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

August 11, 2009

Vice President, Operations
Entergy Operations, Inc.
River Bend Station
5485 U.S. Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION, UNIT 1 - ISSUANCE OF AMENDMENT RE: ADOPTION OF TECHNICAL SPECIFICATION TASK FORCE IMPROVED STANDARD TECHNICAL SPECIFICATION CHANGE TRAVELERS TSTF-163, TSTF-222, TSTF-230, AND TSTF-306 (TAC NO. ME0406)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 165 to Facility Operating License No. NPF-47 for the River Bend Station, Unit 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated January 21, 2009, as supplemented by letters dated January 23 and June 22, 2009.

The amendment: 1) revises references in TS 5.5.7, "Ventilation Filter Testing Program (VFTP)"; 2) corrects an editorial error in TS 3.7.2, "Control Room Fresh Air (CRFA) System"; 3) adopts Technical Specification Task Force (TSTF)-163, Revision 2, "Minimum vs. Steady State Voltage and Frequency"; 4) adopts TSTF-222, Revision 1, "Control Rod Scram Time Testing"; 5) adopts TSTF-230, Revision 1, "Add new Condition B to LCO 3.6.2.3 'RHR Suppression Pool Cooling'"; and 6) adopts TSTF-306, Revision 2, "Add Action to LCO 3.3.6.1 to give option to isolate the penetration."

A copy of our related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

Alan Wang

Alan B. Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-458

Enclosures:
1. Amendment No. 165 to NPF-47
2. Safety Evaluation

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

ENTERGY GULF STATES LOUISIANA, LLC

AND

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-458

RIVER BEND STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 165
License No. NPF-47

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Entergy Operations, Inc. (the licensee), dated January 21, 2009, as supplemented by letters dated January 23 and June 22, 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, as amended, 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 license 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-47 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. 165 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. The 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

CFlyon for

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-47 and
Technical Specifications

Date of Issuance: August 11, 2009

ATTACHMENT TO LICENSE AMENDMENT NO. 165

FACILITY OPERATING LICENSE NO. NPF-47

DOCKET NO. 50-458

Replace the following pages of the Facility Operating License No. NPF-47 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
-3-	-3-

Technical Specifications

Remove	Insert
3.1-12	3.1-12
3.1-13	3.1-13
3.3-48	3.3-48
3.6-37	3.6-37
3.7-7	3.7-7
3.8-7	3.8-7
3.8-10	3.8-10
3.8-12	3.8-12
3.8-15	3.8-15
5.0-11	5.0-11
5.0-12	5.0-12

(3) EOI, pursuant to the Act and 10 CFR Part 70, to receive, possess and to use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

(4) EOI, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;

(5) EOI, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and

(6) EOI, pursuant to the Act and 10 CFR Parts 30, 40 and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by 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 3091 megawatts thermal (100% rated power) in accordance with the conditions specified herein. The items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 165 and the Environmental Protection Plan contained in Appendix 8, are hereby incorporated in the license. EOI shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

SURVEILLANCE REQUIREMENTS

----------NOTE----------
During single control rod scram time Surveillances, the control rod drive (CRD) pumps shall be isolated from the associated scram accumulator.

SURVEILLANCE		FREQUENCY
SR 3.1.4.1	Verify each control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure ≥ 950 psig.	Prior to exceeding 40% RTP after each reactor shutdown ≥ 120 days
SR 3.1.4.2	Verify, for a representative sample, each tested control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure ≥ 950 psig.	200 days cumulative operation in MODE 1
SR 3.1.4.3	Verify each affected control rod scram time is within the limits of Table 3.1.4-1 with any reactor steam dome pressure.	Prior to declaring control rod OPERABLE after work on control rod or CRD System that could affect scram time

(continued)

SURVEILLANCE REQUIREMENT (continued)

SURVEILLANCE		FREQUENCY
SR 3.1.4.4	Verify each affected control rod scram time is within the limits of Table 3.1.4-1 with reactor steam dome pressure ≥ 950 psig.	Prior to exceeding 40% RTP after fuel movement within the affected core cell AND Prior to exceeding 40% RTP after work on control rod or CRD System that could affect scram time

3.3 INSTRUMENTATION

3.3.6.1 Primary Containment and Drywell Isolation Instrumentation

LCO 3.3.6.1 The primary containment and drywell isolation instrumentation for each Function in Table 3.3.6.1-1 shall be OPERABLE.

