and requalification and has also requested reductions in the watchstanding requirements to maintain an operator's license, which requires an exemption from the regulations.

Due to the unique cold-shutdown, partially defueled condition of TMI-2, there is no plant-referenced simulator or simulation facility that reflects the current condition of TMI-2. The time to design, procure, install, and begin to operate a simulation facility would exceed the period of time in which licensed operators would be required at the facility. Furthermore, due to the changing nature of the cleanup effort any design of a simulator would be quickly outdated. The use of the facility as a simulation facility is not practical since this would require facility manipulations not authorized by the facility license.

The licensee does not plan to license any additional operators between now and the end of defueling next spring when licensed operators will no longer be needed. Maintenance of current operator licenses will be through an approved TMI-2 Licensed Operator Requalification Training Program. Although 10 CFR 55.59(a)(2) requires that the requalification training program consist of both a written examination and an operating test and 10 CFR 55.45(b)(1) requires a simulation facility for conducting the operating test, the licensee proposes not to employ a simulation facility for annual requalification. The NRC approved requalification program consists of pre-planned lectures, a plant drill program, an operational review program and an evaluation of each licensed operator.

The NRC staff has determined that the current and future plant conditions, the length of time that licensed operators will be needed, and the time necessary to construct a simulator warrant exemptions to the requirements of 10 CFR 55.45(b)(1), "Implementation-Administration," 10 CFR 55.45(b)(2), "Schedule for facility licensees," 10 CFR 55.45(b)(4), "Application for and approval of simulator facilities," 10 CFR 55.45(b)(5), "Certification of simulation facilities," and 10 CFR 55.59(a)(2), "Requalification requirements" to the extent that they require a simulation facility or the use of a simulation facility to grant or maintain operators licenses.

The staff recognizes that some reduction in the hourly watchstanding requirement for maintenance of an operator's license is appropriate. The current requirements of 10 CFR 55.53 were based on the assumption that the operators would be controlling an operating facility which is not the case at TMI-2. The TMI-2 operators function largely to prevent a criticality in a reactor in which the potential for a criticality is greatly reduced from operating facilities. Furthermore, the potential for recriticality at TMI-2 decreases on an almost daily basis as defueling progresses. In contrast to operating facilities, TMI-2 is essentially in a static mode with little change from day to day. The principal operator activity is monitoring various plant parameters to assure the continued safe shutdown of the facility and assist the ongoing decontamination and defueling activities.

Based on a review of the operator licensing requirements, the NRC staff finds that reducing the hourly watchstanding for maintenance of an operator's license from seven 8-hour shifts or five 12-hour shifts per calendar quarter to four 8-hour shifts per quarter appropriate. Further, the staff finds that if a

licensed operator fails to meet the quarterly requirement, before reinstatement and resumption of functions authorized by a license, the licensee must complete a minimum of two 8-hour shifts instead of 40 hours of shift work.

IV.

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

Accordingly, the Commission hereby grants exemption from the requirements of 10 CFR 55.45(b)(1), 10 CFR 55.45(b)(2), 10 CFR 55.45(b)(4), 10 CFR 55.45(b)(5) and 10 CFR 55.59(a)(2) to the extent that these sections require a simulation facility to grant or maintain an operators license. The Commission also grants exemption from 10 CFR 55.53(e) and 55.53(f) to the extent that the hourly watchstanding requirements to maintain an operator's license is reduced to four 8-hour shifts per calendar quarter and the requirement to reinstate the license if the quarterly requirement is not met is reduced to a minimum of two 8-hour shifts.

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 37375).

This exemption is effective as of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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

Dated at Rockville, Maryland
this 6th day of October 1988.