

June 5, 1992

Docket No. 50-320

Dr. Robert L. Long  
Director, Corporate Services/  
Director, TMI-2  
GPU Nuclear Corporation  
Post Office Box 480  
Middletown, Pennsylvania 17057

Dear Dr. Long:

SUBJECT: THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2 - ISSUANCE  
OF AMENDMENT NO. 42 TO FACILITY OPERATING LICENSE  
NO. DPR-73-(TAC NO. M75135)

The Commission has issued the enclosed Amendment No. 42 to Facility Operating License No. DPR-73 for the Three Mile Island Nuclear Station, Unit 2, in response to your letter dated October 10, 1989 (Technical Specification Change Request No. 66).

The amendment modifies the Appendix B Technical Specifications by deleting the requirement to sample for Strontium-89 (Sr-89) in both liquid and gaseous radioactive wastes.

A copy of the related Safety Evaluation supporting Amendment No. 42 is enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

ORIGINAL SIGNED BY  
Seymour H. Weiss, Director  
Non-Power Reactors, Decommissioning and  
Environmental Project Directorate  
Division of Reactor Projects - III/IV/V  
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Amendment No. 42 to DPR-73
- 2. Safety Evaluation

cc w/enclosures:

See next page

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06/5/92	06/5/92	06/5/92	06/5/92	05/19/92 [AMEND2]

DOCUMENT NAME: AMEND2

ORIGINATOR NAME: Michael Masnik

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

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Sincerely,

A handwritten signature in cursive script that reads "Seymour H. Weiss".

Seymour H. Weiss, Director  
Non-Power Reactors, Decommissioning and  
Environmental Project Directorate  
Division of Reactor Projects - III/IV/V  
Office of Nuclear Reactor Regulation

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1. Amendment No. 42 to DPR-73
2. Safety Evaluation

cc w/enclosures:  
See next page

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GPU Nuclear Corporation Unit No. 2

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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. 42  
License No. DPR-73

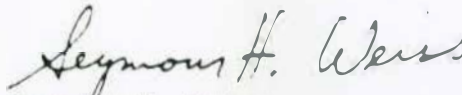
1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by GPU Nuclear Corporation (the licensee), dated October 19, 1989, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's 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 set forth in 10 CFR Chapter I;
  - 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-73 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 42, are hereby incorporated in the license. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications and all Commission Orders issued subsequent to March 28, 1979.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Seymour H. Weiss, Director  
Non-Power Reactors, Decommission and  
Environmental Project Directorate  
Division of Reactor Projects - III/IV/V  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications Appendix B

Date of Issuance: June 5, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 42

FACILITY OPERATING LICENSE NO. DPR-73

DOCKET NO. 50-320

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

Remove

2-4  
2-11

Insert

2-4  
2-11

TABLE 2.3-1

Radioactive Liquid Waste Sampling and Analysis (4, 5)

A. Monitor Tank Releases

<u>Sampling Frequency</u>	<u>Type of Activity Analysis</u>	<u>Detectable Concentration (3)</u>
Each Batch	Individual Gamma	$5 \times 10^{-7}$ $\mu\text{Ci/ml}$ (2)
	H-3	$10^{-5}$ $\mu\text{Ci/ml}$
Monthly Composite (1)	Gross Alpha	$10^{-7}$ $\mu\text{Ci/ml}$
	Sr-90	$5 \times 10^{-8}$ $\mu\text{Ci/ml}$

Notes

- (1) A composite sample is one in which the quantity of liquid sampled is proportional to the quantity of liquid waste discharged from the plant.
- (2) For certain mixtures of gamma emitters, it may not be possible to measure radionuclides in concentrations near this sensitivity limit when other nuclides are present in the sample in much greater concentrations. Under these circumstances, it will be more appropriate to calculate the concentrations of such radionuclides using measured ratios with those radionuclides which are routinely identified and measured.
- (3) The detectability limits for radioactivity analysis are based on the technical feasibility and on the potential significance in the environment of the quantities released. For some nuclides, lower detection limits may be readily achievable and when nuclides are measured below the stated limits, they should also be reported.
- (4) The results of these analyses should be used as the basis for recording and reporting the quantities of radioactive material released in liquid effluents during the sampling period. In estimating releases for a period when analyses were not performed, the average of the two adjacent data points spanning this period should be used. Such estimates should be included in the effluent records and reports; however, they should be clearly identified as estimates, and the method used to obtain these data should be described.
- (5) Deviations from sampling/analysis regime will be noted in the report specified in Section 5.6.1.

