

REGULATORY DOCKET FILE COPY

Docket No. 50-261

JUNE 12 1980

Mr. J. A. Jones
Senior 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. 47 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 and is in response to your request dated March 6, 1979.

The amendment consists of a change to the Technical Specifications which clarifies a note on Table 3.5-3. The note allows blockage of channels ("High Differential Pressure Between any Steamline and the Steamline Header" and "Pressurizer Low Pressure and Low Level") when the Reactor Coolant System pressure is less than 2000 psig.

Copies of the Safety Evaluation and the Federal Register Notice 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. 47 to DPR-23
2. Safety Evaluation
3. Notice of Issuance

cc: w/enclosures
See next page

F.R. notice & Amendment only

Completes TAC 8356

800701010

SEE REVISIONS YELLOW FOR CONCURRENCE

OFFICE	DL:ORB1*	DL:ORB1*	DL:ORB1*	DL:AD/OR	OELD	DL:ORB1
SURNAME	JDNeighbors	CSParrish	MGrotenhuis	TNovak	KARMAH	SAVarga
DATE	05/30/80	06/02/80	05/31/80	06/5/80	06/6/80	06/4/80

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6/4

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Attorney, OELD

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ACRS (16)
C. Stephens
C. Miles
R. Diggs
M. GROTEWITZ

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Nov

OFFICE	DL:ORB1	DL:ORB1	DL:AD:ORP	OELD	DL:ORB1	
SURNAME	JNeighbors	jbCS	TPNovak		SAVarga	
DATE	05/30/80	6/2/80	1/80	1/80	1/80	



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

June 12, 1980

Docket No. 50-261

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

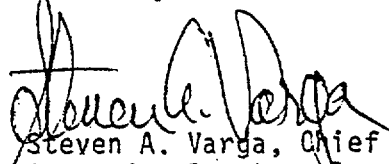
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Division of Licensing

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2. Safety Evaluation
3. Notice of Issuance

cc: w/enclosures
See next page

Mr. J. A. Jones
Carolina Power and Light Company - 2 -

June 12, 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

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Dr. W. Reed Johnson
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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, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 47
License No. DPR-23

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Carolina Power and Light Company (the licensee) dated March 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.

8007010/S

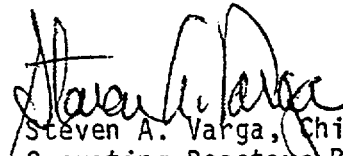
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 3.B of Facility Operating License No. DPR-23 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 47, 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: June 12, 1980

ATTACHMENT TO LICENSE AMENDMENT NO. 47

FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Replace the following page of the Appendix A Technical Specification with the enclosed page. The revised page is identified by Amendment Number and contains a vertical line indicating the area of change.

Remove

Table 3.5-3

Insert

Table 3.5-3

TABLE 3.5-3

INSTRUMENTATION OPERATING CONDITIONS FOR ENGINEERED SAFETY FEATURES

NO.	FUNCTIONAL UNIT	1 MINIMUM OPERABLE CHANNELS	2 MINIMUM DEGREE OF REDUNDANCY	3 OPERATOR ACTION IF CONDITIONS OF COLUMN 1 OR 2 CANNOT BE MET
1.	SAFETY INJECTION			
	a. Manual	1	0	Cold shutdown
	b. High Containment Pressure (Hi Level)	2	1	Cold shutdown
	c. High Differential Pressure between any Steam Line and the Steam Line Header	2	1	Cold shutdown***
	d. Pressurizer Low Pressure and Low Level	2*	1	Cold shutdown***
	e. High Steam Flow in 2/3 Steam Lines Coincident with Low T _{avg} or Low Steam Pressure	1/Steam line	*****	Cold shutdown****
		2 T _{avg} Signals	1	
		2 Pressure Signals	1	
2.	CONTAINMENT SPRAY			
	a. Manual	2	0**	Cold shutdown
	b. High Containment Pressure (Hi-Hi Level)	2/set	1/set	Cold shutdown

*Each channel has two separate signals (level and pressure).

**Must actuate two switches simultaneously.

***When primary pressure is less than 2000 psig, channels may be blocked.

****When primary temperature is less than 547°F, channels may be blocked.

*****In this case the 2/3 high steam flow is already in the trip mode.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 47 TO FACILITY

OPERATING LICENSE NO. DPR-23

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

DOCKET NO. 50-261

1.0 INTRODUCTION

By letter dated March 6, 1979, the Carolina Power and Light Company submitted proposed changes to the Technical Specifications to allow blocking the "High Differential Pressure between any Steam Line and Steam Header" Safety Injection Signal initiation when the primary reactor coolant system is less than 2,000 psig. Our review of the proposed Technical Specification changes and the associated circuitry follows.

