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

METROPOLITAN EDISON COMPANY

JERSEY CENTRAL POWER & 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. 158
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 licensee) dated June 18, 1990 and supplemented on October 26, 1990, 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, 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. 158, 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 I-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 26, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 158

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.

Remove	Insert
iii	iii
1-7	1-7
3-104	3-104
4-2	4-2
4-5	4-5
4-37	4-37
--	4-38
4-38a	--

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1.19 PURGE - PURGING

PURGE or PURGING is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating conditions in such a manner that replacement air or gas is required to purify the confinement.

1.20 VENTING

VENTING is the controlled process of discharging air as gas from a confinement to maintain temperature, pressure, humidity, concentration or other operating conditions in such a manner that replacement air or gas is not provided. Vent used in system name does not imply a VENTING process.

1.21 REPORTABLE EVENT

A REPORTABLE EVENT shall be any of those conditions specified in 10 CFR 50.73.

1.22 MEMBER(S) OF THE PUBLIC

MEMBER(S) OF THE PUBLIC shall include all persons who are not occupationally associated with the plant. This category does not include employees of the GPU System, GPU contractors or vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries.

1.23 SUBSTANTIVE CHANGES

SUBSTANTIVE CHANGES are those which affect the activities associated with a document or the document's meaning or intent. Examples of non-substantive changes are: (1) correcting spelling; (2) adding (but not deleting) sign-off spaces; (3) blocking in notes, cautions, etc.; (4) changes in corporate and personnel titles which do not reassign responsibilities and which are not referenced in the Appendix A Technical Specifications; and (5) changes in nomenclature or editorial changes which clearly do not change function, meaning or intent.

1.24 CORE OPERATING LIMITS REPORT

The CORE OPERATING LIMITS REPORT is a TMI-1 specific document that provides core operating limits for the current operating reload cycle. These cycle-specific core operating limits shall be determined for each reload cycle in accordance with Specification 6.9.5. Plant operation within these operating limits is addressed in individual specifications.

1.25 FREQUENCY NOTATION

The FREQUENCY NOTATION specified for the performance of Surveillance Requirements shall correspond to the intervals defined in Table 1.2. All Surveillance Requirements shall be performed within the specified time interval with a maximum allowable extension not to exceed 25% of the surveillance interval.

TABLE 3.21-2 (Continued)

RADIOACTIVE GASEOUS PROCESS AND EFFLUENT MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABILITY	ACTION
5. Auxiliary and Fuel Handling Building Ventilation System			
a. Noble Gas Activity Monitor (RM-A8) or (RM-A4 and RM-A6)	1	*	27
b. Iodine Sampler (RM-A8) or (RM-A4 and RM-A6)	1	*	31
c. Particulate Sampler (RM-A8) or (RM-A4 and RM-A6)	1	*	31
d. Effluent System Flow Rate Measuring Devices (FR-151, or FR-149 and FR-150)	1	*	26
e. Sampler Flow Rate Monitor	1	*	26
6. Fuel Handling Building ESF Air Treatment System			
a. Noble Gas Activity Monitor (RM-A14 or Suitable Equivalent)	1	****	27, 33
b. Iodine Cartridge	N/A(3)	****	31, 33
c. Particulate Filter	N/A(3)	****	31, 33
d. Effluent System Flow (UR-1104A/B)	1	****	26, 33
e. Sampler Flow Rate Monitor	1	****	26, 33

NOTE 2: DELETED

NOTE 3: No instrumentation channel is provided, however, for determining operability, the equipment named must be installed and functional or the ACTION applies.

Calibration

Calibration shall be performed to assure the presentation and acquisition of accurate information. The nuclear flux (power range) channels amplifiers shall be checked and calibrated if necessary, every shift against a heat balance standard. The frequency of heat balance checks will assure that the difference between the out-of-core instrumentation and the heat balance remains less than 4%.

Channels subject only to "drift" errors induced within the instrumentation itself can tolerate longer intervals between calibrations. Process system instrumentation errors induced by drift can be expected to remain within acceptance tolerances if recalibration is performed at the intervals of each refueling period.

Substantial calibration shifts within a channel (essentially a channel failure) will be revealed during routine checking and testing procedures.

Thus, minimum calibration frequencies set forth are considered acceptable.

Testing

On-line testing of reactor protection channels is required monthly on a rotational basis. The rotation scheme is designed to reduce the probability of an undetected failure existing within the system and to minimize the likelihood of the same systematic test errors being introduced into each redundant channel (Reference 1).

The rotation schedule for the reactor protection channels is as follows:

a) Channels A, B, C & D Before Startup, when shutdown greater than 24 hours and

b) Monthly with one channel being tested per week on a continuous sequential rotation.

