

Docket No. 50-261

JUL 31 1970

Distribution w/encs:

- \*AEC PDR
- \*E. G. Case
- R. S. Boyd
- \*R. C. DeYoung
- \*D. Skovholt
- \*P. Collins
- \*M. Malsch, OGC
- \*Compliance (2)
- \*N. Dube (w/3 enc.)
- \*Docket File ✓
- DR Reading
- DRL Reading
- BWR-2 Reading
- R. L. Tedesco
- G. C. Lainas
- H. Steele (2)

bcc: H. J. McAlduff, ORO \*  
 E. E. Hall, GMR/H  
 E. B. Tremmel, IP  
 R. Leith, OC  
 J. A. Harris, PI  
 J. R. Buchanan, ORNL\*  
 T. W. Laughlin, DTIE\*  
 A. A. Wells, ASLB \*  
 S. Robinson, SECY \*  
 J. Saltzman, SLR  
 J. Verme, SNM  
 D. Nussbaumer, DML  
 \* = w/T.S.

Carolina Power & Light Company  
 336 Fayetteville Street  
 Raleigh, North Carolina 27602

Attention: Mr. P. S. Colby  
 Senior Vice President  
 Engineering & Operations

Gentlemen:

Facility Operating License No. DPR-23, with appended Technical Specifications, is enclosed. The license authorizes Carolina Power & Light Company to possess, use, and operate the H. B. Robinson Unit No. 2 at steady state power levels not to exceed five megawatts thermal, in accordance with the provisions of the license and Technical Specifications appended thereto. However, the reactor shall not be made critical until the Hot Laboratory and installation and testing of the secondary system as described in your letter dated July 16, 1970 are completed. Upon satisfactory completion of certain other items, operation at power levels not to exceed 2200 megawatts thermal would be authorized. A copy of a related notice which has been forwarded to the Office of the Federal Register for filing and publication is also enclosed.

Two signed copies of Amendment No. 1 to Indemnity Agreement No. B-43, which covers the activities authorized under License No. DPR-23, are enclosed for your review and acceptance. Please sign and return one copy of the amendment to this office.

Sincerely yours,

Original Signed by  
 Peter A. Morris

Peter A. Morris, Director  
 Division of Reactor Licensing

Enclosures:

1. Lic. No. DPR-23 w/Tech Specs
2. Fed. Reg. Notice
3. Amend. No. 1 to I.A. No. B-43

D V  
 DRL m  
 PAMorris  
 7/31/70

OFFICE	w/encs. 1 & 2	DRL	OGC	DRL
SURNAME	George F. Trowbridge, Esquire Shaw, Pittman, Potts, Trowbridge & Madden	HSteele/dj RLTedesco		RSBoyd
DATE		7/31/70	7/ /70	7/31/70

DISTRIBUTION w/enc:

- AEC PDR
- Docket File
- DR Reading
- DRL Reading
- BWR-2 File
- E. G. Case
- R. S. Boyd
- R. C. DeYoung
- S. Levine
- D. Skovholt
- R. L. Tedesco
- G. C. Lainas
- P. Collins
- M. Dube (w/3 enc.)
- M. Malsch, OGC
- Compliance (2)
- H. Steele (2)
- H. J. McAlduff, ORO
- E. E. Hall, GMR/H
- E. B. Tremmel, IP
- R. Leith, OC
- J. A. Harris, PI
- J. R. Buchanan, ORNL

Docket No. 50-261

Carolina Power & Light Company  
 336 Fayetteville Street  
 Raleigh, North Carolina 27602

Attention: Mr. P. S. Colby  
 Senior Vice President  
 Engineering & Operations

bc: H. J. McAlduff, ORO  
 E. E. Hall, GMR/H  
 E. B. Tremmel, IP  
 R. Leith, OC  
 J. A. Harris, PI  
 J. R. Buchanan, ORNL

Gentlemen:

Facility Operating License No. DPR-23, with appended Technical Specifications, is enclosed. The license authorizes Carolina Power & Light Company to possess, use, and operate the H. B. Robinson Unit No. 2 at steady state power levels not to exceed five megawatts thermal, in accordance with the provisions of the license and Technical Specifications appended thereto. However, the reactor shall not be made critical until the Hot Laboratory and installation and testing of the secondary system as described in your letter dated July 16, 1970 are completed. A copy of a related notice which has been forwarded to the Office of the Federal Register for filing and publication is also enclosed.

