May 17, 1991

Docket No. 50-261

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Mr. Lynn W. Eury
Executive Vice President
Power Supply
Carolina Power & Light Company
Post Office Box 1551
Raleigh, North Carolina 27602

Dear Mr. Eury:

SUBJECT: ISSUANCE OF AMENDMENT NO. 134 TO FACILITY OPERATING LICENSE NO. DPR-23 REGARDING CONTROL ROOM AIR CLEANING SYSTEM - H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2, (TAC NO. 77574)

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 134 to Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2. This amendment consists of changes to the Technical Specifications in response to your request dated August 29, 1990.

The amendment revises the TS Sections 3.15 and 4.15 related to the control room air cleaning system.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

Orignal signed by:

Ronnie H. Lo, Senior Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:
1. Amendment No. 134 to DPR-23
2. Safety Evaluation

cc w/enclosures:
See next page

OFC	:LA:PD21:DRPR	:PM:PD21:DRPR	:OGC	:D:PD21:DRPR	:	:
NAME	: PAnderson	: RLo:EL	: J. Hull	: A Mendiola	:	:
DATE	: 4/29/91	: 5/1/91	: 5/14/91	: 5/17/91	:	:

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AMENDMENT NO. 134 TO FACILITY OPERATING LICENSE NO. DPR-23 - ROBINSON, UNIT NO. 2

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Plant, Unit No. 2

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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

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

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 134
License No. DPR-23

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

   A. The application for amendment by Carolina Power & Light Company (the licensee), August 29, 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 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. 134 , are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective on September 15, 1991.

FOR THE NUCLEAR REGULATORY COMMISSION

Orignal signed by:

Anthony J. Mendiola, Acting Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: May 17, 1991

OFC	:LA:PD21	:DRPR:PM:PD21	:DRPR:D:PD21	:DRPR	:	:	:
NAME	: PAnderson	: RLo:EL	: AMendiola		:	:	:
DATE	: 5/1/91	: 5/1/91	: 5/17/91		: 5/14/91	:	:

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ATTACHMENT TO LICENSE AMENDMENT NO. 134

FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Remove Pages	Insert Pages
3.15-1	3.15-1
3.15-2	3.15-2
4.15-1	4.15-1
4.15-2	4.15-2
4.15-3	4.15-3

3.15 CONTROL ROOM AIR CONDITIONING SYSTEM

Applicability

Applies to the Control Room Air Conditioning System which is comprised of two parts, an environmental control system and an air clean-up system.

The Control Room Air Conditioning System contains redundant safety-related active components. Passive safety-related components and nonsafety-related components are not required to be redundant.

Objective

To provide limiting conditions for operation which ensure the operability of the air conditioning system during plant operation, such that normal operation or plant accident conditions requiring operation of the system will not result in consequences more severe than those analyzed.

Specification

3.15.1 During all modes of plant operation, except cold shutdown, the Control Room Air Conditioning System shall be operable with two trains of active safety-related components and the shared safety-related passive components, except as described below:

a. With one safety-related active component or train of the Control Room Air Conditioning System inoperable, restore the inoperable component or train to operable status within 7 days or be in at least hot shutdown within the next 8 hours and in cold shutdown within the following 30 hours.

b. With both redundant active components or trains or a safety-related passive component inoperable, restore at least one redundant train/active component or the inoperable passive component to operable status within 48 hours or be in at least hot shutdown within the next 8 hours and cold shutdown within the following 30 hours.

3.15.2 If the system is determined to be inoperable while the reactor is in cold shutdown, both trains shall be made operable prior to exceeding 200 degrees F reactor coolant temperature. Also, during cold shutdown and refueling when containment integrity is required, the following restrictions apply:

a. With one safety-related active component or train of the Control Room Air Conditioning System inoperable, restore the inoperable component or train to operable status within 7 days or initiate and maintain operation of the remaining operable train in the emergency pressurization mode.

b. With both redundant safety-related active components or trains or a safety-related passive component inoperable, suspend all operations involving core alterations or any operation which would reduce shutdown margin to less than that required for cold shutdown or refueling as appropriate.

Basis

Operability of the Control Room Air Conditioning System ensures that the Control Room will remain habitable during an accidental atmospheric radiation release to the extent that none of the occupants would receive a personal radiation exposure in excess of the limits specified in GDC 19 of Appendix A to 10CFR50[1]. Because the system's protection is required only during low probability events, a system train may be out of service for 7 days for repairs. Since reactor startup should not commence without this system in service, the specification prohibits exceeding 200 degrees F reactor coolant temperature with the system inoperable.

