

August 9, 1996

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

SUBJECT: ISSUANCE OF AMENDMENT NO. 173 TO FACILITY OPERATING LICENSE NO. DPR-23 REGARDING REACTOR COOLANT PUMP (RCP) FLYWHEEL INSPECTION- H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2 (TAC NO. M95699)

Dear Mr. Hinnant:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 173 to 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 (TS) in response to your request dated June 6, 1996.

The amendment changes the TS to allow a deferral of the RCP flywheel inspection until outage 18, scheduled for the spring of 1998.

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

Sincerely,

Original signed by:

Brenda L. Mozafari, Project Manager
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-261

Enclosures:

1. Amendment No. 173 to DPR-23
2. Safety Evaluation

cc w/enclosures:
See next page

FILENAME: G:\ROBINSON\ROB95699.AMD

OFFICE	LA:PDII-1 <i>ETD</i>	PM:PDII-1 <i>BMO</i>	OGC <i>NW</i>	PD:PDII-1
NAME	EDunnington	BMOzafari	<i>Mozafari</i>	EImbro <i>FE</i>
DATE	8/2/96	8/2/96	8/6/96	8/8/96
COPY	Yes/No	Yes/No	Yes/No	Yes/No

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AMENDMENT NO. 173 TO FACILITY OPERATING LICENSE NO. DPR-23 - H. B. ROBINSON
STEAM ELECTRIC PLANT, UNIT NO. 2

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Mr. C. S. Hinnant
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H. B. Robinson Steam Electric
Plant, Unit No. 2

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Hartsville, South Carolina 29550



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-261

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

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 173
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 June 6, 1996, 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 Facility Operating License No. DPR-23 is hereby amended to read as follows:

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B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 173, 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



Eugene V. Imbro, Director
Project Directorate II-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 9, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 173

FACILITY OPERATING LICENSE NO. DPR-23

DOCKET NO. 50-261

Replace the following page of the Appendix A Technical Specifications with the enclosed page. The revised area is indicated by a marginal line.

Remove Page

4.2-6

Insert Page

4.2-6

Classes 2 and Class 3 components were chosen based on Regulatory Guide 1.26 and ANSI N18.2 and N18.2a "Nuclear Safety Criteria for the Design of stationary Pressurized Water Reactor Plants."

The Surveillance Requirements for inspection of the steam generator tubes ensure that the structural integrity of this portion of the RCS will be maintained. The program for inservice inspection of steam generator tubes is based on a modification of Regulatory Guide 1.83, Revision 1. Inservice inspection of steam generator tubing is essential in order to maintain surveillance of the conditions of the tubes for evidence of mechanical damage or progressive degradation. Inservice inspection of steam generator tubing also provides a means of characterizing the nature and cause of any tube degradation so that corrective measures can be taken.

Wastage-type defects will be minimized with proper chemistry treatment of the secondary coolant. If defects or significant degradations should develop in service, this condition is expected to be detected during inservice steam generator tube examinations. Plugging will be required for all tubes with imperfections exceeding the plugging limit. Steam generator tube inspections by means of eddy current testing have demonstrated the capability to reliably detect degradation that has penetrated 20% of the original tube wall thickness.

Whenever the results of any steam generator tubing inservice inspection fall into Category C-3, these results will be reported to the Commission prior to resumption of plant operation. Such cases will be considered by the Commission on a case-by-case basis and may result in a requirement for analysis, laboratory examinations, tests, additional eddy-current inspection, and revision of the Technical Specifications.

4.2.2 Materials Irradiation Surveillance Specimens

The reactor vessel material surveillance specimens shall be removed and examined to determine changes in their material properties, as required by Appendix H to 10CFR50.

4.2.3 Primary Pump Flywheels

The flywheels shall be visually examined at the first refueling after each ten year inspection. At the fourth refueling after each ten year inspection and at each fourth refueling thereafter, the outside surfaces shall be examined by ultrasonic methods. The examinations scheduled for Refueling Outage 17, in 1996, may be deferred to Refueling Outage 18.



