



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

July 29, 2015

Vice President, Operations
Entergy Operations, Inc.
Waterford Steam Electric Station, Unit 3
17265 River Road
Killona, LA 70057-3093

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - ISSUANCE OF
AMENDMENT RE: RELOCATION OF TECHNICAL SPECIFICATIONS 3/4.9.6
AND 3/4.9.7 TO THE TECHNICAL REQUIREMENTS MANUAL
(TAC NO. MF4940)

Dear Sir or Madam:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 243 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3 (WF3). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 1, 2014, as supplemented by letter dated February 2, 2015.

The amendment will relocate TS 3/4.9.6, "Refueling Machine," and 3/4.9.7, "Crane Travel – Fuel Handling Building," to the Technical Requirements Manual. This amendment conforms to the standard technical specifications of NUREG-1432, "Standard Technical Specifications - Combustion Engineering Plants: Specifications," Volume 1, Revision 4, and is consistent with the requirements of Title 10 of the *Code of Federal Regulations*, Part 50, Section 36.

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,

A handwritten signature in black ink, appearing to read "Michael D. Orenak", is written over a horizontal line.

Michael D. Orenak, Project Manager
Plant Licensing IV-2 and Decommissioning
Transition Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures:

1. Amendment No. 243 to NPF-38
2. Safety Evaluation

cc w/encls: Distribution via Listserv



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

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-382

WATERFORD STEAM ELECTRIC STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 243
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 October 1, 2014, as supplemented by letter dated February 2, 2015, 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.

Enclosure 1

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. 243, 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



Meena K. Khanna, Chief
Plant Licensing IV-2 and Decommissioning
Transition Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Facility Operating
License No. NPF-38 and
Technical Specifications

Date of Issuance: July 29, 2015

ATTACHMENT TO LICENSE AMENDMENT NO. 243

TO FACILITY OPERATING LICENSE NO. NPF-38

DOCKET NO. 50-382

Replace the following pages of the Facility Operating License and 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.

Facility Operating License

REMOVE

-4-

INSERT

-4-

Technical Specifications

REMOVE

3/4 9-6

3/4 9-7

INSERT

or indirectly any control over (i) the facility, (ii) power or energy produced by the facility, or (iii) the licensees of the facility. Further, any rights acquired under this authorization may be exercised only in compliance with and subject to the requirements and restrictions of this operating license, the Atomic Energy Act of 1954, as amended, and the NRC's regulations. For purposes of this condition, the limitations of 10 CFR 50.81, as now in effect and as they may be subsequently amended, are fully applicable to the equity investors and any successors in interest to the equity investors, as long as the license for the facility remains in effect.

- (b) Entergy Louisiana, LLC (or its designee) to notify the NRC in writing prior to any change in (i) the terms or conditions of any lease agreements executed as part of the above authorized financial transactions, (ii) any facility operating agreement involving a licensee that is in effect now or will be in effect in the future, or (iii) the existing property insurance coverages for the facility, that would materially alter the representations and conditions, set forth in the staff's Safety Evaluation enclosed to the NRC letter dated September 18, 1989. In addition, Entergy Louisiana, LLC or its designee is required to notify the NRC of any action by equity investors or successors in interest to Entergy Louisiana, LLC that may have an effect on the operation of the facility.

- C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

- 1. Maximum Power Level

EOI is authorized to operate the facility at reactor core power levels not in excess of 3716 megawatts thermal (100% power) in accordance with the conditions specified herein.

- 2. Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 243, 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.

This page has been deleted.