APPLICABILITY: According to Table 3.3.6.1-1.

ACTIONS

----------NOTES----------

1. Penetration flow paths, except for the drywell 24 inch purge valve penetration flow path, may be unisolated intermittently under administrative controls.

2. Separate Condition entry is allowed for each channel.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more required channels inoperable.	A.1 Place channel in trip.	12 hours for Functions 2.b, 5.b, 5.d, and 5.e AND 24 hours for Functions other than Functions 2.b, 5.b, 5.d, and 5.e
B. One or more automatic Functions with isolation capability not maintained.	B.1 Restore isolation capability.	1 hour

(continued)

3.6 CONTAINMENT SYSTEMS

3.6.2.3 Residual Heat Removal (RHR) Suppression Pool Cooling

LCO 3.6.2.3 Two RHR suppression pool cooling subsystems shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION		COMPLETION TIME
A. One RHR suppression pool cooling subsystem inoperable.	A.1	Restore RHR suppression pool cooling subsystem to OPERABLE status.	7 days
B. Two RHR suppression pool cooling subsystems inoperable.	B.1	Restore one RHR suppression pool cooling subsystem to OPERABLE status.	8 hours
C. Required Action and associated Completion Time not met.	C.1	Be in MODE 3.	12 hours
	AND		
	C.2	Be in MODE 4.	36 hours

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
F. Two CRFA subsystems inoperable during movement of recently irradiated fuel assemblies in the primary containment or fuel building, or during OPDRVs.	F.1 Suspend movement of recently irradiated fuel assemblies in the primary containment and fuel building.	Immediately
	AND	
OR One or more CRFA subsystems inoperable due to inoperable CRE boundary during movement of recently irradiated fuel assemblies in the primary containment or fuel building, or during OPDRVs.	F.2 Initiate action to suspend OPDRVs.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.7.2.1	Operate each CRFA subsystem for ≥ 10 continuous hours with the heaters operating.	31 days
SR 3.7.2.2	Perform required CRFA filter testing in accordance with the Ventilation Filter Testing Program (VFTP).	In accordance with the VFTP
SR 3.7.2.3	Verify each CRFA subsystem actuates on an actual or simulated initiation signal.	18 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.7	----------NOTE---------- All DG starts may be preceded by an engine prelube period. ---------- Verify each DG starts from standby conditions and achieves: a. For DG 1A and DG 1B: 1. In ≤ 10 seconds, voltage ≥ 3740 V and frequency ≥ 58.8 Hz; and 2. Steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz. b. For DG 1C: 1. Maximum of 5400 V, and 66.75 Hz, and 2. In ≤ 13 seconds, voltage ≥ 3740 V and frequency ≥ 58.8 Hz; and 3. Steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	184 days
SR 3.8.1.8	----------NOTE---------- This Surveillance shall not be performed in MODE 1 or 2. However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify manual transfer of unit power supply from the normal offsite circuit to required alternate offsite circuit.	18 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.12	----------NOTES---------- 1. All DG starts may be preceded by an engine prelube period. 2. This Surveillance shall not be performed in MODE 1 or 2. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify on an actual or simulated Emergency Core Cooling System (ECCS) initiation signal each DG auto-starts from standby condition and: a. For DG 1C during the auto-start maintains voltage ≤ 5400 V and frequency ≤ 66.75 Hz; b. In ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C after auto-start and during tests, achieves voltage ≥ 3740 V and frequency ≥ 58.8 Hz; c. Achieves steady state voltage ≥ 3740 and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz; and d. Operates for ≥ 5 minutes.	18 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.15	----------NOTES---------- 1. This Surveillance shall be performed within 5 minutes of shutting down the DG after the DG has operated ≥ 1 hour loaded ≥ 3000 kW and ≤ 3100 kW for DG 1A and DG 1B, and ≥ 2500 kW and ≤ 2600 for DG 1C, or operating temperatures have stabilized, which ever is longer. Momentary transients outside of the load range do not invalidate this test. 2. All DG starts may be preceded by an engine prelube period. ---------- Verify each DG starts and achieves: 1. In ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C voltage ≥ 3740 V and frequency ≥ 58.8 Hz, and 2. Steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	18 months
SR 3.8.1.16	----------NOTE---------- This Surveillance shall not be performed in MODE 1, 2, or 3. (Not applicable to DG 1C) However, credit may be taken for unplanned events that satisfy this SR. ---------- Verify each DG: a. Synchronizes with offsite power source while loaded with emergency loads upon a simulated restoration of offsite power; b. Transfers loads to offsite power source; and c. Returns to ready-to-load operation.	18 months

