

May 15, 1989

Docket No. 50-320

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Mr. Michael B. Roche
Vice President/Director
Three Mile Island Unit 2
GPU Nuclear Corporation
P. O. Box 480
Middletown, Pennsylvania 17057

Dear Mr. Roche:

SUBJECT: ISSUANCE OF AMENDMENT (TAC NO. 66697)

The Commission has issued the enclosed Amendment No. 34 to Facility Operating License No. DPR-73 for the Three Mile Island Nuclear Station, Unit No. 2, in response to your letter dated December 4, 1987 (Technical Specification Change Request No. 57).

The amendment modifies Appendix A Technical Specifications by revising the specifications related to fire protection systems at TMI-2.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's bi-weekly Federal Register notice.

Sincerely,

/s/

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

Enclosures:

- 1. Amendment No. 34 to DPR-73
- 2. Safety Evaluation

cc w/enclosures:

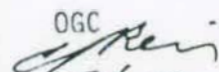
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[TAC NO. 66697]

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

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Vice President/Director
Three Mile Island Unit 2
GPU Nuclear Corporation
P. O. Box 480
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Sincerely,

A handwritten signature in cursive script that reads "Michael T. Masnik".

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

Enclosures:

1. Amendment No. 34 to DPR-73
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. M. B. Roche
GPU Nuclear Corporation

Three Mile Island Nuclear Station
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

GPU NUCLEAR CORPORATION

DOCKET NO. 50-320

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 34
License No. DPR-73

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by GPU Nuclear Corporation, et al. (the licensee) dated December 4, 1987 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.

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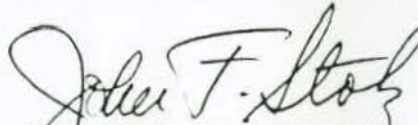
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.c.(2) of Facility Operating License No. OPR-73 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 34, 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



John F. Stolz, Director
Project Directorate 1-4
Division of Reactor Projects I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 15, 1989

ATTACHMENT TO LICENSE AMENDMENT NO. 34

FACILITY OPERATING LICENSE NO. DPR-73

DOCKET NO. 50-320

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by amendment number 34 and contain vertical lines indicating the area of change.

Remove

Page 1-4
Page 3.7-4
Page 3.7-5
Page 3.7-6
Page 3.7-7
Page B 3/4 3-3
Page B 3/4 7-2
Page B 3/4 7-3

Insert

Page 1-4
Page 3.7-4
Page 3.7-5
Page 3.7-6
Page 3.7-7
Page B 3/4 3-3
Page B 3/4 7-2
Page B 3/4 7-3

1.0 DEFINITIONS

CHANNEL FUNCTION TEST

1.10 A CHANNEL FUNCTIONAL TEST shall be:

- a. Analog channels - the injection of a simulated signal into the channel as close to the primary sensor as practicable to verify OPERABILITY including alarm and/or trip functions.
- b. Bistable channels - the injection of a simulated signal into the channel sensor to verify OPERABILITY including alarm and/or trip functions.

STAGGERED TEST BASIS

1.11 A STAGGERED TEST BASIS shall consist of:

- a. A test schedule for n systems, subsystems, trains or designated components obtained by dividing the specified test interval into n equal subintervals,
- b. The testing of one system, subsystem, train or designated components at the beginning of each subinterval.

FREQUENCY NOTATION

1.12 The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2.

FIRE SUPPRESSION WATER SYSTEM

1.13 A FIRE SUPPRESSION WATER SYSTEM shall consist of: a water source; gravity tank or pumps; and distribution piping and associated sectionalizing control or isolation valves. Such valves shall include yard hydrant curb valves, and the first valve upstream of the water flow alarm device on each hose standpipe.

REVIEW SIGNIFICANT

1.14 REVIEW SIGNIFICANT items shall consist of items that are Important to Safety, or proposed changes to Technical Specifications, License, Special Orders or Agreements, Recovery Operations Plan, Organization Plan, or involve an Unreviewed Safety Question or a Significant Environmental Impact. Also, those system operating procedures and associated emergency, abnormal, alarm response procedures which require NRC approval. In addition, those activities not covered by an NRC approved system description, SER or TER and which exceed PEIS values.

