

September 22, 2000

Mr. Randall K. Edington  
Vice President - Operations  
Entergy Operations, Inc.  
River Bend Station  
P. O. Box 220  
St. Francisville, LA 70775

SUBJECT: RIVER BEND STATION, UNIT 1 - ISSUANCE OF AMENDMENT RE: FUEL BUILDING AND FUEL BUILDING VENTILATION SYSTEM REQUIREMENTS (TAC NO. MA8916)

Dear Mr. Edington:

The Commission has issued the enclosed Amendment No. 113 to Facility Operating License No. NPF-47 for the River Bend Station, Unit 1 (RBS). The amendment approves changes to the RBS Updated Final Safety Analysis Report in response to your application dated May 8, 2000, as supplemented August 30, 2000. The August 30, 2000, supplement provided additional clarifying information that does not change the initial no significant hazards consideration determination.

The amendment revises Technical Specifications to remove the fuel building (FB) and the FB ventilation system from the requirements associated with secondary containment during power operation (except during movement of recently irradiated fuel assemblies in the FB).

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/

Jefferey F. Harold, Project Manager, Section 1  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-458

Enclosures: 1. Amendment No. 113 to NPF-47  
2. Safety Evaluation

cc w/encls: See next page

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\*No major changes made to SE

\*\* See previous concurrence

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

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Entergy Operations, Inc.  
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Jefferey F. Harold, Project Manager, Section 1  
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Docket No. 50-458

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2. Safety Evaluation

cc w/encls: See next page

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

ENERGY GULF STATES, INC. \*\*

AND

ENERGY OPERATIONS, INC.

DOCKET NO. 50-458

RIVER BEND STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 113  
License No. NPF-47

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Entergy Gulf States, Inc.\* (the licensee) dated May 8, 2000, as supplemented August 30, 2000, 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

---

\* Entergy Operations, Inc. is authorized to act as agent for Entergy Gulf States, Inc, and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

\*\*Entergy Gulf States, Inc., has merged with a wholly owned subsidiary of Entergy Corporation. Entergy Gulf States, Inc. was the surviving company in the merger.

- 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. 113 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 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Gramm, Chief, Section 1  
Project Directorate IV & Decommissioning  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to Facility Operating  
License

Date of Issuance: September 22, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 113

FACILITY OPERATING LICENSE NO. NPF-47

DOCKET NO. 50-458

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by Amendment number and contain marginal lines indicating the areas of change.

<u>Remove</u>	<u>Insert</u>
3.3-58	3.3-58
3.3-59	3.3-59
3.3-60	3.3-60
3.3-61	3.3-61
3.6-46	3.6-46
3.6-47	3.6-47
3.6-48	3.6-48
3.6-49	3.6-49
3.6-50	3.6-50
3.6-55	3.6-55
3.6-56	3.6-56
3.6-57	3.6-57
3.6-58	3.6-58
3.10-1	3.10-1



ACTIONS		
CONDITION	REQUIRED ACTION	COMPLETION TIME
C. (continued)	C.1.2 Declare associated isolation dampers inoperable.	1 hour
	<u>AND</u>	
	C.2.1 Place the associated ventilation subsystem in operation.	1 hour
	<u>OR</u>	
	C.2.2 Declare associated ventilation subsystem inoperable.	1 hour

SURVEILLANCE REQUIREMENTS

-----NOTES-----

1. Refer to Table 3.3.6.2-1 to determine which SRs apply for each Isolation Function.
  2. When a channel is placed in an inoperable status solely for performance of required Surveillances, entry into associated Conditions and Required Actions may be delayed for up to 6 hours, provided the associated Function maintains secondary containment isolation capability.
- 

SURVEILLANCE		FREQUENCY
SR 3.3.6.2.1	Perform CHANNEL CHECK.	12 hours
SR 3.3.6.2.2	Perform CHANNEL FUNCTIONAL TEST.	92 days

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.3.6.2.3      Calibrate the trip unit.	92 days
SR 3.3.6.2.4      Perform CHANNEL CALIBRATION.	18 months
SR 3.3.6.2.5      Perform LOGIC SYSTEM FUNCTIONAL TEST.	18 months

Table 3.3.6.2-1 (page 1 of 1)  
Secondary Containment and Fuel Building Isolation Instrumentation

