

September 19, 1995

Mr. James Knubel, Vice President
and Director, TMI
GPU Nuclear Corporation
P.O. Box 480
Middletown, PA 17057-0480

SUBJECT: ISSUANCE OF AMENDMENT - TSCR NO. 252 (TAC NO. M92439)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 196 to Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1 (TMI-1), in response to your letter of August 11, 1995, which superseded your request of May 17, 1995.

The amendment removes the Technical Specifications for the Makeup, Purification, and Chemical Addition Systems from the Technical Specifications (Section 3.2) and relocates the pertinent design information, including tank volume and boron concentrations, to the TMI-1 Updated Final Safety Analysis Report.

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 M. Griggs
for

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. 196 to DPR-50
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

Docket File SNorris
PUBLIC OGC
PDI-3 Plant GHill (2)
SVarga CGrimes, DORS/OTSB
PMcKee ACRS (4)
RHernan RJones
JRogge, RI

Document Name: G:\HERNAN\M92439.AMD

* See previous concurrence

OFFICE	LA:PDI-3	PM:PDI-3	D:PDI-3	BC:SRXB	OGC
NAME	SNorris*	RHernan:cn	PMcKee*	RJones*	AHodgdon*
DATE	8/21/95	09/19/95	8/21/95	8/22/95	8/30/95

OFFICIAL RECORD COPY

210055

9509220006 950919
PDR ADDCK 05000289
P PDR

NOG FILE CENTER COPY

CP-1
DF01



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

September 19, 1995

Mr. James Knubel, Vice President
and Director, TMI
GPU Nuclear Corporation
P.O. Box 480
Middletown, PA 17057-0480

SUBJECT: ISSUANCE OF AMENDMENT - TSCR NO. 252 (TAC NO. M92439)

Dear Mr. Knubel:

The Commission has issued the enclosed Amendment No. 196 to Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1 (TMI-1), in response to your letter of August 11, 1995, which superseded your request of May 17, 1995.

The amendment removes the Technical Specifications for the Makeup, Purification, and Chemical Addition Systems from the Technical Specifications (Section 3.2) and relocates the pertinent design information, including tank volume and boron concentrations, to the TMI-1 Updated Final Safety Analysis Report.

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,

for Maudette Briggs

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. 196 to DPR-50
2. Safety Evaluation

cc w/encls: See next page

J. Knubel
GPU Nuclear Corporation

Three Mile Island Nuclear Station,
Unit No. 1

cc:

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

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

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

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

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

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

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



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. 196
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 August 11, 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.

9509220007 950919
PDR ADOCK 05000289
P PDR

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. 196, 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.

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: September 19, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 196

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 contains a vertical line indicating the area of change.

Remove

ii
3-19
3-20

Insert

ii
3-19
3-20

TABLE OF CONTENTS

<u>Section</u>		<u>Page</u>
2	<u>SAFETY LIMITS AND LIMITING SAFETY SYSTEM SETTINGS</u>	2-1
2.1	<u>Safety Limits, Reactor Core</u>	2-1
2.2	<u>Safety Limits, Reactor System Pressure</u>	2-4
2.3	<u>Limiting Safety System Settings, Protection Instrumentation</u>	2-5
3	<u>LIMITING CONDITIONS FOR OPERATION</u>	3-1
3.0	<u>General Action Requirements</u>	3-1
3.1	<u>Reactor Coolant System</u>	3-1a
3.1.1	Operational Components	3-1a
3.1.2	Pressurization, Heatup and Cooldown Limitations	3-3
3.1.3	Minimum Conditions for Criticality	3-6
3.1.4	Reactor Coolant System Activity	3-8
3.1.5	Chemistry	3-10
3.1.6	Leakage	3-12
3.1.7	Moderator Temperature Coefficient of Reactivity	3-16
3.1.8	Single Loop Restrictions	3-17
3.1.9	Low Power Physics Testing Restrictions	3-18
3.1.10	Control Rod Operation	3-18a
3.1.11	Reactor Internal Vent Valves	3-18c
3.1.12	Pressurizer Power Operated Relief Valve (PORV) and Block Valve	3-18d
3.1.13	Reactor Coolant System Vents	3-18f
3.2	<u>Deleted</u>	3-19
3.3	<u>Emergency Core Cooling, Reactor Building Emergency Cooling and Reactor Building Spray Systems</u>	3-21
3.4	<u>Decay Heat Removal Capability</u>	3-25
3.4.1	Reactor Coolant System Temperature Greater than 250°F	3-25
3.4.2	Reactor Coolant System Temperature 250°F or Less	3-26
3.5	<u>Instrumentation Systems</u>	3-27
3.5.1	Operational Safety Instrumentation	3-27
3.5.2	Control Rod Group and Power Distribution Limits	3-33
3.5.3	Engineered Safeguards Protection System Actuation Setpoints	3-37
3.5.4	Incore Instrumentation	3-38
3.5.5	Accident Monitoring Instrumentation	3-40a
3.5.6	Deleted	3-40f
3.6	<u>Reactor Building</u>	3-41
3.7	<u>Unit Electrical Power System</u>	3-42
3.8	<u>Fuel Loading and Refueling</u>	3-44
3.9	<u>Deleted</u>	3-46
3.10	<u>Miscellaneous Radioactive Materials Sources</u>	3-46
3.11	<u>Handling of Irradiated Fuel</u>	3-55
3.12	<u>Reactor Building Polar Crane</u>	3-57
3.13	<u>Secondary System Activity</u>	3-58
3.14	<u>Flood</u>	3-59
3.14.1	Periodic Inspection of the Dikes Around TMI	3-59
3.14.2	Flood Condition for Placing the Unit in Hot Standby	3-60
3.15	<u>Air Treatment Systems</u>	3-61
3.15.1	Emergency Control Room Air Treatment System	3-61
3.15.2	Reactor Building Purge Air Treatment System	3-62a
3.15.3	Auxiliary and Fuel Handling Building Air Treatment System	3-62c
3.15.4	Fuel Handling Building ESF Air Treatment System	3-62e

