



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

YANKEE ATOMIC ELECTRIC COMPANY

DOCKET NO. 50-029

YANKEE NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 123

License No. DPR-3

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by Yankee Atomic Electric Company (the licensee) dated October 21, 1988 and as supplemented on November 22, 1988 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-3 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 123, are hereby incorporated in the license. The licensee 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

/s/

Richard H. Wessman, Director  
Project Directorate I-3  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 31, 1989

*GMS*  
PDI-3/LA PDI-3/PM  
MRushby:rw PMSears:rw  
8/10/89 8/16/89

OFFICIAL RECORD COPY

OGC  
*J. Teble*  
8/24/89  
*With modifications as noted in SER*  
PDI-3/D  
RHWessman  
8/31/89

ATTACHMENT TO LICENSE AMENDMENT NO. 123

FACILITY OPERATING LICENSE NO. DPR-3

DOCKET NO. 50-029

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

B 2-4

B 2-5

3/4 3-2

3/4 3-8

Insert

B 2-4

B 2-5

3/4 3-2

3/4 3-8



## LIMITING SAFETY SYSTEM SETTINGS

### BASES

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#### Low Main Coolant Flow (Steam Generator $\Delta P$ )

The Low Main Coolant Flow trips provide core protection in the event of a loss of one or more main coolant pumps.

Above a power of 15 MWE, with 4 main coolant pumps operating, an automatic reactor trip will occur if the flow in any two loops drops below 80% of nominal full loop flow and, with 3 main coolant pumps operating, automatic reactor trip will occur if the flow in any single operating loop drops below 80% of nominal full loop flow. The setpoints specified are consistent with the value assumed in the accident analysis.

#### Low Main Coolant Flow (Main Coolant Pump Current)

The Low Main Coolant Flow trips provide core protection in the event of a loss of one or more main coolant pumps.

Above a power of 15 MWE, with 4 main coolant pumps operating, an automatic trip will occur if the main coolant pump motor current is outside the limits on any two pumps, and with 3 main coolant pumps operating, automatic trip will occur if the main coolant pump motor current is outside the limits on any operating pump. The setpoints specified are consistent with the value assumed in the accident analysis.

#### Main Coolant System Low Pressure

The Main Coolant System Low Pressure trip is provided to prevent operation in the pressure range in which DNBR is less than 1.30 ensuring that the thermal and hydraulic limits assumed in the accident analysis are not exceeded. This Low Pressure trip provides protection by tripping the reactor in the event of a loss of main coolant pressure.

## LIMITING SAFETY SYSTEM SETTINGS

### BASES

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#### Steam Generator Water Level

The Low Steam Generator Water Level trip provides core protection by preventing operation with the steam generator water level below the minimum volume required for adequate heat removal capacity. The specified setpoint provides allowance that there will be sufficient water inventory in the steam generators at the time of trip to provide 15 minutes, as assumed in the accident analysis, for starting delays of the emergency feedwater system.

#### Turbine and Generator Trip

A Turbine or Generator Trip causes a direct reactor trip when operating above 15 MWe. Each of the turbine trips provide turbine protection and reduce the severity of the ensuing transient. No credit was taken in the accident analyses for operation of these trips. Their functional capability is required to enhance the overall reliability of the Reactor Protection System.

#### Main Steam Isolation Trip

A Main Steam Isolation Trip closes the main steam line nonreturn valves and causes a direct reactor trip. This trip reduces the severity of the cooldown and the ensuing transient effects resulting from a main steam line break. This trip also serves to assure the availability of a secondary system heat sink following a seismic event, until the Safe Shutdown System is available to provide feedwater to the steam generators. Its functional capability enhances the overall reliability of the Reactor Protection System.

#### Main Coolant System High Pressure

The Main Coolant System High Pressure trip acts in conjunction with the pressurizer safety valves to ensure protection against Main Coolant System overpressurization caused by a loss of load incident or an uncontrolled rod withdrawal event.

TABLE 3.3-1

## REACTOR PROTECTIVE SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
1. Manual Reactor Trip	3	1	3	1, 2, and *	1
2. Power Range, Neutron Flux and Intermediate Power Range, Neutron Flux	6	2	4	1, 2, and *(1)	2**
3. Intermediate Range, Neutron Flux, High Startup Rate	2	1	2	1(2), 2 and *	3
4. Source Range, Neutron Flux					
a. Startup ##	2	NA	2	2# and *(5)	4
b. Shutdown	2	NA	1	3, 4, 5(5)	5
5. Low Main Coolant Flow (SG P)	4	2	3	1(3)	6**
6. Low Main Coolant Flow (MC Pump Current)					
a. System A	4	2	3	1(3)	7**
b. System B	4	2	3	1(3)	7**
7. High Main Coolant System Pressure	3	2	3	1, 2(4)	6**
8. Low Main Coolant System Pressure	3	2	3	1, 2(4)	6**
9. Intentionally Blank	-	-	-	-	-
10. Low Steam Generator Water Level	4	2	3	1(3)	6**



TABLE 4.3-1

## REACTOR PROTECTIVE SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES IN WHICH SURVEILLANCE REQUIRED
1. Manual Reactor Trip	NA	NA	S/U(1)	NA
2. Power Range, Neutron Flux and Intermediate Power Range, Neutron Flux	S	D(2), R(5)	M(6)	1, 2 and *
3. Intermediate Range, Neutron Flux, High Startup Rate	S	R(5)	M	1, 2 and *
4. Source Range, Neutron Flux	S	R(5)	S/U(1)	2, 3, 4, 5 and *
5. Low Main Coolant Flow (SGAP)	S	R(4)	M(3)	1
6. Low Main Coolant Flow, Systems A and B (MC Pump Current)	S	R	M	1
7. High Main Coolant System Pressure	S	R(4)	M	1, 2
8. Low Main Coolant System Pressure	S	R(4)	M	1, 2
9. Intentionally Blank	-	-	-	-
10. Low Steam Generator Water Level	S	R(4)	M	1