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50-261

OCTOBER 22 1980

Docket No. 50-261

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

Dear Mr. Jones:

The Commission has issued the enclosed Amendment No. 52 to Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letters dated September 19, October 7 and October 17, 1980.

The amendment consists of changes to the Technical Specifications related to the setpoints, calibrations, and surveillance requirements associated with the degraded voltage protection system for Class 1E equipment.

We have discussed these changes with members of your staff and, where the approved Technical Specifications differ from those you proposed, these revisions have been approved by your staff.

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

Sincerely,

Original signed by:
S. A. Varga

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosures:

1. Amendment No. 52 to DPR-23
2. Safety Evaluation
3. Notice of Issuance

cc: w/enclosures
See next page

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

October 22, 1980

Docket No. -261

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

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We have discussed these changes with members of your staff and, where the approved Technical Specifications differ from those you proposed, these revisions have been approved by your staff.

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Sincerely,

A handwritten signature in black ink, appearing to read "Steven A. Varga".

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosures:

1. Amendment No. 52 to DPR-23
2. Safety Evaluation
3. Notice of Issuance

cc: w/enclosures
See next page

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Mr. J. A. Jones
Carolina Power and Light Company

- 2 -

October 22, 1980

cc: G. F. Trowbridge, Esquire
Shaw, Pittman, Potts and Trowbridge
1800 M Street, N.W.
Washington, D. C. 20036

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

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

Mr. McCuen Morrell, Chairman
Darlington County Board of Supervisors
County Courthouse
Darlington, South Carolina 29535

State Clearinghouse
Division of Policy Development
116 West Jones Street
Raleigh, North Carolina 27603

Attorney General
Department of Justice
Justice Building
Raleigh, North Carolina 27602

Michael C. Farrar, Chairman
Atomic Safety and Licensing
Appeal Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Richard S. Salzman
Atomic Safety and Licensing
Appeal Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. W. Reed Johnson
Atomic Safety and Licensing
Appeal Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Director, Technical Assessment Division
Office of Radiation Programs (AW-459)
U. S. Environmental Protection Agency
Crystal Mall #2
Arlington, Virginia 20460



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

CAROLINA POWER AND LIGHT COMPANY

DOCKET NO. 50-261

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

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 52
License No. DPR-23

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The applications for amendment by Carolina Power and Light Company (the licensee) dated September 19, October 7, and October 17, 1980 comply 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.

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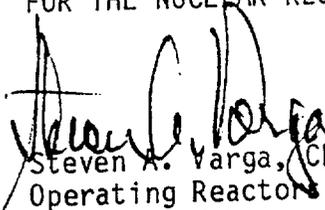
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-23 is hereby amended to read as follows:

(B) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 52, 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


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 22, 1980

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 52 TO FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Revise Appendix A as follows:

Remove Pages

3.5-7A
3.5-10A
4.1-6A

Insert Pages

3.5-7A
3.5-10A
4.1-6A

Table 3.5-1 (Continued)

ENGINEERED SAFETY FEATURE SYSTEM INITIATION INSTRUMENT SETTING LIMITS

NO.	FUNCTIONAL UNIT	CHANNEL ACTION	SETTING LIMIT
6	Loss of Power		
	a. 480V Emerg. Bus Undervoltage (Loss of Voltage) Time Delay	Trip Breaker	328 Volts \pm 1 volt .75 \pm .25 sec.
	b. 480V Emerg. Bus Undervoltage (Degraded Voltage) Time Delay	Trip Breaker	412 Volts \pm 1 volt 10.0 Second Delay \pm 0.5 sec

TABLE 3.5-3 (Continued)

<u>NO.</u>	<u>FUNCTIONAL UNIT</u>	1 <u>MINIMUM CHANNELS OPERABLE</u>	2 <u>MINIMUM DEGREE OF REDUNDANCY</u>	3 <u>OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 2 CANNOT BE MET</u>
3	Loss of Power			
	a. 480V Emerg. Bus Undervoltage (Loss of Voltage)	2/Bus ^(a)	1/Bus ^(b)	Maintain Hot Shutdown
	b. 480V Emerg. Bus Undervoltage (Degraded Voltage)	2/Bus	1/Bus	Maintain Hot Shutdown ^(c)

- (a) During testing and maintenance of one channel may be reduced to 1/Bus.
- (b) During testing and maintenance of one channel may be reduced to zero.
- (c) The reactor may remain critical below the Power Operating Condition with this feature inhibited for the purpose of starting Reactor Coolant Pumps.

