



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. 97  
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 November 13, 1985, 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:

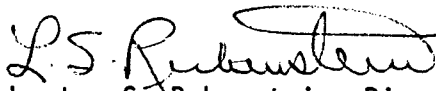
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(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 97, 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

  
Lester S. Rubenstein, Director  
PWR Project Directorate #2  
Division of PWR Licensing-A

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: March 7, 1986

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 97 FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Revise Appendix A as follows:

Remove Pages

3.3-2  
3.3-3  
3.3-4  
3.3-14  
4.1-6  
4.1-10  
4.1-11

Insert Pages

3.3-2  
3.3-3  
3.3-4  
3.3-14  
4.1-6  
4.1-10  
4.1-11

- b. Each accumulator is pressurized to at least 600 psig and contains at least 825 ft<sup>3</sup> and no more than 841 ft<sup>3</sup> of water with a boron concentration of at least 1950 ppm. No accumulator may be isolated.
- c. Three safety injections pumps are operable.
- d. Two residual heat removal pumps are operable.
- e. Two residual heat exchangers are operable.
- f. All essential features including valves, interlocks, and piping associated with the above components are operable.
- g. During conditions of operation with reactor coolant pressure in excess of 1000 psig the A.C. control power shall be removed from the following motor operated valves with the valve in the specified position:

<u>Valves</u>	<u>Position</u>
MOV 862 A&B	Open
MOV 864 A&B	Open
MOV 865 A,B,&C	Open
MOV 878 A&B	Open
MOV 863 A&B	Closed
MOV 866 A&B	Closed

- h. During conditions of operation with reactor coolant pressure in excess of 1000 psig, the air supply to air operated valves 605 and 758 shall be shut off with valves in the closed position.
- i. Power operation with less than three loops in service is prohibited.

## 3.3.1.2

During power operation, the requirements of 3.3.1.1 may be modified to allow any one of the following components to be inoperable. If the system is not restored to meet the requirements of 3.3.1.1 within the time period specified, the reactor shall be placed in the hot shutdown condition utilizing normal operating procedures. If the requirements of 3.3.1.1 are not satisfied within an additional 48 hours, the reactor shall be placed in the cold shutdown condition utilizing normal operating procedures.

- a. One accumulator may be isolated for a period not to exceed four hours.
- b. If one safety injection pump becomes inoperable during normal reactor operation, the reactor may remain in operation for a period not to exceed 24 hours, provided the remaining two safety injection pumps are demonstrated to be operable prior to initiating repairs.
- c. If one residual heat removal pump becomes inoperable during normal reactor operation, the reactor may remain in operation for a period not to exceed 24 hours, provided the other residual heat removal pump is demonstrated to be operable prior to initiating repairs.
- d. If one residual heat exchanger becomes inoperable during normal reactor operation, the reactor may remain in operation for a period not to exceed 24 hours.
- e. If any one flow path including valves of the safety injection or residual heat removal system is found to be inoperable during normal reactor operation, the reactor may remain in operation for a period not to exceed 24 hours, provided the other flow path(s) are demonstrated to be operable prior to initiating repairs. The hot leg injection paths of the Safety Injection System, including

valves, are not subject to the requirements of this specification.

- f. Power or air supply may be restored to any valve referenced in 3.3.1.1.h. and 3.3.1.1.i. for the purpose of valve testing or maintenance providing no more than one valve has power restored and provided that testing and maintenance is completed and power removed within 24 hours except for accumulator isolation valves (MOV 865 A,B,&C) which will have this time period limited to four hours.

floor. This depth of water is equivalent to the amount of water in the primary system plus 60% of the refueling water storage tank, approximately 215,000 gallons of water at 263°F.<sup>(1)</sup>

The post-accident containment venting system is designed with redundant air supply and vent paths. The valves in the system will be demonstrated to be operable prior to criticality. Testing of the air supply system is not required because of the long lead time between an accident and the required operation of the venting system. This period of time will permit maintenance effort, if required. The efficiency of the filters in each vent path was not used in this safety analysis; therefore, testing of these filters is not required.<sup>(6)</sup>

The Isolation Seal Water System provides a reliable means for injecting seal water between the seats and stem packing of the globe and double disc types of isolation valves and into the piping between closed diaphragm type isolation valves.<sup>(7)</sup>

The minimum 825 ft<sup>3</sup> and maximum 841 ft<sup>3</sup> of water in the accumulators correspond to an instrument reading of 61.5% and 80.4% of instrument span, respectively.

#### References

- (1) FSAR Section 6.2
- (2) FSAR Section 6.3
- (3) FSAR Section 14.3.5
- (4) FSAR Section 9.3
- (5) FSAR Section 9.6.2
- (6) FSAR Appendix 6B
- (7) FSAR Section 5.2.2
- (8) CP&L report and supplemental letters of September 29, November 5, December 8, 1971, and March 20, 1972.

