



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

March 18, 2010

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: TECHNICAL SPECIFICATION CHANGE TO RELOCATE
STEAM GENERATOR HIGH LEVEL TRIP FUNCTION (TAC NO. ME2464)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 225 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3 (Waterford 3). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 19, 2009.

The amendment relocates the Waterford 3 Steam Generator Level - High trip requirements from TS Sections 2.2 and 3/4.3.1 to the Technical Requirements Manual (TRM). This relocation of the Steam Generator Level - High trip requirements is consistent with Technical Specification Task Force (TSTF) 410-A, "Relocation of Steam Generator Level - High Trip to the TRM," and Revision 3 of NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants."

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 "N. Kalyanam", followed by the word "FOR" in capital letters.

N. Kalyanam, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures:

1. Amendment No. 225 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. 225
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 19, 2009, 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

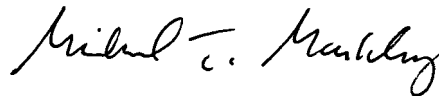
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and Paragraph 2.C.2 of Facility Operating License No. NPF-38 is hereby amended to read as follows:

2. Technical Specifications and Environmental Protection Plan

- The Technical Specifications contained in Appendix A, as revised through Amendment No. 225, 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 90 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Michael T. Markley, Chief
Plant Licensing Branch IV
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: March 18, 2010

ATTACHMENT TO LICENSE AMENDMENT NO. 225

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

INSERT

-4-

-4-

Technical Specifications

REMOVE

INSERT

2-3

2-3

3/4 3-3

3/4 3-3

3/4 3-4

3/4 3-4

3/4 3-5

3/4 3-5

3/4 3-6

3/4 3-6

3/4 3-10

3/4 3-10

3/4 3-18b

3/4 3-18b

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. 225, 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.

TABLE 2.2-1
REACTOR PROTECTIVE INSTRUMENTATION TRIP SETPOINT LIMITS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. Manual Reactor Trip	Not Applicable	Not Applicable
2. Linear Power Level - High		
Four Reactor Coolant Pumps Operating	$\leq 108\%$ of RATED THERMAL POWER	$\leq 108.76\%$ of RATED THERMAL POWER
3. Logarithmic Power Level - High (1)	$\leq 0.257\%$ of RATED THERMAL POWER (6)	$\leq 0.280\%$ of RATED THERMAL POWER (6)
4. Pressurizer Pressure - High	≤ 2350 psia	≤ 2359 psia
5. Pressurizer Pressure - Low	≥ 1684 psia (2)	≥ 1649.7 psia (2)
6. Containment Pressure - High	≤ 17.1 psia	≤ 17.4 psia
7. Steam Generator Pressure - Low	≥ 666 psia (3)	≥ 652.4 psia (3)
8. Steam Generator Level - Low	$\geq 27.4\%$ (4)	$\geq 26.48\%$ (4)
9. Local Power Density - High	≤ 21.0 kW/ft (5)	≤ 21.0 kW/ft (5)
10. DNBR - Low	≥ 1.26 (5)	≥ 1.26 (5)
11. DELETED		
12. Reactor Protection System Logic	Not Applicable	Not Applicable
13. Reactor Trip Breakers	Not Applicable	Not Applicable
14. Core Protection Calculators	Not Applicable	Not Applicable
15. CEA Calculators	Not Applicable	Not Applicable
16. Reactor Coolant Flow - Low	≥ 19.00 psid (7)	≥ 18.47 psid (7)

WATERFORD - UNIT 3

2-3

AMENDMENT NO. 42, 44, 45, 199, 225

TABLE 3.3-1
REACTOR PROTECTIVE INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
1. Manual Reactor Trip	2 sets of 2	1 set of 2	2 sets of 2	1, 2	1
	2 sets of 2	1 set of 2	2 sets of 2	3*, 4*, 5*	8
2. Linear Power Level - High	4	2	3	1, 2	2#, 3#
3. Logarithmic Power Level-High					
a. Startup and Operating	4	2(a)(d)	3	2**	2#, 3#
	4	2	3	3*, 4*, 5*	8
b. Shutdown	4	0	2	3, 4, 5	4
4. Pressurizer Pressure - High	4	2	3	1, 2	2#, 3#
5. Pressurizer Pressure - Low	4	2(b)	3	1, 2	2#, 3#
6. Containment Pressure - High	4	2	3	1, 2	2#, 3#
7. Steam Generator Pressure - Low 4/SG		2/SG	3/SG	1, 2	2#, 3#
8. Steam Generator Level - Low	4/SG	2/SG	3/SG	1, 2	2#, 3#
9. Local Power Density - High	4	2(c)(d)	3	1, 2	2#, 3#
10. DNBR - Low	4	2(c)(d)	3	1, 2	2#, 3#
11. DELETED					
12. Reactor Protection System Logic	4	2	3	1, 2	5
				3*, 4*, 5*	8
13. Reactor Trip Breakers	4	2(f)	4	1, 2	5
				3*, 4*, 5*	8
14. Core Protection Calculators	4	2(c)(d)	3	1, 2	2#, 3# and 7
15. CEA Calculators	2	1	2(e)	1, 2	6 and 7
16. Reactor Coolant Flow - Low	4/SG	2/SG(c)	3/SG	1, 2	2#, 3#

