MAY 15 1974

Docket No. 50-261

Carolina Power & Light Company
ATTN: Mr. E. E. Utley, Vice President
Bulk Power Supply Department
336 Fayetteville Street
Raleigh, North Carolina 27602

Gentlemen:

Your letter dated September 13, 1973, proposed changes to the Technical Specifications of Facility License No. DPR-23 for the H. B. Robinson Unit No. 2 facility that would incorporate proposed changes to the Spent Fuel Building filter system and add the applicable surveillance requirements. In the March 13, 1974 meeting between representatives of CP&L and Licensing, additional changes to the Technical Specifications regarding performance and surveillance of the charcoal adsorbers and HEPA filters installed in the Refueling Building ventilation system and the Containment Purge system were discussed.

During our review, we informed your staff that certain modifications to the proposed changes were necessary to meet Regulatory requirements as given in Regulatory Guide 1.52, "Design, Testing, and Maintenance Criteria for Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants," dated June 1973. These modifications have been made.

On the basis of our review reflected in the enclosed Safety Evaluation, we have concluded that the proposed changes do not present significant hazards considerations and that there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner.

APPLY

Accordingly, Amendment No. 5 to Facility Operating License No. DPR-23 is enclosed revising the Technical Specifications thereto to authorize the requested changes as modified. A copy of a notice which is being forwarded to the Office of the Federal Register for publication relating to this action is also enclosed for your information.

Sincerely,

Original Signed by
Karl Goller

Karl R. Goller
Assistant Director for
Operating Reactors
Directorate of Licensing

Enclosures:
1. Safety Evaluation
2. Amendment No. 5
3. Federal Register Notice

cc w/enclosures:
G. F. Trowbridge, Esquire
Shaw, Pittman, Potts, Trowbridge
& Madden
910 - 17th Street, N. W.
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Florence, South Carolina 29501

Mr. Dave Hopkins
Environmental Protection Agency
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

Hartsville Memorial Library
Home and Fifth Avenues
Hartsville, South Carolina 29550

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DATE ➤	4/28/74	4/29/74	4/29/74	4/3/74	4/15/74	

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING

SUPPORTING AMENDMENT NO. 5 TO LICENSE NO. DPR-23

(CHANGE NO. 30 TO APPENDIX A OF TECHNICAL SPECIFICATIONS)

CAROLINA POWER & LIGHT COMPANY

H. B. ROBINSON UNIT NO. 2

DOCKET NO. 50-261

INTRODUCTION

By a letter dated September 13, 1973, Carolina Power & Light Company (CP&L) proposed changes to the Technical Specifications of Operating License No. DPR-23 for the H. B. Robinson Unit No. 2 facility that would incorporate proposed changes to the Spent Fuel Building filter system and add the applicable surveillance requirements. In the March 13, 1974 meeting between representatives of CP&L and Licensing, additional changes to the Technical Specifications regarding performance and surveillance of the charcoal adsorbers and HEPA filters installed in the Refueling Building ventilation system and the Containment Purge system were discussed.

DISCUSSION

Specification 3.8.1

Reference to the required relative humidity (R.H.) of the atmosphere in the Spent Fuel Building or Containment Building working area has been deleted from Specification 3.8.1.i. Since heaters have been installed upstream of the Spent Fuel Building filters to control the R.H. of the air processed by the HEPA filter and charcoal adsorber banks, the required R.H. level is controlled in the ventilation system and not in the working area.

Specification 3.8.2

The operating limitations on the Spent Fuel Building filter system and the Containment Purge filter system have been added to satisfy the Regulatory requirements for such systems as reflected in Regulatory Guide 1.52,

OFFICE ➤						
SURNAME ➤						
DATE ➤						

"Design, Testing, and Maintenance Criteria for Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants," dated June 1973. The bases for these specifications are given in Regulatory Guide 1.52 and the enclosed Basis to the Technical Specifications. The R.H. of the air processed by the Containment Purge filter system is not controlled during fuel handling operations. Therefore, if the R.H. during fuel handling operations exceeds the level specified, the Containment Purge filter system operation will be terminated until the R.H. level is reduced to 70 percent. The R.H. requirement for the Spent Fuel Building filter system reflects the installation of a heater system capable of controlling the R.H. in this ventilation system upstream of the filter and adsorber banks to less than 70 percent. If these specifications cannot be met, fuel handling operations will be terminated until the requirements are met in the Spent Fuel Building.

