

May 5, 1983

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Docket No. 50-289

Mr. Henry D. Hukill
Vice President
GPU Nuclear Corporation
P. O. Box 480
Middletown, Pennsylvania 17057

Dear Mr. Hukill:

SUBJECT: AMENDMENT NO. 85 TO FACILITY OPERATING LICENSE NO. DPR-50

The Commission has issued Amendment No. 85 to Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1 (TMI-1). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 3, 1983, as revised April 14, 1983.

This amendment modifies Appendix A Specification 3.22.2.5 to permit controlling explosive gas mixtures in the waste holdup system by limiting hydrogen to 2 percent by volume with no limit on oxygen concentration. This change is effective only after a second hydrogen/oxygen monitor is installed and declared operable, and is effective until Cycle 5 criticality.

We have incorporated certain changes to the TS changes proposed in your application. We have discussed these changes with Mr. Roy Harding of your licensing staff.

Copies of the Safety Evaluation supporting this amendment and the Notice of Issuance are enclosed.

Sincerely,

John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosures:

1. Amendment No. 85 to DPR-50
2. Safety Evaluation
3. Notice

8305180099 830505
PDR ADDCK 05000289
P PDR

cc w/enclosures:
See next page

*See previous white for concurrences.

OFFICE	ORB#4:DL	ORB#4:DL	C-ORB#4:DL	AD:OR:DL	OELD		
SURNAME	RIngram	*JVan Vliet; *A De Agazio	JStolz*	Gainas*	MCutchin*		
DATE	5/5/83	5/2/83	5/2/83	5/2/83	5/3/83		

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Docket No. 50-289

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Snyder

DBrinkman

ACRS (10)

QPC CMiles

RFerguson

RDiggs

RBallard

NSIC

Gray

ASLAB

Docket No. 50-289

Mr. Henry D. Hukill
Vice President
GPU Nuclear Corporation
P.O. Box 480
Middletown, Pennsylvania 17057

Dear Mr. Hukill:

Subject: Amendment No. To Facility Operating License No. DPR-50

The Commission has issued Amendment No. to Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1 (TMI-1). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated February 3, 1983, as revised April 14, 1983.

This amendment modifies Appendix A Specification 3.22.2.5 to permit controlling explosive gas mixtures in the waste holdup system by limiting hydrogen to within 2 percent by volume with no limit on oxygen concentration. This change is effective only after a second hydrogen/oxygen monitor is installed and declared operable, and is effective until Cycle 5 criticality.

We have incorporated certain changes to the TS changes proposed in your application. We have discussed these changes with Mr. Roy Harding of your licensing staff.

Copies of the Safety Evaluation supporting this amendment and the Notice of Issuance are enclosed.

Sincerely,

John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosures:

1. Amendment No. to DPR-50
2. Safety Evaluation
3. Federal Register Notice

Changes expected to be made by 5/1/83 by amendment. If approved not required.

OFFICE	LA:ORB.#4	ORB.#4	ORB.#4	OELD	AD. OR		
SURNAME	RIGram	JStolz	JStolz	CUTCHIN	Gladmas		
DATE	4/29/83	5/12/83	5/12/83	5/13/83	5/17/83		



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555
May 5, 1983

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R Ingram

Docket No. 83-230

Docketing and Service Section
Office of the Secretary of the Commission

SUBJECT: THREE MILE ISLAND, UNIT 1

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies (12) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s): Time for Submission of Views on Antitrust Matters.
- Notice of Availability of Applicant's Environmental Report.
- Notice of Proposed Issuance of Amendment to Facility Operating License.
- Notice of Receipt of Application for Facility License(s); Notice of Availability of Applicant's Environmental Report; and Notice of Consideration of Issuance of Facility License(s) and Notice of Opportunity for Hearing.
- Notice of Availability of NRC General Environmental Statement.
- Notice of Issuance of License Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Amendment No. 85.

Referenced documents have been provided PDR.

