

Template = NRR-058

March 7, 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: SMALL BREAK LOSS-OF-COOLANT ACCIDENT MODEL
(TAC NO. MA3271)

Dear Mr. Dugger:

The Commission has issued the enclosed Amendment No. 158 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 July 29, 1998, as supplemented by letters dated July 29, October 28, and November 11, 1999.

The amendment replaces the existing reference to the Asea Brown Boveri-Combustion Engineering, Inc. small break loss-of-coolant accident emergency core cooling system performance evaluation model with the revised model described in the topical report CENPD-137, Supplement 2, P-A, April 1998.

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. 158 to NPF-38
2. Safety Evaluation

cc w/encls: See next page

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Waterford Generating Station 3

cc:

Administrator
Louisiana Radiation Protection Division
P. O. Box 82135
Baton Rouge, LA 70884-2135

Vice President, Operations Support
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286

Director
Nuclear Safety & Regulatory Affairs
Entergy Operations, Inc.
P. O. Box B
Killona, LA 70066

Wise, Carter, Child & Caraway
P. O. Box 651
Jackson, MS 39205

General Manager Plant Operations
Entergy Operations, Inc.
P. O. Box B
Killona, LA 70066

Licensing Manager
Entergy Operations, Inc.
P. O. Box B
Killona, LA 70066

Winston & Strawn
1400 L Street, N.W.
Washington, DC 20005-3502

Resident Inspector/Waterford NPS
Post Office Box 822
Killona, LA 70066

Regional Administrator, Region IV
U.S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Parish President Council
St. Charles Parish
P. O. Box 302
Hahnville, LA 70057

Executive Vice-President
and Chief Operating Officer
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Chairman
Louisiana Public Service Commission
One American Place, Suite 1630
Baton Rouge, LA 70825-1697



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

ENERGY OPERATIONS, INC.

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.158
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 29, 1998, as supplemented by letters dated July 29, October 28, and November 11, 1999, 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. 158 , 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



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: March 7, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 158

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

6-20
6-20a

Insert

6-20
6-20a

ADMINISTRATIVE CONTROLS

INDUSTRIAL SURVEY OF TOXIC OR HAZARDOUS CHEMICALS REPORT

6.9.1.9 Surveys and analyses of major industries in the vicinity of Waterford 3 which could have significant inventories of toxic chemicals onsite to determine impact on safety shall be performed and submitted to the Commission at least once every 4 years.

6.9.1.10 A survey of major pipelines (≥ 4 inches) within a 2-mile radius of Waterford 3, which contain explosive or flammable materials and may represent a hazard to Waterford 3, including scaled engineering drawings or maps which indicate the pipeline locations, shall be performed and submitted to the Commission at least once every 4 years.

CORE OPERATING LIMITS REPORT COLR

6.9.1.11 Core operating limits shall be established and documented in the CORE OPERATING LIMITS REPORT prior to each reload cycle or any remaining part of a reload cycle.

6.9.1.11.1 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC as follows:

1) "The ROCS and DIT Computer Codes for Nuclear Design," CENPD-266-P-A, April 1983; and "C-E Methodology for Core Designs Containing Gadolinia-Urania Burnable Absorber," CENPD-275-P-A, May 1988. (Methodology for Specifications 3.1.1.1 and 3.1.1.2 for Shutdown Margins, 3.1.1.3 for MTC, 3.1.3.6 for Regulating CEA Insertion Limits, 3.1.2.9 Boron Dilution (Calculation of CBC & IBW), and 3.9.1 Boron Concentration).

2) "C-E Method for Control Element Assembly Ejection Analysis," CENPD-0190-A, January 1976. (Methodology for Specification 3.1.3.6 for Regulating CEA Insertion Limits and 3.2.3 for Azimuthal Power Tilt).

3) "Modified Statistical Combination of Uncertainties" CEN-356(V)-P-A, May 1988. (Methodology for Specification 3.2.4 for DNBR Margin and 3.2.7 for ASI).

4) "Calculative Methods for the C-E Large Break LOCA Calculation Model For The Analysis of C-E and W Designed NSSS," CENPD-132, Supplement 3-P-A, June 1985. (Methodology for Specification 3.1.1.3 for MTC, 3.2.1 for Linear Heat Rate, 3.2.3 for Azimuthal Power Tilt and 3.2.7 for ASI).