3.2 MAKEUP AND PURIFICATION AND CHEMICAL ADDITION SYSTEMS

DELETED

THIS PAGE LEFT BLANK INTENTIONALLY



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 196 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 August 11, 1995, the GPU Nuclear Corporation (GPUN, the licensee) submitted a request for changes to the Three Mile Island Nuclear Station, Unit 1 (TMI-1) Technical Specifications (TS). The requested changes would remove Section 3.2 of the TMI-1 TS, "Makeup and Purification and Chemical Addition Systems," and the associated bases. The pertinent design requirements and bases that are not already in the TMI-1 Updated Final Safety Analysis Report (UFSAR), such as boron concentration and minimum volume of tanks such as the boric acid mixing tank, are being incorporated into the UFSAR.

2.0 BACKGROUND

Section 50.36 of Title 10 of the Code of Federal Regulations (10 CFR 50.36) establishes the regulatory requirements related to the content of TS. The rule requires that TS include items in specific categories, including safety limits, limiting conditions for operation, and surveillance requirements; however, the rule does not specify the particular requirements to be included in a plant's TS. The NRC developed criteria, as described in the "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," (58 FR 39132, July 22, 1993) to determine which of the design conditions and associated surveillances need to be located in the TS because the requirement is "necessary to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety." Briefly, those criteria are (1) detection of abnormal degradation of the reactor coolant pressure boundary, (2) boundary conditions for design basis accidents and transients, (3) primary success paths to mitigate design basis accidents and transients, and (4) functions determined to be important to risk or operating experience. The Commission's final policy statement acknowledged that its implementation may result in the relocation of existing

9509220009 950919
PDR ADOCK 05000289
P PDR

TS requirements to licensee-controlled documents and programs. The criteria stated in the policy statement have also been recently codified in NRC regulations in a change to 10 CFR 50.36 (60 FR 36953, July 19, 1995). The FEDERAL REGISTER Notice related to this rulemaking stated the following:

... Each licensee covered by these regulations may voluntarily use the criteria as a basis to propose the relocation of existing technical specifications that do not meet any of the criteria from the facility license to licensee-controlled documents. The voluntary conversion of current technical specifications in this manner is expected to produce an improvement in the safety of nuclear power plants through a reduction in unnecessary plant transients and more efficient use of NRC and industry resources.

3.0 EVALUATION

The functions, design requirements/assumptions, and design bases of the TMI-1 Makeup, Purification, and Chemical Addition Systems are discussed in detail in 9.1 and 9.2 of the TMI-1 UFSAR. Section 3.2 of the TS does not contain any instrumentation used to detect abnormal degradation of the reactor coolant pressure boundary. In fact it contains no references or requirements pertaining to any instrumentation at all. No parameters of these systems are considered an initial condition or a primary success path to any design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. The volumes and boron concentrations of the tanks in these systems are not risk significant and were, therefore, not considered in the TMI-1 probabilistic risk assessment. Therefore, the requirements currently contained in TS 3.2 do not meet the criteria in the NRC "Final Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors," as codified by the revision to 10 CFR 50.36 and are, therefore, not required to be maintained in the TS. The proposed amendment is expected to produce an improvement in safety through reduced potential action statement-induced plant transients.

Design basis accident and transient analysis criteria regarding emergency core cooling system (ECCS) cold shutdown boration requirements will be maintained in TMI-1 TS Section 3.3. These are separate systems from those in Section 3.2 of the TS. Administrative relocation of the existing TS 3.2 requirements for the Makeup, Purification, and Chemical Addition Systems to the UFSAR ensures that these system requirements and bases are appropriately controlled in accordance with the requirements of 10 CFR 50.59.

On this basis, the staff concludes that the Makeup, Purification, and Chemical Addition Systems do not need to be controlled by TS, and changes to the design bases of these systems will be adequately controlled by 10 CFR 50.59, "Changes, tests, and experiments." Should the licensee's determination regarding any changes to these sections of the UFSAR conclude that an unreviewed safety question is involved, due to either (1) an increase in the probability or consequences of accidents or malfunctions of equipment

important to safety, (2) the creation of a possibility for an accident or malfunction of a different type than any evaluated previously, or (3) a reduction in the margin of safety, NRC approval would be required prior to implementation of the change. NRC inspection and enforcement programs also enable the staff to monitor facility changes and licensee adherence to UFSAR commitments and to take any remedial action that may be appropriate.

The staff has concluded, therefore, that relocation of TS Section 3.2 is acceptable because (1) its inclusion in technical specifications is not specifically required by 10 CFR 50.36 or other regulations, (2) the TS is not required to avert an immediate threat to the public health and safety, and (3) changes that are deemed to involve an unreviewed safety question will require prior NRC approval in accordance with 10 CFR 50.59(c).

4.0 STATE CONSULTATION

In accordance with the Commission's regulations the staff made a good faith effort to contact the Pennsylvania State official for comments on September 19, 1995.

5.0 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. 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 43172). 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.

6.0 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 Contributor: Ronald W. Hernan

Date: September 19, 1995