WATERFORD - UNIT 3

3/4 3-3

AMENDMENT NO. 44, 40, 46,

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TABLE 3.3-1 (Continued)

TABLE NOTATION

*With the protective system trip breakers in the closed position, the CEA drive system capable of CEA withdrawal, and fuel in the reactor vessel.

#The provisions of Specification 3.0.4 are not applicable.

**Not applicable above 10^{-4} % RATED THERMAL POWER⁽¹⁾.

- (a) Trip may be manually bypassed above 10^{-4} % of RATED THERMAL POWER⁽¹⁾; bypass shall be automatically removed when THERMAL POWER⁽¹⁾ is less than or equal to the reset point of the bistable. The reset point shall be within 3.0×10^{-5} % of RATED THERMAL POWER⁽¹⁾ below the bistable setpoint which is nominally 10^{-4} % of RATED THERMAL POWER⁽¹⁾. This accounts for the deadband of the bistable.
- (b) Trip may be manually bypassed below 400 psia; bypass shall be automatically removed whenever pressurizer pressure is greater than or equal to 500 psia.
- (c) Trip may be manually bypassed below 10^{-4} % of RATED THERMAL POWER⁽¹⁾; bypass shall be automatically removed when THERMAL POWER⁽¹⁾ is greater than or equal to 10^{-4} % of RATED THERMAL POWER⁽¹⁾. During testing pursuant to Special Test Exception 3.10.3, trip may be manually bypassed below 5% of RATED THERMAL POWER; bypass shall be automatically removed when THERMAL POWER is greater than or equal to 5% of RATED THERMAL POWER.
- (d) Trip may be bypassed during testing pursuant to Special Test Exception 3.10.3.
- (e) See Special Test Exception 3.10.2.
- (f) Each channel shall be comprised of two trip breakers; actual trip logic shall be one-out-of-two taken twice.

⁽¹⁾ As measured by the Logarithmic Power Channels.

TABLE 3.3-1 (Continued)

ACTION STATEMENTS

With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

Process Measurement Circuit	Functional Unit Bypassed/Tripped
1. Linear Power (Subchannel or Linear)	Linear Power Level - High Local Power Density - High DNBR - Low
2. Pressurizer Pressure - High	Pressurizer Pressure - High Local Power Density - High DNBR - Low
3. Containment Pressure - High	Containment Pressure - High (RPS) Containment Pressure - High (ESF)
4. Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator ΔP 1 and 2 (EFAS 1 and 2)
5. Steam Generator Level	Steam Generator Level - Low Steam Generator ΔP (EFAS)
6. Core Protection Calculator	Local Power Density - High DNBR - Low

ACTION 3 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE requirement, STARTUP and/or POWER OPERATION may continue provided the following conditions are satisfied:

- a. Verify that one of the inoperable channels has been bypassed and place the other channel in the tripped condition within 1 hour, and
- b. All functional units affected by the bypassed/tripped channel shall also be placed in the bypassed/tripped condition as listed below:

Process Measurement Circuit	Functional Unit Bypassed/Tripped
1. Linear Power (Subchannel or Linear)	Linear Power Level - High Local Power Density - High DNBR - Low

TABLE 3.3-1 (Continued)

ACTION STATEMENTS

2.	Pressurizer Pressure - High	Pressurizer Pressure - High Local Power Density - High DNBR - Low
3.	Containment Pressure - (RPS) High	Containment Pressure - High Containment Pressure - High (ESF)
4.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator ΔP 1 and 2 (EFAS 1 and 2)
5.	Steam Generator Level	Steam Generator Level - Low Steam Generator ΔP (EFAS)
6.	Core Protection Calculator	Local Power Density - High DNBR - Low

STARTUP and/or POWER OPERATION may continue until the performance of the next required CHANNEL FUNCTIONAL TEST. Subsequent STARTUP and/or POWER OPERATION may continue if one channel is restored to OPERABLE status and the provisions of ACTION 2 are satisfied.