Two signed copies of Amendment No. 1 to Indemnity Agreement No. B-43, which covers the activities authorized under License No. DPR-23, are enclosed for your review and acceptance. Please sign and return one copy of the amendment to this office.

*Upon satisfactory completion of certain test items, operation at power levels not to exceed 500 megawatts thermal would be authorized.*

Sincerely yours,

Peter A. Morris, Director  
 Division of Reactor Licensing

Enclosures:

1. Lic. DPR-23 w/Tech Specs
2. Fed. Reg. Notice
3. Amend. No. 1 to I.A. No. B-43

- T. W. Laughlin, DTIE
- A. A. Wells, ASLB
- S. Robinson, SECY
- J. Saltzman, SLR
- J. Verme, SNM
- D. Nussbaumer, DML

cc w/enc. 1 & 2:

OFFICE	George F. Trowbridge, Esquire	DRL	OGC <i>MJM</i>	DRL	DRL
SURNAME	Shaw, Pittman, Potts, Trowbridge & Madden	<i>H Steele</i> RL Tedesco	<i>6FH</i> (assured)	RSBoyd	PAMorris
DATE		7/22/70	7/27/70	1/70	1/70

ATOMIC ENERGY COMMISSION

DOCKET NO. 50-261

CAROLINA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF FACILITY OPERATING LICENSE

Notice is hereby given that no request for a hearing by the applicant or petition for leave to intervene by any interested person having been filed following publication of the notice of proposed action in the FEDERAL REGISTER, the Atomic Energy Commission (the Commission) has issued Facility Operating License No. DPR-23 to the Carolina Power & Light Company authorizing the licensee to possess, use, and operate the H. B. Robinson Unit No. 2, a closed cycle, pressurized water nuclear reactor, on the licensee's site in Darlington County, about 4.5 miles west northwest of Hartsville, South Carolina.

The notice of proposed action, as published in the FEDERAL REGISTER on May 16, 1970, 35 F.R. 7669, provided that although the H. B. Robinson Unit No. 2 is designed to operate at approximately 2200 megawatts thermal, initial operation would be restricted to 5 megawatts thermal pending completion of the Commission's review of the seismic analysis of certain Class I piping and equipment to be furnished by the Carolina Power & Light Company. The notice further provided that in the event other construction matters were not completed to permit full power operation, the Commission would issue a facility license consistent with the level of construction completed to permit initial fuel loading and low power testing prior to the issuance of a full power license.

With letters dated June 5, 1970, July 1, 1970, and July 3, 1970, Carolina Power & Light Company provided reports containing additional information concerning the (a) seismic analysis of Class I piping and equipment, (b) likelihood and consequences of turbine overspeed, (c) containment tendon analysis, and (d) incident report on the failure of a safety valve connecting pipe. The Commission has reviewed the information contained in these reports and has determined that additional modifications to the facility to implement certain actions regarding the results of these analyses will be necessary before the Commission will authorize full power operation.

The Commission has inspected the facility and has determined that there are certain construction matters, described in a letter from Carolina Power & Light Company dated July 16, 1970, which have not been completed to permit full power operation. These are the (a) completion of the facility Hot Laboratory, (b) installation of additional seismic pipe restraints, (c) installation and testing of secondary plant safety and power operated relief valves, (d) installation of additional turbine protective features to the facility, and (e) installation of permanent nitrogen storage system racks. Additional analyses were provided in the July 16, 1970 letter regarding the adequacy of the electrical cable tray loading of the 'as-built' facility. Based on our review of the results of these analyses, we conclude that the 'as-built' loading is acceptable.