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.8.1.20	----------NOTE---------- All DG starts may be preceded by an engine prelube period. ---------- Verify, when started simultaneously from standby condition, each DG achieves: 1. In ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C voltage ≥ 3740 V and frequency ≥ 58.8 Hz, and 2. Steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.	10 years

5.5 Programs and Manuals

ASME Boiler and Pressure Vessel Code and applicable Addenda terminology for inservice testing activities	Required frequencies for performing inservice testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

b. The provisions of SR 3.0.2 are applicable to the above required frequencies for performing inservice testing activities;

c. The provisions of SR 3.0.3 are applicable to inservice testing activities; and

d. Nothing in the ASME Boiler and pressure Vessel Code shall be construed to supersede the requirements of any TS.

5.5.7 Ventilation Filter Testing Program (VFTP)

A program shall be established to implement the following required testing of Engineered Safety Feature (ESF) filter ventilation systems at the frequencies specified in Regulatory Guide 1.52, Revision 2.

a. Demonstrate for each of the ESF systems that an inplace test of the high efficiency particulate air (HEPA) filters shows a penetration and system bypass < 0.05% when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1989 at the system flowrate specified below ± 10%:

ESF Ventilation System	Flowrate
SGTS	12,500 cfm
FBVS	10,000 cfm
CRFAS	4,000 cfm

(continued)

5.5 Programs and Manuals

5.5.7 Ventilation Filter Testing Program (VFTP) (continued)

b. Demonstrate for each of the ESF systems that an inplace test of the charcoal adsorber shows a penetration and system bypass < 0.05% when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1989 at the system flowrate specified below ± 10%:

ESF Ventilation System	Flowrate
SGTS	12,500 cfm
FBVS	10,000 cfm
CRFAS	4,000 cfm

c. Demonstrate for each of the ESF systems that a laboratory test of a sample of the charcoal adsorber, when obtained as described in Regulatory Guide 1.52, Revision 2, shows the methyl iodide penetration less than the value specified below when tested in accordance with ASTM D3803-1989 at a temperature of 30°C and the relative humidity specified below:

ESF Ventilation System	Penetration	RH
SGTS	5.0%	70%
FBVS	0.5%	70%
CRFAS	1.0%	70%

d. Demonstrate for each of the ESF systems that the pressure drop across the combined HEPA filters, the prefilters, and the charcoal adsorbers is less than the value specified below when tested in accordance with Regulatory Guide 1.52, Revision 2, and ASME N510-1989 at the system flowrate specified below ± 10%:

ESF Ventilation System	Delta P	Flowrate
SGTS	< 8" WG	12,500 cfm
FBVS	< 8" WG	10,000 cfm
CRFAS	< 8" WG	4,000 cfm

(continued)

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 165 TO

FACILITY OPERATING LICENSE NO. NPF-47

ENTERGY OPERATIONS, INC.

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

1.0 INTRODUCTION

By application dated January 21, 2009 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML090270198), as supplemented by letters dated January 23 and June 22, 2009 (ADAMS Accession Nos. ML090280215 and ML091810118, respectively), Entergy Operations, Inc. (the licensee) requested changes to the Technical Specifications (TS) for River Bend Station (RBS), Unit 1. Specifically, the licensee proposed to:

1) Revise references in TS 5.5.7, "Ventilation Filter Testing Program (VFTP),"

2) Correct an editorial error in TS 3.7.2, "Control Room Fresh Air (CRFA) System,"

3) Adopt Technical Specification Task Force (TSTF) Improved Standard Technical Specification Change Traveler, TSTF-163, Revision 2, "Minimum vs. Steady State Voltage and Frequency,"

4) Adopt TSTF-222, Revision 1, "Control Rod Scram Time Testing,"

5) Adopt TSTF-230, Revision 1, "Add new Condition B to LCO 3.6.2.3 'RHR Suppression Pool Cooling,'" and

6) Adopt TSTF-306, Revision 2, "Add Action to LCO 3.3.6.1 to give option to isolate the penetration."

The supplemental letters dated January 23 and June 22, 2009, provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the U.S. Nuclear Regulatory Commission (NRC) staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on March 24, 2009 (74 FR 12392).