- ACTION 4 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, suspend all operations involving positive reactivity changes. *
- ACTION 5 - With the number of channels OPERABLE one less those required by the Minimum Channels OPERABLE requirement, STARTUP and/or POWER OPERATION may continue provided the reactor trip breakers of the inoperable channel are placed in the tripped condition within 1 hour; otherwise, be in at least HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 1 hour for surveillance testing per Specification 4.3.1.1.
- ACTION 6 - a. With one CEAC inoperable, operation may continue for up to 7 days provided that at least once per 4 hours, each CEA is verified to be within 7 inches (indicated position) of all other CEAs in its group.

* Limited plant cooldown or boron dilution is allowed provided the change is accounted for in the calculated SHUTDOWN MARGIN.

TABLE 4.3-1

REACTOR PROTECTIVE INSTRUMENTATION 225SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Manual Reactor Trip	N.A.	N.A.	R and S/U(1)	1, 2, 3*, 4*, 5*
2. Linear Power Level - High	S	D(2,4),M(3,4), Q(4)	Q	1, 2
3. Logarithmic Power Level - High	S	R(4)	Q and S/U(1)	2#, 3, 4, 5
4. Pressurizer Pressure - High	S	R	Q	1, 2
5. Pressurizer Pressure - Low	S	R	Q	1, 2
6. Containment Pressure - High	S	R	Q	1, 2
7. Steam Generator Pressure - Low	S	R	Q	1, 2
8. Steam Generator Level - Low	S	R	Q	1, 2
9. Local Power Density - High	S	D(2,4), R(4,5)	Q, R(6)	1, 2
10. DNBR - Low	S	S(7), D(2,4), M(8), R(4,5)	Q, R(6)	1, 2
11. DELETED				
12. Reactor Protection System Logic	N.A.	N.A.	Q(11) and S/U(1)	1, 2, 3*, 4*, 5*

TABLE 3.3-3 (Continued)

TABLE NOTATION

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator ΔP 1 and 2 (EFAS)
2.	Steam Generator Level	Steam Generator Level - Low Steam Generator ΔP (EFAS)

ACTION 20 - With the number of OPERABLE channels one less than the Minimum Channels OPERABLE, STARTUP and/or POWER OPERATION and/or operation in the other applicable MODE(S) may continue provided the following conditions are satisfied:

- a. Verify that one of the inoperable channels has been bypassed and place the other inoperable channel in the tripped condition within 1 hour. With a channel process measurement circuit that affects multiple functional units inoperable or in test, bypass or trip all associated functional units as listed below:

	Process Measurement Circuit	Functional Unit Bypassed/Tripped
1.	Steam Generator Pressure - Low	Steam Generator Pressure - Low Steam Generator ΔP 1 and 2 (EFAS)
2.	Steam Generator Level	Steam Generator Level - Low Steam Generator ΔP (EFAS)

- b. Restore at least one of the inoperable channels to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours. Subsequent operation in the applicable MODE(S) may continue if one channel is restored to OPERABLE status and the provisions of ACTION 19 are satisfied.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 225 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 October 19, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML092940242, Reference 1), Entergy Operations, Inc. (Entergy, the licensee), requested changes to the Technical Specifications (TSs) for Waterford Steam Electric Station, Unit 3 (Waterford 3).

The proposed changes would relocate the Waterford 3 Steam Generator Level - High trip requirements from TS Sections 2.2 and 3/4.3.1 to the Technical Requirements Manual (TRM). This relocation of the Steam Generator Level - High trip requirements is consistent with Technical Specification Task Force (TSTF) 410-A, "Relocation of Steam Generator Level - High Trip to the TRM," and Revision 3 of NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants."

2.0 REGULATORY EVALUATION

Section 182a of the Atomic Energy Act of 1954, as amended (the Act), requires applicants for nuclear power plant operating licenses to include TSs as a part of the license. The Nuclear Regulatory Commission's (NRC) regulatory requirements related to the content of TS are set forth in Title 10 of the *Code of Federal Regulations* (10 CFR), Section 50.36, "Technical specifications," which 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 in 10 CFR 50.36(c)(2)(i) state that the TSs will contain LCOs which "are the lowest functional capability or performance levels of equipment required for safe operation of the facility. When 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 regulations in

10 CFR 50.36(c)(2)(i) state that an LCO must be established for each item meeting one or more of the following criteria:

1. Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary;
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;
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;
4. A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.