Division of Licensing, ORB#4
Office of Nuclear Reactor Regulation

Enclosure:
As Stated

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DATE	5/10/83				

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*Dr. John H. Buck
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Mr. David D. Maxwell, Chairman
Board of Supervisors
Londonderry Township
RFD#1 - Geyers Church Road
Middletown, Pennsylvania 17057

Regional Radiation Representative
EPA Region III
Curtis Building (Sixth Floor)
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Philadelphia, Pennsylvania 19106

Mr. Richard Conte
Senior Resident Inspector (TMI-1)
U.S.N.R.C.
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Mr. C. W. Smyth
Supervisor of Licensing TMI-1
GPU Nuclear Corporation
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Middletown, Pennsylvania 17057

Governor's Office of State Planning
and Development
ATTN: Coordinator, Pennsylvania
State Clearinghouse



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

METROPOLITAN EDISON COMPANY

JERSEY CENTRAL POWER AND 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. 85
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 licensees), dated February 3, 1983, as revised April 14, 1983, 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 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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P PDR

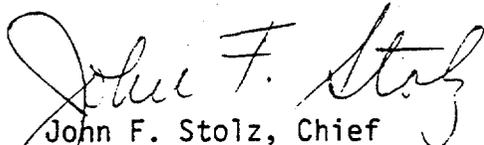
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.c.(2) of Facility Operating License No. DPR-50 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 85, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

3. This license amendment becomes effective upon initial operability of a redundant hydrogen monitor.

FOR THE NUCLEAR REGULATORY COMMISSION


John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 5, 1983

ATTACHMENT TO LICENSE AMENDMENT NO. 85

FACILITY OPERATING LICENSE NO. DPR-50

DOCKET NO. 50-289

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by Amendment number and contains vertical lines indicating the area of change.

Remove

3-116

Insert

3-116

RADIOACTIVE EFFLUENTS

EXPLOSIVE GAS MIXTURE

LIMITING CONDITIONS FOR OPERATION

3.22.2.5 *The concentration in the waste gas holdup system shall be limited to less than or equal to 2% oxygen by volume and 4% hydrogen by volume except that until Cycle 5 criticality, the concentration in the waste gas holdup system shall be limited to less than or equal to 2% hydrogen by volume with no limit on oxygen concentration (see * footnote).

APPLICABILITY: At all times.

ACTION:

- a. *With the concentration in the waste gas holdup system greater than 2% oxygen by volume or 4% hydrogen by volume, immediately minimize additions of waste gases to the system and reduce the concentrations to less than the aforementioned values within one hour.

*Prior to Cycle 5 criticality:

1. With two hydrogen monitors OPERABLE and the concentration in the waste gas holdup system greater than 2% hydrogen by volume, immediately minimize additions of waste gases to the system and reduce the concentration to less than or equal to 2% hydrogen by volume within one hour.
2. With one hydrogen monitor OPERABLE commence taking a grab sample every 8 hours and if the concentration in the waste gas holdup system is greater than 2% hydrogen by volume, immediately minimize additions of waste gases to the system and reduce the concentration to less than or equal to 2% hydrogen by volume within one hour.
3. With no hydrogen monitors OPERABLE, the concentrations in the waste gas holdup system shall be limited to less than or equal to 2% oxygen by volume and 4% hydrogen by volume.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 85 TO FACILITY OPERATING LICENSE NO. DPR-50

METROPOLITAN EDISON COMPANY
JERSEY CENTRAL POWER AND LIGHT COMPANY
PENNSYLVANIA ELECTRIC COMPANY
GPU NUCLEAR CORPORATION

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 1

DOCKET NO. 50-289

INTRODUCTION

By letter dated April 14, 1983, GPU Nuclear Corporation transmitted Technical Specification Change Request No. 121 (Rev. 1) requesting amendment to Appendix A of Facility Operating License No. DPR-50. The subject change involves Section 3.22.2.5 of the Technical Specifications for Three Mile Island Nuclear Station, Unit No. 1 (TMI-1). The licensee has proposed to amend Section 3.22.2.5 by the addition of a footnote providing alternative specifications to be met prior to Cycle 5 criticality. TMI-1 has been shutdown for approximately 4 years and radioactivity within the plant has steadily diminished over this time. The licensee has stated that these changes are needed to allow higher levels of oxygen in the waste gas ventilation system during times of maintenance and inspection of the system when the system is open to the atmosphere.

Technical Specification 3.22.2.5 provides requirements concerning the concentrations of oxygen and hydrogen in the waste gas holdup system. The specification is provided to ensure that the concentration of potentially combustible gas mixtures contained in the waste gas holdup system is maintained below the flammability limits of hydrogen and oxygen. Maintaining the concentrations of hydrogen and oxygen below the flammability limits provides assurance that the release of radioactive materials will be controlled in conformance with the requirements of General Design Criterion 60 of Appendix A to 10 CFR Part 50.

EVALUATION

The model Radiological Effluent Technical Specifications (RETS) described in NUREG-0472 are based on systems that meet the requirements of the Standard Review Plan (SRP), NUREG-0800. The TMI-1 hydrogen-oxygen monitoring equipment does not meet the requirements of SRP 11.3 of NUREG-0800 for dual and redundant gas analyzers with automatic control functions to preclude the formation or buildup of combustible hydrogen-oxygen mixtures. In this usage, redundant means two independent gas analyzers continuously operating and dual means providing two independent measurements for hydrogen and oxygen. Therefore, Technical Specification 3.22.2.5 is designed to afford a degree of protection against hydrogen-oxygen combustion similar to the provisions of the model RETS described in NUREG-0472.