Specification 4.1.3

The surveillance requirements given in Item 16 of Table 4.1-3 have been deleted for the HEPA filters and charcoal adsorbers provided in the Spent Fuel Building filter system and the Containment Purge filter system. These surveillance requirements have been transferred to a new section of the Technical Specifications, Section 4.12, "Refueling Filter Systems."

Section 4.12

Specifications 4.12.1, 4.12.2, and 4.12.3 have been added to the Technical Specifications to impose surveillance requirements on the Spent Fuel Building filter system and the Containment Purge filter system. These requirements expand the surveillance previously required in Specification 4.1.3 and reflect the Regulatory requirements stated in Regulatory Guide 1.52 previously referenced in this Safety Evaluation. Specifications 4.12.1 and 4.12.2 reflect the tests and analysis frequencies required on the charcoal adsorbers and HEPA filters to assure compliance with Specification 3.8.2. Specification 4.12.3 reflects the monitoring frequency of the Spent Fuel Building and Containment air processed by the refueling filter systems to assure compliance with the 70 percent value required by Specification 3.8.2.e.

CONCLUSION

The changes to the Technical Specifications described above provide added assurance of proper operation of the Spent Fuel Building filter system and the Containment Purge filter system, conform to the criteria of Regulatory

Guide 1.52, do not adversely affect any engineered safeguard, and do not compromise the safe operation of the facility. The staff concludes that the changes do not involve a significant hazards consideration since they do not involve a safety consideration of a type or magnitude not previously considered for the Robinson 2 plant, do not involve a substantial increase in the probability or consequences of accidents previously considered, and do not involve a substantial decrease in the margin of safety during normal plant operation, anticipated operational occurrences, or postulated accidents previously considered. There is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner.

/s/

Fredric D. Anderson
Operating Reactors Branch #2
Directorate of Licensing

/s/

Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing

Date: MAY 15 1974

OFFICE ➤						
SURNAME ➤						
DATE ➤						

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

H. B. ROBINSON UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. DPR-23

1. The Atomic Energy Commission (the Commission) having found that:

   A. The application for amendment by Carolina Power & Light Company (the licensee) dated September 13, 1973, 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 license, 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.

2. Accordingly, Paragraph 2.C.(2) of Facility License No. DPR-23 is hereby amended to read as follows:

OFFICE ➔						
SURNAME ➔						
DATE ➔						

"(2) Technical Specifications

The Technical Specifications contained in Appendix A, attached to Facility Operating License No. DPR-23 are revised as indicated in the attachment to this license amendment. The Technical Specifications, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised."

3. This license amendment is effective as of the date of its issuance.

FOR THE ATOMIC ENERGY COMMISSION
Original Signed by
Karl Goller

K. R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

Attachment:
Change No. 30 to Appendix A
Technical Specifications

MAY 15 1974

OFFICE ➤						
SURNAME ➤						
DATE ➤						

ATTACHMENT TO LICENSE AMENDMENT NO. 5

CHANGE NO. 30 TO APPENDIX A OF TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-23

1. Replace pages 3.8-2 and 3.8-3 with the enclosed pages 3.8-2, 3.8-3, 3.8-4, and 3.8-5.

2. Delete Item 16, "Fans and Associated Charcoal and HEPA Filters for Spent Fuel Building and Containment Purge Exhaust System," Table 4.1-3 of Specification 4.1.3.

3. Add Section 4.12, "Refueling Filter Systems," containing Specifications 4.12.1, 4.12.2, and 4.12.3 by the enclosed pages 4.12-1, 4.12-2, and 4.12-3.