FUNCTION	APPLICABLE MODES AND OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS PER TRIP SYSTEM	SURVEILLANCE REQUIREMENTS	ALLOWABLE VALUE
1. Reactor Vessel Water Level — Low Level 2	1.2.3	2	SR 3.3.6.2.1 SR 3.3.6.2.2 SR 3.3.6.2.3 SR 3.3.6.2.4 SR 3.3.6.2.5	> -47 inches
2. Drywell Pressure — High	1.2.3	2	SR 3.3.6.2.1 SR 3.3.6.2.2 SR 3.3.6.2.3 SR 3.3.6.2.4 SR 3.3.6.2.5	≤ 1.88 psid
3. Fuel Building Ventilation Exhaust Radiation — High (IRMS*RE5A)	(a)	1	SR 3.3.6.2.1 SR 3.3.6.2.2 SR 3.3.6.2.4 SR 3.3.6.2.5	≤ 2.18 x 10 <sup>3</sup> μCi/sec
4. Fuel Building Ventilation Exhaust Radiation — High (IRMS*RE5B)	(a)	1	SR 3.3.6.2.1 SR 3.3.6.2.2 SR 3.3.6.2.4 SR 3.3.6.2.5	≤ 7.05 x 10 <sup>-4</sup> μCi/cc
5. Manual Initiation	1.2.3. (a)	2	SR 3.3.6.2.5	NA

(a) During movement of recently irradiated fuel assemblies in the fuel building for fuel building isolation.

3.6 CONTAINMENT SYSTEMS

3.6.4.1 Secondary Containment- Operating

| LCO 3.6.4.1 The shield building and auxiliary building shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Secondary containment inoperable.	A.1 Restore secondary containment to OPERABLE status.	4 hours
B. Required Action and associated Completion Time not met.	B.1 Be in MODE 3.	12 hours
	<u>AND</u> B.2 Be in MODE 4.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.1.1 Verify shield building annulus and auxiliary building vacuum is $\geq 3.0$ and $\geq 0.0$ inch of vacuum water gauge, respectively.	24 hours

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.6.4.1.2	Verify all secondary containment equipment hatches are closed and sealed and loop seals filled.	31 days
SR 3.6.4.1.3	Verify each secondary containment access door is closed, except when the access opening is being used for entry and exit.	31 days
SR 3.6.4.1.4	Verify each standby gas treatment (SGT) subsystem will draw down the shield building annulus and auxiliary building to $\geq 0.5$ and $\geq 0.25$ inch of vacuum water gauge in $\leq 18.5$ and $\leq 13.5$ seconds, respectively.	18 months on a STAGGERED TEST BASIS
SR 3.6.4.1.5	Deleted	Not Applicable
SR 3.6.4.1.6	Verify each SGT subsystem can maintain $\geq 0.5$ and $\geq 0.25$ inch of vacuum water gauge in the shield building annulus and auxiliary building, respectively, for 1 hour.	18 months on a STAGGERED TEST BASIS
SR 3.6.4.1.7	Deleted	Not Applicable

3.6 CONTAINMENT SYSTEMS

3.6.4.2 Secondary Containment Isolation Dampers (SCIDs) and Fuel Building Isolation Dampers (FBIDs)

LCO 3.6.4.2 Each SCID and FBID shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3 for secondary containment isolation.  
During movement of recently irradiated fuel assemblies in the fuel building for fuel building isolation.

ACTIONS

-----NOTES-----

1. Penetration flow paths may be unisolated intermittently under administrative controls.
  2. Separate Condition entry is allowed for each penetration flow path.
  3. Enter applicable Conditions and Required Actions for systems made inoperable by SCIDs or FBIDs.
- 

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more penetration flow paths with one SCID or FBID inoperable.	A.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic damper, closed manual damper, or blind flange.  <u>AND</u>	8 hours          (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. (continued)	<p>A.2 -----NOTE----- Isolation devices in high radiation areas may be verified by use of administrative means. ----- Verify the affected penetration flow path is isolated.</p>	Once per 31 days
B. One or more penetration flow paths with two SCIDs or two FBIDs inoperable.	B.1 Isolate the affected penetration flow path by use of at least one closed and de-activated automatic damper, closed manual damper, or blind flange.	4 hours
C. Required Action and associated Completion Time of Condition A or B not met for SCIDs in MODE 1, 2, or 3.	<p>C.1 Be in MODE 3. <u>AND</u> C.2 Be in MODE 4.</p>	<p>12 hours  36 hours</p>
D. Required Action and associated Completion Time of Condition A or B not met for FBIDs during movement of recently irradiated fuel assemblies in the fuel building.	<p>-----NOTE----- LCO 3.0.3 is not applicable. ----- D.1 Suspend movement of recently irradiated fuel assemblies in the fuel building.</p>	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE		FREQUENCY
SR 3.6.4.2.1	Verify the isolation time of each required power operated automatic SCID and FBID is within limits.	92 days
SR 3.6.4.2.2	Verify each required automatic SCID and FBID actuates to the isolation position on an actual or simulated automatic isolation signal.	18 months