Accordingly, the Commission has issued a license which provides that the reactor shall not be made critical until the Hot Laboratory and installation and testing of the secondary system, as described in Carolina Power & Light Company's letter dated July 16, 1970, are completed, and which restricts steady state operation of the H. B. Robinson Unit No. 2 to 5 megawatts thermal until satisfactory completion of the other three items described in the applicant's letter dated July 16, 1970, and referred to above. In addition, the license provides that, although operation of the facility at steady state power levels up to 2200 megawatts thermal may be authorized without satisfactory completion of the auxiliary safety device on the crane for handling irradiated fuel with the cask, described in the applicant's letter dated July 16, 1970, satisfactory completion of the device is required prior to handling irradiated fuel with the cask.

The Commission has determined that, for initial fuel loading, the facility has been constructed in accordance with the application, as amended, and the provisions of Provisional Construction Permit No. CPPR-26. The Commission has made the findings which are set forth in the license, and has concluded that the issuance of the license will not be inimical to the common defense and security or to the health and safety of the public.

The license was issued as proposed except for the revision of (1) paragraphs a. and d. of the findings to reflect (a) the applicant's letters dated June 5, 1970, July 1, 1970, July 3, 1970 and July 16, 1970, and (b) the necessary completion of certain construction items, respectively, (2) paragraph 1. to reflect the reports filed with the applicant's letters dated June 5, 1970 and July 1, 1970, (3) subparagraph 2.B. to authorize receipt, possession, and use of 1 gram of uranium 235 contained in neutron detectors and 0.3 gram of

plutonium contained in a sealed Pu-Be neutron source, previously licensed by Amendment No. 1 to special nuclear material License No. SNM-1160, (4) subparagraph 2.C. to reflect additional byproduct material previously licensed by Amendment No. 1 to byproduct material License No. 32-06938-02, (5) subparagraph 3.A. to permit 5 megawatt thermal operation only after the Hot Laboratory and installation and testing of the secondary system, as described in Carolina Power & Light Company's letter dated July 16, 1970, are completed, (6) paragraph 4. to reflect language consistent with Appendix D of 10 CFR Part 50 of the Commission's regulations, and (7) to clarify three items of the Technical Specifications, as set forth in the errata sheet attached to the Technical Specifications appended to Operating License No. DPR-23.

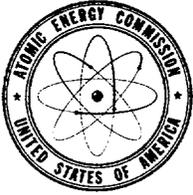
For further information concerning this license, see (1) copies of Carolina Power & Light Company's letters dated June 5, 1970, July 1, 1970, July 3, 1970 and July 16, 1970, with enclosures, and (2) the license, complete with Technical Specifications, all of which are available for public inspection in the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C. Copies of the license may be obtained upon request addressed to the Atomic Energy Commission, Washington, D. C. 20545, Attention: Director, Division of Reactor Licensing.

Dated at Bethesda, Maryland, this *31st* day of *July*, 1970.