[1] FSAR Section 6.4

4.15 CONTROL ROOM AIR CONDITIONING SYSTEM

Applicability

Applies to the Control Room Air Conditioning System which is comprised of two parts, an environmental control system and an air cleaning system

Objective

To verify that the Control Room Air Conditioning System will maintain the Control Room environment and adequately remove radioactivity from the incoming ambient air should there be an accidental radiation release to the atmosphere.

Specification

The Control Room Air Conditioning System shall be demonstrated operable by:

a. At least once per 12 hours by verifying that the Control Room air temperature is less than or equal to 85 degrees F;

b. At least once per 31 days on a staggered testing basis initiating, from the Control Room, flow through the HEPA filters and carbon adsorber and verifying that the system operates for at least one hour;

c. At least once per 31 days, on a staggered testing basis, verify that a positive pressure is maintained in the Control Room during the Emergency Pressurization operating mode.

d. At least once per 18 months or (1) after any structural maintenance on the HEPA filters or carbon adsorber housings, or (2) following painting, fire, or chemical release in the Control Room envelope by:

1. Verifying that the cleanup system satisfies the in-place penetration and by-pass leakage testing acceptance criteria of less than 0.05% and uses the test procedure guidance in Regulatory Positions C.5.a, C.5.c, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is not less than 3300 ACFM or more than 4150 ACFM through the air cleaning unit and not less than 5200 ACFM or more than 5800 ACFM through the air handling unit; and,

2. Verifying, within 31 days of removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 1% when tested at a temperature of 30 degree C and at a relative humidity of 70% in accordance with ASTM D3803.

e. After every 720 hours of carbon adsorber operation, by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, by showing a methyl iodide penetration of less than 1% when tested at a temperature of 30 degrees C and at a relative humidity of 70% in accordance with ASTM D3803.

f. At least once per 18 months by:

1. Verifying the following for the air cleaning unit:

   a. The overall different pressure is less than or equal to 3.4 inches water gauge,

   b. Air flow through the unit is greater than or equal to 3300 ACFM and less than or equal to 4150 ACFM and

2. Verifying the following for the air handling unit:

   a. Air flow through the unit is greater than or equal to 5200 ACFM and less than or equal to 5800 ACFM.

3. Verifying that, on either a safety injection test signal or a high radiation test signal, the system automatically switches into the emergency pressurization operating mode with flow through the HEPA filters and carbon adsorber bank;

4. Verifying that the system maintains the Control Room at a positive pressure relative to the outside atmosphere at less than or equal to a pressurization rate of 400 ACFM during the emergency pressurization operating mode;

g. After each complete or partial replacement of a HEPA filter bank, verify that the unit satisfies the in-place penetration and bypass leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the ACU system at a flow rate between 3300 ACFM and 4150 ACFM, inclusive.

h. After each complete or partial replacement of a carbon adsorber bank, verify that the cleanup system satisfies the in-place penetration leakage testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the ACU system at a flow rate between 3300 ACFM and 4150 ACFM, inclusive.

Basis

Determination that the system air flow versus pressure drop is per design assures that the air cleanup system is operating within the boundaries of the radiological dose calculation with regards to system air flows. Monitoring of pressure drop across the air cleaning unit and air handling unit assures that filters and adsorbers are replaced prior to excessive filter loading.

The frequency of in-place testing and sample analysis is necessary to show that the HEPA filters and carbon adsorbers can perform as evaluated under postulated accident conditions. Any HEPA filters found defective shall be replaced with the filters qualified pursuant to the Regulatory Position C.3.d of Regulatory Guide 1.52, Revision 2, March 1978. If the carbon fails to pass the laboratory test, all adsorbent in the system shall be replaced with an adsorber qualified according to Table 5.1 of ANSI N509-1980; with performance requirements of 30 degrees C and 70% RH and acceptance values of 0.1% penetration maximum for elemental iodine and 1% penetration maximum for methyl iodide. The performance requirements are consistent with in-service test conditions, as recommended by Regulatory Guide 1.52, Revision 2, March 1978, paragraph C.6.b, and the acceptance values are consistent with Regulatory Guide 1.52, Revision 2, March 1978, paragraph C.6.a., for a two-inch deep bed designed to operate outside primary containment. Methyl iodide penetration of less than 1% at 70% RH is required, consistent with Table 2 of the above referenced Regulatory Guide. All references by Regulatory Guide 1.52 to ANSI N509-1975 and ANSI N510-1975 are superseded by ANSI N509-1980 and ANSI N510-1980, respectively.