TABLE 4.1-1 (Continued)

<u>NO.</u>	<u>CHANNEL DESCRIPTION</u>	<u>CHECK</u>	<u>CALIBRATE</u>	<u>TEST</u>	<u>REMARKS</u>
32	Loss of Power				
a.	480V Emerg. Bus Undervoltage (Loss of Voltage)	NA	R	R	
b.	480V Emerg. Bus Undervoltage (Degraded Voltage)	NA	R	R	



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 52 TO FACILITY OPERATING LICENSE NO. DPR-23

CAROLINA POWER AND LIGHT COMPANY

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

DOCKET NO. 50-261

Introduction

By letter dated September 18, 1980 the staff issued Amendment No. 49 to License No. DPR-23 for the H. B. Robinson Steam Electric Plan, Unit No. 2. That amendment changed the Radiological Technical Specifications to reflect modifications of the plant related to degraded grid voltage protection for Class 1E equipment. The licensee (Carolina Power and Light Company) desires to further modify this protection system. In letters dated September 19, October 7, and October 17, 1980 the licensee proposed changes and corrections to the Technical Specifications related to the degraded grid voltage protection system that were approved in Amendment No. 49.

Discussion and Evaluation

A. In its letter of September 19, 1980 the licensee requested that two errors in his earlier submittals, that were reviewed during preparation of Amendment No. 49, be corrected.

1. In Table 3.5-1, Item No. 6, of the Radiological Technical Specifications, the setting limit for the loss of voltage relay, was in error.

The undervoltage relay setpoint for the emergency 480 volt buses, as well as the normal 480 volt buses, should be 328 volts \pm 1 volt with instantaneous response. The staff's review failed to acknowledge corrected information provided by the licensee in a letter dated July 23, 1980. In this letter the licensee corrected its earlier submittal of October 3, 1979, wherein the undervoltage instantaneous trip setting was described as being 394 volts, 82% of normal. This correction was based on the fact that all of the licensee's undervoltage protection analyses had assumed a trip point of approximately 70% of nominal voltage would afford adequate protection to plant equipment.

The use of an undervoltage trip setting for the 480V emergency bus undervoltage breaker equal to 328 volts \pm 1 volt is acceptable, since the trip value of the second level of undervoltage protection (degraded voltage) is higher, i.e., 412 volts \pm 1 volt with a time delay of 10 seconds \pm 0.5 seconds to preclude spurious trips.

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2. In Amendment No. 49 the new degraded voltage trip point was set at 413 volts \pm 1 volt. By letter dated September 19, 1980 the licensee requested that this setting be changed to 412 volts \pm 1 volt. The reason for this request was that the second level of undervoltage protection had been selected as 76% of a nominal 480 volts, i.e., 412.8 volts. For ease of calibration the licensee actually rounded down this value to 412 rather than 413 volts. This change does not affect the staff's evaluation as submitted in Amendment No. 49 and is, therefore, acceptable.

B. In its letter of October 7, 1980, the licensee requested changes in Item 3 in Table 3.5.3 related to Instrument Operating Conditions for Engineered Safety Features. These specifications had been required by Amendment No. 49.

The licensee requested that the minimum number of operable channels for relays protecting against loss of voltage be reduced from 2 per bus. The licensee also requested that the minimum degree of redundancy of these channels be reduced from 1 per bus to zero. The bases for these requests were twofold: there are only two relays per bus, and, when one relay is taken out of service for maintenance or testing, the plant must be placed in Hot Shutdown; and the requested change is consistent with requirements for other protective systems that have only two relays.

The staff recognizes the problems associated with dependence on two relays and we have agreed to modify this Technical Specification so that the licensee will not be required to stop operation of the plant during maintenance and testing of these channels. The new qualifying footnotes (a) and (b) for Item 3.a will allow the licensee to be dependent on only one bus per channel for limited periods of time only. Protection from undervoltage during these periods will be maintained by requiring implementation of the action statement, i.e., to place the plant in Hot Shutdown if the second channel becomes inoperable.