FOR THE ATOMIC ENERGY COMMISSION

*Peter A. Morris*

Peter A. Morris, Director  
Division of Reactor Licensing



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

FACILITY OPERATING LICENSE

License No. DPR-23

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

- a. Carolina Power & Light Company (the applicant) has submitted to the Commission all technical information required by Provisional Construction Permit No. CPPR-26, the Atomic Energy Act of 1954, as amended (the Act), and the rules and regulations of the Commission to complete the application for a construction permit and facility license dated July 12, 1966, as amended by Amendment Nos. 8 through 21 (the application); and supplemented by the applicant's letters dated June 5, 1970, July 1, 1970, July 3, 1970, and July 16, 1970;
- b. The H. B. Robinson Unit No. 2 (the facility) has been substantially completed in conformity with Provisional Construction Permit No. CPPR-26, the application, the provisions of the Act, and the rules and regulations of the Commission;
- c. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission;
- d. There is reasonable assurance (i)(a) that initial fuel loading can be conducted in accordance with this license without endangering the health and safety of the public, (i)(b) that upon completion of the Hot Laboratory and installation and testing of the secondary system as described in the applicant's letter dated July 16, 1970, and as noted in subparagraph 3.A., the facility can be operated at steady state power levels up to 5 megawatts thermal in accordance with this license without endangering the health and safety of the public, and (i)(c) that, upon satisfactory completion of the seismic analysis of Class I piping and equipment and upon satisfactory completion of all of the items described in the applicant's letter dated July 16, 1970, except the auxiliary safety device on the crane for handling a spent fuel cask which will be installed prior to handling irradiated fuel with the cask, the facility can be operated at steady state power levels up to 2200 megawatts thermal in accordance with this license without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the regulations of the Commission;
- e. The applicant is technically and financially qualified to engage in the activities authorized by this operating license, in accordance with the rules and regulations of the Commission;

- f. The applicant has furnished proof of financial protection to satisfy the requirements of 10 CFR Part 140; and
- g. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;

Facility Operating License No. DPR-23 is hereby issued to Carolina Power & Light Company (CP&L), as follows:

- 1. This license applies to the H. B. Robinson Unit No. 2 nuclear facility, a closed cycle, pressurized, light water moderated and cooled reactor, and associated steam generators and electric generating equipment (the facility). The facility is located on the applicant's H. B. Robinson site, Darlington County, about 4.5 miles west northwest of Hartsville, South Carolina, and is described in the "Final Facility Description and Safety Analysis Report," as amended (Amendment Nos. 8 through 21), and in the reports filed with the applicant's letters dated June 5, 1970 and July 1, 1970.
- 2. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses CP&L:
  - A. Pursuant to Section 104b of the Atomic Energy Act of 1954, as amended (the Act), and 10 CFR Part 50, "Licensing of Production and Utilization Facilities," to possess, use, and operate the facility as a utilization facility at the designated location on the H. B. Robinson site;
  - B. Pursuant to the Act and 10 CFR Part 70, "Special Nuclear Material," to receive, possess, and use at any one time in connection with operation of the facility up to 3200 kilograms of contained uranium 235, 1 gram of uranium 235 as contained in neutron detectors, and 0.3 gram of plutonium as contained in a sealed Pu-Be neutron source;
  - C. Pursuant to the Act and 10 CFR Part 30, "Rules of General Applicability to Licensing of Byproduct Material," to receive, possess, and use in connection with operation of the facility 600 curies of Polonium 210 as two sealed sources, not to exceed 300 curies per source; 60 microcuries of Cobalt 60 as one sealed source; 15 millicuries of Cobalt 60 as a sealed source; 100 curies of Cesium 137 as a sealed source; 0.2 microcurie of Neptunium 237 and 0.01 microcurie of Cesium 137 as a liquid source; 25 millicuries of Cesium 137 as a liquid source; 25 millicuries of Krypton 85 as a gaseous source; and uranium 238-neptunium 237 sealed sources, not to exceed 16 microcuries per source;
  - D. Pursuant to the Act and 10 CFR Parts 30 and 70, to possess, but not to separate, such byproduct and special nuclear material as may be produced by operation of the facility.

