

October 10, 2001

Mr. John T. Herron
Vice President Operations
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - ISSUANCE OF
AMENDMENT RE: REVISION OF CONTAINMENT INTERNAL PRESSURE
REQUIREMENT (TAC NO. MB0972)

Dear Mr. Herron:

The Commission has issued the enclosed Amendment No. 174 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 January 8, 2001.

The amendment revises the lower limit of the allowable containment internal pressure in TS 3.6.1.4, "Containment Systems - Internal Pressure," from 14.375 pounds per square inch, absolute (psia) to 14.275 psia. A change to the TS 3/4.6.1.4 Bases has also been made, for information only, to support this change.

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

Sincerely,

/RA/

N. Kalyanam, Project Manager, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures: 1. Amendment No. 174 to NPF-38
2. Safety Evaluation

cc w/encls: See next page

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RidsRgn4MailCenter (KBrockman)	L. Hurley, RIV	D. Bujol, RIV

**No legal objection

Accession No.: *No major change from the Tech. Staff provided SE

OFFICE	PDIV-1/PM	PDIV-1/LA	DSSA/SPLB	OGC/NLO**	PDIV-1/SC
NAME	NKalyanam	DJohnson	GHubbard*	SUttal	RGramm
DATE	09/10/01	09/13/01	8/29/01	10/04/01	10/05/01

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ENERGY OPERATIONS, INC.

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 174
License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Entergy Operations, Inc. (EOI) dated January 8, 2001, 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 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. 174, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated in the license. EOI 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 and shall be implemented within 60 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

Robert A. Gramm, Chief, Section 1
Project Directorate IV
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: October 10, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 174

TO FACILITY OPERATING LICENSE NO. NPF-38

DOCKET NO. 50-382

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 a marginal line indicating the area of change.

Remove

3/4 6-11

Insert

3/4 6-11

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 174 TO

FACILITY OPERATING LICENSE NO. NPF-38

ENERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By application dated January 8, 2001, Entergy Operations, Inc. (the licensee), submitted a request for change to the Waterford Steam Electric Station, Unit 3, (Waterford 3) Technical Specifications (TSs). The requested change would revise the lower limit of the allowable containment internal pressure in TS 3.6.1.4, "Containment Systems - Internal Pressure," from 14.375 pounds per square inch, absolute (psia) to 14.275 psia. The following statement is added to the TS 3/4.6.1.4 Bases, for information only, to clarify the bases for the emergency core cooling system (ECCS) performance analysis and the limits on negative containment pressure.

"...thus ensuring peak cladding temperature and cladding oxidation remain within limits. The 14.275 psia limit also ensures the containment pressure will not exceed the containment design negative pressure differential with respect to the annulus atmosphere in the event of an inadvertent actuation of the containment spray system."

The licensee stated that the proposed change would provide additional operating margin and flexibility for the containment atmosphere purge (CAP) system.

2.0 BACKGROUND

The containment is designed to withstand the pressure and temperature transients following a loss of coolant accident (LOCA) or a main steam line break (MSLB). In addition, the containment is designed to withstand the differential pressure associated with an inadvertent actuation of the containment heat removal (containment spray) system during normal plant operation. The design pressures for the containment are 44 pounds per square inch, gauge, internal pressure and 0.65 pounds per square inch (psi), differential (psid), external to internal differential pressure.

3.0 EVALUATION

The change of the limitations on containment internal pressure may have impacts on the following design parameters: (1) design negative pressure differential with respect to the

annulus atmosphere, (2) the containment peak pressure during either LOCA or MSLB, and (3) the minimum pressure of the ECCS performance analysis.

The design basis event for the design negative differential pressure is an inadvertent actuation of containment spray during normal operation. The actuation of the containment spray system results in a decrease in the containment internal pressure, therefore increasing the differential pressure across the containment boundary. The licensee stated that the current Waterford 3 analysis for this event assumes an initial minimum containment pressure of 14.25 psia, which bounds the proposed TS values of 14.275. Therefore, the proposed change has no effect on the calculated pressure differential, 0.49 psid, which remain less than the design limit of 0.65 psid.

The proposed TS change on the lower limit of containment pressure does not affect the containment peak pressure, which is based on the upper limit of the internal containment pressure.

For ECCS performance, using a lower limit of initial containment pressure results in a higher peak clad temperature and higher clad oxidation during a large break LOCA. The Waterford 3 ECCS performance was previously analyzed in accordance with 10 CFR 50.46, using an initial containment pressure of 14.275 psia. This value is consistent with the proposed TS change. The calculated peak clad temperature of 2177 °F is within the acceptance criteria given in 10 CFR 50.46.

The instrument uncertainty for the measurement of the containment pressure is less than 0.25 psi. The licensee's analysis using GOTHIC code shows that for a decrease in initial containment pressure of 0.25 psi, the calculated maximum pressure differential increase is less than 0.0001 psi. This impact of instrument uncertainty on the calculated differential pressure is negligible. The licensee's ECCS sensitivity analysis shows that the peak cladding temperature increases by approximately 20 °F. The licensee indicated that this impact is small compared to the large amount of conservatism required by the 10 CFR 50.46 ECCS Evaluation Model.

The proposed change provides additional operating margin for the CAP system. If the CAP system was initiated during low atmospheric pressure conditions at approximately 14.68 psia, the current TS 3.6.1 limit of 14.375 psia would be reached. Atmospheric pressure less than 14.68 psia are usually associated with short-term weather conditions. Currently, when these conditions do occur, containment purge is delayed until atmospheric pressure increases above 14.68 psia. By reducing the TS lower limit for containment internal pressure, the restriction of the atmospheric pressure at which CAP system can be operated is reduced. Therefore, it provides additional operating stability for the use of the CAP system.

4.0 SUMMARY

Based on the above evaluation, the staff finds the proposed TS change acceptable.

5.0 STATE CONSULTATION

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

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 (66 FR 11058, February 21, 2001). 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.

7.0 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: Chang-Yang Li

Date: October 10, 2001

Waterford Generating Station 3

cc:

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