LIMITING CONDITIONS FOR OPERATION

3.7.10 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

3.7.10.1 The FIRE SUPPRESSION WATER SYSTEM shall be OPERABLE with;

a. At least two (2) of the following three (3) high pressure pumps shall be OPERABLE with their discharge aligned to the fire suppression header:

1. Unit 1 Circulating Water Flume Diesel Fire Pump
2. Unit 1 River Water Intake Diesel Fire Pump
3. Deleted
4. Unit 1 River Water Intake Motor Fire Pump

b. Two (2) separate water supplies of the following three (3) shall be available with at least 90,000 gallons each:

1. Altitude Tank
2. Unit 1 Circulating Water Flume
3. Unit 1 River Water Intake Structure
4. Deleted

c. An OPERABLE flow path capable of taking suction from a water supply and transferring the water through distribution piping with OPERABLE section-alizing control or isolation valves to the yard hydrant curb valves and the first valve ahead of the water flow alarm device on each hose standpipe, required to be OPERABLE per Specification 3.7.10.4.

APPLICABILITY: MODES 1, 2 and 3

ACTION:

- a. With two (2) pumps or two (2) water supplies inoperable, restore the inoperable equipment to OPERABLE status within seven (7) days.
- b. With the Fire Suppression Water System otherwise inoperable establish a backup Fire Suppression Water System within 24 hours.

LIMITING CONDITIONS FOR OPERATION

DELUGE/SPRINKLER SYSTEMS

3.7.10.2 Deleted.

LIMITING CONDITIONS FOR OPERATION

HALON SYSTEM

3.7.10.3 Deleted.

FIRE HOSE STATIONS

3.7.10.4 The fire hose stations listed in Table 4.7-1 of the RECOVERY OPERATIONS PLAN shall be OPERABLE:

APPLICABILITY: MODES 1, 2 and 3

ACTION:

With one or more of the fire hose stations shown in Table 4.7-1 in the Recovery Operations Plan inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose station within 1 hour.

LIMITING CONDITONS FOR OPERATION

PENETRATION FIRE BARRIERS

3.7.11 Deleted.

INSTRUMENTATION

BASES

3/4.3.3.8 AND 3/4.3.3.9 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the Fire Detection Instrumentation ensures that adequate warning capability as required by the TMI-2 Fire Protection Program Evaluation, is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires is an integral element in the overall facility fire protection program.

In the event that a portion of the Fire Detection Instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is returned to service. For purposes of ALARA considerations, remote mechanisms (e.g., CCTV coverage) may be utilized to perform the fire patrol. However, the inoperability of this instrument would not affect the capability to maintain the safe shutdown condition of the plant nor the ability to prevent offsite releases greater than 10 CFR 100 limits.

PLANT SYSTEMS

BASES

3/4.7.7 CONTROL ROOM EMERGENCY AIR CLEANUP SYSTEM

The OPERABILITY of the control room emergency air cleanup system ensures that (1) the ambient air temperature does not exceed the allowable temperature for continuous duty rating for the equipment and instrumentation cooled by this system and (2) the control room will remain habitable for operations personnel during and following all credible conditions. Under certain conditions (i.e., loss of offsite power combined with a severe accident at Unit 1), it would be required to place TMI-2 in a stable configuration with core alterations suspended. In this case, operability requirements to ensure TMI-2 Control Room habitability may be temporarily suspended. The OPERABILITY of this system in conjunction with control room design provisions is based on limiting the radiation exposure to personnel occupying the control room to 5 rem or less whole body, or its equivalent. This limitation is consistent with the requirements of General Design Criterion 19 of Appendix "A", 10 CFR 50.

3/4.7.9 SEALED SOURCE INTEGRITY

The limitation on removable contamination for sources requiring leak testing, including alpha emitters, is based on 10 CFR 70.39(c) limits for plutonium. This limitation will ensure that leakage from byproduct, source, and Special Nuclear Material sources will not exceed allowable intake values.

3/4.7.10 FIRE SUPPRESSION SYSTEMS

The OPERABILITY of the Fire Suppression Systems ensures that adequate fire suppression capability is available as required by the TMI-2 Fire Protection Program Evaluation. The Fire Suppression System consists of the water system, and fire hose stations. Any two (2) of the three (3) main fire pumps provide combined capacity greater than 3575 gpm.

In the event that portions of the Fire Suppression Systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the affected equipment can be restored to service. However, the inoperability of these systems would not affect the capability to maintain the safe shutdown condition of the plant nor the capability to prevent offsite releases greater than 10 CFR 100 limits.