Enclosure 2

2.0 REGULATORY EVALUATION

The NRC's regulatory requirements related to the content of the TS are contained in Section 50.36, "Technical specifications," of Title 10 of the *Code of Federal Regulations* (10 CFR). The regulations in 10 CFR 50.36 require that the TS include items in the following categories: (1) safety limits, limiting safety systems settings, and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. The administrative controls are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner.

The regulations in 10 CFR 50.36(c)(2)(i) state that LCOs "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 licensee's proposed changes contain revisions to the following:

- Condition F of TS 3.7.2, "Control Room Fresh Air (CRFA) System,"
- Remedial actions to be taken when two residual heat removal (RHR) suppression pool cooling subsystems are inoperable in TS 3.6.2.3, "Residual Heat Removal (RHR) Suppression Pool Cooling," and
- Remedial actions to be taken when primary containment and drywell isolation instrumentation is inoperable in TS 3.3.6.1, "Primary Containment and Drywell Isolation Instrumentation."

These proposed changes were reviewed for compliance with 10 CFR 50.36(c)(2)(i).

The regulations in 10 CFR 50.36(c)(3) state that SRs "are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met." The licensee's proposed changes revise SRs for:

- Control rod scram time testing found in TS 3.8.1, "AC Sources – Operating," and TS 3.1.4, "Control Rod Scram Times," and
- Changes for the emergency diesel generators in SRs 3.8.1.7, 3.8.1.12, 3.8.1.15, and 3.8.1.20.

These proposed changes were reviewed for compliance with 10 CFR 50.36(c)(3).

The regulations in 10 CFR 50.36(c)(5) state that administrative controls "are the provisions relating to organization and management, procedures, recordkeeping, review and audit, and reporting necessary to assure operation of the facility in a safe manner." The licensee proposed changes to the reference to be used when testing ventilation filters in TS 5.5.7, "Ventilation Filter

Testing Program (VFTP)." This proposed change was reviewed for compliance with 10 CFR 50.36(c)(5).

In addition, the following guidance was applied by the NRC staff in its review for the adoption of TSTF-163, Revision 2:

- Regulatory Guide (RG) 1.9, Revision 3, "Selection, Design, Qualification, and Testing of Emergency Diesel Generator Units Used as Class 1E Onsite Electric Power Systems at Nuclear Power Plants," dated July 1993. Regulatory Position C.1.4 of RG 1.9, Revision 3, states that,

  > ... each diesel generator unit should be capable of starting and accelerating to rated speed, in the required sequence, all the needed engineered safety feature and emergency shutdown loads. The diesel generator unit design should be such that at no time during the loading sequence should the frequency decrease to less than 95 percent of nominal nor the voltage decrease to less than 75 percent of nominal (a larger decrease in voltage and frequency may be justified for a diesel generator unit that carries only one large connected load).

  Regulatory Position C.2.2 of this RG provides details on surveillance tests that shall be performed to demonstrate diesel generator capabilities. These tests require verification that the emergency diesel generator achieves required steady state voltage and frequency within acceptable limits and time as defined in the plant TS.

- NRC-approved Industry/TSTF-163, Revision 2, "Minimum vs. Steady State Voltage and Frequency."

3.0 TECHNICAL EVALUATION

3.1 Revision of References in TS 5.5.7, "Ventilation Filter Testing Program (VFTP)"

The Standby Gas Treatment System (SGTS), the Fuel Building Ventilation System (FBVS), and the Control Room Fresh Air (CRFA) System, all utilize ventilation filters to ensure proper system operation during a design-basis accident (DBA). The ventilation filters remove airborne particulates, as well as protect system components.

TS 5.5.7 currently states, in part, that ventilation testing shall be done in accordance with American National Standards Institute (ANSI) N510-1989, "Testing of Nuclear Air Treatment Systems." ANSI N510-1989 has been changed to American Society of Mechanical Engineers (ASME) N510-1989. As a result, the licensee proposes to replace the current reference, "ANSI N510-1989," in TS 5.5.7.a, b, c, and d with "ASME N510-1989." No changes were made to the requirements contained in the document when its designation was changed. As a result, the revised reference still assures operation of the facility in a safe manner. Therefore, the NRC

staff concludes that the change in document designation is not material and, therefore, the proposed change is acceptable.

