

October 4, 2006

Mr. T. D. Walt, Vice President  
Carolina Power & Light Company  
H. B. Robinson Steam Electric Plant  
Unit No. 2  
3581 West Entrance Road  
Hartsville, South Carolina 29550

SUBJECT: H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 - ISSUANCE OF AN  
AMENDMENT ON EMERGENCY DIESEL GENERATOR AUTOMATIC TRIPS  
BYPASS TS 3.8.1 (TAC NO. MC9209)

Dear Mr. Walt:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 208 to Renewed Facility Operating License No. DPR-23 for the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR). This amendment changes the HBR Technical Specifications in response to your application dated November 30, 2005.

The amendment revises the frequency of the emergency diesel generator automatic trips bypass Surveillance Requirement 3.8.1.11 from 18 months to 24 months.

A copy of the related Safety Evaluation is enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

*/RA/*

Brenda Mozafari, Senior Project Manager  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosures:

1. Amendment No. 208 to DPR-23
2. Safety Evaluation

cc w/enclosures: See next page

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NRR-058

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Mr. T. D. Walt  
Carolina Power & Light Company

H. B. Robinson Steam Electric Plant,  
Unit No. 2

cc:

Steven R. Carr  
Associate General Counsel - Legal  
Department  
Progress Energy Service Company, LLC  
Post Office Box 1551  
Raleigh, North Carolina 27602-1551

Mr. C. T. Baucom  
Supervisor, Licensing/Regulatory Programs  
H. B. Robinson Steam Electric Plant,  
Unit No. 2  
Carolina Power & Light Company  
3581 West Entrance Road  
Hartsville, South Carolina 29550

Ms. Margaret A. Force  
Assistant Attorney General  
State of North Carolina  
Post Office Box 629  
Raleigh, North Carolina 27602

Ms. Beverly Hall, Section Chief  
N.C. Department of Environment  
and Natural Resources  
Division of Radiation Protection  
3825 Barrett Dr.  
Raleigh, North Carolina 27609-7721

U. S. Nuclear Regulatory Commission  
Resident Inspector's Office  
H. B. Robinson Steam Electric Plant  
2112 Old Camden Road  
Hartsville, South Carolina 29550

Mr. Robert P. Gruber  
Executive Director  
Public Staff - NCUC  
4326 Mail Service Center  
Raleigh, North Carolina 27699-4326

Mr. Dan Stoddard  
Plant General Manager  
H. B. Robinson Steam Electric Plant,  
Unit No. 2  
Carolina Power & Light Company  
3581 West Entrance Road  
Hartsville, South Carolina 29550

Mr. Henry H. Porter, Assistant Director  
South Carolina Department of Health  
Bureau of Land & Waste Management  
2600 Bull Street  
Columbia, South Carolina 29201

Mr. William G. Noll  
Director of Site Operations  
H. B. Robinson Steam Electric Plant,  
Unit No. 2  
Carolina Power & Light Company  
3581 West Entrance Road  
Hartsville, South Carolina 29550

Mr. Chris L. Burton  
Manager  
Performance Evaluation and  
Regulatory Affairs PEB 7  
Progress Energy  
Post Office Box 1551  
Raleigh, North Carolina 27602-1551

Public Service Commission  
State of South Carolina  
Post Office Drawer 11649  
Columbia, South Carolina 29211

Mr. John H. O'Neill, Jr.  
Shaw, Pittman, Potts, & Trowbridge  
2300 N Street NW.  
Washington, DC 20037-1128

J. F. Lucas  
Manager - Support Services - Nuclear  
H. B. Robinson Steam Electric Plant,  
Unit No. 2  
Carolina Power & Light Company  
3581 West Entrance Road  
Hartsville, South Carolina 29550

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

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

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No. 208  
Renewed License No. DPR-23

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Carolina Power & Light Company (the licensee), dated November 30, 2005, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 208, are hereby incorporated in the license. Carolina Power & Light Company shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

L. Raghavan, Chief  
Plant Licensing Branch II-2  
Division of Operating Reactor Licensing  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: October 4, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 208

RENEWED FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Replace page 3 of Operating License No. DPR-23 with the attached page 3.

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the area of change.

