

March 17, 1986

DMB-016

Docket No. 50-289

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Dear Mr. Hukill:

SUBJECT: AMENDMENT NO. 115 TO FACILITY OPERATING LICENSE NO. DPR-50

The Commission has issued the enclosed Amendment No. 115 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 TS Change Request No. 146 dated August 20, 1985.

This amendment modifies TMI-1 TS 3.13, Secondary Coolant System Activity, by (1) decreasing the specification for I-131 activity from 1.0 uCi/cc to 0.1 uCi/gram DOSE EQUIVALENT I-131, (2) describing actions to be taken if the limit is exceeded, (3) eliminating the weekly gross activity determination in favor of isotopic analysis for DOSE EQUIVALENT I-131 once per every 72 hours, and (4) deleting the requirement to determine the I-131 condenser partition factor if primary to secondary leakage develops.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY:

John O. Thoma, Project Manager
PWR Project Directorate #6
Division of PWR Licensing-B

Enclosures:

1. Amendment No. 115 to DPR-50
2. Safety Evaluation

cc w/enclosures:
See next page

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2/24/86

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L Fiske
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GPU Nuclear Corporation

Three Mile Island Nuclear Station,
Unit No. 1

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Three Mile Island Nuclear Station
Unit No. 1

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Atomic Safety & Licensing Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Atomic Safety & Licensing Appeal
Board Panel (8)
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555



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. 115
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 August 20, 1985, 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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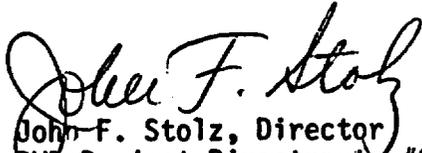
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.c.(2) of Facility Operating License No. DPR-50 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 115, 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 60 days after its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


John F. Stolz, Director
PWR Project Directorate #6
Division of PWR Licensing-B

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 17, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 115

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.

Pages

3-57*

3-58

4-10

*Overleaf page included for document completeness.

3.12 REACTOR BUILDING POLAR CRANE

Applicability

Applies to the use of the reactor building polar crane hoists over the steam generator compartments and the fuel transfer canal.

Objective

To identify those conditions for which the operation of the reactor building polar crane hoists are restricted.

Specification

- 3.12.1 The reactor building polar crane hoists shall not be operated over the fuel transfer canal when any fuel assembly is being moved.
- 3.12.2 During the period when the reactor vessel head is removed and irradiated fuel is in the reactor building and fuel is not being moved, the reactor building polar crane hoist shall be operated over the fuel transfer canal only where necessary and in accordance with approved operating procedures stating the purpose of such use.
- 3.12.3 During the period when the reactor coolant system is pressurized above 300 psig, and is above 200 F, and fuel is in the core, the reactor building polar crane hoists shall not be operated over the steam generator compartments.

Bases

Restriction of use of the reactor building polar crane hoists over the fuel transfer canal when the reactor vessel head is removed to permit those operations necessary for the fuel handling and core internals operations is to preclude the dropping of materials or equipment into the reactor vessel and possibly damaging the fuel to the extent that any escape of fission products would result.

Restriction of use of the reactor building polar crane hoists over the steam generator compartments during the time when steam could be formed from dropping a load on the steam generator or reactor coolant piping resulting in rupture of the system is required to protect against a loss-of-coolant accident.

3.13 SECONDARY COOLANT SYSTEM ACTIVITY

Applicability

Applies to the limiting conditions for operation when reactor coolant system pressure is greater than 300 psig or T_{avg} is greater than 200°F.

Objective

To limit the inventory of activity in the secondary system.

Specification

- 3.13.1 The specific activity of the secondary coolant system shall be $\leq 0.10 \mu$ Ci/gram DOSE EQUIVALENT I-131.
- 3.13.2 With the specific activity of the secondary coolant system $> 0.10 \mu$ Ci/gram DOSE EQUIVALENT I-131, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

Bases

The limitations on secondary system specific activity ensure that the resultant off-site radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose includes the effects of a coincident 1.0 GPM primary-to-secondary tube leak in the steam generator of the affected steam line.