OFFICE ➤						
SURNAME ➤						
DATE ➤						

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-261

CAROLINA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF FACILITY LICENSE AMENDMENT

Notice is hereby given that the U. S. Atomic Energy Commission (the Commission) has issued Amendment No. 5 to Facility Operating License No. DPR-23 issued to Carolina Power & Light Company which revised Technical Specifications for operation of the H. B. Robinson Unit 2, located in Darlington County, Hartsville, South Carolina.

The amendment permits changes in the Technical Specifications pertaining to the Spent Fuel Building filter system and Containment Purge filter system.

The application for the amendment complies with the standards and requirements of the Act and the Commission's rules and regulations and the Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter 1, which are set forth in the license amendment.

For further details with respect to this action, see (1) the application for amendment dated September 13, 1973, (2) Amendment No. 5 to the License No. DPR-23, with any attachments, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Hartsville Memorial Library, Home & Fifth Avenues, Hartsville, South Carolina.

A copy of items (2) and (3) may be obtained upon request addressed to the United States Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this MAY 15 1974

FOR THE ATOMIC ENERGY COMMISSION

/s/

Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing

OFFICE ➔						
SURNAME ➔						
DATE ➔						

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

May 15, 1974

Docket No. 50-261

Carolina Power & Light Company
ATTN: Mr. E. E. Utley, Vice President
Bulk Power Supply Department
336 Fayetteville Street
Raleigh, North Carolina 27602

Gentlemen:

Your letter dated September 13, 1973, proposed changes to the Technical Specifications of Facility License No. DPR-23 for the H. B. Robinson Unit No. 2 facility that would incorporate proposed changes to the Spent Fuel Building filter system and add the applicable surveillance requirements. In the March 13, 1974 meeting between representatives of CP&L and Licensing, additional changes to the Technical Specifications regarding performance and surveillance of the charcoal adsorbers and HEPA filters installed in the Refueling Building ventilation system and the Containment Purge system were discussed.

During our review, we informed your staff that certain modifications to the proposed changes were necessary to meet Regulatory requirements as given in Regulatory Guide 1.52, "Design, Testing, and Maintenance Criteria for Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants," dated June 1973. These modifications have been made.

On the basis of our review reflected in the enclosed Safety Evaluation, we have concluded that the proposed changes do not present significant hazards considerations and that there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner.

Accordingly, Amendment No. 5 to Facility Operating License No. DPR-23 is enclosed revising the Technical Specifications thereto to authorize the requested changes as modified. A copy of a notice which is being forwarded to the Office of the Federal Register for publication relating to this action is also enclosed for your information.

Sincerely,

Karl R. Goller

Karl R. Goller
Assistant Director for
Operating Reactors
Directorate of Licensing

Enclosures:
1. Safety Evaluation
2. Amendment No. 5
3. Federal Register Notice

cc w/enclosures:
G. F. Trowbridge, Esquire
Shaw, Pittman, Potts, Trowbridge
& Madden
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Washington, D. C. 20006

John D. Whisenhunt, Esquire
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Florence, South Carolina 29501

Mr. Dave Hopkins
Environmental Protection Agency
1421 Peachtree Street, N. E.
Atlanta, Georgia 30309

Hartsville Memorial Library
Home and Fifth Avenues
Hartsville, South Carolina 29550

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

SAFETY EVALUATION BY THE DIRECTORATE OF LICENSING

SUPPORTING AMENDMENT NO. 5 TO LICENSE NO. DPR-23

(CHANGE NO. 30 TO APPENDIX A OF TECHNICAL SPECIFICATIONS)

CAROLINA POWER & LIGHT COMPANY

H. B. ROBINSON UNIT NO. 2

DOCKET NO. 50-261

INTRODUCTION

By a letter dated September 13, 1973, Carolina Power & Light Company (CP&L) proposed changes to the Technical Specifications of Operating License No. DPR-23 for the H. B. Robinson Unit No. 2 facility that would incorporate proposed changes to the Spent Fuel Building filter system and add the applicable surveillance requirements. In the March 13, 1974 meeting between representatives of CP&L and Licensing, additional changes to the Technical Specifications regarding performance and surveillance of the charcoal adsorbers and HEPA filters installed in the Refueling Building ventilation system and the Containment Purge system were discussed.

