

Docket No. 50-382

Mr. J. G. Dewease
Senior Vice President - Nuclear Operations
Louisiana Power and Light Company
317 Baronne Street, Mail Unit 17
New Orleans, Louisiana 70112

Dear Mr. Dewease:

SUBJECT: ISSUANCE OF AMENDMENT NO. 30 TO FACILITY OPERATING LICENSE
NPF-38 - WATERFORD STEAM ELECTRIC STATION, UNIT 3
(TAC NO. 66609)

DISTRIBUTION:

Docket File	Wanda Jones
NRC PDR	EJordan
Local PDR	JPartlow
PD4 Reading	ARM/LFMB
DHagan	GPA/PA
PNoonan (3)	OGC-Bethesda
JWilson	EButcher
JCalvo	ACRS (10)
TBarnhart (4)	Plant File
J. Tsao	C.Y. Cheng

The Commission has issued the enclosed Amendment No.30 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 27, 1987.

The amendment changes the Appendix A Technical Specifications by revising the inspection interval for low pressure turbine heavy disc rotors from 40 to 60 months.

A copy of the Safety Evaluation supporting the amendment is also enclosed. Notice of Issuance will be included in the Commission's next Bi-weekly Federal Register notice.

Sincerely,
/s/

David L. Wigginton, Project Manager
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 30 to NPF-38
2. Safety Evaluation

cc w/enclosures:
See next page

LTR NAME: WATERFORD 3 AMENDMENT NO. 69

PD4/LA PNoonan 12/31/87	PD4/PM JWilson 12/24/87	EMTR CCheng 12/24/87	OGC-Bethesda G.S.M. 12/30/87	PD4/PA JCalvo 12/23/87	PD4/PM DWigginton 2/23/88
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EMT
CCheng
12/18/87

OGC-Bethesda
Go. W.
12/30/87

PD4/D
JCalvo
12/23/87
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PD4/PM
DWigginton
2/23/88

Mr. Jerrold G. Dewease
Louisiana Power & Light Company

Waterford 3

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President, Police Jury
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Hahnville, Louisiana 70057



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

LOUISIANA POWER AND LIGHT COMPANY

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 30
License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Louisiana Power and Light Company (the licensee) dated October 27, 1987, 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.

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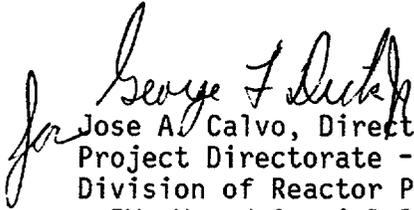
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-38 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. , and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

for 
Jose A. Calvo, Director
Project Directorate - IV
Division of Reactor Projects - III,
IV, V and Special Projects
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: February 23, 1988

ATTACHMENT TO LICENSE AMENDMENT NO.30
TO FACILITY OPERATING LICENSE NO. NPF-38
DOCKET NO. 50-382

Replace the following page of the Appendix A Technical Specifications with the attached page. The revised page is identified by Amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf page is also provided to maintain document completeness.

Remove

3/4 3-68

Insert

3/4 3-68

TABLE 4.3-9 (Continued)

TABLE NOTATIONS

*At all times.

**During WASTE GAS HOLDUP SYSTEM operation.

***When irradiated fuel is in the spent fuel pool.

- (1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm/trip setpoint.
 2. Circuit failure.
 3. Instrument indicates a downscale failure.

- (2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm setpoint.
 2. Circuit failure.

- (3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards (NBS) or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.

- (4) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:
 1. Zero volume percent hydrogen, balance nitrogen, and
 2. Four volume percent hydrogen, balance nitrogen.

- (5) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:
 1. Zero volume percent oxygen, balance nitrogen, and
 2. Four volume percent oxygen, balance nitrogen.

- (6) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway occurs if the instrument indicates measured levels above the alarm/trip setpoint and that control room alarm annunciation occurs if any of the following conditions exists:
 1. Instrument indicates measured levels above the alarm set.
 2. Circuit failure.
 3. Instrument controls not set in operate mode.

