June 21, 1984

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Docket No. 50-289

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Mr. Henry D. Hukill, Vice President
and Director - TMI-1
GPU Nuclear Corporation
P. O. Box 480
Middletown, Pennsylvania 17057

Dear Mr. Hukill:

SUBJECT: AMENDMENT NO. 97 TO FACILITY OPERATING LICENSE NO. DPR-50

The Commission has issued the enclosed Amendment No. 97 to Facility Operating License No. DPR-50 for Three Mile Island Nuclear Station, Unit No. 1 (TMI-1). This amendment consists of changes to the Technical Specifications (TSs) in response to your request of February 9, 1984 (Technical Specification Change Request No. 137).

This amendment adds TSs covering limiting conditions for operation and surveillance requirements for the Reactor Coolant System high point vents.

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

Sincerely,

"ORIGINAL SIGNED BY
JOHN F. STOLZ"
John F. Stolz, Chief
Operating Reactors Branch #4
Division of Licensing

Enclosures:
1. Amendment No. 97
2. Safety Evaluation

cc w/enclosures:
See next page

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see correction on p. 1 of SER

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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. 97
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 9, 1984, 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.

2. Accordingly, Facility Operating License No. DPR-50 is hereby amended as indicated below and by changes to the Technical Specifications as indicated in the attachment to this license amendment.

   Revise paragraph 2.c.(2) to read as follows:

   Technical Specifications

   The Technical Specifications contained in Appendix A, as revised through Amendment No. 97 , are hereby incorporated in the license. The 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

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

Attachment:
Changes to the Technical Specifications

Date of Issuance: June 21, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 97

FACILITY OPERATING LICENSE NO. DPR-50

DOCKET NO. 50-289

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

Remove	Insert
ii	ii
iv	iv
--	3-18f
--	3-18g
4-54	4-54

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3.1.13 Reactor Coolant System Vents

Applicability

Provides the limiting conditions for operation of the Reactor Coolant System Vents. These limiting conditions for operation (LCO) are applicable only when Reactor is critical.

Objective

To ensure that sufficient vent flow paths are operable during the plant operating modes mentioned above.

Specification

3.1.13.1 At least one reactor coolant system vent path consisting of at least two power operated valves in series, powered from emergency buses shall be OPERABLE and closed at each of the following locations:

a. Reactor vessel head* (RC-V42 & RC-V43)
b. Pressurizer steam space (RC-V28 & RC-V44)
c. Reactor coolant system high point (either RC-V40A and 41A) or (RC-V40B and 41B)

Action

3.1.13.2 a. With one of the above reactor coolant system vent paths inoperable, the inoperable vent path shall be maintained closed, with power removed from the valve actuators in the inoperable vent path. The inoperable vent path shall be restored to OPERABLE status within 30 days, or the plant shall be in HOT SHUTDOWN within an additional 6 hours and in COLD SHUTDOWN within the following 30 hours.

b. With two or more of the above reactor coolant system vent paths inoperable, maintain the inoperable vent path closed, with power removed from the valve actuators in the inoperable vent paths, and restore at least two of the vent paths to OPERABLE status within 72 hours or be in HOT SHUTDOWN within an additional 6 hours and in COLD SHUTDOWN within the following 30 hours.

* This specification becomes binding after installation and initially being declared operable.

Bases

The safety function enhanced by this venting capability is core cooling. For events beyond the present design basis, this venting capability will substantially increase the plants ability to deal with large quantities of noncondensible gas which could interfere with natural circulation (i.e., core cooling).

The reactor vessel head vent (RC-V42 & RC-V43 in series) provides the capability of venting noncondensible gases from the majority of the reactor vessel head as well as the Reactor Coolant hot legs (to the elevation of the top of the outlet nozzles) and cold legs (through vessel internals leakage paths, to the elevation of the top of the inlet nozzles). This vent is routed to containment atmosphere.

Venting for the pressurizer steam space (RC-V28 and RC-V44 in series) has been provided to assure that the pressurizer is available for Reactor Coolant System pressure and volume control. This vent is routed to the Reactor Coolant Drain Tank.

Additional venting capability has been provided for the Reactor Coolant hot leg high points (RC-V4GA,B, RC-V41A,B), which normally cannot be vented through the Reactor vessel head vent or pressurizer steam-space vent. These vents relieve to containment atmosphere through a rupture disk (set at low pressure).

The above vent systems are seismically designed, environmentally qualified and the power operated valves (2 in series in each flow path) which are powered from emergency buses fail closed on loss of power. All vent valves for the reactor vessel head vent, pressurizer vent and loop B high point vent are powered from the class 1E "B" bus. The vent valves for the loop A high point vent are powered from the class 1E "A" bus. The power operated valves are controlled in the Control Room. The individual vent path lines are sized so that an inadvertant valve opening will not constitute a LOCA as defined in 10 CFR 50.46(c)(1). These design features provide a high degree of assurance that these vent paths will be available when needed, and that inadvertent operation or failures will not significantly hamper the safe operation of the plant.

4.11 REACTOR COOLANT SYSTEM VENTS

Applicability

Applies to Reactor Coolant System Vents.

Objective

To ensure that Reactor Coolant System vents are able to perform their design function.

Specification

4.11.1 Each reactor coolant system vent path shall be demonstrated OPERABLE once per refueling interval by cycling each power operated valve in the vent path through at least one complete cycle of full travel from the control room during COLD SHUTDOWN or REFUELING.

BASES

Frequency of tests specified above are necessary to ensure that the individual Reactor Coolant System Vents will perform their functions. It is not advisable to perform these tests during Plant Power Operation, or when there is significant pressure in the Reactor Coolant System. Tests are, therefore, to be performed during either Cold Shutdown or Refueling.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 97 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

1.0 Introduction

GPU Nuclear Corporation (GPU or the licensee) has installed Reactor Coolant System high point vents at Three Mile Island Nuclear Station, Unit No. 1 (TMI-1) pursuant to Item II.B.1 of NUREG-0737. In accordance with the NRC staff request in Generic Letter 83-37, dated November 1, 1983, GPU submitted proposed Technical Specifications for these vents in Technical Specification Change Request No. 137 transmitted by letter dated February 9, 1984. The purpose of this Safety Evaluation is to evaluate these proposed Technical Specification changes.

2.0 Evaluation

In accordance with 10 CFR 50.44 and NUREG-0737, Item II.B.1, high point vents are being installed at TMI-1. The vents are designed to remove noncondensible gas which might collect at the reactor system high points following an occurrence of inadequate core cooling. The vents are located on the reactor vessel head, each of the two hot legs and on the pressurizer. The vents are not required to mitigate any design basis accident but provide a defense in depth function. The vent design and testing program was previously approved by the NRC staff.

The proposed Technical Specifications regarding the high point vents provide for operation with the reactor critical for no more than 30 days with one vent path out of service and for no more than 72 hours with two or more vent paths out of service. The valves in each vent line are required to be tested for operability during each refueling outage. These requirements are consistent with our previous acceptance of the vent design and testing program and with Technical Specifications in place at other plants and are therefore acceptable.

3.0 Environmental Consideration

This amendment involves a change in the installation or use of a facility component located within the restricted area. We have determined that the amendment involves no significant increase in the amounts of

any effluents that may be released offsite and that there is no significant increase in individual or cumulative occupation 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.

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 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: June 21, 1984

The following NRC personnel have contributed to this Safety Evaluation: W. Jensen, H. Silver.