2.0 EVALUATION

The enclosed Technical Evaluation report was prepared for us by our consultant, EG&G Idaho, as part of our DL Technical Assistance Program.

3.0 CONCLUSIONS

Based on our review of the EG&G Idaho technical evaluation, we agree with their finding that the proposed change to Table 3.5.3 of the H.B. Robinson Unit 2 Technical Specifications to allow blocking the "High Differential Pressure between any Steam Line and the Steam Header" signal when primary pressure is less than 2,000 psig be allowed. Adequate protection from a steam line rupture is provided without this signal by independent and redundant systems. Additionally, this will prevent inadvertent SIS initiation during cooldown due to the limited range of the Steam Header Pressure transmitter.

The NRC staff position stated in generic letter of November 28, 1978 required that all licensees "review the design of all safety actuation signal circuits which incorporate a manual override feature to ensure that overriding of one safety actuation signal does not also cause the bypass (block) of any other safety actuation signal, that sufficient physical features are provided to facilitate adequate administrative controls, and that the use of each such manual override is annunciated at the system level for every system impacted." EG&G recommended that the switch which blocks both the "Pressurizer Low Level and Low Pressure" signal and the "High Differential Pressure Between Any Steam Line and the Steam Header" signal be modified to include the separation of these bypasses and to comply with this staff position.

We have informed our consultant and they agree that the above staff position relates to actuation signal circuits which incorporate a "manual override feature." However, the licensee proposed changes

deal with "operating bypasses" which are defined by IEEE Std. 279-1971, as requiring the design to be such that the bypass will be removed automatically whenever permissive conditions are not met. As such, no modification to the switch which blocks both the "Pressurizer Low Level and Low Pressure" signal and the "High Differential Pressure Between any Steam Line and the Steam Header" signal is required. We have reviewed the switch circuitry and conclude that there is adequate physical separation between these two safety injection signals.

Environmental Considerations

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 consideration 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 this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date: June 12, 1980

TECHNICAL EVALUATION REPORT

ELECTRICAL, INSTRUMENTATION, AND CONTROL ASPECTS OF
PROPOSED TECHNICAL SPECIFICATIONS CHANGE REGARDING BLOCKING
OF SAFETY INJECTION SIGNALS WHEN PRESSURE IS BELOW 2000 PSIG

H. B. ROBINSON, UNIT 2

Docket No. 50-261

February 19809

S. E. Mays

2/14/80

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TECHNICAL EVALUATION REPORT

ELECTRICAL, INSTRUMENTATION, AND CONTROL ASPECTS OF PROPOSED TECHNICAL SPECIFICATIONS CHANGE REGARDING BLOCKING OF SAFETY INJECTION SIGNALS WHEN PRESSURE IS BELOW 2000 PSIG

H. B. ROBINSON, UNIT 2

1.0 INTRODUCTION

The objective of this review is to evaluate if plant safety is degraded by allowing the proposed changes to the H. B. Robinson, Unit 2 Technical Specifications to allow blocking the "High Differential Pressure Between any Steam Line and the Steam Header" Safety Injection System (SIS) initiation when primary plant pressure is less than 2000 psig (as in cooldown operations). This change was proposed by Carolina Power and Light Company in their letter Utley to Schwencer dated March 6, 1979.

2.0 DISCUSSION

The present H. B. Robinson, Unit 2 Technical Specifications allow blocking the "Pressurizer Low Pressure and Low Level" SIS initiation when primary pressure is less than 2000 psig (as in cooldown operations). However, the same switch which blocks this signal also blocks the "High Differential Pressure Between any Steam Line and the Steam Header" SIS initiation. Table 3.5.3 of the Technical Specifications presently does not allow this signal to be blocked under any conditions. Therefore, Carolina Power and Light Company has requested that Table 3.5.3 of the Technical Specifications be changed to allow blocking the "High Differential Pressure Between any Steam Line and the Steam Header" when primary plant pressure is less than 2000 psig.

Section 14.2.5 of the H. B. Robinson, Unit 2 Final Facility Description and Safety Analysis Report (FSAR) discusses the factors protecting the core in the event of a steam line rupture. The SIS initiation and rapid closure of the main steam isolation valves is required to ensure that the possible return to criticality will not

result in sufficient heat flux to cause core damage and to ensure that adequate shutdown margin is maintained.