This page has been deleted.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 243 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 October 1, 2014 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML14275A374), as supplemented by letter dated February 2, 2015 (ADAMS Accession No. ML15033A482), Entergy Operations, Inc. (the licensee), requested changes to the Technical Specifications (TSs) for Waterford Steam Electric Station, Unit 3 (WF3). The proposed changes would relocate TS 3/4.9.6, "Refueling Machine," and TS 3/4.9.7, "Crane Travel – Fuel Handling Building," to the Technical Requirements Manual (TRM). The proposed changes are consistent with NUREG-1432, "Standard Technical Specifications - Combustion Engineering Plants: Specifications," Volume 1, Revision 4, April 2012 (ADAMS Accession No. ML12102A165) and conform to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, Section 50.36, "Technical specifications," requirements. TS 3/4.9.6 and TS 3/4.9.7 ensure that lifting devices have adequate capacity to lift the combined weight of a fuel assembly and a rod control cluster assembly, and an automatic load limiting device is available to prevent damage to a fuel assembly during an overload condition. TS 3/4.9.7 also contains restrictions on movement of loads in excess of the nominal weight of a fuel assembly, control element assembly (CEA), and an associated handling tool over other fuel assemblies in the storage pool.

The supplemental letter dated February 2, 2015, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination, as published in the *Federal Register* on March 3, 2015 (80 FR 11475).

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act of 1954, as amended, requires applicants for nuclear power plant operating licenses to include TSs as part of the license. The U.S. Nuclear Regulatory Commission's (NRC's) regulatory requirements related to the content of TSs are

set forth in 10 CFR 50.36. Specifically, 10 CFR 50.36 requires that the TSs include items in specific categories, including: (1) safety limits, limiting safety system settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. The regulations do not specify the actual items to be included in the TSs. The two TSs that are the subject of this request contain LCOs and SRs.

The four criteria, defined by 10 CFR 50.36(c)(2)(ii), for determining the particular items to be included in the TS LCOs are:

- (A) Criterion 1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.
- (B) Criterion 2. A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- (C) Criterion 3. A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.
- (D) Criterion 4. A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

The regulations in 10 CFR 50.36(c)(2) specify, in part, that, "[w]hen a limiting condition for operation of a nuclear reactor is not met, the licensee shall shut down the reactor or follow any remedial action permitted by the technical specifications until the condition can be met."

The TRM is part of the Updated Final Safety Analysis Report (USFAR) and any changes to relocate TSs will be addressed using the 10 CFR 50.59, "Changes, tests, and experiments," change process. The change process identifies criteria that, if met, allows for changes to occur without prior NRC approval. Under 10 CFR 50.59, sufficient regulatory controls exist to ensure continued protection of public health and safety.

NUREG-1432, "Standard Technical Specifications - Combustion Engineering Plants," Volume 1, Revision 4, contains the improved Standard Technical Specifications (STSS) for Combustion Engineering plants. The changes reflected in Revision 4 result from the experience gained from plant operation using the improved STSS and extensive public technical meetings and discussions among the NRC staff and various nuclear power plant licensees and the Nuclear Steam Supply System Owners Groups.

3.0 TECHNICAL EVALUATION

In the October 1, 2014, submittal, the licensee cited the Combustion Engineering Owner's Group (CEOG) CEN-355, Volume I, report and the related NRC approval letter dated May 9, 1988 (ADAMS Accession No. ML11264A057), as demonstrating that the NRC has previously determined that the LCOs for TS 3/4.9.6 and TS 3/4.9.7 met the criteria to be relocated to a licensee controlled document on a generic basis. The licensee discussed how the NRC subsequently developed final criteria in the "Final Policy Statement of Technical Specifications Improvements for Nuclear Power Reactors," published in the *Federal Register* on July 22, 1993 (58 FR 39132), and that TS 3/4.9.6 and TS 3/4.9.7 LCOs are not contained in NUREG-1432, Volume 1, Revision 4.

It is noted in the Abstract to NUREG-1432 that, "licensees are encouraged to upgrade their technical specifications consistent with those criteria and conforming, to the practical extent, to Revision 4 to the improved STS."

The licensee evaluated TS LCO 3.9.6 and TS LCO 3.9.7, with respect to the four criteria in 10 CFR 50.36(c)(2)(ii), to validate the basis for the relocation to the TRM. The TRM is part of the UFSAR and any changes to the TRM are subject to the criteria of 10 CFR 50.59.