3. This license shall be deemed to contain and is subject to the conditions specified in the following Commission regulations: 10 CFR Part 20, Section 30.34 of 10 CFR Part 30, Section 40.41 of 10 CFR Part 40, Sections 50.54 and 50.59 of 10 CFR Part 50, and Section 70.32 of 10 CFR Part 70; and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission now or hereafter in effect, and is subject to the additional conditions specified below:

A. Maximum Power Level

The reactor shall not be made critical until the Hot Laboratory and installation and testing of the secondary system as described in CP&L's letter dated July 16, 1970 are completed; subsequently, CP&L is authorized to operate the facility at steady state power levels not in excess of 5 megawatts thermal until satisfactory completion of the seismic analysis of Class I piping and equipment and until satisfactory completion of all of the items described in CP&L's letter dated July 16, 1970, except the auxiliary safety device on the crane for handling a spent fuel cask, at which time operation at steady state power levels not in excess of 2200 megawatts thermal will be authorized, provided, however, that the auxiliary safety device on the crane for handling a spent fuel cask must be installed prior to handling irradiated fuel with the cask.

B. Technical Specifications

The Technical Specifications contained in Appendix A attached hereto are hereby incorporated in this license. CP&L shall operate the facility at steady state power levels not in excess of 2200 megawatts thermal in accordance with the Technical Specifications, and may make changes therein only when authorized by the Commission in accordance with the provisions of Section 50.59 of 10 CFR Part 50.

C. Reports

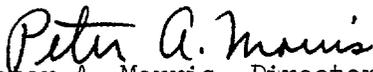
CP&L shall make certain reports in accordance with the requirements of the Technical Specifications.

D. Records

CP&L shall keep facility operating records in accordance with the requirements of the Technical Specifications.

4. CP&L shall observe such standards and requirements for the protection of the environment as are validly imposed pursuant to authority established under Federal and State law and as are determined by the Commission to be applicable to the facility covered by this operating license. This condition does not apply to (a) radiological effects since such effects are dealt with in other provisions of this operating license or (b) matters of water quality covered by section 21(b) of the Federal Water Pollution Control Act.
5. This license is effective as of the date of issuance, and shall expire at midnight April 13, 2007.

FOR THE ATOMIC ENERGY COMMISSION

  
Peter A. Morris, Director  
Division of Reactor Licensing

Attachment:  
Appendix A - Technical Specifications

Date of Issuance: JUL 31 1970

UNITED STATES ATOMIC ENERGY COMMISSION

DOCKET NO. 50-261

CAROLINA POWER & LIGHT COMPANY

NOTICE OF ISSUANCE OF FACILITY LICENSE AMENDMENT

The Atomic Energy Commission ("the Commission") has issued, effective as of the date of issuance, Amendment No. 1 to Facility License No. DPR-23. The license presently authorizes Carolina Power & Light Company to procure and to use certain quantities of "Special Nuclear Materials" and "Byproduct Materials" for use in connection with operation of the H. B. Robinson Unit No. 2 reactor located in Darlington County, South Carolina. The amendment authorizes modest increases in the quantities and some changes in kinds of the above materials that may be procured and used.

The Commission has found that the application for the amendment complies with the requirements of the Atomic Energy Act of 1954, as amended ("the Act"), and the Commission's regulations published in 10 CFR, Chapter I. The Commission has made the findings required by the Act and the Commission's regulations which are set forth in the amendment, and has concluded that the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Within fifteen (15) days from the date of publication of the notice in the FEDERAL REGISTER, the applicant may file a request for a hearing and any person whose interest may be affected by this proceeding may file a petition for leave to intervene. Request for a hearing and petitions to intervene shall

be filed in accordance with the Commission's "Rules of Practice" in 10 CFR Part 2. If a request for a hearing or a petition for leave to intervene is filed within the time prescribed in this notice, the Commission will issue a notice of hearing or an appropriate order.

For further details with respect to this amendment, see (1) the licensee's application for license amendment dated September 21, 1970, and (2) the amendment to the facility license, both of which are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C. Copies of item (2) above may be obtained upon request sent to the U. S. Atomic Energy Commission, Washington, D. C., 20545, Attention: Director, Division of Reactor Licensing.

Dated at Bethesda, Maryland, this 23 day of October, 1970.

FOR THE ATOMIC ENERGY COMMISSION

Original Signed by  
Peter A. Morris

Peter A. Morris, Director  
Division of Reactor Licensing