SIS initiation and rapid closure of the main steam isolation valves during a steam line rupture can be initiated by any of the following signals.

- (1) Pressurizer Low Level and Low Pressure
- (2) High Differential Pressure Between any Steam Line and the Steam Header
- (3) High Containment Pressure
- (4) High Steam Flow in 2/3 Steam Lines Coincident with Low T_{avg} or Low Steam Pressure.

Technical Specifications, Table 3.5.3 allows blocking signal (1) above when primary pressure is less than 2000 psig. The proposed change would also allow signal (2) above to be blocked when pressure is less than 2000 psig. This would leave only signals (3) and (4) above available for SIS initiation and rapid closure of the main steam isolation valves in the event of a steam line rupture. Table 3.5.3 of the Technical Specifications requires a minimum of two containment pressure channels to be operable with one degree of redundancy. It also requires operability of at least one steam line flow channel per loop, two T_{avg} channels with one degree of redundancy, and two steam pressure channels with one degree of redundancy. Therefore, SIS initiation and core protection is provided by two separate redundant systems if both signals (1) and (2) above are blocked when the primary pressure is below 2000 psig.

Furthermore, as noted in NRC Memo from J. H. Snizek to D. Eisenhut, dated April 5, 1978, the steam header pressure transmitter range is so narrow that safety injection will occur during normal cooldown operations unless the "High Differential Pressure Between any Steam Line and

result in sufficient heat flux to cause core damage and to ensure that adequate shutdown margin is maintained.

SIS initiation and rapid closure of the main steam isolation valves during a steam line rupture can be initiated by any of the following signals.

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Furthermore, as noted in NRC Memo from J. H. Snizek to D. Eisenhut, dated April 5, 1978, the steam header pressure transmitter range is so narrow that safety injection will occur during normal cooldown operations unless the "High Differential Pressure Between any Steam Line and

the Steam Header" signal is blocked. Such a safety injection could result in an uncontrolled cooldown and possible plant overpressurization which is undesirable.

3.0 EVALUATION

The NRC staff position stated in generic letter of November 28, 1978 required that all licensees "review the design of all safety actuation signal circuits which incorporate a manual override feature to ensure that overriding of one safety actuation signal does not also cause the bypass (block) of any other safety actuation signal, that sufficient physical features are provided to facilitate adequate administrative controls, and that the use of each such manual override is annunciated at the system level for every system impacted." It is recommended that the switch which blocks both the "Pressurizer Low Level and Low Pressure" signal and the "High Differential Pressure Between any Steam Line and the Steam Header" signal be modified to comply with this staff position.

It is recommended that the proposed change to Table 3.5.3 of the H. B. Robinson, Unit 2 Technical Specifications to allow blocking the "High Differential Pressure Between any Steam Line and the Steam Header" signal when primary pressure is less than 2000 psig be allowed. Adequate protection from a steam line rupture is provided without this signal by independent and redundant systems. Additionally, this will prevent inadvertent SIS initiation during cooldown due to the limited range of the Steam Header Pressure transmitter.

4.0 REFERENCES

1. CPLC letter (Utley) to NRC (Schwencer) dated March 6, 1979.
2. H. B. Robinson, Unit 2 Technical Specifications, Table 3.5.3.
3. H. B. Robinson, Unit 2 Final Facility Description and Safety Analysis Report.

4. NRC Memo J. H. Sniezek to D. Eisenhut, dated April 5, 1978.
5. NRC generic letter dated November 28, 1978, Containment Purging During Normal Plant Operation.

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

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 47 to Facility Operating License No. DPR-23, issued to Carolina Power and Light Company, which revised Technical Specifications for operation of the H. B. Robinson Unit No. 2 (the facility) located in Darlington County, South Carolina. The amendment is effective as of its date of issuance.

The amendment consists of a change to the Technical Specifications which clarifies a note on Table 3.5-3. The note allows blockage of channels ("High Differential Pressure Between any Steamline and the Steamline Header" and "Pressurizer Low Pressure and Low Level") when the Reactor Coolant System pressure is less than 2000 psig.

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 the amendment does not involve a significant hazards consideration.

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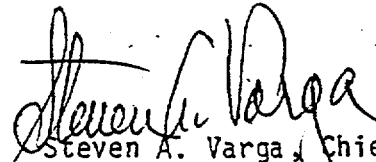
- 2 -

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 the issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated March 6, 1979, (2) Amendment No. 47 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 12th day of June, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION


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