3.1 TS 3/4.9.6, "Refueling Machine"

TS 3/4.9.6 contains LCO 3.9.6 that ensures the refueling machine is used for fuel assemblies or CEAs, has adequate capacity to lift the weight of a fuel assembly or CEAs, and has an automatic load limiting device available to prevent damage to a fuel assembly or CEA that becomes stuck during movement. The licensee concluded that TS 3/4.9.6 does not meet the criteria of 10 CFR 50.36 for retention in the WF3 TSs and proposed that it be relocated to the TRM.

The NRC staff evaluated the licensee's proposal against the four criteria in 10 CFR 50.36(c)(2)(ii). The staff's assessment of the licensee's proposal against each of the four criteria is provided below:

- Criterion 1 - This refueling machine does not contain "installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary." Thus, it does not satisfy Criterion 1 for inclusion in the TSs.
- Criterion 2 - Criterion 2 refers to a "process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier." The applicable design basis accident is the fuel handling accident (FHA) described in the UFSAR, Section 15.7.3.4. The analysis assumes that a fuel assembly is dropped as the initial condition that implies that the fuel crane has already failed. The refueling machine has no impact on the initial conditions assumed in any accident or transient analysis; therefore, the refueling machine TS does not meet Criterion 2 for inclusion in the TSs.

- Criterion 3 - Criterion 3 refers to a "structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier." As stated in Criterion 2, the FHA assumes that a fuel assembly is dropped as the initial condition that implies the fuel crane has already failed. The refueling machine does not prevent the accident conditions from occurring or limit the severity of the accident; therefore, the refueling machine TS does not satisfy Criterion 3 for inclusion in the TSs.
- Criterion 4 - The refueling machine is not required to respond, mitigate, or terminate any design-basis accident; therefore, this change will not adversely impact the likelihood or probability of a design-basis accident, or change the consequences. The refueling machine TS does not satisfy Criterion 4 for inclusion in the TSs.

The NRC staff finds the licensee's justification that the current TS 3/4.9.6 requirements do not meet the four criteria of 10 CFR 50.36(c)(2)(ii) for retention in the TSs, consistent with NUREG-1432, Volume 1, Revision 4. The staff finds the proposed relocation to the TRM will maintain the existing requirements associated with the refueling machine; and that there is no change to the existing requirements and no change to the level of safety of facility operation. Maintaining this requirement in the UFSAR or TRM is acceptable because any change, with regard to the refueling machine, will be controlled by the requirements of 10 CFR 50.59.

3.2 TS 3/4.9.7, "Crane Travel - Fuel Handling Building"

TS 3/4.9.7 contains two distinct LCOs for the fuel handling building cranes. LCO 3.9.7.a requires that the spent fuel handling machine shall be used for movement of fuel assemblies (with or without CEAs) and includes load limiting restrictions during movement of fuel assemblies. LCO 3.9.7.b prohibits travel of heavy loads (loads in excess of 2000 pounds) over irradiated fuel assemblies in the spent fuel pool, with the exception of travel over the assemblies in a transfer cask using a single failure-proof handling system.

In its application, the licensee stated that the requirements in LCOs 3.9.7.a/b on the use of cranes in the fuel handling building, including the fuel handling machine and related hoist load limit restrictions on capacity when lifting fuel assembly (with or without CEAs), and the general load limits for movement of cranes over irradiated fuel assemblies, do not meet the criteria of 10 CFR 50.36 for retention in the WF3 TSs; and the licensee proposed that TS 3/4.9.7 be relocated to the TRM.

The licensee's justification for relocating the fuel handling building crane TS 3/4.9.7 to the TRM is similar to the evaluation used for the refueling machine, as discussed in Section 3.1 of this safety evaluation. Specifically, the fuel handling building cranes do not contain installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary. The fuel handling building cranes do not prevent or mitigate a design-basis accident, as the FHA is the initial condition. Lastly, the fuel handling cranes are not required to respond, mitigate, or terminate any design-basis accident;

therefore, this change will not adversely impact the likelihood or probability of a design-basis accident, or change the consequences.

