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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. 156 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 July 26, 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;
 - 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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- Accordingly, the license is amended by chan es to the Technical Specifications as indicated in the attachment to this license amendment, and paragraphs 2.c.(2) of Facility Operating License No. DPR-50 are hereby amended to read as follows:
 - (2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 156, are hereby incorporated in the licensc. GPU Nuclear Corporation shall operate the facility in accordance with the Technical Specifications.

 This license amendment is effective as of is date of issuance, to be implemented within 30 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

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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: September 25, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 156

FACILITY OPERATING LICENSE NO. DPR-50

DOCKET NO. 50-289

Replace the following pages of the Facility Operating License and 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
viii	viii
* Figure 3.5 - 2K	
* Figure 3.5 - 2L	
4-2	4-2
4-5	4-5
4-5a	4-5a

*These figures were deleted by Amendment No. 150

LIST OF FIGURES

Figure	Title					
3.5-2K thru 3.5-2L	DELETED					
3.5-2M	LOCA Limited Maximum Allowable Linear Heat Rate					
3.5-1	Incore Instrumentation Specification Axial Imbalance Indication, TMI-1					
3.5-2	Incore Instrumentation Specification Radial Flux Tilt Indication, TMI-1					
3.5-3	Incore Instrumentation Specification					
3.11-1	Transfer Path to and from Cask Loading Pit					
4.17-1	Snubber Functional Test - Sample Plan 2					
5-	Extended Plot Plan TMI					
5-2	Site Topography 5 Mile Radius					
5-3	Locations of Gamman Effluent Delense Delete and					

-3 Locations of Gaseous Effluent Release Points and Liquid Effluent Outfalls

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Amendment Nos. 72, 77, 128, 139, 142, 148, 150, 156

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 put-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 channe' 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.

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.

* e protection channels coincidence logic, the control rod drive trip Leakers and the regulating control rod power SCRs electronic trips, are trip _sted 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.

Amendment No. 78, 123, 138, 156

			TABLE 4.1	-1 (Continued)	
	CHANNEL DESCRIPTION	CHECK	TEST	CALIBRATE	REMARKS
9.	Reactor Building Emergency Cooling and Isolation System Analog Channels				
	a. Reactor Building	S(1)	M(1)	R	(1) When CONTAINMENT INTEGRITY is required
	h 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	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
Theory Property	Reactor Building Spray System Logic Channel	NA	Q	NA	
	Reactor Building Spray System Analog Channels				
	a. Reactor Building 30 psig Channels	NA	M	R	
	Pressurizer Temperature Channels	S	NA	R	
	Control Rod Absolute Position	S(1)	NA	R	(1) Check with Relative Position Indicator
	Control Rod Relative Position	S(1)	NA	R	(1) Check with Absolute Position Indicator
•	Core Flooding Tanks				
	a. Pressure Channels	S(1)	NA	R	(1) When Reactor Coolant system pressure 1
	b. Level Channels	S(1)	NA	R	greater than for parg
	Pressurizer Level Channels	S	NA	R	
	Makeup Tank Level Channels	D(1)	NA	R	(1) When Makeup and Purification System is

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Amendment Nos. 24, 78, 156

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Amendment

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	CHANNEL DESCRIPTION	CHECK	TEST	CALIBRATE	REMARKS
28.	Radiation Monitoring Systems*	W(1)(3)	M(3)	Q(2)	(1) Using the installed check source when background is less than twice the expected increase in cpm which would result from the check source alone. Background readings greater than this

29. High and Low Pressure Injection Systems: Flow Channels

(2) Except area gamma radiation monitors RM-G5, RM-G6, RM-G7, RM-G8, and RM-G21. which are located in the Reactor Building. When purging is permitted per T.S. 3.6. RM-G5 and RM-G21 will be calibrated quarterly. If purging is not permitted per T.S. 3.6. RM-G5 and RM-G21 shall be calibrated at the next scheduled reactor shutdown following the quarter in which calibration would normally be due. RM-G6, RM-G7, and RM-G8 which are in high radiation areas shall be calibrated at the next scheduled reactor shutdown following the quarter in which calibration is due, if a shutdown during the quarter does not occur.

value are sufficient in themselves to

show that the monitor is functioning.

(3) Surveillances are required to be performed only when containment integrity is required. This applies to monitors which initiate containment isolation only.

*Does not include the monitors covered under Specifications 3.5.5.2 and 4.1.3 or Specifications 3.21.1, 3.21.2 and 4.21.1, 4.21.2.

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