C. In its October 7, 1980 letter, the licensee also requested that revisions be made in Table 4.1-1. Items 32a and 32b, of the Radiological Technical Specifications. This table lists the minimum frequencies for checks, calibrations, and test of instrument channels. Items 32a and 32b relate to the channels required for undervoltage and degraded grid voltage and were added in Amendment No. 49.

The licensee states that the frequencies originally proposed in his letter of October 3, 1979 and approved by the staff in Amendment No. 49 were erroneous and should be changed to be consistent with those currently required for the channels that protect the 4kV circuits. These changes would require that the channels that protect the 480V circuits against undervoltage and degraded voltage would be tested during each refueling shutdown rather than monthly and need not be checked on any schedule.

We approve these requested changes as being consistent with existing requirements for other parts of the electrical power supply system at Robinson.

D. In its letter of October 17, 1980, the licensee requested that Item 3.b of Table 3.5-3 be revised as an interim measure to permit efficient operation of the reactor cooling pumps. This item was added in Amendment No. 49 and requires the plant to be placed in Hot Shutdown if the minimum number of channels protecting the 480V emergency bus is less than two per bus or the degree of redundancy is less than one per bus.

The licensee states that the following problem has arisen since the degraded grid voltage protection has been installed.

During extended periods of time with the reactor critical below the Power Operating Condition (less than two percent of rated power), it may be necessary to start and stop reactor coolant pumps (RCP) in order to aid in reactor coolant system temperature control. The RCPs are powered by large 4160V motors with flywheels, and draw a sizeable current during the initial start. As a result, the starting creates a momentary (10-15 seconds) voltage "dip" below the Degraded Voltage Setpoint of 412 volts. Therefore, it is necessary to be able to inhibit this feature of the Loss of Power function during the period that a pump is started. Until a permanent fix can be installed, this can be accomplished procedurally by blocking the signal which trips the normally closed feeder breaker with a temporary jumper. When the reactor is critical, operating procedures will ensure that the temporary jumper will only be in place for the time required to start the reactor coolant pumps. A key interlock switch will be installed as a permanent fix during the next extended outage pending the availability of parts and equipment.

We have reviewed the licensee's proposed method for applying a jumper to bypass the second level undervoltage trip during startup of the motors for the Reactor Coolant Pumps. The licensee has further advised us that administrative control of this action is maintained by a specific "Safety Related Jumper Control" procedure that assures attention is provided by the Shift Supervisor, Shift Foreman and the operator who installs and removes the jumper.

The Office of Inspection and Enforcement will verify that such procedures provide positive assurance that the jumper will remain installed only during the time needed to start the three RCP motors.

The licensee also advised the staff that whenever feasible the temperature of the reactor coolant will be controlled, before criticality is attained, by the use of the secondary coolant rather than by brief actuations of the RCPs.

The interim proposal is approved (and footnote (c) to Item 3 of Table 3.5-3 has been added) on the basis that the key interlock switch will be installed at the next extended outage. Such an outage is planned before the next refueling outage to make steam generator inspection.

Environmental Consideration

We have determined that the amendment does 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 amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §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 this amendment.

Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: October 22, 1980

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-261CAROLINA POWER AND LIGHT COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 52 to Facility Operating License No. DPR-23 issued to Carolina Power and Light Company (the licensee), which revised Technical Specifications for operation of the H. B. Robinson Steam Electric Plant, Unit No. 2, (the facility) located in Darlington County, South Carolina. The amendment is effective as of the date of issuance.

The amendment consists of changes to the Technical Specifications related to the setpoints, calibrations, and surveillance requirements associated with the degraded voltage protection system for Class 1E equipment.

The application for the amendment 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 amendment. Prior public notice of this amendment was not required since this amendment does not involve a significant hazards consideration.

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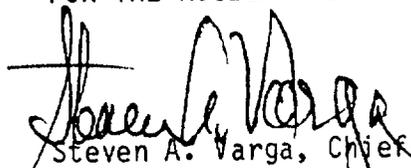
- 2 -

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the applications for amendment dated September 19, October 7, and October 17, 1980, (2) Amendment No. 52 to License No. DPR-23, 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 and Fifth Avenues, Hartsville, South Carolina 29550. 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 Licensing.

Dated at Bethesda, Maryland, this 22nd day of October, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing