November 24, 1995

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

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M92440)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No.199 to Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1, in response to your letter dated May 24, 1995, as supplemented July 24, 1995.

The amendment revises the Technical Specifications to extend the test interval for the source range neutron flux instrumentation from 7 days prior to startup to 6 months prior to startup.

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-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosures: 1. Amendment No. 199 to DPR-50
2. Safety Evaluation

cc w/encls: See next page

Distribution:
Docket File
PUBLIC
PD I-3 Plant
SVarga
PMcKee
SNorris
RHernan
MGriggs
OGC
GHill (2)
CGrimes
SMazumdar
ACRS
PEselgroth, RI

CP-1
FO1
1/1

DOCUMENT NAME: G:\GRIGGS\M92440.AMD

OFFICE	LA:PDI-3	PM:PDI-3	PM:PDI-3	D:PDI-3	OGC
NAME	SNorris	MGriggs:cn	RHernan	PMcKee	EBachmann
DATE	11/7/95	11/7/95	11/7/95	11/7/95	11/8/95

OFFICIAL RECORD COPY

9512010014 951124
PDR ADOCK 05000289
P PDR

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

November 24, 1995

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

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. M92440)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 199 to Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1, in response to your letter dated May 24, 1995, as supplemented July 24, 1995.

The amendment revises the Technical Specifications to extend the test interval for the source range neutron flux instrumentation from 7 days prior to startup to 6 months prior to startup.

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,

Ronald W. Hernan

Ronald W. Hernan, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-289

Enclosures: 1. Amendment No. 199 to DPR-50
2. Safety Evaluation

cc w/encls: See next page

cc:

Michael Ross
Director, O&M, TMI
GPU Nuclear Corporation
P.O. Box 480
Middletown, PA 17057

John C. Fornicola
Director, Planning and
Regulatory Affairs
GPU Nuclear Corporation
100 Interpace Parkway
Parsippany, NJ 07054

Jack S. Wetmore
Manager, TMI Regulatory Affairs
GPU Nuclear Corporation
P.O. Box 480
Middletown, PA 17057

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

Chairman
Board of County Commissioners
of Dauphin County
Dauphin County Courthouse
Harrisburg, PA 17120

Chairman
Board of Supervisors
of Londonderry Township
R.D. #1, Geyers Church Road
Middletown, PA 17057

Michele G. Evans
Senior Resident Inspector (TMI-1)
U.S. Nuclear Regulatory Commission
P.O. Box 311
Middletown, PA 17057

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

Robert B. Borsum
B&W Nuclear Technologies
Suite 525
1700 Rockville Pike
Rockville, MD 20852

William Dornsife, Acting Director
Bureau of Radiation Protection
Pennsylvania Department of
Environmental Resources
P.O. Box 2063
Harrisburg, PA 17120

Dr. Judith Johnsrud
National Energy Committee
Sierra Club
433 Orlando Avenue
State College, PA 16803

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. 199
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 May 24, 1995, as supplemented July 24, 1995, 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. 199, 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

Phillip F. McKee, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: November 24, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 199

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	Insert
1-8	1-8
4-3	4-3

1.24 CORE OPERATING LIMITS REPORT

The CORE OPERATING LIMITS REPORT is a TMI-1 specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.5. Plant operation within these operating limits is addressed in individual specifications.

1.25 FREQUENCY NOTATION

The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2. All Surveillance Requirements shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the surveillance interval. The 25% extension applies to all frequency intervals with the exception of "F." No extension is allowed for intervals designated "F."

TABLE 1.2

FREQUENCY NOTATION

NOTATION	FREQUENCY
S	Shiftly (once per 12 hours)
D	Daily (once per 24 hours)
W	Weekly (once per 7 days)
M	Monthly (once per 31 days)
Q	Quarterly (once per 92 days)
S/A	Semi-Annually (once per 184 days)
R	Refueling Interval (once per 24 months)
P S/U	Prior to each reactor startup, if not done during the previous 7 days
P S/A	**Within six (6) months prior to each reactor startup**
P	Completed prior to each release
N/A (NA)	Not applicable
E	Once per 18 months
F	Not to exceed 24 months

Amendment No. 72, 137, 155, 173, 175 ,199

TABLE 4.1-1

INSTRUMENT SURVEILLANCE REQUIREMENTS

	CHANNEL DESCRIPTION	CHECK	TEST	CALIBRATE	REMARKS
1.	Protection Channel Coincidence Logic	NA	M	NA	
2.	Control Rod Drive Trip Breaker and Regulating Rod Power SCRs	NA	M	NA	(1) Includes independent testing of shunt trip and undervoltage trip features.
3.	Power Range Amplifier	D(1)	NA	(2)	(1) When reactor power is greater than 15%. (2) When above 15% reactor power run a heat balance check once per shift. Heat balance calibration shall be performed whenever heat balance exceeds indicated neutron power by more than two percent.
4.	Power Range Channel	S	M	M(1)(2)	(1) When reactor power is greater than 60% verify imbalance using incore instrumentation. (2) When above 15% reactor power calculate axial offset upper and lower chambers after each startup if not done within the previous seven days.
5.	Intermediate Range Channel	S(1)	P S/U	NA	(1) When in service.
6.	Source Range Channel	S(1)	P S/A	NA	(1) When in service.
7.	Reactor Coolant Temperature Channel	S	M	F	