5) "Calculative Methods for the ABB CE Small Break LOCA Evaluation Model," CENPD-137-P, August 1974: Supplement 2-P-A, April 1998. (Methodology for Specification 3.1.1.3 for MTC, 3.2.1 for Linear Heat Rate, 3.2.3 for Azimuthal Power Tilt and 3.2.7 for ASI).

ADMINISTRATIVE CONTROLS

CORE OPERATING LIMITS REPORT COLR (Continued)

6) "CESEC - Digital Simulation for a Combustion Engineering Nuclear Steam Supply System," CENPD-107, December 1981. (Methodology for Specification 3.1.1.1 and 3.1.1.2 for Shutdown Margins, 3.1.1.3 for MTC, 3.1.3.1 for Movable Control Assemblies - CEA Position, 3.1.3.6 for Regulating CEA Insertion Limits, 3.1.3.7 for Part Length CEA Insertion Limits and 3.2.3 for Azimuthal Power Tilt).

6.9.1.11.2 The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as shutdown margin, and transient and accident analysis limits) of the safety analysis are met.

6.9.1.11.3 The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements thereto, shall be provided upon issuance, for each reload cycle, to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.

6.10 Not Used



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 158 TO

FACILITY OPERATING LICENSE NO. NPF-38

ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By application dated July 29, 1998, as supplemented by letters dated July 29, October 28, and November 11, 1999, Entergy Operations, Inc. (the licensee), submitted a request for changes to the Waterford Steam Electric Station, Unit 3 (Waterford 3), Technical Specifications (TSs). The requested changes would replace the existing reference to the Asea Brown Boveri-Combustion Engineering, Inc. (ABB-CE) small break loss-of-coolant accident (SBLOCA) emergency core cooling system performance evaluation model with the revised model described in the topical report CENPD-137, Supplement 2, P-A, April 1998. This revised SBLOCA model was used to perform analyses presented in the licensee's letter dated April 30, 1999.

The July 29, October 28, and November 11, 1999, letters provided additional information that did not change the scope of the initial proposed no significant hazards consideration determination.

2.0 EVALUATION

The ABB-CE SBLOCA evaluation model described in the topical report CENPD-137, Supplement 2, P-A, April 1998, has been generically approved as applicable to Combustion Engineering reactor designs. The July 29, 1999, letter indicated that the CENPD-137, Supplement 2, P-A methodology applies to Waterford 3 for the analyses presented in the April 30, 1998, letter. This conclusion was based on the licensee's evaluation that the analysis input values bound the actual as-operated plant values for peak cladding temperature (PCT)-sensitive parameters. However, the July 29, 1999, letter did not identify the licensee's plant-specific processes for determining values for analysis input parameters that assure that the input values would bound the actual as-operated plant values for PCT-sensitive parameters in future analyses. To assure the staff that specific analyses described in April 30, 1998, letter will remain valid, by letters dated October 28 and November 11, 1999, the licensee committed to revise Waterford 3 Updated Final Safety Analysis Report (UFSAR). The revised UFSAR will include the requirement that the licensee will inform the NRC staff before implementing any material changes in the SBLOCA analyses described in the April 30, 1998, letter.

Based on the generic acceptability and applicability of the SBLOCA code, and on the licensee's assurance that PCT-sensitive parameter values input to the SBLOCA model bound the actual as-operated plant values for Waterford 3 in the April 1998 analyses, the staff concludes that the SBLOCA methodology described in the topical report CENPD-137, Supplement 2, P-A applies to the April 1998 Waterford 3 analyses. Therefore, this methodology is acceptable for use in performing the April 1998 Waterford SBLOCA analyses and CENPD-137, Supplement 2, P-A is acceptable for reference in the Waterford TSs and core operating report for as long as those specific analyses described in the April 1998 letter continue to apply.

By its letter dated October 28, 1999, the licensee has stated that the NRC staff will be informed before the plant implements changes to the SBLOCA analyses methodology contained in the letter dated April 30, 1998, and the UFSAR will be revised to include this commitment. However, because of the lack of plant-specific processes for determining values for analysis input parameters that assure that the input values would bound the actual as-operated plant values for PCT-sensitive parameters, future use of the SBLOCA methodology is outside the scope of this review.

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 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 (64 FR 70085, dated December 15, 1999). 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: F. Orr

Date: March 7, 2000