FEBRUARY 14 1979

Distribution
Docket
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RDiggs

Docket Nos. 50-325
and 50-324

Mr. J. A. Jones
Executive Vice President
Carolina Power & Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

Dear Mr. Jones:

The Commission has issued the enclosed Amendment No. 20 to Facility Operating License No. DPR-71 and Amendment No. 44 to Facility Operating License No. DPR-62 for the Brunswick Steam Electric Plant, Units Nos. 1 and 2, respectively. These amendments consist of changes to the Technical Specifications in response to your request dated February 6, 1979.

These amendments revise the surveillance requirement for the Standby Gas Treatment System heaters to demonstrate that the heaters will dissipate at least 15.2 kw when tested in accordance with the standard ANSI N510-1975 "Testing of Nuclear Air Cleaning Systems."

Copies of the Safety Evaluation and Notice of Issuance are also enclosed.

Sincerely,

Original signed by

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:
1. Amendment No. 20 to DPR-71
2. Amendment No. 44 to DPR-62
3. Safety Evaluation
4. Notice

cc w/enclosures:
See page 2

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DATE	2/12/79	2/12/79	2/12/79	2/14/79	2/14/79

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

February 14, 1979

Docket Nos. 50-325
and 50-324

Mr. J. A. Jones
Executive Vice President
Carolina Power & Light Company
336 Fayetteville Street
Raleigh, North Carolina 27602

Dear Mr. Jones:

The Commission has issued the enclosed Amendment No. 20 to Facility Operating License No. DPR-71 and Amendment No. 44 to Facility Operating License No. DPR-62 for the Brunswick Steam Electric Plant, Units Nos. 1 and 2, respectively. These amendments consist of changes to the Technical Specifications in response to your request dated February 6, 1979.

These amendments revise the surveillance requirement for the Standby Gas Treatment System heaters to demonstrate that the heaters will dissipate at least 15.2 kw when tested in accordance with the standard ANSI N510-1975 "Testing of Nuclear Air Cleaning Systems."

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Sincerely,

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

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1. Amendment No. 20 to DPR-71
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3. Safety Evaluation
4. Notice

cc w/enclosures:
See page 2

cc: Richard E. Jones, Esquire
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Raleigh, North Carolina 27602

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110 North Fifth Avenue
Wilmington, North Carolina 28461

Mr. Steve J. Varnam
Chairman, Board of County
Commissioners of Brunswick County
Southport, North Carolina 28461

Denny McGuire (Ms)
State Clearinghouse
Division of Policy Development
116 West Jones Street
Raleigh, North Carolina 27603

Southport - Brunswick County Library
109 W. Moore Street
Southport, North Carolina 28461

Director, Technical Assessment Division
Office of Radiation Programs (AW-459)
US EPA
Crystal Mall #2
Arlington, Virginia 20460

U.S. Environmental Protection Agency
Region IV Office
ATTN: EIS COORDINATOR
345 Courtland Street, NW
Atlanta, Georgia 30308

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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 20
License No. DPR-71

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

   A. The application for amendment by Carolina Power & Light Company (the licensee) dated February 6, 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 2.C.(2) of Facility Operating License No. DPR-71 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 20, 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

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 14, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 20

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Replace the following pages of the Technical Specifications contained in Appendix A of the above-indicated license with the attached pages. The changed area of the revised page is reflected by a marginal line.

Remove	Insert
3/4 6-25*	3/4 6-25*
3/4 6-26	3/4 6-26

*Overleaf pages - no change

3/4.6.6 CONTAINMENT ATMOSPHERE CONTROL

STANDBY GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two independent Standby Gas Treatment System subsystems shall be OPERABLE.

APPLICABILITY: CONDITIONS 1, 2, 3, 5 and *.

ACTION:

a. With one standby gas treatment subsystem inoperable:

   1. In CONDITION 1, 2 or 3, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

   2. In CONDITION 5 or *, restore the inoperable subsystem to OPERABLE status within 31 days or suspend irradiated fuel handling in the secondary containment, CORE ALTERATIONS or operations that could reduce the SHUTDOWN MARGIN. The provisions of Specification 3.0.3 are not applicable.

b. With both standby gas treatment subsystems inoperable;

   1. In CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

   2. In CONDITION 5 or *, suspend all irradiated fuel handling in the secondary containment, CORE ALTERATIONS or operations that could reduce the SHUTDOWN MARGIN. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.6.1 Each standby gas treatment subsystem shall be demonstrated OPERABLE:

   a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters on automatic control.

*When irradiated fuel is being handled in the secondary containment.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a., C.5.c and C.5.d of Regulatory Guide 1.52, Revision 1, July 1976, and the system flow rate is 3000 cfm ± 10%.