If painting, fire, or chemical release occurs such that the HEPA filters or carbon adsorbers could become contaminated from the fumes, chemicals, or foreign material, the same in-place testing and sample analysis shall be performed, as required, for operational use.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 134 TO FACILITY OPERATING LICENSE NO. DPR-23

CAROLINA POWER & LIGHT COMPANY

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

DOCKET NO. 50-261

1.0 INTRODUCTION

By letter dated August 29, 1990, the licensee of H. B. Robinson Steam Electric Plant, Unit No. 2, Carolina Power & Light Company, requested revision to technical specification (TS) sections 3.15 and 4.15. The content of these sections encompasses the air cleaning systems operability and surveillance requirements. They are being modified to reflect modifications to the existing air cleaning system. The revision of the licensee's original design proposal, submitted on June 2 and November 4, 1983, was provided in a letter dated July 26, 1988. This was followed by the basis and results of the dose calculations in a May 21, 1990, letter and further revisions to the design in a August 29, 1990, submittal. The final design and commitments were accepted by the NRC in a safety evaluation report (SER) dated October 26, 1990.

Additionally, due to the extensive nature of the control room habitability modifications, the licensee is requesting a period of time, up to 6 months, subsequent to Refueling No. 13 to complete system check out, performance verification, and system optimization. During this period, these actions could require a redundant train or redundant components to be out of service for periods longer than allowed by the proposed TS. For this reason, the licensee is requesting that a transition from the old to the new TS be granted for the duration of this check out period. The intent of the licensee during this period will be to assure that at least one component train will be available to mitigate the consequences of an accident. This train will be required to meet the requirements of the existing TS including action statements and surveillance requirements. The new TS would be implemented following completion of the testing/optimization period. The licensee is therefore requesting that the amendment be issued with an implementation date of no later than six months after the date of synchronization to the grid following Refueling No. 13.

2.0 EVALUATION

Design changes to the plant are required as a result of evaluations that were conducted in accordance with the requirements of NUREG-0737, Item III.D.3.4, Control Room Habitability. The evaluations identified the need to make improvements to reduce the dose that operators could receive in a design basis accident and to improve reliability by assuring that a failure of any active component of the control room HVAC system would not result in system inoperability. The reliability of the control room HVAC system to perform its

safety function is accomplished in the approved design by providing fully redundant safety-related active components. The system is designed to remain operable following a single active failure concurrent with an initiating event. The bulk of the changes to the TS are a result of this addition of redundant safety-related active components and of the required operability following a single active failure concurrent with an initiating event. The staff has reviewed the revised sections of the TS and finds them acceptable.

The licensee has requested that up to 6 months subsequent to Refueling No. 13 be allowed for system check out, performance verification and system optimization. The licensee will assure that during this period at least one component train will be available to mitigate the consequences of an accident. This train will be required to meet the requirements of the existing TS including action statements and surveillance requirements. This request does not represent a degradation of the current systems ability to mitigate the consequences of an accident and is acceptable to the staff.

In the SER dated October 26, 1990, the licensee was required to address two issues in the new TS. The first commitment required the licensee to establish procedures to provide for periodic inspection of the gravity dampers to verify that they are unimpeded and are able to fully open or close when required. The second commitment requires that the laboratory test of a representative sample of the carbon adsorbent should demonstrate a methyl iodide removal efficiency of greater than or equal to 99 percent. The staff has reviewed the new TS and finds that these commitments have been integrated and are acceptable.

Based on the above evaluation of the licensee's submittal, the staff finds the revised TS Sections 3.15 and 4.15, Control Room Air Conditioning System, to be acceptable. The staff also finds the requested six month time period for testing and optimization following Refueling No. 13 to allow transition from the old to the new TS to be acceptable.

3.0 State Consultation

In accordance with the Commission's regulations, the South Carolina State official was notified of the proposed issuance of the amendment. The state official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes the surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards

consideration, and there has been no public comment on such finding (55 FR 30293). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: W. Pegg

Date: May 17, 1991