PLANT SYSTEMS

BASES

3/4.7.11 PENETRATION FIRE BARRIERS

Deleted.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 34 TO FACILITY OPERATING LICENSE NO. DPR-73

GPU NUCLEAR CORPORATION

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

DOCKET NO. 50-320

INTRODUCTION

By letter dated December 4, 1987, GPU Nuclear Corporation (GPUN or the licensee) requested the approval of a change to the Appendix A Technical Specifications of Facility Operating License No. DPR-73 for Three Mile Island Nuclear Station, Unit No. 2. The proposed amendment would revise the specifications related to fire protection systems at TMI-2 by aligning license requirements with the current, as well future, plant conditions through the remainder of the current cleanup operations.

DISCUSSION AND EVALUATION

The licensee proposes a revised definition of "Fire Suppression Water System," Section 1.13. The current definition describes the components of the fire suppression water system. The revised definition deletes the terms "sprinkler" and "spray system riser." These systems are eliminated consistent with the deletion of Section 3.7.10.2 which requires an operable deluge/sprinkler system at a number of locations. The staff finds the licensee's proposal to delete the terms "sprinkler" and "spray system" from Section 1.13 acceptable.

Technical Specification 3.7.10.1, Fire Suppression Water System, lists the components of the fire suppression water system that shall be operable. The current technical specification requires four high pressure pumps, a Unit 2 river water intake diesel fire pump, Unit 2 river water intake structure, and an operable flow path to each sprinkler and spray system riser as well as a number of other components to be operable. The licensee proposes to change the technical specification to require only three high pressure pumps, and delete the requirements for an operable Unit 2 river water intake diesel fire pump, an operable intake structure, and an operable flow path to each sprinkler and spray system riser. The staff finds that only two of the currently required four fire pumps are necessary to provide the required flowrate of 3575 gpm for the TMI site. Additionally, the staff finds that

only two of the current four fire protection water supplies for the TMI site are required. Furthermore, fire suppression capability is principally required to attain safe shutdown of the facility and preclude the release of radioactivity. The current TMI-2 core conditions and the level of combustible loading inside the containment warrant a reduction in fire suppression capability. The staff finds the licensee's proposed change acceptable and consistent with current staff practice.

Technical Specification 3.7.10.2, Deluge/Sprinkler Systems, requires operable deluge and/or sprinkler systems located in a number of locations throughout TMI-2. The licensee proposes to delete the requirement for maintaining the operability of these systems. The principal purpose of the deluge/sprinkler systems is to assure the safe shutdown of the facility, and preclude the possibility of an off-site release in excess of 10 CFR Part 100 limits. Since safe shutdown of the facility has been attained and assured, and the charcoal filters in the TMI-2 ventilation systems are no longer necessary to maintain off-site doses less than 10 CFR Part 100 limits, the staff finds the proposed changes acceptable.

Technical Specification 3.7.11, Penetration Fire Barriers, requires that all penetration fire barriers protecting safety related areas be in place and capable of functioning as designed. The licensee has requested to delete the requirement to maintain functional penetration fire barriers. The reactor building penetration seals and access hatches were not fire rated; hence the requirement for penetration fire barriers. The integrity of these seals and access hatches is not required for the safe shutdown of the plant. Penetration fire barriers are also not needed to preclude off-site releases greater than 10 CFR Part 100 limit. The limited size of the design basis fire, the degree of the resulting overpressure inside the reactor building, and the nature and location of contamination inside the reactor building does not require functioning penetration fire barriers to maintain off-site releases within acceptable limits. The staff finds the proposed changes acceptable.

Section 3/4.7.11, Penetration Fire Barriers, provides the basis for requiring the functional integrity of the Fire Barrier Penetration Seals. The licensee proposes to delete Bases Section 3/4.7.11 consistent with the request to delete Section 3.7.11, Penetration Fire Barriers. The staff has determined above that the elimination of the requirement to maintain the functional integrity of the fire barriers is appropriate; therefore, deletion of this Section is consistent with the staff's determination.

ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted areas as defined in 10 CFR Part 20. The 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 off site, and that there is no significant increase in

individual or cumulative occupational exposure. The staff has determined that the amendment involves no significant hazards consideration, and there has been no public comment on such finding. 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 this amendment.

CONCLUSION

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Michael T. Masnik

Dated: May 15, 1989