In its application, the licensee provided additional justification for relocating TS 3/4.9.7 in its comparison against technical specification screening Criterion 2. Specifically:

- Criterion 2 - While the cranes have design features and operation restrictions in place to prevent exceeding the initial condition of dropping a load on to irradiated fuel that is stored in the spent fuel pool, the FHA still assumes the crane fails and results in the accident. The analysis assumes a fuel bundle is dropped as the initial condition. Therefore, the cranes do not impact the initial conditions assumed in the accident analysis. Therefore TS 3.9.7 does not meet Criterion 2.

The NRC staff finds the licensee's justification that the current TS 3/4.9.7 requirements do not meet the four criteria of 10 CFR 50.36(c)(2)(ii) for retention in the TSs, consistent with NUREG-1432, Volume 1, Revision 4. The staff finds the proposed relocation to the TRM will maintain the existing requirements associated with the fuel handling building cranes and heavy loads in proximity to the spent fuel; and that there is no change to the existing requirements and no change to the level of safety of facility operation. Maintaining this requirement in the UFSAR or TRM is acceptable because any change, with regards to the fuel handling building cranes and heavy loads, will be controlled by the requirements of 10 CFR 50.59.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Louisiana State official was notified of the proposed issuance of the amendment on July 27, 2015. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to the installation or use of a facility component located within the restricted area, as defined in 10 CFR Part 20; and changes the associated 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 a no significant hazards consideration, and there has been no public comment on such finding published in the *Federal Register* on March 3, 2015 (80 FR 11475). The amendment also relates to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and 10 CFR 51.22(c)(10). 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) there is reasonable assurance that such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: G. Curran

Date: July 29, 2015

July 29 2015

Vice President, Operations
Entergy Operations, Inc.
Waterford Steam Electric Station, Unit 3
17265 River Road
Killona, LA 70057-3093

SUBJECT: WATERFORD STEAM ELECTRIC STATION, UNIT 3 - ISSUANCE OF
AMENDMENT RE: RELOCATION OF TECHNICAL SPECIFICATIONS 3/4.9.6
AND 3/4.9.7 TO THE TECHNICAL REQUIREMENTS MANUAL
(TAC NO. MF4940)

Dear Sir or Madam:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 243 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3 (WF3). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 1, 2014, as supplemented by letter dated February 2, 2015.

The amendment will relocate TS 3/4.9.6, "Refueling Machine," and 3/4.9.7, "Crane Travel – Fuel Handling Building," to the Technical Requirements Manual. This amendment conforms to the standard technical specifications of NUREG-1432, "Standard Technical Specifications - Combustion Engineering Plants: Specifications," Volume 1, Revision 4, and is consistent with the requirements of Title 10 of the *Code of Federal Regulations*, Part 50, Section 36.

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/

Michael D. Orenak, Project Manager
Plant Licensing IV-2 and Decommissioning
Transition Branch
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures:

1. Amendment No. 243 to NPF-38
2. Safety Evaluation

cc w/encls: Distribution via Listserv

DISTRIBUTION:

PUBLIC
LPL4-2 r/f
RidsAcrsAcnw_MailCTR Resource
RidsNrrDssStsb Resource

RidsNrrDorLpl4-2 Resource
RidsNrrDorDpr Resource
RidsNrrPMWaterford Resource
RidsNrrLAPBlechman Resource

RidsRgn4MailCenter Resource
SKoenick, NRR
RidsNrrDssSbpb ResourcePrincipal
GCurran, NRR

ADAMS Accession No. ML15174A227

*see previous

**via e-mail

OFFICE	NRR/DORL/LPL4-2/PM	NRR/DORL/LPL4-2/LA	NRR/DSS/SBPB/BC	NRR/DSS/STSB/BC	OGC	NRR/DORL/LPL4-2/BC
NAME	SKoenick*	PBlechman*	GCasto*	RElliot*	CKanatas**-NLO	MKhanna
DATE	07/06/15	07/06/15	07/09/15	07/15/15	07/24/15	07/27/15
OFFICE	NRR/DORL/LPL4-2/PM					
NAME	MOrenak					
DATE	07/29/15					

OFFICIAL RECORD COPY