3.2 Correction of Editorial Error in TS 3.7.2, "Control Room Fresh Air (CRFA) System"

The CRFA system ensures that the unit can be safely operated from the control room following a DBA. The intent of TS 3.7.2 is to require that two CRFA subsystems shall be operable in:

- Modes 1, 2, and 3; or
- During movement of recently irradiated fuel assemblies in the primary containment; or
- During movement of recently irradiated fuel assemblies in the fuel building; or
- During operations with a potential for draining the reactor vessel (OPDRVs)

Currently, the second paragraph of Condition F states:

> One or more CRFA subsystems inoperable due to inoperable CRE [control room envelope] boundary during movement of recently irradiated fuel assemblies in the primary containment or fuel building during OPDRVs.

As currently written, the intent of Condition F could be interpreted to be that this Condition applies only during the movement of recently irradiated fuel during OPDRVs. The licensee proposed to add the term "or" between fuel building and OPDRVs so that Condition F will now be applicable, in part, when:

> One or more CRFA subsystems inoperable due to inoperable CRE boundary during movement of recently irradiated fuel assemblies in the primary containment or fuel building, or during OPDRVs.

The proposed change clarifies that OPDRVs are considered separate from fuel movement in the primary containment or fuel building. This was the original intent of TSTF-448, Revision 3, "Control Room Habitability," which was approved by the NRC for plant-specific adoption on January 17, 2007 (72 FR 2022). The licensee's proposed change corrects an error when RBS adopted TSTF-448, Revision 3, via Amendment No. 154, dated November 16, 2007 (ADAMS Accession Nos. ML072490080 and ML072490100). The NRC staff concludes the change is editorial in nature and, therefore, is acceptable.

3.3 Adoption of TSTF-163, Revision 2

The proposed amendment includes changes to TS SRs 3.8.1.7, 3.8.1.12, 3.8.1.15, and 3.8.1.20 for the emergency diesel generators (DGs), specifically, DG 1A, DG 1B, and DG 1C. The proposed changes remove the maximum voltage and frequency limits during initial start transient condition of emergency DGs (≤ 10 seconds for DG 1A and DG 1B, and ≤ 13 seconds for DG 1C). By letter dated June 22, 2009, the licensee provided supplemental information

which included an additional change on one of the TS Bases pages to avoid a potential inconsistency between the proposed changes and the TS Bases.

The licensee stated that the proposed changes are consistent with NRC-approved TSTF-163, Revision 2, "Minimum vs. Steady State Voltage and Frequency." TSTF-163, Revision 2 (ADAMS Accession No. ML040500733), was submitted to the NRC on April 22, 1998, and was made available for plant-specific adoption via incorporation into Revision 2 of NUREG-1434, "Standard Technical Specifications — General Electric Plants (BWR/6): Specifications," on June 30, 2001.

According to the Updated Final Safety Analyses Report (UFSAR), the RBS has two emergency DGs (1A and 1B), each rated at 3500 kilo Watts (kW), and one emergency DG (1C) rated at 2600 kW, that provides power to the safety-related 4.16 kilo Volt (kV) buses which powers the high pressure core spray (HPCS) pumps.

Consistent with the approved TSTF-163, Revision 2, the licensee proposed to revise the acceptance criteria of SRs 3.8.1.7, 3.8.1.12, 3.8.15, and 3.8.1.20. The acceptance criteria for the emergency DG start tests will be modified by specifying the minimum voltage and frequency to be achieved during startup, and assigning the currently listed voltage and frequency ranges as values to be achieved once "steady state" is reached.

Currently, SRs 3.8.1.7, 3.8.1.12, 3.8.1.15, and 3.8.1.20 verify that when started from standby conditions, that: 1) emergency DG 1A and DG 1B achieve voltage $\geq$ 3740 V and $\leq$ 4580 V and frequency $\geq$ 58.8 Hz [Hertz] and $\leq$ 61.2 Hz in $\leq$ 10 seconds, and 2) emergency DG 1C achieves voltage $\geq$ 3740 V and $\leq$ 4580 V and frequency $\geq$ 58.8 Hz and $\leq$ 61.2 Hz in $\leq$ 13 seconds. The SRs have been revised to eliminate the maximum voltage and frequency limits from the start test, and reword the SRs to clarify that each emergency DG is required to achieve steady state operation following the timed start.