Remove Page

Insert Page

3.8-9

3.8-9

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 208 TO

RENEWED FACILITY OPERATING LICENSE NO. DPR-23

CAROLINA POWER & LIGHT COMPANY

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

DOCKET NO. 50-261

1.0 INTRODUCTION

By letter dated November 30, 2005, Carolina Power & Light Company, the licensee, proposed an amendment to the Technical Specification (TS) 3.8.1 contained in Appendix A of the Operating License No. DPR-23 for H. B. Robinson Steam Electric Plant (HBR). The proposed amendment revises the frequency of the emergency diesel generator (EDG) automatic trips bypass Surveillance Requirements (SR) 3.8.1.11 from 18 months to 24 months. Currently, the licensee performs the EDG inspection/maintenance at a frequency of 24 months. The proposed change will allow the licensee to schedule the EDG trips bypass testing at the same time as the EDG inspection/maintenance.

2.0 REGULATORY EVALUATION

The regulatory requirements that the staff applied in its review of the application include:

General Design Criterion (GDC) 17, "Electric power systems," of Appendix A, "General Design Criteria for Nuclear Power Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, requires, in part, that nuclear power plants have onsite and offsite electric power systems to permit the functioning of structures, systems, and components that are important to safety. The onsite system is required to have sufficient independence, redundancy, and testability to perform its safety function, assuming a single failure.

GDC 18, "Inspection and testing of electric power systems," requires the electric power systems that are important to safety be designed to permit appropriate periodic inspection and testing.

As required by 10 CFR 50.36(c)(3), "Surveillance Requirements," the SRs relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

Regulatory Guide 1.9, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants," Rev. 3, Section 1.8, states that the EDG unit should be automatically tripped on an engine overspeed and generator-differential overcurrent (critical trips). It further states that other trips

(non-critical) should be handled in one of the two ways: (1) a trip should be implemented with two or more measurements for each trip parameter with coincident logic provisions for trip actuation, or (2) a trip may be bypassed under accident conditions provided the operator has sufficient time to react appropriately to an abnormal EDG unit condition.

### 3.0 TECHNICAL EVALUATION

Presently, SR 3.8.1.11 requires verification that each EDG's non-critical automatic trips (e.g., coolant water temperature high, crank case pressure high, coolant pressure low, and lube oil pressure low) are bypassed except the engine overspeed (critical trip), at a frequency of 18 months. The licensee has proposed to revise the frequency of SR 3.8.1.11 from 18 months to 24 months.

The licensee carries out the EDG inspection during the plant operation by utilizing Condition B of Limiting [Condition for Operation] LCO 3.8.1, which requires restoration of an inoperable EDG within 7 days. During this period, the EDG inspection (maintenance and testing) is conducted. The licensee stated that in 2002, a change from an 18 month to a 24 month inspection frequency for DG inspection was adopted for HBR as recommended by the Fairbanks-Morse Owners Group. The performance of SR 3.8.1.11 (every 24 months) during the EDG inspection outage is preferred because the EDG is already unavailable for the other required maintenance and testing (also called overhaul).

SR 3.8.1.11 demonstrates that the EDG non-critical automatic trips are bypassed except the engine overspeed (critical trip). At HBR, the non-critical trips are bypassed simply by changing the position of a manual key-operated bypass switch to the "Trips Defeat" position, which opens the stop relay circuit of the engine. A control room alarm "EDG trouble" is annunciated if the switch is placed in the "Trips in Service" position. The non-critical trips are bypassed during design basis accidents by simply keeping the manual bypass switch in "Trips Defeat" position. The SR is satisfied by simulating a trip signal to each of the four non-critical trips by placing a jumper in the actuation circuit and observing the EDG does not receive a trip signal. The "EDG trouble" alarm is also annunciated on any abnormal engine condition. This alarm provides the operator with sufficient time to react appropriately.

The licensee provided the following to justify that the proposed frequency change from 18 months to 24 months will not affect the reliability of the trip bypass circuit of emergency EDGs:

A review of maintenance and testing records showed that there were no failures of the trip bypass circuitry. This result is not unexpected because of the simplicity of this circuitry. The trip bypass is a key-switch that is placed in the "Trips Defeat" position, which opens the only circuit path that can automatically energize the Stopping Relay. This test is fundamentally a verification that the key-switch creates the open circuit, thus preventing the non-critical trips.

Considering the licensee's past experience, the NRC staff agrees that changing the frequency of SR 3.8.1.11 from 18 months to 24 months will not impact the reliability of trip bypass circuit of emergency EDGs. According to TSs of some other nuclear plants (such as Brunswick, Calvert Cliffs, Diablo Canyon), the frequency of SR for verification of the EDG non-critical automatic trips bypass is also 24 months.



#### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the State of South Carolina official was notified of the proposed issuance of the amendment. The State official had no comments.

#### 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes the Surveillance Requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (71 FR 10072). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: Vijay Goel

Date: October 4, 2006