2. 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 1, July 1976, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 1, July 1976.

3. Verifying a system flow rate of 3000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.53, Revision 1, July 1976, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 1, July 1976.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is < 8.5 inches Water Gauge while operating the filter train at a flow rate of 3000 cfm ± 10%.

2. Verifying that the filter train starts on each secondary containment isolation test signal.

3. Verifying that the heaters will dissipate at least 15.2 kw when tested in accordance with ANSI N510-1975.

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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 44
License No. DPR-62

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

   A. The application for amendment by Carolina Power & Light Company (the licensee) dated February 6, 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 2.C.(2) of Facility Operating License No. DPR-62 is hereby amended to read as follows:

   (2) Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 44, 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

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 14, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 44

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Replace the following pages of the Technical Specifications contained in Appendix A of the above indicated license with the attached pages. The changed area of the page is reflected by a marginal line.

Remove	Insert
3/4 6-25*	3/4 6-25*
3/4 6-26	3/4 6-26

*Overleaf pages - no change

CONTAINMENT SYSTEMS

3/4.6.6 CONTAINMENT ATMOSPHERE CONTROL

STANDBY GAS TREATMENT SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.6.1 Two independent Standby Gas Treatment System subsystems shall be OPERABLE.

APPLICABILITY: CONDITIONS 1, 2, 3, 5 and *.

ACTION:

a. With one standby gas treatment subsystem inoperable:

   1. In CONDITION 1, 2 or 3, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

   2. In CONDITION 5 or *, restore the inoperable subsystem to OPERABLE status within 31 days or suspend irradiated fuel handling in the secondary containment, CORE ALTERATIONS or operations that could reduce the SHUTDOWN MARGIN. The provisions of Specification 3.0.3 are not applicable.

b. With both standby gas treatment subsystems inoperable;

   1. In CONDITION 1, 2 or 3, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.

   2. In CONDITION 5 or *, suspend all irradiated fuel handling in the secondary containment, CORE ALTERATIONS or operations that could reduce the SHUTDOWN MARGIN. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.6.6.1 Each standby gas treatment subsystem shall be demonstrated OPERABLE:

   a. At least once per 31 days by initiating, from the control room, flow through the HEPA filters and charcoal adsorbers and verifying that the system operates for at least 10 hours with the heaters on automatic control.

*When irradiated fuel is being handled in the secondary containment.

SURVEILLANCE REQUIREMENTS (Continued)

b. At least once per 18 months or (1) after any structural maintenance on the HEPA filter or charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the system by:

1. Verifying that the cleanup system satisfies the in-place testing acceptance criteria and uses the test procedures of Regulatory Positions C.5.a., C.5.c and C.5.d of Regulatory Guide 1.52, Revision 1, July 1976, and the system flow rate is 3000 cfm ± 10%.

2. 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 1, July 1976, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 1, July 1976.

3. Verifying a system flow rate of 3000 cfm ± 10% during system operation when tested in accordance with ANSI N510-1975.

c. After every 720 hours of charcoal adsorber operation by verifying within 31 days after removal that a laboratory analysis of representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.53, Revision 1, July 1976, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 1, July 1976.

d. At least once per 18 months by:

1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is < 8.5 inches Water Gauge while operating the filter train at a flow rate of 3000 cfm ± 10%.

2. Verifying that the filter train starts on each secondary containment isolation test signal.

3. Verifying that the heaters will dissipate at least 15.2 kw when tested in accordance with ANSI N510-1975.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 20 TO FACILITY LICENSE NO. DPR-71

AND AMENDMENT NO. 44 TO FACILITY LICENSE NO. DPR-62

CAROLINA POWER & LIGHT COMPANY

BRUNSWICK STEAM ELECTRIC PLANT, UNITS NOS. 1 AND 2

DOCKET NOS. 50-325 AND 50-324

Introduction

By letter dated February 6, 1979, Carolina Power & Light Company (the licensee) requested a change to surveillance requirement 4.6.6.1, Containment Systems, Standby Gas Treatment System (SGTS), of the Technical Specifications for Brunswick Steam Electric Plant (BSEP) Units Nos. 1 and 2. This change will delete the surveillance requirement to demonstrate that the SGTS heaters will maintain a specified outlet temperature when tested in accordance with the standard ANSI N510-1975. In its place, the licensee has proposed the surveillance requirement to demonstrate that the heaters will dissipate at least 15.2 kw when tested in accordance with the standard ANSI N510-1975, "Testing of Nuclear Air Cleaning Systems".