Current SR 3.8.1.7 states, in part,

a. For DG 1A and DG 1B, steady state voltage $\geq$ 3740 V and $\leq$ 4580 V and frequency $\geq$ 58.8 Hz and $\leq$ 61.2 Hz in $\leq$ 10 seconds.

b. For DG 1C:

   1. Maximum of 5400 V, and 66.75 Hz, and

   2. Steady state voltage $\geq$ 3740 V and $\leq$ 4580 V and frequency $\geq$ 58.8 Hz and $\leq$ 61.2 Hz in $\leq$ 13 seconds.

Revised SR 3.8.1.7 would state, in part:

a. For DG 1A and DG 1B:

   1. In $\leq$ 10 seconds, voltage $\geq$ 3740 V and frequency $\geq$ 58.8 Hz; and

2. Steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.

b. For DG 1C:

1. Maximum of 5400 V, and 66.75 Hz, and

2. In ≤ 13 seconds, voltage ≥ 3740 V and frequency ≥ 58.8 Hz; and

3. Steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.

Current SR 3.8.1.12 states, in part:

b. In ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C after auto-start and during tests, achieves voltage ≥ 3740 V and ≤ 4580 V.

c. In ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C after auto-start and during tests, achieves frequency ≥ 58.8 Hz and ≤ 61.2 Hz; and

Revised SR 3.8.1.12 would state, in part:

b. In ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C after auto-start, and during tests, achieves voltage ≥ 3740 V and frequency ≥ 58.8 Hz;

c. Achieves steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz; and

Current SR 3.8.1.15 states, in part:

Verify each DG starts and achieves, in ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C, voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.

Revised SR 3.8.1.15 would state, in part:

Verify each DG starts and achieves:

1. In ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C voltage ≥ 3740 V and frequency ≥ 58.8 Hz, and

2. Steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.

Current SR 3.8.1.20 states, in part:

> Verify, when started simultaneously from standby condition, each DG achieves, in ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C, voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.

Revised SR 3.8.1.20 would state, in part:

> Verify, when started simultaneously from standby condition, each DG achieves:
>
> 1. In ≤ 10 seconds for DG 1A and DG 1B and ≤ 13 seconds for DG 1C voltage ≥ 3740 V and frequency ≥ 58.8 Hz, and
>
> 2. Steady state voltage ≥ 3740 V and ≤ 4580 V and frequency ≥ 58.8 Hz and ≤ 61.2 Hz.

The "Notes" associated with the above SRs are not changed.

The changes that the licensee has proposed maintain the original voltage and frequency range for steady state conditions while in the transient region (within ≤ 10 seconds for DG 1A and DG 1B, and ≤ 13 seconds for DG 1C), only minimum values are proposed in the allowable range. The licensee stated that when a test is performed that does not result in tying the emergency DG to the bus, a momentary voltage or frequency overshoot (and/or subsequent undershoot) can occur because no loads are being tied to the emergency DGs. The loading tends to minimize the overshoot, whereas the unloaded overshoot might momentarily exceed the specified limits within the first 10 or 13 seconds of startup. The licensee stated that this condition is inherent in the design and physical capabilities of the emergency DG governor as it seeks to control emergency DG speed during fast starts when the emergency DG is unloaded. The voltage and frequency excursions do not affect the permissive for closure of the emergency DG output breaker, since the permissive is primarily dependent on minimum conditions being achieved regardless of any overshoot or subsequent momentary undershoot. The requirement for verifying steady state voltage and frequency are verified by tests required by TS SR 3.8.1.11 and SR 3.8.1.19. These SRs are associated with simulation of loss of offsite power and an actuation of engineered safety features signal, and verify the capability of the emergency DGs to provide power at a voltage and frequency adequate to start and operate the safety loads.

The NRC staff agrees that the voltage and frequency range currently specified in the subject surveillances are more appropriate for steady state limits than transient limits, and that the revised TS SRs, as proposed, will continue to verify the capability of the emergency DGs to provide power at a voltage and frequency adequate to start and operate the safety loads. The NRC staff and the industry have reviewed and resolved this issue on a generic basis via TSTF-163, Revision 2, which applies to SR 3.8.1.7, SR 3.8.1.12, SR 3.8.1.15, and SR 3.8.1.20, and which (1) eliminates the maximum voltage and frequency limits from the start test, (2) rewords the SR to clarify that each emergency DG is required to achieve steady state operation following the timed start; and (3) recommends in the TS Bases that the time to reach steady state operation is periodically monitored and the trend evaluated to identify degradation of governor and voltage regulator performance.