3.13 SECONDARY COOLANT SYSTEM ACTIVITY

Applicability

Applies to the limiting conditions for operation when reactor coolant system pressure is greater than 300 psig or T_{avg} is greater than 200°F.

Objective

To limit the inventory of activity in the secondary system.

Specification

- 3.13.1 The specific activity of the secondary coolant system shall be $\leq 0.10 \mu$ Ci/gram DOSE EQUIVALENT I-131.
- 3.13.2 With the specific activity of the secondary coolant system $> 0.10 \mu$ Ci/gram DOSE EQUIVALENT I-131, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

Bases

The limitations on secondary system specific activity ensure that the resultant off-site radiation dose will be limited to a small fraction of 10 CFR Part 100 limits in the event of a steam line rupture. This dose includes the effects of a coincident 1.0 GPM primary-to-secondary tube leak in the steam generator of the affected steam line.

TABLE 4.1-3 Cont'd.

	<u>Item</u>	<u>Check</u>	<u>Frequency</u>
4.	Spent Fuel Pool Water Sample	Boron concentration	Monthly and after each makeup
5.	Secondary Coolant System Activity	Isotopic analysis for DOSE EQUIVALENT I-131 concentration	At least once per 72 hours when reactor coolant system pressure is greater than 300 psig or Tav is greater than 200°F
6.	Boric Acid Mix Tank or Reclaimed Boric Acid Tank	Boron concentration	Twice weekly***
7.	Deleted		
8.	Deleted		
9.	Deleted		
10.	Sodium Hydroxide Tank	Concentration	Quarterly and after each makeup
11.	Deleted		
12.	Deleted		

Until the specific activity of the primary coolant system is restored within its limits.

* Sample to be taken after a minimum of 2 EFPD and 20 days of POWER OPERATION have elapsed since the reactor was last subcritical for 48 hours or longer.

** Deleted.

*** The surveillance of either the Boric Acid Mix Tank or the Reclaimed Boric Acid Tank is not necessary when that respective tank is empty.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 115 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 August 20, 1985, GPU Nuclear Corporation (GPU or the licensee) requested changes to Appendix A of Facility Operating License No. DPR-50 for the Three Mile Island Nuclear Station, Unit No. 1 (TMI-1). The changes would modify existing Technical Specification 3.13, Secondary Coolant System Activity, by (1) decreasing the specification for I-131 activity from 1.0 uCi/cc to 0.1 uCi/gram DOSE EQUIVALENT I-131, (2) describing actions to be taken if the limit is exceeded, (3) eliminating the weekly gross activity determination in favor of isotopic analysis for DOSE EQUIVALENT I-131 once per every 72 hours, and (4) deleting the requirement to determine the I-131 condenser partition factor if primary to secondary leakage develops.

EVALUATION AND DISCUSSION

The requested changes to Technical Specification 3.13 incorporate more conservative limiting conditions for operation than currently imposed and conform with the provisions of the applicable Standard Technical Specifications for Babcock and Wilcox Pressurized Water Reactors.

By performing isotopic analysis for DOSE EQUIVALENT I-131 in the secondary coolant system every 72 hours, the need for weekly gross beta-gamma analysis is effectively eliminated. Further, reducing the allowable DOSE EQUIVALENT I-131 to 0.1 uCi/gram and restricting plant operations if the limit is exceeded, eliminates any need or purpose to determine an I-131 partition factor in the condenser for normal operations since the plant is required to be in hot standby within 6 hours and cold shutdown in the following 30 hours when the limit is exceeded; and the condenser off-gas is continually monitored. Additionally, by limiting the DOSE EQUIVALENT I-131 to 0.1 uCi/gram in the secondary coolant system, the dose resulting at the site boundary will be limited to a small fraction (i.e., less than 10%) of the 10 CFR Part 100 limits.

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The incorporation of these changes provides for more conservative and restrictive limits on plant operation and reduces the dose to the environment in the event of a steam line rupture or release via the main steam relief valves in a loss of load condition. Therefore, we find this change to be acceptable.

ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and a change in surveillance requirements. We have 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 this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this 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 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: March 17, 1986

Principal Contributor: John R. White