Therefore, existing TS LCOs and related SRs that fall within or satisfy any of these criteria, must be retained in the TSs, while those TS requirements that do not fall within or satisfy these criteria may be relocated to other, licensee-controlled documents.

The NRC staff also evaluated the proposed changes against the following criteria in 10 CFR 50.36(c)(2)(ii):

(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.

3.0 TECHNICAL EVALUATION

3.1 Proposed TS Changes

As stated in its letter dated October 19, 2009, the licensee proposed the following changes:

1. Relocate the trip setpoints and allowable values for Functional Unit 11, "Steam Generator Level – High," from TS Table 2.2-1 to the Waterford 3 TRM (page 2-3);

2. Relocate the Functional Unit 11, "Steam Generator Level – High" requirements of TS Table 3.3-1 to the Waterford 3 TRM (page 3/4 3-3);
3. Relocate Note (g) in TS Table 3.3-1 (steam generator high level trip bypass) to the Waterford 3 TRM (page 3/4 3-4);
4. Relocate references to the Steam Generator Level – High functional units from Actions 2 and 3 of TS Table 3.3-1 to the Waterford 3 TRM (pages 3/4 3-5 and 3/4 3-6);
5. Relocate the Functional Unit 11, "Steam Generator Level – High" surveillance requirements of TS Table 4.3-1 to the Waterford 3 TRM (page 3/4 3-10);
6. Relocate references to "Steam Generator Level – High" from Actions 19 and 20 of TS Table 3.3-3 to the Waterford 3 TRM (page 3/4 3-18b); and
7. Relocate the TS Bases in Section 2.2.1 for "Steam Generator Level – High" trip setpoint to the Waterford 3 TRM.

In addition, Table Notation (4) of TS Table 2.2-1 will be retained in the TSs, but will be copied to the Waterford 3 TRM.

3.2 NRC Staff Evaluation

The reactor protection system "Steam Generator Level - High" trip function is provided to protect the main turbine from excessive moisture carryover from the steam generators that may result in damage to the turbine in the event of a feedwater transient. During a feedwater malfunction, the steam generator level may rise to the point that excessive moisture entering the steam line could cause potential damage to components within the main turbine and failure of the turbine itself. The moisture mist entering the steam line could cause increased vibration, blade wear, and eventual permanent damage to the main turbine. Therefore, upon the steam generator level exceeding the steam generator high level trip setpoint, a reactor trip is initiated, which in turn automatically trips the main turbine. However, the main turbine is not a safety-related component and its loss does not impact the safety of the reactor core. The high steam generator level trip function does not act to protect the reactor core. This trip function is not credited in any design-basis accident and transient analysis, nor does it correspond to any safety limit.

The steam generator high level trip function was evaluated against the four criteria stated in 10 CFR 50.36(c)(2)(ii). The NRC staff's evaluation determined the following:

1. The steam generator high level trip does not provide control room instrumentation that is used to detect a significant abnormal degradation of the reactor coolant pressure boundary. Based on the licensee's November 22, 1994, response (Reference 2) to NRC Generic Letter (GL) 89-19, "Safety Implication of Control Systems in LWR Nuclear Power Plants," dated September 20, 1989 (ADAMS Legacy Library Accession No. 890920223), appropriate provisions have been met and maintained which adequately

address the concerns of GL 89-19 without the reliance on the steam generator high level trip function.

2. The steam generator high level trip is not 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 steam generator high level trip function supports main turbine protection and is not credited in any accident analyses nor does it correspond to any safety limit.
3. The steam generator high level trip is not a structure, system, or component that is part of the primary success path 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. The steam generator high level trip function provides main turbine protection and is not analyzed to mitigate the consequences of a design-basis accident that threatens the integrity of a fission product barrier.
4. The steam generator high level trip is not a structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety. The steam generator high level trip function supports main turbine protection. In its response to GL-89-19 (Reference 2), the licensee stated that it had reviewed the Combustion Engineering Owners Group's (CEOG) report and verified that the generic aspects of the report are applicable to Waterford 3. As discussed in its January 3, 1995, safety evaluation (Reference 3) on the CEOG's response to GL 89-19 regarding the steam generator overflow protection, the NRC staff accepted the CEOG's contention from a probabilistic risk assessment viewpoint that steam generator overflow events do not have a significant impact on the public health and safety.