3.6 CONTAINMENT SYSTEMS

3.6.4.5 Fuel Building

LCO 3.6.4.5 The fuel building shall be OPERABLE.

| APPLICABILITY: During movement of recently irradiated fuel assemblies in the fuel building.

ACTIONS

-----NOTE-----  
LCO 3.0.3 is not applicable.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Fuel building inoperable	A.1 Suspend movement of recently irradiated fuel assemblies in the fuel building.	Immediately

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.4.5.1 Verify fuel building vacuum is $\geq$ 0.25 inch of vacuum water gauge.	24 hours
SR 3.6.4.5.2 Verify all fuel building equipment hatch covers are installed.	31 days
SR 3.6.4.5.3 Verify each fuel building access door is closed, except when the access opening is being used for entry and exit.	31 days

### 3.6 CONTAINMENT SYSTEMS

| 3.6.4.6 Deleted

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3.6 CONTAINMENT SYSTEMS

3.6.4.7 Fuel Building Ventilation System - Fuel Handling

LCO 3.6.4.7 Two fuel building ventilation charcoal filtration subsystems shall be OPERABLE and one shall be operating in emergency mode.

| APPLICABILITY: During movement of recently irradiated fuel assemblies in the fuel building.

ACTIONS

-----NOTE-----  
LCO 3.0.3 is not applicable.  
-----

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One fuel building ventilation charcoal filtration subsystem inoperable.	A.1 Restore fuel building ventilation charcoal filtration subsystem to OPERABLE status.	7 days
B. Required Action and associated Completion Time of Condition A not met.  <u>OR</u>  Two fuel building ventilation charcoal filtration subsystems inoperable  <u>OR</u>  One fuel building ventilation charcoal filtration subsystem not in operation.	B.1 Suspend movement of recently irradiated fuel assemblies in the fuel building.	Immediately

## 3.10 SPECIAL OPERATIONS

## 3.10.1 Inservice Leak and Hydrostatic Testing Operation

LCO 3.10.1 The average reactor coolant temperature specified in Table 1.1-1 for MODE 4 may be changed to "NA," and operation considered not to be in MODE 3; and the requirements of LCO 3.4.10, "Residual Heat Removal (RHR) Shutdown Cooling System — Cold Shutdown," may be suspended, to allow performance of an inservice leak or hydrostatic test provided the following MODE 3 LCOs are met:

- | a. LCO 3.3.6.2, "Secondary Containment and Fuel Building Isolation Instrumentation," Functions 1, 2, and 5 of Table 3.3.6.2-1;
- | b. LCO 3.6.4.1, "Secondary Containment — Operating";
- | c. LCO 3.6.4.2, "Secondary Containment Isolation Dampers (SCIDs) and Fuel Building Isolation Dampers (FBIDs)";
- | d. LCO 3.6.4.3, "Standby Gas Treatment (SGT) System";
- | e. LCO 3.6.4.4, "Annulus Mixing System"; and
- | f. LCO 3.6.4.5, "Fuel Building";

APPLICABILITY: MODE 4 with average reactor coolant temperature > 200°F.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 113 TO FACILITY OPERATING LICENSE NO. NPF-47

ENTERGY OPERATIONS, INC.

RIVER BEND STATION, UNIT 1

DOCKET NO. 50-458

1.0 INTRODUCTION

By letter dated May 8, 2000, as supplemented by letter dated August 30, 2000, Entergy Operations, Inc., the licensee for River Bend Station, Unit 1 (RBS), requested an amendment to Facility Operating License No. NPF-47 to revise the technical specifications (TSs) by removing the Fuel Building (FB) and the FB Ventilation System (FBVS) from the secondary containment system boundary. Specifically, the proposed amendment would revise TSs 3.3.6.2, 3.6.4.1, 3.6.4.2, 3.6.4.5, 3.6.4.6, 3.6.4.7, and 3.10.1.