TABLE 4.1-1 (Continued)  
MINIMUM FREQUENCIES FOR CHECKS, CALIBRATIONS AND TEST OF INSTRUMENT CHANNELS

<u>Channel Description</u>	<u>Check</u>	<u>Calibrate</u>	<u>Test</u>	<u>Remarks</u>
9. Analog Rod Position	S (1,2)	R	M	(1) With step counters (2) Following rod motion in excess of six inches when the computer is out of service
10. Rod Position Bank Counters	S (1,2)	N.A.	N.A.	(1) Following rod motion in excess of six inches when the computer is out of service
11. Steam Generator Level	S	R	M	
12. Charging Flow	N.A.	R	N.A.	
13. Residual Heat Removal Pump Flow	N.A.	R	N.A.	
14. Boric Acid Tank Level	D (1)	R	N.A.	(1) Bubbler tube rodded weekly
15. Refueling Water Storage Tank Level	W	R	N.A.	
16. Deleted				
17. Volume Control Tank Level	N.A.	R	N.A.	
18. Containment Pressure	D	R	B/W (1)	(1) Containment isolation valve signal
19. Deleted by Amendment No. 85				
20. Boric Acid Makeup Flow Channel	N.A.	R	N.A.	

4.1-6

Amendment No. 97



TABLE 4.1.2  
FREQUENCIES FOR SAMPLING TESTS

	<u>Check</u>	<u>Frequency</u>	<u>Maximum Time Between Tests</u>
1. Reactor Coolant Samples	- Gross Activity (1)	Minimum 1 Per 72 hrs.	3 days
	- Radiochemical (2)	Monthly	45 days
	- Radiochemical for E Determination	1 per 6 mos. (6)(7)	6 months
	- Isotopic Analysis for Dose Equivalent I-131 Concentration	1 per 14 days (7)	14 days
	- Isotopic Analysis for Iodine ##?Includ- ing I-131, I-133 and I-135	a) Once per 4 b) One sample (9)	hours (8)
	- Tritium Activity	Weekly	10 days
	- Cl & O <sub>2</sub>	5 day/week	3 days
2. Reactor Coolant Boron	Boron concentration	Twice/week	5 days
3. Refueling Water Storage Tank Water Sample	Boron concentration	Weekly	10 days
4. Boric Acid Tank	Boron concentration	Twice/week	5 days
5. Spray Additive Tank	NaOH concentration	Monthly	45 days
6. Accumulator	Boron concentration	Monthly	45 days
7. Spent Fuel Pit	Boron concentration	Prior to Refueling	NA*
8. Secondary Coolant	Gross activity	Minimum 1 Per 72 hrs.	3 days
	Isotopic Analysis for Dose Equivalent I-131 Concentration	a) 1 per 31 days (10) b) 1 per 6 months (11)	
9. Stack Gas Iodine & Particulate Samples	I-131 and particulate radioactivity releases	Weekly (3)	10 days
10. Steam Generator Samples	Primary to secondary tube leakage	5 days/week	3 days

NOTES TO TABLE 4.1-2

- (1) A gross activity analysis shall consist of the quantitative measurement of the total radioactivity of the primary coolant in units of  $\mu\text{Ci}/\text{gram}$ .
- (2) A radiochemical analysis shall consist of the quantitative measurement of each radionuclide with half life greater than 30 minutes-making up at least 95% of the total activity of the primary coolant.
- (3) When iodine or particulate radioactivity levels exceed 10% of the limit in Specification 3.9.2.1, the sampling frequency shall be increased to a minimum of once each day.
- (5) Deleted.
- (6) Sample to be taken after a minimum of 2EFPD and 20 days of power operation have elapsed since the reactor was last subcritical for 48 hours or longer.
- (7) Samples are to be taken in the power operating condition.
- (8) Sample taken at all operating conditions whenever the specific activity exceed  $1.0 \mu\text{Ci}/\text{gram}$  DOSE EQUIVALENT I-131 or  $100/\bar{E} \mu\text{Ci}/\text{gram}$ . These samples are to be taken until the specific activity of the reactor coolant system is restored within its limits.
- (9) One sample between 2 and 6 hours following a thermal power change exceeding 15 percent of the rated thermal power within a one-hour period. Samples are required when in the hot shutdown or power operating modes.
- (10) Sample whenever that gross activity determination indicates iodine concentrations are greater than 10% of the allowable limit.
- (11) Sample whenever the gross activity determination indicates iodine concentrations are below 10 percent of the allowable limit.

NA\* - Not applicable.