The NRC staff evaluated the licensee's request to revise TS SRs 3.8.1.7, 3.8.1.12, 3.8.1.15, and 3.8.1.20 for the emergency DG start time for RBS. In summary, the NRC staff concludes that the proposed changes are consistent with TSTF-163, Revision 2, for eliminating the upper end of allowable voltage range during transient conditions experienced during emergency DG starts. The NRC staff also concludes that the provisions of the SRs, as amended, will continue to ensure that proper transient and steady state voltage and frequency are attained consistent with the recommendations of RG 1.9, Revision 3. The NRC staff's conclusion is based on the following:

- the elimination of upper end of allowable voltage for transient conditions during an unloaded emergency DG start does not degrade safety margins, and

- the steady state voltage requirements are not impacted and compliance with SR will continue to demonstrate the performance capabilities of each emergency DG to maintain bus voltages within acceptable limits for achieving safe shutdown.

Based on the above evaluation, the NRC staff concludes that the proposed TS changes are consistent with TSTF-163, Revision 2, and will not impact the licensee's ability to continue to comply with the requirements of 10 CFR 50.36(c) and, therefore, are acceptable. These changes are consistent with and have been incorporated into the improved Standard TS (ISTS).

3.4 Adoption of TSTF-222, Revision 1

The licensee has proposed to adopt TSTF-222, Revision 1 (ADAMS Accession No. ML040570118). TSTF-222, Revision 1, was submitted to the NRC on April 28, 1998, and was approved for plant-specific adoption on May 12, 1999 (ADAMS Accession No. ML090750111). The scram function of the control rod drive system controls reactivity changes during abnormal operational transients to ensure that specified acceptable fuel design limits are not exceeded. SR 3.1.4.1 currently requires each control rod to be scram time tested prior to exceeding 40 percent rated thermal power (RTP) if any fuel movement in the reactor pressure vessel occurs. As a result, even if only one bundle in the reactor core is moved, all of the control rods in the reactor core are required to be tested. The licensee proposed to delete this requirement and add a new requirement to SR 3.1.4.4. SR 3.1.4.4 will require affected control rods to be scram time testing prior to exceeding 40 percent RTP (i.e., fuel movement within the affected core cell). This is acceptable since control rod scram times are most likely to be affected by fuel movement within the affected core cell. In addition, SR 3.1.4.1 will still require that the every control rod be scram time tested prior to exceeding 40 percent RTP if the reactor has been shut down for greater than or equal to 120 days. The NRC staff has concluded that the licensee's proposal is consistent with the intent of TSTF-222, Revision 1. Based on the above, the NRC staff concludes that the proposed change is acceptable.

3.5 Adoption of TSTF-230, Revision 1

TSTF-230, Revision 1 (ADAMS Accession No. ML040570110), was submitted to the NRC on June 15, 1999, and was made available for plant-specific adoption via incorporation into Revision 2 of the ISTS (NUREG-1434) on June 30, 2001. Following a DBA, the residual heat removal (RHR) suppression pool cooling system removes heat from the suppression pool. The

suppression pool is designed to absorb the sudden input of heat from the primary system. In the long term, the pool continues to absorb residual heat generated by fuel in the reactor core. Some means must be provided to remove heat from the suppression pool so that the temperature inside the primary containment remains within design limits. This function is provided by two redundant RHR suppression pool cooling subsystems.

RBS TS 3.6.2.3 currently requires that two RHR suppression pool cooling subsystems be operable in Modes 1, 2, and 3. When two RHR suppression pool cooling subsystems are inoperable, the current Required Action and Completion Time states to be in Mode 3 in 12 hours and be in Mode 4 in 36 hours. The licensee is proposing that when two RHR suppression pool cooling subsystems are inoperable, 8 hours be given to restore one RHR suppression pool cooling subsystem to operable status. If this proposed Required Action can not be completed within the Completion Time, then the licensee will be required to be in Mode 3 in 12 hours and be in Mode 4 in 36 hours. The 8 hour Completion Time is considered acceptable due to the low probability of a DBA occurring. The NRC staff has concluded that the licensee's proposal is consistent with the intent of TSTF-230, Revision 2. Based on the above, the NRC staff finds the proposed change is acceptable.

3.6 Adoption of TSTF-306, Revision 2

TSTF-306, Revision 2 (ADAMS Accession No. ML003725864), was submitted to the NRC on June 20, 2000, and was made available for plant-specific adoption via incorporation into Revision 2 of the ISTS (NUREG-1434) on June 30, 2001.