RBS TSs specify that the FB is required to be operable during reactor operational Modes 1, 2, 3, 4, and 5, as well as during movement of irradiated fuel assemblies. The proposed amendment will revise the TSs and separate the FB and FBVS from the secondary containment system boundary during reactor operational Modes 1, 2, and 3. The changes will also revise the TSs where operability of the FBVS will no longer be required during reactor operational Modes 4 and 5, but operability will be required when moving recently irradiated fuel. Amendment 85, which was approved by the staff on January 11, 1996, defined "recently irradiated fuel" as "fuel that occupied part of a critical reactor core within the previous 11 days."

2.0 BACKGROUND

The secondary containment at RBS consists of three structures, the FB, the Auxiliary Building, and the Shield Building. The Shield Building completely encloses the steel primary containment and those components that may be postulated to contain primary system fluid, and serves as a secondary containment. The function of the secondary containment is to contain, dilute, and hold up highly radioactive fission products that may leak from primary containment following a design-basis accident (DBA), or that may be released during certain operations that take place inside primary containment when primary containment is not required to be operable. The secondary containment is designed to function in conjunction with the operation of the Standby Gas Treatment System (SGTS), FBVS, and the closure of certain valves whose lines penetrate the secondary containment to reduce the activity level of the fission products prior to release to the environment. The secondary containment ventilation system is a safeguard system which maintains a negative pressure in the secondary containment enclosure upon detection of high area radiation. RBS's Updated Final Safety Analysis Report (UFSAR), Section 6.2, describes the containment systems.

ENCLOSURE

The FBVS requires that two FB, Ventilation charcoal filtration subsystems must be operable during movement of irradiated fuel in the FB and one (standby system) must be operating in the emergency mode during movement of irradiated fuel. These requirements were implemented to ensure that, in the event of a postulated fuel-handling accident, the FB air contaminated with fission products released from the damaged fuel would be treated and filtered by the FBVS filters prior to release to the environment. RBS's UFSAR, Section 9.4.2, describes the FBVS.

### 3.0 EVALUATION

The licensee proposed to amend the TS requirements for the FB and FBVS. These changes have no impact on any other safety-related structure, system, or component. The FB portion of the secondary containment boundary is not an active component that could affect the proper operation of any other essential safety feature or component. Also, the accident mitigating features that are currently credited in response to the DBA are unchanged by the proposed TS change.

The RBS secondary containment is composed of annulus, auxiliary building, and fuel-handling building (FHB), and a separate ventilation treatment system is provided for each fuel and auxiliary building. The current RBS design basis leak rate of the primary to the secondary containment is 0.26 percent of the containment volume per day for the duration of a postulated loss-of-coolant accident (LOCA). This leakage is assumed to be released entirely to the annulus, except annulus bypass leakage through containment isolation valves and containment air locks. The annulus bypass leakage is assumed to go to the auxiliary and FHBs where it is processed by the SGTS and the FBVS prior to release to the environment. The containment annulus bypass leakage is limited by the RBS TS to be less than 13,500 cc/hour.

By the proposed TS changes, the licensee assumes that the annulus bypass leakage, at 13,500 cc/hour, is directly released to the environment without filtration by the SGTS or FBVS for the duration of the accident since the FB is removed from the secondary containment boundary and credit for FB integrity is not taken. The licensee further assumes all annulus bypass leakage directed to the FB (not to the auxiliary building) to be conservative. To demonstrate the adequacy of the RBS engineered safety feature systems designed to mitigate the radiological consequences of the DBAs with the FB removed from the secondary containment boundary, the licensee reevaluated the offsite and control room radiological consequences resulting from the postulated LOCA.

The results of the licensee's offsite and control room radiological consequence analyses are contained in its May 8, 2000, submittal. In its submittal, the licensee concluded that the radiological consequences at the exclusion area boundary (EAB) and low-population zone (LPZ), with direct release of the annulus bypass leak without filtration, will still be within the dose reference values given in 10 CFR Part 100, and that the radiological consequence to the control room operator will still be within the dose criteria specified in General Design Criterion (GDC) 19 of 10 CFR Part 50.

To review the licensee's radiological consequence analyses, the staff performed confirmatory dose calculations using 13,500 cc/hour annulus bypass leak with and without filtration at a reactor power level of 3100 megawatts thermal. The staff finds that the increase in the radiological doses due to the proposed removal of the FB from the secondary containment boundary and deletion of the FBVS are minimal (less than 2.5 percent). The staff also

confirmed that the resulting doses are still well within the relevant dose criteria specified in 10 CFR Part 100 and GDC 19 of Appendix A to 10 CFR Part 50. The resulting radiological doses at the EAB and LPZ, and in the control room calculated by the staff are given in Table 1. The major parameters and assumptions used by the staff are given in Table 2.

**TABLE 1**  
**Radiological Consequences of Loss-of-Coolant Accident**  
**(rem)**

Direct release of the annulus bypass leak to the environment without filtration

EAB <sup>(1)</sup>		LPZ <sup>(2)</sup>		Control Room	
Thyroid	WB <sup>(3)</sup>	Thyroid	WB	Thyroid	WB
85	4	118	2	3	<1

Release of the annulus bypass leak to the environment with filtration

EAB		LPZ		Control Room	
Thyroid	WB	Thyroid	WB	Thyroid	WB
83	4	115	2	3	<1

Dose Acceptance Criteria<sup>(4)</sup>

EAB		LPZ		Control Room <sup>(5)</sup>	
Thyroid	WB	Thyroid	WB	Thyroid	WB
300	25	300	25	30	5

<sup>1</sup> Exclusion area boundary

<sup>2</sup> Low population zone

<sup>3</sup> Whole body

<sup>4</sup> 10 CFR Part 100

<sup>5</sup> Standard Review Plan

TABLE 2  
Assumptions Used to Evaluate  
Radiological consequence  
Loss-of-Coolant Accident

<u>Parameter</u>	<u>Value</u>
Reactor Power MWt	3100
Fraction of core inventory released, fractions	
Noble gases	1.0
Iodine	0.5
Iodine chemical forms, fractions	
Organic	0.04
Elemental	0.91
Particulate	0.05
Primary containment leakage, %/day	0.26
Secondary containment bypass leakage, cc/hour	1.35E+4
Penetration valve leakage control system leakage, cc/hour	1.70E+5
Primary containment free volume, ft <sup>3</sup>	1.2E+6
Drywell volume, ft <sup>3</sup>	2.4E+5
Drywell leakage (suppression pool bypass), %	3.0
Effective suppression pool decontamination factors	
Noble gas	1
Organic iodine	1
Elemental iodine	7.87
Particulate iodine	7.87
Suppression pool water volume, ft <sup>3</sup>	1.23E+5
ECCS leak rate, gpm	1.0
ECCS leak iodine partition factor	10
SGTS flow rate, cfm	2.5E+3

### 3.1 Original Requirements/Licensee's Proposal

RBS was granted an operating license by the Nuclear Regulatory Commission (NRC) on November 20, 1985. The licensee has implemented NUREG-1434, Revision 1, "Standard Technical Specifications, General Electric Plants, BWR/6."

The licensee requested changes to the following TSs:

- TS 3.3.6.2 - Secondary Containment Isolation Instrumentation
- TS 3.6.4.1 - Secondary Containment-Operating
- TS 3.6.4.2 - Secondary Containment Isolation Dampers (SCIDs)
- TS 3.6.4.5 - FB
- TS 3.6.4.6 - FB Ventilation System-Operating
- TS 3.6.4.7 - FB Ventilation System-Fuel Handling
- TS 3.10.1 - Inservice Leak and Hydrostatic Testing Operation

The licensee has justified the above TS changes by performing offsite and control room radiological consequence analyses under the regulatory requirements established by TS 5.5.4, "Radioactive Effluent Controls Program." In its submittal, the licensee concluded that the requirements for FB effluent release monitoring under this program are unaffected by this proposed amendment.

The requested changes will affect the above TS as follows:

#### CURRENT

##### 3.3.6.2 Secondary Containment Isolation Instrumentation

LCO 3.3.6.2 The secondary containment isolation instrumentation for each Function in Table 3.3.6.2-1 shall be OPERABLE.

#### ACTIONS

CONDITION B. One or more automatic Functions with secondary containment isolation capability not maintained.

REQUIRED ACTION B.1 Restore secondary containment isolation capability

#### SURVEILLANCE REQUIREMENTS

#### NOTE

1. Refer to Table 3.3.6.2-1 to determine which SRs [Surveillance Requirement] apply for each Secondary Containment Isolation Function

#### PROPOSED

##### 3.3.6.2 Secondary Containment and Fuel Building Isolation Instrumentation

LCO 3.3.6.2 The isolation instrumentation for each Function in Table 3.3.6.2-1 shall be OPERABLE.

#### ACTIONS

CONDITION B. One or more automatic Functions with secondary containment or Fuel Building isolation capability not maintained.

REQUIRED ACTION B.1 Restore the applicable isolation capability

#### SURVEILLANCE REQUIREMENTS

#### NOTE

1. Refer to Table 3.3.6.2-1 to determine which SRs apply for each Isolation Function

The licensee states that, "The TS is being amended to reflect exclusion of the fuel building from the requirements associated with the secondary containment boundary. The headings, LCO, CONDITIONS, REQUIRED ACTIONS, and NOTES are revised to maintain applicable requirements for fuel building isolation instrumentation while distinguishing this isolation function from the secondary containment function. In addition, the APPLICABILITY for the fuel building isolation functions are revised to only require OPERABILITY during movement of "recently irradiated" fuel assemblies in the fuel building. The TS Bases will define the term "recently irradiated" as "fuel that has occupied part of a critical reactor core within the previous 11 days."

The NRC staff finds that the licensee's proposed changes to the FB isolation instrumentation is acceptable. The proposed operability requirements for the FB ventilation exhaust radiation instrumentation ensures automatic closure of the appropriate FB isolation damper (FBIDs) and initiation of FB ventilation flow through the filtration system. FB isolation ensures that fission products released due to fuel uncover or a dropped fuel assembly are also maintained within regulatory limits.

#### CURRENT

3.6.4.1 Secondary Containment-Operating

LCO 3.6.4.1 The shield building, auxiliary building, and fuel building shall be OPERABLE.

#### SURVEILLANCE REQUIREMENTS

SR 3.6.4.1.1 Verify, shield building annulus, auxiliary building and fuel building vacuum is  $\geq 3.0$ ,  $\geq 0.0$ , and  $\geq 0.0$  inch of vacuum water gauge, respectively.

SR 3.6.4.1.5 Verify each fuel building ventilation subsystem will draw down the fuel building to  $\geq 0.25$  inch of vacuum water gauge in  $\leq 12.5$  seconds.

FREQUENCY: 18 months on a STAGGERED TEST BASIS.

SR 3.6.4.1.7 Verify each fuel building ventilation subsystem can maintain  $\geq 0.25$  inch of vacuum water gauge in the fuel building for 1 hour.

FREQUENCY: 18 months on a STAGGERED TEST BASIS.

PROPOSED

LCO 3.6.4.1 The shield building and auxiliary building shall be OPERABLE.

**SURVEILLANCE REQUIREMENTS**

SR 3.6.4.1.1 Verify, shield building annulus and auxiliary building vacuum is  $\geq 3.0$  and  $\geq 0.0$  inch of vacuum water gauge, respectively.

SR 3.6.4.1.5 This SR and FREQUENCY is being deleted.

SR 3.6.4.1.7 This SR and FREQUENCY is being deleted.

The licensee states that, "The TS is being amended to exclude the fuel building from the requirements of secondary containment during MODES 1, 2, and 3. Associated surveillance requirements are also modified or deleted to reflect the change."

The NRC staff found this change acceptable, since the FB portion of the secondary containment boundary is not an active component that could affect the proper operation of any essential safety feature or component. In reactor operational Modes 1, 2, and 3, a LOCA could lead to a fission product release to primary containment that leaks to secondary containment. Therefore, secondary containment operability is required during the same operating conditions that requires primary containment operability. The modified secondary containment boundary (excluding the FB in operating Modes 1, 2, and 3) will still be capable of performing the function of limiting offsite and control room dose to within regulatory limits.

CURRENT

3.6.4.2 Secondary Containment Isolation Dampers (SCIDs)

LCO 3.6.4.2 Each SCID shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3,  
During movement of irradiated fuel assemblies in the fuel building for fuel building isolation.

**ACTIONS**

**NOTES**

3. Enter applicable Conditions and Required Actions for systems made inoperable by SCIDs.

CONDITION A. One or more penetration flow paths with one SCID inoperable.

- CONDITION B. One or more penetration flow paths with two SCIDs inoperable.
- CONDITION C. Required Action and associated Completion Time of Condition A or B not met in MODE 1, 2, or 3.
- CONDITION D. Required Action and associated Completion Time of Condition A or B not met during movement of irradiated fuel assemblies in the fuel building.

REQUIRED ACTION D.1 Suspend movement of irradiated fuel assemblies in the fuel building.

#### SURVEILLANCE REQUIREMENTS

- SR 3.6.4.2.1 Verify the isolation time of each required power operated automatic SCID is within limits.
- SR 3.6.4.2.2 Verify each required automatic SCID actuates to the isolation position on an actual or simulated automatic isolation signal.

#### PROPOSED

3.6.4.2 Secondary Containment Isolation Dampers (SCIDs) and Fuel Building Isolation Dampers (FBIDs)

LCO 3.6.4.2 Each SCID and FBID shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3 for secondary containment isolation  
During movement of recently irradiated fuel assemblies in the fuel building for fuel building isolation.

#### ACTIONS

#### NOTES

3. Enter applicable Conditions and Required Actions for systems made inoperable by SCIDs or FBIDs.

CONDITION A. One or more penetration flow paths with one SCID or FBID inoperable.

CONDITION B. One or more penetration flow paths with two SCIDs or two FBIDs inoperable.

CONDITION C. Required action and associated Completion Time of Condition A or B not met for SCIDs in MODE 1, 2, or 3.

CONDITION D. Required action and associated Completion Time of Condition A or B not met for FBIDs during movement of recently irradiated fuel assemblies in the fuel building.

**REQUIRED ACTION D.1** Suspend movement of recently irradiated fuel assemblies in the fuel building.

#### **SURVEILLANCE REQUIREMENTS**

**SR 3.6.4.2.1** Verify the isolation time of each required power operated automatic SCID and FBID is within limits.

**SR 3.6.4.2.2** Verify each required automatic SCID and FBID actuates to the isolation position on an actual or simulated automatic isolation signal.

The licensee states that, "The TS is being amended to reflect exclusion of the fuel building from the requirements associated with the secondary containment boundary. The headings, LCO, CONDITIONS, REQUIRED ACTIONS, and NOTES are revised to maintain the applicable requirements for fuel building isolation dampers while distinguishing this isolation function from the secondary containment function. In addition, the APPLICABILITY for the fuel building isolation dampers are revised to only require OPERABILITY during movement of "recently" irradiated fuel assemblies in the fuel building."

The NRC staff finds that the licensee's proposed change to the applicability for the FBIDs is acceptable. The operability requirements for SCIDs and FBIDs help ensure that an adequate secondary containment boundary is maintained during and after a postulated accident by minimizing potential paths to the environment.

#### **CURRENT**

**3.6.4.5** Fuel Building

**APPLICABILITY:** During movement of irradiated fuel assemblies in the fuel building.

#### **ACTIONS**

**REQUIRED ACTION A.1** Suspend movement of irradiated fuel assemblies in the fuel building.

#### **PROPOSED**

**APPLICABILITY:** During movement of recently irradiated fuel assemblies in the fuel building.

#### **ACTIONS**

**REQUIRED ACTION A.1** Suspend movement of recently irradiated fuel assemblies in the fuel building.

The licensee states that, "The TS is being amended so that it is only applicable during movement of "recently" irradiated fuel assemblies in the fuel building. The associated REQUIRED ACTION is also changed to be consistent with the APPLICABILITY."

The NRC staff's review found this change acceptable. Regardless of the plant operating Mode, anytime "recently" irradiated fuel is being handled, there is a potential for a FHA, and FB operability is required to mitigate the consequences. The licensee determined that only "recently" irradiated fuel contains sufficient fission products to require operability of accident mitigation features to meet the postulated FHA analysis assumptions. The licensee defines "recently" irradiated fuel as fuel that has occupied part of a critical reactor core within the previous 11 days. The staff accepts this definition as documented in the Amendment 85, which was approved by the staff on January 11, 1996.

#### CURRENT

##### 3.6.4.6 Fuel Building Ventilation System-Operating

#### PROPOSED

This TS is being deleted.

The licensee states that, "The fuel building ventilation charcoal filtration subsystems are not credited in the revised DBA LOCA analysis. The fuel building charcoal filtration subsystems are only required to support the Fuel Handling Accident, which is addressed by TS 3.6.4.7. Therefore, deletion of this TS is acceptable because the charcoal filtration subsystems are not credited as an accident mitigation function during MODES 1, 2, and 3 and do not satisfy any of the criteria of 10 CFR 50.36(c)(2)(ii) for Technical Specification limiting conditions for operations."