DISCUSSION

Specification 3.8.1

Reference to the required relative humidity (R.H.) of the atmosphere in the Spent Fuel Building or Containment Building working area has been deleted from Specification 3.8.1.i. Since heaters have been installed upstream of the Spent Fuel Building filters to control the R.H. of the air processed by the HEPA filter and charcoal adsorber banks, the required R.H. level is controlled in the ventilation system and not in the working area.

Specification 3.8.2

The operating limitations on the Spent Fuel Building filter system and the Containment Purge filter system have been added to satisfy the Regulatory requirements for such systems as reflected in Regulatory Guide 1.52,

"Design, Testing, and Maintenance Criteria for Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants," dated June 1973. The bases for these specifications are given in Regulatory Guide 1.52 and the enclosed Basis to the Technical Specifications. The R.H. of the air processed by the Containment Purge filter system is not controlled during fuel handling operations. Therefore, if the R.H. during fuel handling operations exceeds the level specified, the Containment Purge filter system operation will be terminated until the R.H. level is reduced to 70 percent. The R.H. requirement for the Spent Fuel Building filter system reflects the installation of a heater system capable of controlling the R.H. in this ventilation system upstream of the filter and adsorber banks to less than 70 percent. If these specifications cannot be met, fuel handling operations will be terminated until the requirements are met in the Spent Fuel Building.

Specification 4.1.3

The surveillance requirements given in Item 16 of Table 4.1-3 have been deleted for the HEPA filters and charcoal adsorbers provided in the Spent Fuel Building filter system and the Containment Purge filter system. These surveillance requirements have been transferred to a new section of the Technical Specifications, Section 4.12, "Refueling Filter Systems."

Section 4.12

Specifications 4.12.1, 4.12.2, and 4.12.3 have been added to the Technical Specifications to impose surveillance requirements on the Spent Fuel Building filter system and the Containment Purge filter system. These requirements expand the surveillance previously required in Specification 4.1.3 and reflect the Regulatory requirements stated in Regulatory Guide 1.52 previously referenced in this Safety Evaluation. Specifications 4.12.1 and 4.12.2 reflect the tests and analysis frequencies required on the charcoal adsorbers and HEPA filters to assure compliance with Specification 3.8.2. Specification 4.12.3 reflects the monitoring frequency of the Spent Fuel Building and Containment air processed by the refueling filter systems to assure compliance with the 70 percent value required by Specification 3.8.2.e.

CONCLUSION

The changes to the Technical Specifications described above provide added assurance of proper operation of the Spent Fuel Building filter system and the Containment Purge filter system, conform to the criteria of Regulatory

Guide 1.52, do not adversely affect any engineered safeguard, and do not compromise the safe operation of the facility. The staff concludes that the changes do not involve a significant hazards consideration since they do not involve a safety consideration of a type or magnitude not previously considered for the Robinson 2 plant, do not involve a substantial increase in the probability or consequences of accidents previously considered, and do not involve a substantial decrease in the margin of safety during normal plant operation, anticipated operational occurrences, or postulated accidents previously considered. There is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner.

Fredric D. Anderson
Operating Reactors Branch #2
Directorate of Licensing

Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing

Date: May 15, 1974

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

H. B. ROBINSON UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 5
License No. DPR-23

1. The Atomic Energy Commission (the Commission) having found that:

   A. The application for amendment by Carolina Power & Light Company (the licensee) dated September 13, 1973, 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 license, 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. Prior public notice of this amendment is not required since the amendment does not involve a significant hazards consideration.

2. Accordingly, Paragraph 2.C.(2) of Facility License No. DPR-23 is hereby amended to read as follows:

"(2) Technical Specifications

The Technical Specifications contained in Appendix A, attached to Facility Operating License No. DPR-23 are revised as indicated in the attachment to this license amendment. The Technical Specifications, as revised, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications, as revised."

3. This license amendment is effective as of the date of its issuance.

FOR THE ATOMIC ENERGY COMMISSION

Karl R. Goller

K. R. Goller, Assistant Director
for Operating Reactors
Directorate of Licensing

Attachment:
Change No. 30 to Appendix A
Technical Specifications

Date of Issuance: May 15, 1974

ATTACHMENT TO LICENSE AMENDMENT NO. 5

CHANGE NO. 30 TO APPENDIX A OF TECHNICAL SPECIFICATIONS

FACILITY OPERATING LICENSE NO. DPR-23

1. Replace pages 3.8-2 and 3.8-3 with the enclosed pages 3.8-2, 3.8-3, 3.8-4, and 3.8-5.

2. Delete Item 16, "Fans and Associated Charcoal and HEPA Filters for Spent Fuel Building and Containment Purge Exhaust System," Table 4.1-3 of Specification 4.1.3.

3. Add Section 4.12, "Refueling Filter Systems," containing Specifications 4.12.1, 4.12.2, and 4.12.3 by the enclosed pages 4.12-1, 4.12-2, and 4.12-3.

e. At least one residual heat removal pump shall be in operation to circulate reactor coolant.

f. During reactor vessel head removal and while loading and unloading fuel from the reactor, the minimum boron concentration of 1950 ppm shall be maintained in the primary coolant system and verified by sampling once each shift.

g. Direct communication between the control room and the refueling cavity manipulator crane shall be available whenever changes in core geometry are taking place.

h. Movement of fuel within the core shall not be initiated prior to 100 hours after shutdown.

i. The Spent Fuel Building ventilation system shall be operating when handling irradiated fuel in this area. Prior to moving irradiated fuel assemblies in the spent fuel pool, the ventilation system exhaust shall be aligned to discharge through HEPA and impregnated charcoal filters. When in operation, the exhaust flow of the Containment Purge System shall discharge through HEPA and impregnated charcoal filters. When the Containment Purge System is not in operation at least one automatic containment isolation valve shall be secured in each line penetrating the containment which provides a direct path from the containment atmosphere to the outside atmosphere.

j. If any of the specified limiting conditions for refueling are not met, refueling of the reactor shall cease; work shall be initiated to correct the conditions so that the specified limits are met; and no operations which may increase the reactivity of the core shall be made.

k. The reactor shall be subcritical as required by 3.10.6.3 with $T_{avg} \leq 140°F$.

3.8.2 The Spent Fuel Building filter system and the Containment Purge filter system shall satisfy the following conditions:

a. The results of the in-place cold DOP and halogenated hydrocarbon tests at greater than 20 percent design flows on HEPA filters and charcoal adsorber banks shall show ≥ 99 percent DOP removal and ≥ 99 percent halogenated hydrocarbon removal.

b. The results of laboratory carbon sample analysis from the Spent Fuel Building filter system carbon and the Containment Purge filter system carbon shall show $\geq$ 90 percent radioactive methyl iodide removal at a velocity within 20 percent of the filter system design, 0.05 to 0.15 mg/m^3 inlet methyl iodide concentration, $\geq$ 70 percent R.H. and $\geq$ 1.25°F.

c. All filter system fans shall be shown to operate within $\pm$ 10% of design flow.

d. During fuel handling operations, the relative humidity (R.H.) of the air processed by the refueling filter systems shall be $\leq$ 70 percent.

e. From and after the date that the Spent Fuel Building filter system is made or found to be inoperable for any reason, fuel handling operations in the Spent Fuel Building shall be terminated immediately.

Basis

The equipment and general procedures to be utilized during refueling are discussed in the Final Facility Description and Safety Analysis Report. Detailed instructions, the above specified precautions, and the design of the fuel handling equipment incorporating built-in interlocks and safety features, provide assurance that no incident could occur during the refueling operations that would result in a hazard to public health and safety(1). Whenever changes are not being made in core geometry one flux monitor is sufficient. This permits maintenance of the instrumentation. Continuous monitoring of radiation levels and neutron flux provides immediate indication of an unsafe condition. The residual heat pump is used to maintain a uniform boron concentration.