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 199 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 May 24, 1995, as supplemented July 24, 1995, 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 (TSs). The requested changes would revise the TSs to extend the test interval for the source range neutron flux instrumentation from 7 days prior to startup to 6 months prior to startup. The July 24, 1995, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

Section 3.3.9 of NUREG-1430, Rev. 1, "Improved Standard Technical Specifications for Babcock & Wilcox Plants" (STS), requires a surveillance for the source-range neutron flux instrumentation channels which includes a channel calibration (excluding neutron detectors) every 18 months. In the proposed amendment, the licensee requested that this calibration interval be increased from 7 days prior to plant startup to within 6 months prior each reactor plant startup. The licensee used manufacturer's data in lieu of statistical observation to address instrument drift and the effect of the increased surveillance interval on instrument errors. The proposed 6-month interval prior to reactor start-up is more conservative than the NUREG-1430 requirement because components are being tested during plant operation and there may be more than one reactor start-up in a refueling cycle (mode change to start-up from hot standby, hot or cold shutdown).

The amendment request serves only to replace the 7-day test requirement for the source range nuclear instrumentation (NI) with a requirement to test these NI channels within 6 months prior to each reactor startup, as indicated in TS Table 4.1-1, Item 6. The extension to 6 months prior to a reactor startup is based on the GAMMA-METRICS, Inc. specification that the source range NI equipment exhibits a maximum drift rate of ±0.5% of span over 6 months. The source range NI test verifies the operation and accuracy of the electronics, excluding the detector, and includes: (i) power supply voltages, (ii) built-in test features, which are used to simulate counts and count rates and to check the accuracy of the electronics, panel meters, and the computer, and (iii) bistable setpoints and their outputs are tested. The proposed channel test for the source NI is equivalent to the calibration test (excluding the detectors) of NUREG-1430, Rev. 1 except that the TMI-1 TSs presently requires the test to be done 7-days prior to reactor startup. The STS requires a calibration of the same equipment to be done on a refueling interval, which would mean every 24 months for TMI-1 because of the 24-month refueling cycle for TMI-1.

In Bases Section 3.8 of the TMI-1 TSs states that "Continuous monitoring of radiation levels and neutron flux provides immediate indication of an unsafe condition during refueling and fuel loading activities." Testing of the source range channels 6 months prior to reactor restart is acceptable based on the 0.5% drift specified by GAMMA-METRICS, Inc. and will have no impact on continuous monitoring capability, nor will it impact the ability to provide immediate indication of an unsafe condition during refueling.

During the 7R refueling outage, the source-range monitors were replaced by new monitors manufactured by GAMMA-METRICS, Inc. Thus far, the licensee has noticed very little instrument drift during operation and testing conducted during outages 8R, 9R, and 10R. The proposed changes do not involve any physical change to the plant. The source-range monitors do not provide any inputs to the reactor protection system and no credit is taken for the source-range monitors in the accident analysis. Furthermore, no changes were required in safety system setpoints or safety analysis. The licensee used the combination of the manufacturer's data and the results of tests conducted during the past three refueling outages to determine that the effects of increased surveillance intervals on instrument drift and its effect on safety. The staff reviewed this information and concludes that the licensee has adequately analyzed the effect of increased surveillance intervals on instrument drift and its effect on safety.

The proposed amendment includes:

A. TS page 4-3, Table 4.1-1, Instrument Surveillance Requirements, Item 6: Replace notation "P S/U" which stands for "Prior to each reactor startup, if not done during the previous 7 days" by "P S/A" which stands for "Within six (6) months prior to each reactor startup."

B. TS page 1-8, Table 1.2: Add notation "P S/A".

Finally, the licensee has evaluated the effect of the increase in the surveillance interval on safety and has concluded that no effect exists. The licensee has documented very small instrument drift during the past three refueling outages and surveillance data do not invalidate this conclusion. Performance of the source range NI test described above on the proposed 6-month interval is more conservative than the calibration interval of the STS. This change will have no impact on any TS governing the safety functions and requirements for the source range instrumentation. TSs 3.5.1.5 and 3.5.5 ensure that the NIs are operable prior to startup and that the equipment is functional with respect to its safety requirements. Also, the small incremental drift seen between the time of conducting the surveillance and startup will have no impact on nuclear safety. The staff reviewed this information and finds that the proposed TS changes do not have a significant effect on safety and are, therefore, acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, a good faith effort was made to contact the Pennsylvania State official about the proposed issuance of the amendment.

4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any 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 (60 FR 32365). 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 Contributors: Subinoy Mazumdar
Maudette Griggs

Date: November 24, 1995