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P PDR

Technical Specification 3.22.2.5 provides that the concentrations in the waste gas holdup system are to be limited at all times to less than or equal to 2% and 4% oxygen and hydrogen, respectively, by volume, and that if the concentrations in the waste gas holdup system exceed either of these values, additions of waste gas to the system are to be immediately minimized and the concentrations are to be reduced to less than the limiting values within one hour. If the concentration of either hydrogen or oxygen is kept below a concentration of 4% by volume, any gas mixture within the system will be below the flammability limit. The proposed change to Technical Specification 3.22.2.5 would apply only during the present cold shutdown, prior to Cycle 5 criticality, and would limit the concentration in the waste gas holdup system to less than or equal to 2% hydrogen by volume with no limit on the oxygen concentration. This provides a margin between 2% and 4% hydrogen by volume outside the flammability limit. Therefore, with these limits, as determined under the specification by either two operable hydrogen monitors or one operable hydrogen monitor and the prescribed periodic sampling and analysis, adequate protection is afforded against hydrogen-oxygen combustion and assurance is provided that the release of radioactive materials will be controlled in conformance with the requirements of General Design Criteria 60 of Appendix A to 10 CFR Part 50.

SUMMARY

In view of the above considerations, we have concluded that the proposed amendment to Section 3.22.2.5 of the TMI-1 Technical Specifications is acceptable.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §1.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: May 5, 1983

The following NRC personnel have contributed to this Safety Evaluation:
C. Nichols.

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-289METROPOLITAN EDISON COMPANYJERSEY CENTRAL POWER AND LIGHT COMPANYPENNSYLVANIA ELECTRIC COMPANYGPU NUCLEAR CORPORATIONNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 85 to Facility Operating License No. DPR-50, issued to Metropolitan Edison Company, Jersey Central Power and Light Company, Pennsylvania Electric Company, and GPU Nuclear Corporation (the licensees), which revised the Technical Specifications (TSs) for operation of the Three Mile Island Nuclear Station, Unit No. 1 (the facility) located in Dauphin County, Pennsylvania. The amendment becomes effective upon initial operability of a redundant hydrogen monitor.

This amendment modifies Appendix A Specification 3.22.2.5 to permit controlling explosive gas mixtures in the waste holdup system by limiting hydrogen to 2 percent by volume with no limit on oxygen concentration.

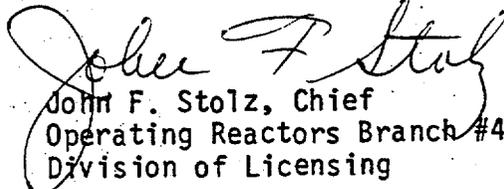
The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated February 3, 1983, as revised April 14, 1983, (2) Amendment No. 85 to License No. DPR-50, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. 20555, and at the Government Publications Section, State Library of Pennsylvania, Education Building, Commonwealth and Walnut Streets, Harrisburg, Pennsylvania 17126. A copy of items (2) and (3) may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 5th day of May 1983.

FOR THE NUCLEAR REGULATORY COMMISSION


John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 WASHINGTON, D.C. 20555
 May 5, 1983

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 Ringram

Docket No. 50-289

Docketing and Service Section
 Office of the Secretary of the Commission

SUBJECT: **THREE MILE ISLAND, UNIT 1**

Two signed originals of the Federal Register Notice identified below are enclosed for your transmittal to the Office of the Federal Register for publication. Additional conformed copies (12) of the Notice are enclosed for your use.

- Notice of Receipt of Application for Construction Permit(s) and Operating License(s).
- Notice of Receipt of Partial Application for Construction Permit(s) and Facility License(s); Time for Submission of Views on Antitrust Matters.
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- Notice of Availability of NRC Draft/Final Environmental Statement.
- Notice of Limited Work Authorization.
- Notice of Availability of Safety Evaluation Report.
- Notice of Issuance of Construction Permit(s).
- Notice of Issuance of Facility Operating License(s) or Amendment(s).
- Other: Amendment No. 85.
Referenced documents have been provided PDR.

Division of Licensing, ORB#4
 Office of Nuclear Reactor Regulation

Enclosure:
 As Stated

OFFICE →	ORB#4:DL					
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DATE →	5/12/83					