The reactor protection system instrumentation test cycle is continued with one channel's instrumentation tested each week. Upon detection of a failure that prevents trip action in a channel, the instrumentation associated with the protection parameter failure will be tested in the remaining channels. If actuation of a safety channel occurs, assurance will be required that actuation was within the limiting safety system setting.

The protection channels coincidence logic, the control rod drive trip breakers and the regulating control rod power SCRs electronic trips, are trip tested monthly. The trip test checks all logic combinations and is to be performed on a rotational basis. The logic and breakers of the four protection channels and the regulating control rod power SCRs shall be trip tested prior to startup when the reactor has been shutdown for greater than 24 hours.

Discovery of a failure that prevents trip action requires the testing of the instrumentation associated with the protection parameter failure in the remaining channels.

TABLE 4.1-1 (Continued)

	CHANNEL DESCRIPTION	CHECK	TEST	CALIBRATE	REMARKS
19.	Reactor Building Emergency Cooling and Isolation System Analog Channels				
	a. Reactor Building 4 psig Channels	S(1)	M(1)	R	(1) When CONTAINMENT INTEGRITY is required
	b. RCS Pressure 1600 psig	S(1)	M(1)	NA	(1) When RCS Pressure > 1800 psig
	c. RPS Trip	S(1)	M(1)	NA	(1) When CONTAINMENT INTEGRITY is required
	d. Reactor Bldg. 30 psig	S(1)	M(1)	R	(1) When CONTAINMENT INTEGRITY is required
	e. Reactor Bldg. Purge Line High Radiation (AH-V-1A/D)	W(1)	M(1)	R	(1) When CONTAINMENT INTEGRITY is required
	f. Line Break Isolation Signal (ICCW & NSCCW)	W(1)	M(1)	R	(1) When CONTAINMENT INTEGRITY is required
20.	Reactor Building Spray System Logic Channel	NA	Q	NA	
21.	Reactor Building Spray System Analog Channels				
	a. Reactor Building 30 psig Channels	NA	M	R	
22.	Pressurizer Temperature Channels	S	NA	R	
23.	Control Rod Absolute Position	S(1)	NA	R	(1) Check with Relative Position Indicator
24.	Control Rod Relative Position	S(1)	NA	R	(1) Check with Absolute Position Indicator
25.	Core Flooding Tanks				
	a. Pressure Channels	S(1)	NA	R	(1) When Reactor Coolant system pressure is greater than 700 psig
	b. Level Channels	S(1)	NA	R	
26.	Pressurizer Level Channels	S	NA	R	
27.	Makeup Tank Level Channels	D(1)	NA	R	(1) When Makeup and Purification System is in operation

4.4.2.1.6 Reports

a. Within 3 months after the completion of each tendon surveillance a special report shall be submitted to the NRC Region I Administrator. This Report will include a section dealing with trends for the rate of prestress loss as compared to the predicted rate for the duration of the plant life (after an adequate number of surveillances have been completed).

b. Reports submitted in accordance with 10 CFR 50.73 shall include a description of the tendon condition, the condition of the concrete (especially at tendon anchorages), the inspection procedures, the tolerances on cracking, and any corrective actions taken.

4.4.3 DELETED

4.4.4 Hydrogen Recombiner System

Applicability

Applies to the testing of the hydrogen recombiner and associated controls.

Objective

To verify that the hydrogen recombiner and associated controls are operable.

4.4.4.1 Specification

a. At least once per 6 months, perform a hydrogen recombiner system functional test to demonstrate that the minimum reaction chamber gas temperature is maintained $\geq$ 600°F for at least 2 hours.

b. At least once per refueling interval, perform the following surveillances:

1. A channel calibration of all recombiner instrumentation and control circuits.

2. Verify through a visual examination that there is no evidence of abnormal conditions (i.e., loose wiring or structural connections, deposits of foreign materials, etc.)

3. Verify during a recombiner system functional test that the reaction chamber gas temperature is maintained $\geq$1200°F for at least 4 hours.

4. Verify the integrity of the heater electrical circuits by performing a continuity and resistance to ground test. The resistance to ground for any heater phase shall be $\geq$10,000 ohms.

Bases

The surveillance program described above provides high assurance that the hydrogen recombiner system will be available to perform its post-LOCA function of maintaining the containment hydrogen concentration to below 4.1 volume percent. This system is not credited to mitigate any accident analyzed in Chapter 14 of the TMI-1 FSAR. The frequency of the surveillance of the hydrogen recombiner system is based on the safety significance of the system. TMI-1 FSAR Section 6.5.3.1 indicates that the hydrogen recombiner system is not required until 9.8 days following a LOCA. This is adequate time to place a hydrogen recombiner in service.

(Page 4-38a deleted)