TS LCO 3.3.6.1 currently requires that the primary containment and drywell isolation instrumentation for various listed functions be operable as stated in Table 3.3.6.1-1. The instrumentation ensures that various flow paths into and out of the primary containment and drywell are isolated when required during a DBA. For some of the primary containment and drywell isolation instrumentation, inoperability may eventually require that the flow path be isolated. Long-term operation of the plant in this condition is acceptable since isolating the affected flow path accomplishes the safety function of the inoperable channel.

The licensee is proposing to add a new Action Note 1 in LCO 3.3.6.1, and renumber the existing note as Note 2. The new note will read:

1. Penetration flow paths, except for the drywell 24 inch purge valve penetration flow path, may be unisolated intermittently under administrative controls.

In the new note, the administrative controls consist of stationing a dedicated operator at the controls of the valve, who is in continuous communication with the control room. The NRC staff concludes that this change is acceptable since the penetrations can be rapidly isolated when a need for primary containment and/or drywell isolation is indicated. Due to the size of the drywell 24-inch purge valve, this flow path may not be opened under administrative controls. The NRC staff has concluded that the licensee's proposal is consistent with the intent of TSTF-306, Revision 2. Based on the above, the NRC staff concludes that the proposed changes are acceptable.

4.0 REGULATORY COMMITMENT

In support of the proposed application, the licensee provided in its January 21, 2009, submittal the following regulatory commitment:

> RBS will periodically monitor and trend the time it takes for each DG to reach steady state operation to identify degradation of governor and voltage regulator performance.

The licensee committed to complete the above commitment upon the implementation of the TS amendment. The NRC concludes this commitment is acceptable.

5.0 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.

6.0 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 March 24, 2009 (74 FR 12392). 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.

7.0 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 Contributors: A. Lewin
V. Goel

Date: August 11, 2009

August 11, 2009

Vice President, Operations
Entergy Operations, Inc.
River Bend Station
5485 U.S. Highway 61N
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION, UNIT 1 - ISSUANCE OF AMENDMENT RE: ADOPTION OF TECHNICAL SPECIFICATION TASK FORCE IMPROVED STANDARD TECHNICAL SPECIFICATION CHANGE TRAVELERS TSTF-163, TSTF-222, TSTF-230, AND TSTF-306 (TAC NO. ME0406)

Dear Sir or Madam:

The Commission has issued the enclosed Amendment No. 165 to Facility Operating License No. NPF-47 for the River Bend Station, Unit 1. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated January 21, 2009, as supplemented by letters dated January 23 and June 22, 2009.

The amendment: 1) revises references in TS 5.5.7, "Ventilation Filter Testing Program (VFTP)"; 2) corrects an editorial error in TS 3.7.2, "Control Room Fresh Air (CRFA) System"; 3) adopts Technical Specification Task Force (TSTF)-163, Revision 2, "Minimum vs. Steady State Voltage and Frequency"; 4) adopts TSTF-222, Revision 1, "Control Rod Scram Time Testing"; 5) adopts TSTF-230, Revision 1, "Add new Condition B to LCO 3.6.2.3 'RHR Suppression Pool Cooling'"; and 6) adopts TSTF-306, Revision 2, "Add Action to LCO 3.3.6.1 to give option to isolate the penetration."

A copy of our related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next biweekly *Federal Register* notice.

Sincerely,

/RA/

Alan B. Wang, Project Manager
Plant Licensing Branch IV
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-458
Enclosures:
1. Amendment No. 165 to NPF-47
2. Safety Evaluation
cc w/encls: Distribution via Listserv

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RidsOgcRp Resource
RidsRgn4MailCenter Resource
ALewin, NRR/DIRS/ITSB
VGoel, NRR/DE/EEEB

ADAMS Accession No. ML092010370 *SE memo dated

OFFICE	NRR/LPL4/PM	NRR/LPL4/LA	DIRS/ITSB/BC	DE/EEEB/BC	OGC	NRR/LPL4/BC	NRR/LPL4/PM
NAME	ABWang	JBurkhardt	RElliott*	GWilson*	BHarris	MMarkley CFLyon for	ABWang CFLyon for
DATE	7/29/09	7/27/09	5/26/09	7/15/09	8/5/09	8/11/09	8/11/09

OFFICIAL AGENCY RECORD