Discussion

In the letter of February 6, 1979 the licensee stated that they cannot, as required in Specification 4.6.6.1.d.3, maintain an outlet temperature of $150^{o}F \pm 10^{o}F$ from the SGTS with the SGTS inlet air heater. They cannot control the SGTS inlet temperature because of seasonal ambient temperature variations and thus, cannot control the outlet temperature at the specified level of $150^{o}F \pm 10^{o}F$.

The licensee also stated that the purpose of the heaters was not to maintain a certain SGTS outlet temperature. Their purpose was to reduce the relative humidity of the air entering the SGTS charcoal filters to less than 70 percent. The licensee referred to BSEP Final Safety Analysis Report (FSAR) Volume 2, page 5.3-7, fourth paragraph.

The licensee stated that the SGTS heaters are designed to dissipate approximately 18.8 kw at rated voltage. Using conservative assumptions, the licensee calculated that 15.2 kw will reduce the relative humidity of the air entering the SGTS charcoal filters to less than 70 percent. Based on this, the licensee has proposed a surveillance requirement to verify that the heaters dissipate at least 15.2 kw when tested in accordance with ANSI N510-1975.

Evaluation

We have reviewed and evaluated the licensee's proposed change to Specification 4.6.6.1.d.3 of the BSEP Technical Specifications. This specification is one of the surveillance requirements on the engineered safety feature SGTS. This ventilation filter system is used to mitigate the consequences of a Loss-of-Coolant accident or a fuel handling accident.

We agree with the licensee that the purpose of the SGTS heaters is to reduce the relative humidity of the air entering the SGTS charcoal to about 70 percent. This is stated in Position C.2. of Regulatory Guide 1.52 (Revision 2) dated March 1978 and in Section 5.5.1 of standard ANSI N509-1976, "Nuclear Power Plant Air Cleaning Units and Components." The efficiency at which the charcoal removes radioiodine from the air is affected by the relative humidity of the air. Above about 80 percent relative humidity, the efficiency decreases with increasing percent relative humidity. The SGTS heaters are designed to keep the relative humidity of the air entering the SGTS below 70 percent to keep the efficiency of the charcoal above the values assumed in the accident analyses.

The present Specification 4.6.6.1.d.3 is not an appropriate surveillance requirement on the SGTS heater. This specification will not demonstrate that the heater can maintain the relative humidity of the air entering the charcoal filter about 70 percent.

We have calculated the required heat dissipation from the SGTS heaters which will keep the relative humidity of the air entering the charcoal filter below 70 percent. We agree with the assumptions made by the licensee for his calculations and have used them for our calculations. We agree with the licensee's conclusion that 15.2 kw dissipated by the SGTS heater will reduce the relative humidity of the air entering the charcoal filter to less than 70 percent.

The change to Specification 4.6.6.1.d.3 does not change any of the assumptions made in the Loss-of-Coolant Accident (LOCA) or the Fuel Handling Accident (FHA) given in Table 15-3 of the BSEP Safety Evaluation dated November 1973. The proposed specification 4.6.6.1.d.3, in addition to other specifications not being changed in this action, provides adequate assurance that the SGTS will have the radioiodine removal efficiencies given in Table 15-3. The potential consequences of the postulated LOCA and FHA have not changed from those given in Table 15-2 of the Safety Evaluation dated November 1973. These potential consequences are less than the guidelines of 10 CFR Part 100.

Based on the above considerations, we conclude that the proposed change to Specification 4.6.6.1.d.3 is acceptable as written.

Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR Section 51.5(d)(4) that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendments.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: February 14, 1979

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKETS NOS. 50-325 AND 50-324

CAROLINA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendments Nos. 20 and 44 to Facility Operating Licenses Nos. DPR-71 and DPR-62, respectively, issued to Carolina Power & Light Company (the licensee) for operation of the Brunswick Steam Electric Plant, Units Nos. 1 and 2 (the facility), located in Brunswick, North Carolina. The amendments are effective as of the date of issuance.

These amendments revise the surveillance requirement for the Standby Gas Treatment System heaters to demonstrate that the heaters will dissipate at least 15.2 kw when tested in accordance with the standard ANSI N510-1975 "Testing of Nuclear Air Cleaning Systems."

The application for amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of the amendments was not required since the amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of the amendments will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4) an environmental impact statement or negative

declaration and environmental impact appraisal need not be prepared in connection with issuance of the amendments.

For further details with respect to this action, see (1) the application for amendments dated February 6, 1979, (2) Amendment Nos. 20 and 44 to License Nos. DPR-71 and DPR-62, and (3) the Commission's related Safety Evaluation. These items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. 20555, and at the Southport-Brunswick County Library, 109 West Moore Street, Southport, North Carolina 28461. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland this 14th day of February 1979.

FOR THE NUCLEAR REGULATORY COMMISSION

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors