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

CAROLINA POWER AND LIGHT COMPANY

DOCKET NO. 50-261

H. B. ROBINSON STEAM ELECTRIC PLANT UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 38
License No. DPR-23

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Carolina Power and Light Company (the licensee) dated May 18, 1979, 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 3.B. of Facility Operating License No. DPR-23 is hereby amended to read as follows:

"B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 38 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 24, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 38

FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Revise Appendix A as follows:

Remove the following pages and insert identically numbered revised pages:

Pages

3.5-2
3.5-4
3.5-7
3.5-10

Safety Injection System Actuation

Protection against a Loss-of-Coolant or Steam Break accident is brought about by automatic actuation of the Safety Injection System which provides emergency cooling and reduction of reactivity.

The Loss-of-Coolant Accident is characterized by depressurization of the Reactor Coolant System and rapid loss of reactor coolant to the containment. The Engineered Safety Features have been designed to sense these effects of the Loss-of-Coolant Accident by detecting low pressurizer pressure and generates signals actuating the SIS active phase. The SIS active phase is also actuated by a high containment pressure signal (Hi-Level) brought about by loss of high enthalpy coolant to the containment. This actuation signal acts as a backup to the low pressurizer pressure signal actuation of the SIS and also adds diversity to protection against loss of coolant.

Signals are also provided to actuate the SIS upon sensing the effects of a steam line break accident. Therefore, SIS actuation following a steam line break is designed to occur upon sensing high differential steam pressure between the steam header and steam generator line or upon sensing high steam line flow in coincidence with low reactor coolant average temperature or low steam line pressure.

The increase in the extraction of RCS heat following a steam line break results in reactor coolant temperature and pressure reduction. For this reason protection against a steam line break accident is also provided by low pressurizer pressure signals actuating safety injection.

Protection is also provided for a steam line break in the containment by actuation of SIS upon sensing high containment pressure.

Feedwater Line Isolation

The feedwater lines are isolated upon actuation of the Safety Injection System in order to prevent excessive cooldown of the reactor coolant system. This mitigates the effect of an accident such as steam break which in itself causes excessive coolant temperature cooldown.

Feedwater line isolation also reduces the consequences of a steam line break inside the containment, by stopping the entry of feedwater.

Setting Limits

a. The Hi-Level containment pressure limit is set at about 10% of design containment pressure. Initiation of Safety Injection protects against Loss-of-Coolant[2] or steam line break[3] accidents as discussed in the safety analysis.

b. The Hi-Hi Level containment pressure limit is set at about 50% of design containment pressure. Initiation of Containment Spray and Steam Line Isolation protects against large Loss-of-Coolant[2] or steam line break accidents[3] as discussed in the safety analysis.

c. The pressurizer low pressure limit is set substantially below system operating pressure limits. However, it is sufficiently high to protect against a Loss-of-Coolant Accident as shown in the safety analysis.[2]

TABLE 3.5-1

ENGINEERED SAFETY FEATURE SYSTEM INITIATION INSTRUMENT SETTING LIMITS

NO.	FUNCTIONAL UNIT	CHANNEL ACTION	SETTING LIMIT
1	High Containment Pressure (Hi Level)	Safety Injection*	≤ 5 psig
2	High Containment Pressure (Hi-Hi Level)	a. Containment Spray** b. Steam Line Isolation	≤ 25 psig
3	Pressurizer Low Pressure	Safety Injection*	≥1700 psig
4	High Differential Pressure Between any Steam Line and the Steam Line Header	Safety Injection*	≤ 150 psi
5	High Steam Flow in 2/3 Steam Lines***	a. Safety Injection*	≤ 40% (at zero load) of full steam flow
		b. Steam Line Isolation	≤ 40% (at 20% load) of full steam flow ≤110% (at zero load) of full steam flow
	Coincident with Low T_{avg} or		≥541°F T_{avg}
	Low Steam Line Pressure		≥600 psig steam line pressure

*Initiates also containment isolation (Phase A), feedwater line isolation and starting of all containment fans.

**Initiates also containment isolation (Phase B).

***Derived from equivalent ΔP measurements.

TABLE 3.5-1

INSTRUMENTATION OPERATING CONDITIONS FOR ENGINEERED SAFETY FEATURES

NO.	FUNCTIONAL UNIT	1 MINIMUM OPERABLE CHANNELS	2 MINIMUM DEGREE OF REDUNDANCY	3 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 2 CANNOT BE MET
1.	SAFETY INJECTION			
	a. Manual	1	0	Cold shutdown
	b. High Containment Pressure (HI Level)	2	1	Cold shutdown
	c. High Differential Pressure between any Steam Line and the Steam Line Header	2	1	Cold shutdown
	d. Pressurizer Low Pressure	2	1	Cold shutdown***
	e. High Steam Flow In 2/3 Steam Lines Coincident with Low T_{avg} or Low Steam Pressure	1/Steam line	*****	Cold shutdown****
		2 T_{avg} Signals	1	
		2 Pressure Signals	1	
2.	CONTAINMENT SPRAY			
	a. Manual	2	0**	Cold shutdown
	b. High Containment Pressure (HI-HI Level)	2/set	1/set	Cold shutdown

**Must actuate two switches simultaneously.
***When primary pressure is less than 2000 psig, channels may be blocked.
****When primary temperature is less than 547°F, channels may be blocked.
*****In this case the 2/3 high steam flow is already in the trip mode.