INSTRUMENTATION

3/4.3.4 TURBINE OVERSPEED PROTECTION

LIMITING CONDITION FOR OPERATION

3.3.4 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODES 1, 2*, and 3*.

ACTION:

- a. With one stop valve or one control valve per high pressure turbine steam lead inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam lead inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours, or close at least one valve in the affected steam lead or isolate the turbine from the steam supply within the next 6 hours.
- b. With the above required overspeed protection system otherwise inoperable, with 6 hours isolate the turbine from the steam supply.

SURVEILLANCE REQUIREMENTS

4.3.4.1 The provisions of Specification 4.0.4 are not applicable.

4.3.4.2 The above required turbine overspeed protection system shall be demonstrated OPERABLE:

- a. At least once per 31 days by cycling each of the following valves through at least one complete cycle from the running position.
 1. Four high pressure throttle valves.
 2. Four high pressure governor valves.
 3. Six low pressure reheat stop valves.
 4. Six low pressure reheat intercept valves.
- b. At least once per 31 days by direct observation of the movement of each of the above valves through one complete cycle from the running position.
- c. At least once per 18 months by performance of a CHANNEL CALIBRATION on the turbine overspeed protection systems.
- d. At least once per 40 months by disassembling at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion.
- e. At least once per 40 operating months by inspecting the installed light low pressure turbine discs, and at least once per 60 operating months by inspecting the installed heavy low pressure turbine discs.

*With any main steam isolation valve and/or any main steam line isolation valve bypass valve not fully closed.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 30 TO

FACILITY OPERATING LICENSE NO. NPF-38

LOUISIANA POWER AND LIGHT COMPANY

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By application dated October 27, 1987, Louisiana Power and Light Company (LP&L or the licensee) requested changes to the Technical Specifications (Appendix A to Facility Operating License No. NPF-38) for Waterford Steam Electric Station, Unit 3. The proposed change would revise the inspection interval for low pressure turbine heavy disc rotors to 60 operating months.

2.0 DISCUSSION

The change proposed by the licensee would revise Technical Specification Surveillance Requirement 4.3.4.2e to distinguish between the present "light" low pressure turbine disc inspection interval, which would remain at 40 months, and the "heavy" low pressure turbine disc inspection interval, which would be extended to 60 months.

In addition, the Surveillance Requirement would be clarified to encompass only the inspection interval time periods during which the installed discs are operating.

3.0 EVALUATION

The licensee has replaced one low pressure turbine rotor (and plans to replace the second and third rotors, shortly) with a new Westinghouse disc design. The new design is more massive than the previous design and is therefore referred to as a "heavy" disc.

Westinghouse developed the heavy disc rotor to reduce disc susceptibility to stress corrosion-induced cracking. The heavy disc mass reduces applied bore stresses while the disc material has a lower yield strength than the light disc material, leading to slower crack propagation. By removing the disc keyway, a major crack source has been eliminated.

Westinghouse has certified to the licensee that a 60-month heavy disc inspection interval will ensure that stress corrosion cracking is

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identified prior to a crack exceeding 50% of the critical crack size. Certification is based on an analysis utilizing the methodology contained in Westinghouse Memorandum MSTG-1-P, June 1981. This methodology, approved by the NRC staff in an SER dated August 2, 1981, combines a linear elastic fracture mechanics approach to calculate critical crack size with a conservative crack growth model.

The Technical Specification change proposed by the licensee is based on approved methodology and will provide adequate notice of a significant reduction in structural integrity of heavy low pressure turbine discs. The proposed Technical Specification change is, therefore, acceptable.

4.0 CONTACT WITH STATE OFFICIAL

The NRC staff has advised the Administrator, Nuclear Energy Division, Office of Environmental Affairs, State of Louisiana of the proposed determination of no significant hazards consideration. No comments were received.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or in a surveillance requirement. The 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 exposures. 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. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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

Based upon its evaluation of the proposed changes to the Waterford 3 Technical Specifications, the staff has concluded that: there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public. The staff, therefore, concludes that the proposed changes are acceptable, and are hereby incorporated into the Waterford 3 Technical Specifications.

Dated: February 23, 1988

Principal Contributor: J. Wilson