The deletion of the Fuel Building Ventilation System-Operating is justified since the FB portion of the secondary containment boundary is not an active component that could affect the proper operation of any essential safety feature or component. The FB charcoal filtration subsystems are only required to support a FHA, which is addressed by TS 3.6.4.7. Therefore, deletion of this TS is acceptable because the charcoal filtration subsystems are not credited as an accident mitigation function during MODES 1, 2, and 3. FB Ventilation charcoal filtration subsystems will be operated during the movement of "recently" irradiated fuel in the FB and one standby system will operate in the emergency mode.

#### CURRENT

##### 3.6.4.7 Fuel Building Ventilation System - Fuel Handling

APPLICABILITY: During movement of irradiated fuel assemblies in the fuel building.

#### ACTIONS

REQUIRED ACTION B.1 Suspend movement of irradiated fuel assemblies in the fuel building.

#### PROPOSED

APPLICABILITY: During movement of recently irradiated fuel assemblies in the fuel building.

**ACTIONS**

**REQUIRED ACTION B.1** Suspend movement of recently irradiated fuel assemblies in the fuel building.

The licensee states that, "The TS is being amended so that it is only applicable during movement of "recently" irradiated fuel assemblies in the fuel building. The associated **REQUIRED ACTION** is also changed to be consistent with the **APPLICABILITY**."

The staff agrees with the statement in the licensee's submittal that only recently irradiated fuel contains sufficient fission products to require operability of accident mitigation features to meet the postulated FHA analysis assumptions. Therefore, the applicability requirements for the FBVS features are revised. Further, the FBVS requires that two FB Ventilation charcoal filtration subsystems shall be operable and one shall be operating in emergency mode during movement of recently irradiated fuel in the FB. These requirements were implemented to ensure that, in the event of a postulated FHA, the FB air contaminated with fission products released from the damaged fuel would be treated and filtered by the FBVS filters prior to release to the environment.

**CURRENT**

3.10.1 Inservice Leak and Hydrostatic Testing Operation

- LCO 3.10.1 a. LCO 3.3.6.2, "Secondary Containment Isolation Instrumentation," Functions 1, 2, 3, 4, 5, and 6 of Table 3.3.6.2-1;
- c. LCO 3.6.4.2, "Secondary Containment Isolation Dampers (SCIDs)";
- e. LCO 3.6.4.4, "Annulus Mixing System";
- f. LCO 3.6.4.5, "Fuel Building"; and
- g. LCO 3.6.4.6, "Fuel Building Ventilation System-Operating"

**PROPOSED**

- LCO 3.10.1 a. LCO 3.3.6.2, "Secondary Containment and Fuel Building Isolation Instrumentation," Functions 1, 2, and 5 of Table 3.3.6.2-1;
- c. LCO 3.6.4.2, "Secondary Containment Isolation Dampers (SCIDs) and Fuel Building Isolation Dampers (FBIDs)";
- e. LCO 3.6.4.4, "Annulus Mixing System"; and
- f. LCO 3.3.4.5, "Fuel Building"
- g. Deleted

The licensee states that, "The TS is being amended to delete the reference to LCO 3.6.4.6, "Fuel Building Ventilation System - Operating" since that LCO is no longer required during MODE 3. In addition, an editorial change is proposed to correct an error that was introduced during the conversion to Improved Technical Specifications (Amendment 81). LCO 3.10.1.a. lists Functions 1, 2, 3, 4, 5, and 6 of Table 3.3.6.2-1 as MODE 3 requirements. However, Table 3.3.6.2-1 correctly lists only five functions and only functions 1, 2, and 5 are MODE 3 requirements. Therefore, the references to Functions 3, 4, and 6 are deleted."

The NRC staff finds the licensee's proposed change to the LCO for Inservice Leak and Hydrostatic Testing Operation to be acceptable. The performance of an inservice leak or hydrostatic test are required regardless of FB and FBVS requirements.

In addition, the licensee has updated the following TS Bases:

- B 3.3.6.2 - Secondary Containment and FB Isolation Instrumentation
- B 3.6.4.1 - Secondary Containment-Operating
- B 3.6.4.2 - Secondary Containment Isolation Dampers (SCIDs)
- B 3.6.4.5 - FB
- B 3.6.4.6 - FBVS-Operating
- B 3.6.4.7 - FBVS-Fuel Handling

The NRC staff has completed its review of the proposed changes associated with the above Bases. The staff finds that the proposed changes are 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 (65 FR 37424 dated June 14, 2000). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

#### 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the

Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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