The boron concentration of 1950 ppm will keep the core subcritical even if all control rods were withdrawn from the core. During refueling, the reactor refueling cavity is filled with approximately 285,000 gallons of borated water. The boron concentration of this water at 1950 ppm boron is sufficient to maintain the reactor subcritical by at least 10% Δk/k in the refueling condition with all rods inserted, and will also maintain the core subcritical even if no control rods were inserted into the reactor[2]. Weekly checks of refueling water storage tank boron concentration ensure the proper shutdown margin[3]. Direct communications allow the control room operator to inform the manipulator operator of any impending unsafe condition detected from the control board indicators during fuel movement.

In addition to the above safety features, interlocks are utilized during refueling to ensure safe handling. An excess weight interlock is provided on the lifting hoist to prevent movement of more than one fuel assembly at a time. The spent fuel transfer mechanism can accommodate only one fuel assembly at a time.

The restriction of not moving fuel in the reactor for a period of 100 hours after shutdown reduces the consequences of a fuel handling accident by providing for decay of short-lived fission products and the reduction of fission gas inventory in any potentially failed fuel. Fuel handling accidents in containment and the Spent Fuel Building have been evaluated by postulating that the failure of all fuel rods in one assembly occurs 100 hours after shutdown[4]. During movement of irradiated fuel assemblies in the spent fuel pool, ventilation exhaust is diverted through HEPA and charcoal filters. During movement of irradiated fuel assemblies in containment, the purge system will be either operable, with exhaust flow passing through HEPA and charcoal filters, or containment isolated.

High-efficiency particulate air (HEPA) filters are installed before the charcoal adsorbers to prevent clogging of the iodine adsorbers for all refueling filter systems. The charcoal adsorbers are installed to reduce the potential release of radioiodine to the environment. The in-place test results should indicate a system leak tightness of less than 1 percent bypass leakage for the charcoal adsorbers and a HEPA efficiency of at least 99 percent removal of DOP particulates. The laboratory carbon sample test results should indicate a radioactive methyl iodide removal efficiency of at least 90 percent on the Spent Fuel Building filter system carbon and the Containment Purge filter system carbon for expected accident conditions. If the efficiencies of the HEPA filters and charcoal adsorbers are as specified, the resulting doses will be less than the 10 CFR Part 100 guidelines for the accidents analyzed. Operation of the fans significantly different from the design flow will change the removal efficiency of the HEPA filters and charcoal adsorbers.

The relative humidity (R.H.) of the air processed by the refueling filter systems should be less than the R.H. used during the testing of the charcoal adsorbers in order to assure that the adsorbers will perform under accident conditions as predicted by the test results. Heaters have been installed upstream of the Spent Fuel Building filters to assure an R.H. of less than 70 percent for the air processed by the Spent Fuel Building filter system. If the R.H. in the Containment atmosphere exceeds 70 percent, operation of the Containment Purge system will be terminated until this specification can be met. If the Spent Fuel Building filter system is found to be inoperable, all fuel handling and fuel movement operations in the Spent Fuel Building will be terminated until the system is made operable.

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(1) FSAR - Section 9.5.2

(2) FSAR - Table 3.2.1-1

(3) FSAR - Section 9.5.1

(4) Letters--CP&L to AEC: September 27, 1972; January 23, 1973; and February 9, 1973.

4.12 REFUELING FILTER SYSTEMS

Applicability:

Applies to fans and associated charcoal adsorber banks and HEPA filters for Spent Fuel Building filter system and Containment Purge filter system.

Objective:

To verify that the refueling filter systems will adequately remove radioactivity that may be released accidentally into the Spent Fuel Building and Containment Building.

Specification:

4.12.1 At least once per operating cycle, the following conditions shall be demonstrated:

a. Pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches of water at system design flow rate.

b. Air distribution is uniform within ± 20 percent across HEPA filters and charcoal adsorbers.