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 173 TO 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 June 6, 1996, the Carolina Power & Light Company (licensee) submitted a request for changes to the H. B. Robinson Steam Electric Plant, Unit No. 2 (HBR), Technical Specifications (TS). The requested change would allow a one-time TS change to defer the inspection of flywheels in reactor coolant pump (RCP) motors from refueling outage 17 scheduled to begin on September 7, 1996, to refueling outage 18 scheduled for the spring of 1998.

The licensee's June 6, 1996, submittal is related to WCAP-14535, "Topical Report on Reactor Coolant Pump Flywheel Inspection Elimination," which was developed by the Westinghouse Owners Group to provide a basis for the complete elimination of the RCP flywheel inspections for all operating Westinghouse plants and some Babcock and Wilcox plants. This topical report was submitted by Duquesne Light Company for Beaver Valley 1 & 2 as lead plants, and has been reviewed by the NRC staff. Because the projected date of issuance of the safety evaluation (SE) for the topical report does not allow the licensee to apply for the plant-specific applicability of WCAP-14535 to HBR before its 1996 outage, the licensee made this request for one-cycle deferral of the flywheel inspection.

2.0 BACKGROUND

The licensee has four RCP flywheels at HBR, three are installed and one is a spare. The licensee has performed 22 total flywheel inspections, two of which resulted in recordable indications. In 1984, a liquid penetrant testing on the "C" RCP resulted in an indication in the bore of the flywheel. The bore area that contained the indication was ground out and upon reexamination no additional indications were noted. In 1992, an indication was recorded on the spare RCP flywheel that the licensee determined through visual inspection to be a surface gouge mark. The licensee found the gouge acceptable for operation. All past examinations, including the two mentioned above, were performed in accordance with Section 4.6.3 of the HBR TS, which specifies that "...flywheels shall be visually examined after each ten year inspection. At the fourth refueling after each ten year inspection and at each fourth refueling thereafter, the outside surfaces shall be examined by ultrasonic methods."

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3.0 EVALUATION

In the submittal, the licensee stated that among the flywheels of the 28 plants that employ a four flywheel inspection program listed in WCAP-14535, the flywheels of HBR rank notably high with respect to inspection frequencies without any indications that would affect flywheel integrity. The staff agrees that this is consistent with what was reported in WCAP-14535, and has considered this operating experience in its evaluation.

In addition to the operating experience of the flywheels at HBR, the licensee also used WCAP-14535 to justify its request for TS change for this one-cycle deferral of the RCP flywheels inspection. The staff has completed the review of WCAP-14535, but has not issued the SER yet. The licensee cited the results and conclusions from WCAP-14535 to support its statement that there are no significant mechanisms for inservice degradation of the RCP flywheels, no significant deformation of the flywheels at either normal operating speed or overspeed, and no appreciable fatigue crack growth for 60 years of operation. Further, the submittal cited from WCAP-14535 that the ductile and brittle failure criteria of RG 1.14, Revision 1, have been satisfied. The staff concludes that these statements are in line with the conclusions made in WCAP-14535. Although certain plant-specific information is needed for the licensee's future submittal demonstrating the plant-specific applicability of the topical report to its plant, the staff determined that the proposed inspection deferral for one operating cycle would not affect the structural integrity of the flywheels. This decision is based on (1) the favorable results from previous volumetric examinations, (2) the fact that no plant-specific information in HBR's submittal indicates a deviation from the assumptions made in WCAP-14535, and (3) the much shorter time involved in the requested one-cycle deferral as compared to what was requested in WCAP-14535.

Based on the evaluation, the NRC staff determined that the proposed inspection deferral for one operating cycle would not affect the structural integrity of the flywheels. Therefore, the flywheel inspection at HBR may be deferred one operating cycle from refueling outage 17 scheduled for the fall of 1996 to refueling outage 18 scheduled for the spring of 1998. The licensee may incorporate the proposed one-time change into the TS for HBR.

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 a Surveillance Requirement. 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 (61 FR 34888). 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 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 health and safety of the public.

Principal Contributor: S. Sheng

Date: August 9, 1996