

April 24, 2000

Mr. Charles M. Dugger  
Vice President Operations  
Entergy Operations, Inc.  
P. O. Box B  
Killona, LA 70066

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - ISSUANCE OF  
AMENDMENT RE: REACTOR COOLANT SYSTEM PRESSURE  
TEMPERATURE CURVE LIMIT EXTENSION (TAC NO. MA6172)

Dear Mr. Dugger:

The Nuclear Regulatory Commission has issued the enclosed Amendment No. 160 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3. The amendment consists of changes to the plant technical specifications in response to your application dated July 15, 1999, as supplemented by letter dated January 6, 2000.

The amendment extends the Reactor Coolant System Pressure Temperature Curve Limit to 16 Effective Full Power Years.

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 & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures: 1. Amendment No. 160 to NPF-38  
2. Safety Evaluation

cc w/encls: See next page

Waterford Generating Station 3

cc:

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ENTERGY OPERATIONS, INC.

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 160  
License No. NPF-38

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Entergy Operations, Inc. (the licensee) dated July 15, 1999, as supplemented by letter dated January 6, 2000, 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. 160 , 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 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 & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: April 24, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 160

TO FACILITY OPERATING LICENSE NO. NPF-38

DOCKET NO. 50-382

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

3/4 4-30

3/4 4-31

Insert

3/4 4-30

3/4 4-31

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 160 TO

FACILITY OPERATING LICENSE NO. NPF-38

PRESSURE TEMPERATURE CURVE LIMIT EXTENSION

ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By letter dated July 15, 1999, Entergy Operations Incorporated (EOI), licensee for the Waterford Steam Electric Station, Unit 3 (Waterford 3), requested plant technical specification changes to extend the Reactor Coolant System Pressure Temperature (PT) Curve Limit to 20 Effective Full Power Years (EFPY) of operation from the current limit of 15 EFPY. Subsequently, by letter dated January 6, 2000, the licensee revised the July 15, 1999, request for the 20 EFPY extension to 16 EFPY. This change is bounded by, and did not change the scope of, the initial proposed no significant hazards consideration determination.

2.0 BACKGROUND

By letter dated December 14, 1993, the licensee originally requested an extension of the Waterford 3 PT curve limit to 20 EFPY. However, the licensee did not respond to staff requests for additional information regarding fluence uncertainty in time for the next scheduled outage, and by letter dated March 3, 1995, requested to shorten the extension to 15 EFPY. The staff estimated that the difference was more than adequate to cover the potential uncertainties and, by letter dated May 18, 1995, approved the extension to 15 EFPY (Amendment 106).

3.0 EVALUATION

In the evaluation of the submittals for the extension of the PT curve limit to 20 EFPY, the staff found that while the approach was generally credible, the methodology was unacceptable in view of non-conservative results due to errors in the iron scattering cross section. By shortening the extension from 20 to 15 EFPY, the staff estimated that the margin from 15 to 20 EFPY was more than adequate to cover potential uncertainties and approved the request for extension to 15 EFPY. The staff estimates that the current request for a one-year extension to 16 EFPY also has sufficient margin to cover potential fluence uncertainties. In addition, the staff considered the fact that the Waterford 3 vessel has a very low rate of embrittlement. For example, the

limiting beltline element (lower Shell M-1004-2) has an estimated end of life  $RT_{NDT}$  of 76 °F. Finally, the licensee stated that another surveillance capsule will be removed during the 11<sup>th</sup> refueling outage in 2002. This will offer the opportunity to update the pressure vessel fluence and the embrittlement state of the vessel. In summary, the staff finds the one-year request for extension of the PT for Waterford 3 to be within the limits of uncertainty described in Draft Regulatory Guide DG-1053 and find the request to be acceptable.

#### 4.0 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.

#### 5.0 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 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 (65 FR 4276, dated January 26, 2000). 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: L. Lois

Date: April 24, 2000