The Waterford 3 Final Safety Analyses Report (FSAR), Section 13.7.1.2, states that the TRM is administered as part of the FSAR, changes to the TRM are subject to the criteria of 10 CFR Section 50.59, "Changes, tests and experiments," and administrative controls for processing TRM changes are included in the Waterford 3 site procedures. Therefore, the NRC staff concludes that sufficient regulatory controls exist for the TRM.

Based on the above, the NRC staff concludes that the proposed TS changes are acceptable. The NRC has also concluded that sufficient controls exist to maintain regulatory requirements via the TRM.

3.3 Summary

The NRC staff concludes that the above requirements associated with the steam generator high level trip function may be deleted from the TSs because (1) the 10 CFR 50.36 TS inclusion criteria are not applicable to the steam generator high level trip function, and (2) these requirements have been appropriately relocated to the licensee's TRM. The NRC staff has reviewed the licensee's request to relocate the portions of the Waterford 3 TSs associated with the steam generator high level trip function to the TRM and, based on its evaluation, the staff concludes that the requested TS changes are acceptable.

In addition, the staff concludes that the licensee has provided adequate justification to support the requested changes and reasonable assurance that Waterford 3 will be able to comply with the regulatory requirements and, therefore, meets 10 CFR 50.36. Therefore, the NRC staff concludes that the proposed TS changes are acceptable.

3.4 Regulatory Commitments

In its letter dated October 19, 2009, the licensee made the following commitment:

Upon NRC approval of the proposed TS change, Entergy will relocate the Waterford 3 Steam Generator Level – High trip function to the Waterford Technical Requirements Manual.

The NRC staff concludes that the proposed commitment is 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 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 published in the *Federal Register* on December 1, 2009 (74 FR 62834). 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

7.0 REFERENCES

1. Kowalewski, J. A., Entergy Operations, Inc., letter to U.S. Nuclear Regulatory Commission, "License Amendment Request, Technical Specification Change to Relocate the Steam Generator High Level Trip Function, Waterford Steam Electric

Station Unit 3, Docket No. 50-382, License No. NPF-38," dated October 19, 2009 (ADAMS Accession No. ML092940242).

2. Burski, R. F., Entergy Operations, Inc., letter to U.S. Nuclear Regulatory Commission, "Waterford 3 SES, Docket No. 50-382, License No. NPF-38, Generic Letter 89-19, 'Safety Implication of Control Systems in LWR Nuclear Power Plants'," dated November 22, 1994 (ADAMS Legacy Library Accession No. 9411280050).
3. Patel, C. P., U.S. Nuclear Regulatory Commission, letter to Ross P. Barkhurst, Entergy Operations, Inc., "Transmittal of the NRC Safety Evaluation for the Combustion Engineering Owners Group Response to Generic Letter 89-19, "Request for Action Related to Resolution of Unresolved Safety Issue A-47 'Safety Implication of Control Systems in LWR Nuclear Power Plants' Pursuant to 10 CFR 50.54(f),' and the Closeout of this Issue – Waterford Steam Electric Station, Unit 3 (TAC No. M75016)," dated January 3, 1995 (ADAMS Legacy Library Accession No. 8909200223).

Principal Contributor: K. Bucholtz

Date: March 18, 2010

March 18, 2010

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: TECHNICAL SPECIFICATION CHANGE TO RELOCATE
STEAM GENERATOR HIGH LEVEL TRIP FUNCTION (TAC NO. ME2464)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 225 to Facility Operating License No. NPF-38 for the Waterford Steam Electric Station, Unit 3 (Waterford 3). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 19, 2009.

The amendment relocates the Waterford 3 Steam Generator Level - High trip requirements from TS Sections 2.2 and 3/4.3.1 to the Technical Requirements Manual (TRM). This relocation of the Steam Generator Level - High trip requirements is consistent with Technical Specification Task Force (TSTF) 410-A, "Relocation of Steam Generator Level - High Trip to the TRM," and Revision 3 of NUREG-1432, "Standard Technical Specifications, Combustion Engineering Plants."

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 Lynnea Wilkins for/

N. Kalyanam, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-382

Enclosures:

1. Amendment No. 225 to NPF-38
2. Safety Evaluation

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NAME	NKalyanam	JBurkhardt	WKemper	GCranston	RElliott MHamm for	DRoth	MMarkley	NKalyanam LWilkins for
DATE	2/23/10	2/23/10	3/1/10	3/10/10	12/2/09	3/11/10	3/17/10	3/18/10

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