4.12.2 a. The tests of Specification 3.8.2.a for the refueling filter systems shall be performed initially and at least once per operating cycle, prior to each refueling outage operation or after every 720 hours of system operation.

b. The tests and sample analysis of Specification 3.8.2.b for the refueling filter systems shall be performed initially, at least once per operating cycle prior to each refueling outage operation or after every 720 hours of system operation, and following significant painting, fire, or chemical release in any ventilation zone communicating with the filter systems.

c. Cold DOP testing shall be performed after each complete or partial replacement of a HEPA filter bank or after any structural maintenance of the filter system housing.

d. Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of a charcoal adsorber bank or after any structural maintenance on the filter system housing.

4.12.3 The relative humidity of the air processed by the refueling filter system shall be monitored hourly during fuel handling operations.

Basis

Pressure drop across the combined HEPA filters and charcoal adsorbers of less than 6 inches of water at the system design flow rate will indicate that the filters and adsorbers are not clogged by excessive amounts of foreign matter. Pressure drop and air distribution should be determined at least once per operating cycle to show system performance capability.

The frequency of tests and sample analysis are necessary to show that the HEPA filters and charcoal adsorbers can perform as evaluated under postulated accident conditions. The charcoal adsorber efficiency test procedures should allow for the removal of one adsorber tray, emptying of one bed from the tray, mixing the adsorbent thoroughly and obtaining at least two samples. Each sample should be at least two inches in diameter and a length equal to the thickness of the bed. If test results are unacceptable, all adsorbent in the system shall be replaced with an adsorbent qualified according to Table 1 of Regulatory Guide 1.52. The replacement tray for the adsorber tray removed for the test should meet the same adsorbent quality. Tests of the HEPA filters with DOP aerosol shall be performed in accordance to ANSI N101.1. Any HEPA filters found defective shall be replaced with filters qualified pursuant to Regulatory Position C.3.d of Regulatory Guide 1.52.

The Containment Purge filter system is normally run continuously during the entire refueling outage to provide cooling and ventilation and periodically during plant operation to reduce airborne radioactivity leaks inside the containment. Operation time of the Containment Purge filter system after the fuel handling operation is completed should not be added to the operation time during fuel handling operations for determination of testing and surveillance requirements given in these specifications.

If significant painting, fire, or chemical release occurs such that the HEPA filter or charcoal adsorber could become contaminated from the fumes, chemicals, or foreign material, the same laboratory tests and sample analysis shall be performed as required for operational use. The determination of significant shall be made by the operator on duty at the time of the incident. Knowledgeable staff members should be consulted prior to making this determination.

The relative humidity of the Containment atmosphere and of the air processed by the filter system and downstream of the heaters with Spent Fuel Building filter system shall be monitored at least hourly to assure that the R.H. is less than 70 percent during fuel handling and Containment Purge filter system operation.

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-261

CAROLINA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF FACILITY LICENSE AMENDMENT

Notice is hereby given that the U. S. Atomic Energy Commission (the Commission) has issued Amendment No. 5 to Facility Operating License No. DPR-23 issued to Carolina Power & Light Company which revised Technical Specifications for operation of the H. B. Robinson Unit 2, located in Darlington County, Hartsville, South Carolina.

The amendment permits changes in the Technical Specifications pertaining to the Spent Fuel Building filter system and Containment Purge filter system.

The application for the amendment complies with the standards and requirements of the Act and the Commission's rules and regulations and the Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter 1, which are set forth in the license amendment.

For further details with respect to this action, see (1) the application for amendment dated September 13, 1973, (2) Amendment No. 5 to the License No. DPR-23, with any attachments, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. and at the Hartsville Memorial Library, Home & Fifth Avenues, Hartsville, South Carolina.

A copy of items (2) and (3) may be obtained upon request addressed to the United States Atomic Energy Commission, Washington, D. C. 20545, Attention: Deputy Director for Reactor Projects, Directorate of Licensing - Regulation.

Dated at Bethesda, Maryland, this 15th day of May 1974.

FOR THE ATOMIC ENERGY COMMISSION

Robert A. Purple, Chief
Operating Reactors Branch #1
Directorate of Licensing