TABLE 2.3-2

Radioactive Gaseous Waste Sampling and Analysis (5)

Sample Type	Sampling Frequency	Type of Activity Analysis	Detectable Concentration (1)
<u>Waste Gas Decay Tank Release</u>			
Gas	Each Tank	H-3	$10^{-6}$ $\mu\text{Ci/cc}$
	Release	Individual Gamma Emitters	$10^{-4}$ $\mu\text{Ci/cc}$ (2)
<u>Reactor Building Purge Releases</u>			
Gas	Each Purge	H-3	$10^{-6}$ $\mu\text{Ci/cc}$
		Individual Gamma Emitters	$10^{-4}$ $\mu\text{Ci/cc}$ (2)
<u>Condenser Vacuum Pump Releases</u>			
Gas	Monthly	H-3	$10^{-6}$ $\mu\text{Ci/cc}$
	Monthly (3)	Individual Gamma Emitters	$10^{-4}$ $\mu\text{Ci/cc}$ (2)
<u>Unit Exhaust</u>			
<u>Vent Release Points</u>			
Gas	Monthly (4)	H-3	$10^{-6}$ $\mu\text{Ci/cc}$
		Individual Gamma Emitters	$10^{-4}$ $\mu\text{Ci/cc}$ (2)
Charcoal	Weekly (6)	I-131, I-133, I-135	$10^{-12}$ $\mu\text{Ci/cc}$
Particulates	Weekly	Individual Gamma Emitters	$10^{-10}$ $\mu\text{Ci/cc}$ (2)
	Monthly Composite	Sr-90	$10^{-11}$ $\mu\text{Ci/cc}$
	Monthly Composite	Gross Alpha Emitters	$10^{-11}$ $\mu\text{Ci/cc}$

(1) The above detectability limits are based on technical feasibility and on the potential significance in the environment of the quantities released. For some nuclides, lower detection limits may be readily achievable and when nuclides are measured below the stated limits, they should also be reported.





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D C 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 42 TO FACILITY OPERATING LICENSE

NO. DRP-73

GPU NUCLEAR CORPORATION

THREE MILE ISLAND NUCLEAR STATION, UNIT NO. 2

DOCKET NO. 50-320

1.0 INTRODUCTION

By letter dated October 10, 1989, GPU Nuclear Corporation (GPUN or the licensee) requested the approval of a change to the Appendix B Technical Specifications of Facility Operating License No. OPR-73 for Three Mile Island Nuclear Station, Unit 2. The proposed amendment would revise the Technical Specifications by deleting the requirement to determine concentrations of Strontium-89 (Sr-89) in facility radioactive liquid and gaseous waste sampling analyses. Table 2.3-1 of the Appendix B Technical Specifications specifies radioactive liquid waste sampling and analyses at TMI-2. Similarly, Table 2.3-2 of the Appendix B Technical Specifications specifies radioactive gaseous waste sampling and analyses at TMI-2. Both tables require activity analyses for Sr-89 for monthly composite samples. The licensee proposes deleting the requirement for Sr-89 analyses from both tables.

Sr-89 is produced as a result of nuclear fission during reactor operation and has a 50.52 day half-life. The production of Sr-89 ceased on the day of the accident, March 28, 1979. The amount of Sr-89 present in TMI-2 on the day of the accident has decayed to undetectable levels over approximately 95 half-lives to the present time.

Since no new Sr-89 is being produced, and the Sr-89 present at the time of the TMI-2 accident has decayed to undetectable levels, the staff finds the proposed change acceptable.

2.0 ENVIRONMENTAL CONSIDERATION

This amendment involves changes to a requirement with respect to a facility component or which changes an inspection or surveillance requirement. 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 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 (57 FR 18174, April 29, 1992). 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.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of Pennsylvania was contacted about the issuance of the amendment. No public comments were received, and the State of Pennsylvania did not have any comments.

### 4.0 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

Date: June 5, 1992