

November 21, 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: RELAXATION OF FUEL HANDLING BUILDING
VENTILATION SYSTEM REQUIREMENTS (TAC NO. MB2462)

Dear Mr. Herron:

The Commission has issued the enclosed Amendment No. 176 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 23, 2001, as supplemented by letter dated October 25, 2001.

The amendment deletes TS 3.9.12, "Fuel Handling Building Ventilation System," and TS 3.3.3.1 requirements for the Fuel Storage Pool area radiation monitors.

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. 176 to NPF-38
2. Safety Evaluation

cc w/encls: See next page

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 176
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 July 23, 2001, as supplemented by letter dated October 25, 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. 176 , 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 by DJaffe for/

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: November 21, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 176

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

IX

XIV

3/4 3-29

3/4 3-31

3/4 3-32

3/4 9-14

3/4 9-15

3/4 9-16

Insert

IX

XIV

3/4 3-29

3/4 3-31

3/4 3-32

3/4 9-14

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 176 TO

FACILITY OPERATING LICENSE NO. NPF-38

ENTERGY OPERATIONS, INC.

WATERFORD STEAM ELECTRIC STATION, UNIT 3

DOCKET NO. 50-382

1.0 INTRODUCTION

By letter dated July 23, 2001, as supplemented by letter dated October 25, 2001, Entergy Operations, Inc. (Entergy, the licensee) submitted a request for amendment to License NPF-38 to revise the Waterford Steam Electric Station, Unit 3 (Waterford 3) Technical Specification (TS) requirements associated with the Fuel Handling Building (FHB) Ventilation System (FHBVS). The licensee proposed to delete TS 3.9.12, "Fuel Handling Building Ventilation System," and the requirements for Fuel Storage Pool area radiation monitors (ARMs) found in TS 3.3.3.1. The licensee will transfer the system operability requirement into the Waterford 3 Technical Requirements Manual (TRM). The licensee also will transfer Surveillance Requirements (SRs) 4.9.12.a, 4.9.12.d.2 and 4.9.12.d.3 to the TRM to continue testing of the isolation and drawdown functions of the FHBVS. At this time, the licensee does not plan to remove the filters or charcoal adsorbers from the system design. The staff's review was based on docketed information.

The October 25, 2001, supplemental letter provided additional information that did not change the scope of the request or the initial proposed no significant hazards consideration determination (66 FR 44169, published August 22, 2001).

2.0 EVALUATION

The staff evaluated the licensee's analysis of the radiological consequences of removing TS requirements for the FHBVS. Prior to this proposed TS revision, the licensee assumed that isolation and filtration by the FHBVS would be initiated by the Fuel Storage Pool ARMs in the event of a postulated design basis Fuel Handling Accident (FHA).

In support of the TS changes approved by the staff in Amendment 169 (October 2, 2000), the licensee had analyzed the radiological consequences of the design basis FHA inside the containment. That analysis did not credit containment isolation, holdup within the containment, or filtration of the postulated radiological release from the FHA. For the radiological analysis of the FHA inside the FHB in support of the above proposed TS changes, the licensee used the same assumptions as were reviewed by the staff in association with Amendment 169. Discussion of the staff's review of the licensee's analysis follows.

2.1 Radiological Analysis of the Fuel Handling Accident Inside the Fuel Handling Building

The licensee’s analysis of the FHA inside the FHB took no credit for holdup or filtration, but instead assumed an immediate radiological release directly to the environment. All other assumptions were the same as are currently in the Waterford 3 Final Safety Analysis Report (FSAR), including basing the core inventory on the current rated core thermal power plus an anticipated 8 percent power uprate, with a 5 percent power stretch factor yield output power of 3,844.3 Megawatts thermal (MWt) (i.e., 3,390 MWt rated x 1.08 x 1.05 = 3,844.3 MWt). The licensee followed guidance in Regulatory Guide 1.25, "Assumptions Used for Evaluating the Potential Radiological Consequences of a Fuel Handling Accident in the Fuel Handling and Storage Facility for Boiling and Pressurized Water Reactors," with the addition of increasing the Iodine-131 (I-131) release fraction to 12 percent for high-burnup fuel as noted in NUREG/CR-5009, "Assessment of the Use of Extended Burnup Fuel in Light Water Power Reactors."

The staff performed calculations using the licensee’s assumptions as a check of the licensee’s analysis. The assumptions are listed in Table 1, below. The staff’s calculations confirmed the licensee’s dose results, which are listed in Table 2. The offsite dose consequences of the licensee’s revised FHA meet the dose acceptance criteria in Section 15.7.4 of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants," and are well within the dose limits given in 10 CFR Part 100, "Reactor Site Criteria." The control room dose consequences calculated by the licensee are within the dose limits given in Appendix A to 10 CFR Part 50, General Design Criterion (GDC)-19, "Control Room." For the reasons stated above, the staff found the licensee’s analysis of the FHA acceptable.

Table 1

Fuel Handling Accident Analysis Parameters Used by Staff

Source Term	
Reactor power (3,390 x 1.08 x 1.05), MWt	3,844.3
Decay Time after Shutdown, hour (hr)	72
Radial Peaking Factor	1.65
Number of Failed Fuel Rods	60
Number of Fuel Rods per Assembly	236
Number of Fuel Assemblies in Core	217
Fuel Rod Gap Activity Release Fractions, percent	
Noble Gases except Kr-85	10
Kr-85	30
Iodines except I-131	10

Table 1 (Continued)

Fuel Handling Accident Analysis Parameters Used by Staff

Source Term (Continued)	
I-131	12
Pool Iodine Decontamination Factor	100
Iodine Form Released from Pool, percent	
Elemental	75
Organic	25
Release Data	
Release Duration, hr	2
Control Room	
Control room envelope volume, cubic feet	220,000
Unfiltered Inleakage, cubic feet per minute (cfm)	13
Normal Air Intake Rate, cfm	2,200
Emergency Air Intake Rate, cfm	200
Isolation on Intake High Radiation	Immediately
Manual Selection of Intake Location, minute	20
Control room intake filter efficiency, all iodine species, percent	99
Recirculation flow rate, cfm	3,800
Breathing rate, control room, cubic meter per second, (m ³ /s)	3.47E-4
Control room occupancy factor	
0-24 hrs	1.0
1-4 days	0.6
4-30 days	0.4
Other Parameters	
Dose conversion factors (FGR - Federal Guidance Register)	FGR11/FGR12

Table 1 (Continued)

Fuel Handling Accident Analysis Parameters Used by Staff

Other Parameters (Continued)	
Offsite Breathing rate, offsite, m ³ /s	
0-8 hrs	3.47E-4
8-24 hrs	1.75E-4
>24 hrs	2.32E-4
Atmospheric Dispersion Factors, seconds per cubic meter	
Exclusion Area Boundary, 0-2 hrs	6.3E-4
Low Population Zone, >24 hrs	7.1E-5
Control Room	
0-8 hrs	1.66E-3
8-24 hrs	9.19E-4
1-4 days	4.85E-4
4-30 days	1.76E-4

Table 2

Licensee's Calculated Dose Results for
Fuel Handling Accident Inside the Fuel Handling Building
(roentgen equivalent man)

Dose Location	Thyroid	Regulatory Acceptance Criteria	Whole Body	Regulatory Acceptance Criteria
Exclusion Area Boundary	53.70	75	0.176	6
Low Population Zone	6.05	75	0.02	6
Control Room	0.932	30	0.015	5

3.0 SUMMARY

Based on the considerations discussed above and the information provided by Entergy regarding the FHA, the staff finds reasonable assurance that the postulated radiological consequences of the design basis FHA will be less than the dose criteria of 10 CFR Part 50, Appendix A, GDC-19. The staff also finds reasonable assurance, based upon the considerations discussed above, that the postulated radiological consequences of the design basis FHA are within the guidelines of 10 CFR Part 100 and Section 15.7.4 of NUREG-0800. Therefore, the staff finds that the proposed changes to the Waterford 3 TSs are acceptable with regard to the radiological consequences of design basis accidents.

4.0 STATE CONSULTATION

In accordance with the U.S. Nuclear Regulatory Commission's (NRC or the Commission) 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 and changes surveillance requirements. 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 44169, dated August 22, 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.

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: M. Hart

Date: November 21, 2001

November 21, 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: RELAXATION OF FUEL HANDLING BUILDING
VENTILATION SYSTEM REQUIREMENTS (TAC NO. MB2462)

Dear Mr. Herron:

The Commission has issued the enclosed Amendment No. 176 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 23, 2001, as supplemented by letter dated October 25, 2001.

The amendment deletes TS 3.9.12, "Fuel Handling Building Ventilation System," and TS 3.3.3.1 requirements for the Fuel Storage Pool area radiation monitors.

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 by DJaffe for/

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. 176 to NPF-38
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION:

PUBLIC

RidsNrrDlpmPdiv (SRichards)

G.Hill(2)

RidsNrrPMNKalyanam

RidsRgn4MailCenter (KBrockman)

PDIV-1 Reading

RidsOgcRp

RidsNrrDlpmPdivLpdiv1 (RGramm)

RidsNrrLADJohnson

L.Hurley, RIV

*** w/comments

** No legal objection

* The Staff provided SE used with minor editorial changes

RidsNrrDripRtsb (WBeckner)

RidsAcrcAcnwMailCenter

M. Hart

D. Bujol, RIV

Accession No.:ML013270214

OFFICE	PDIV-1/PM	PDIV-1/LA	SPSB *	OGC/NLO**	PDIV-1/SC
NAME	NKalyanam	DJohnson***	MReinhart	AHodgdon	DJaffe for RGramm
DATE	11/20/01	11/20/01	10/12/01	11/09/01	11/21/01

OFFICIAL RECORD COPY

Waterford Generating Station 3

cc:

Mr. Michael E. Henry, Administrator
and State Liaison Officer
Department of Environmental Quality
P. O. Box 82135
Baton Rouge, LA 70884-2135

Vice President, Operations Support
Entergy Operations, Inc.
P. O. Box 31995
Jackson, MS 39286-1995

Director
Nuclear Safety Assurance
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

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

General Manager Plant Operations
Waterford 3 SES
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

Licensing Manager
Entergy Operations, Inc.
17265 River Road
Killona, LA 70066-0751

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

Resident Inspector/Waterford NPS
P. O. Box 822
Killona, LA 70066-0751

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 Services Commission
Baton Rouge, LA 70825-1697