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July 18, 2001

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555

Subject: River Bend Station
Docket No. 50-458
License No. NPF-47
Response to Request for Additional Information (RAI) - License Amendment Request (LAR) 2000-27, Revise Technical Specification 3.6.1.3, "Primary Containment Isolation Valves (PCIVS)"

References:

1. Letter from Entergy Operations, Inc. (EOI) to USNRC, dated January 24, 2001, License Amendment Request (LAR) 2000-27, "IFTS Operation in Modes 1,2 and 3."

File Nos.: G9.5, G9.42

RBF1-01-0152
RBG-45767
CNRO-2001-00031

Gentlemen:

By letter dated January 24, 2001, Entergy Operations, Inc. submitted License Amendment Request (LAR) 2000-27. LAR 2000-27 requested that the NRC approve and issue Technical Specification changes to Technical Specification 3.6.1.3, "Primary Containment Isolation Valve (PCIVs)" related to the Inclined Fuel Transfer System (IFTS) Blind Flange. Based on your review of the submittal, a request for additional information (RAI) was forwarded to Entergy. Attachment 1 provides Entergy's response to these questions. Attachment 2 contains an

A001

information only copy of the marked up Bases. This document contains new commitments. A commitment identification form is provided in attachment 3. If you have any questions, please contact Mr. Gregory P. Norris at (225) 336-6391.

Pursuant to 28 U.S.C.A. Section 1746, I declare under penalty of perjury that the foregoing is true and correct.

Executed on July 18, 2001.

Very truly yours,

JW Leavines for

RJK / gpn
attachment (3)

cc:

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ATTACHMENT 1

TO

LETTER NO. RBF1-01-0152

LICENSE NO. NPF-47

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-458

1. **It is possible that the IFTS bottom gate valve would be open at the onset of a severe accident, with the fuel transfer carriage or cables part way through the open valve. In this regard please:**

   a. **Identify systems required to move the fuel transfer carriage and close the IFTS bottom gate valve, and discuss the availability of these systems (or manual back-up systems) in frequency-dominant sequence;**

   b. **Provide an estimate of the core damage frequency for those events that involve loss of systems needed to operate the carriage or close the valve, based on the latest probabilistic safety analysis; and**

   c. **Confirm whether and how the carriage can be moved and the open valve can be closed in the frequency-dominant core damage events at RBS, including events that involve loss of power to the carriage or valve and loss of lighting. Identify any plant procedures that would govern such actions.**

   Response:

   a. In order to move the fuel transfer carriage and close the bottom valve several of the IFTS components must be operational. The carriage itself is moved by a winch powered by a 480 VAC motor. Failure of the motor, winch, or motor power supply would require that the carriage be manually winched out of the way of the bottom gate valve. Failures that could preclude the closure of the bottom valve include failure of the carriage winch while the carriage is in the lower position, failure of the bottom gate valve or valve hydraulic actuator, or failure of the hydraulic actuator power supply. Additionally failure of power to other IFTS components not directly involved in the movement of the carriage or closure of the bottom valve could prevent manipulation of the carriage and lower valve, since these power failures could cause a master position fault at the IFTS control panels.

      The IFTS system is controlled by two control panels, one in the fuel building and one in the containment. These control panels control normal manipulation of the winch and the bottom valve. Failure of the control panels would cause the failure of the winch and the bottom valve to operate. Aside from the failure of the individual panel components, failure of the station power would cause the failure of these panels and therefore failure of the valve and winch to operate. River Bend Station (RBS) station power is fed by two independent 230 KV lines, RSS1 and RSS2. Approximately half of the station loads are fed off of RSS1 and the other loads are fed from RSS2. During a loss of one of the 230 KV lines, the remaining line can feed the required loads through the use of cross-tie breakers. Closure of the cross-tie breakers is performed manually using system operating procedures (SOPs).

      Currently, the power to the essential components for the IFTS system are split between

RSS1 and RSS2. Loss of either offsite power line will cause loss of some or all of the IFTS function. Therefore, in a partial or full loss of offsite power event, the IFTS system would likely fail as is. The current core damage frequency at River Bend is 9.45E-06/yr. Loss of RSS1 and RSS2 contribute to 2.40E-07/yr and 2.17E-09/yr, respectively. The total LOSP initiator contributes to 79.3 percent of the total core damage sequences. This accounts for a core damage frequency for LOSP events of 7.49E-06/yr.

b. The only system modeled in the River Bend Station (RBS) Probabilistic Safety Assessment (PSA) which affects the Inclined Fuel Transfer System (IFTS) is the electrical distribution system. Failure of the IFTS system or failure of the individual IFTS components are not modeled in the PSA, since these components are not important to core damage. Loss of the offsite power lines RSS1 and RSS2 contribute to 2.40E-07/yr and 2.17E-09/yr, respectively. The total LOSP contributes to 79.3 percent of the total core damage sequences. This accounts for a core damage frequency for LOSP events of 7.49E-06/yr. It can be seen that a total LOSP is the dominant contributor to CDF that could also prevent the closure of the bottom valve. Therefore, only a total LOSP will be discussed further.

   If the bottom valve was open at the initiation of a LOSP event, the bottom valve would have to be closed using a manual hydraulic actuator. (Minor modifications to the IFTS bottom valve hydraulic system will be required.). If the carriage is in the lower IFTS pool at the time of the LOSP, then the carriage would have to be manually winched up before the lower valve could be completely closed. This would require a containment entry. During a severe accident, a containment entry may not be feasible and will not be credited in this discussion. Therefore, this discussion does not account for potential recovery actions to move the carriage during long term LOSP events (i.e. LOSP events where core damage does not occur until several hours into an event). Even with this conservative approach, the probability that a LOSP resulting in core damage would occur while the carriage is in the lower pool is minute.

   The IFTS blind flange will only be removed a maximum of 60 days per operating cycle. Due to the short allowed outage time for the IFTS blind flange, the probability of LOSP resulting in core damage while the blind flange is removed is only 8.21E-07/yr (7.49E-6/yr * 60 days/cycle * 1 cycle/1.5 years * 1 year/365 days = 8.21E-7/year). As stated above, the only time that the lower valve could not be closed manually during a LOSP is if the carriage is in the lower pool at the initiation of a LOSP event. The carriage is only expected to be in the lower pool a small fraction of the time that the IFTS blind flange is removed.

   Based upon current schedules for refueling outage (RF) 10, the time duration for scheduled activities associated with opening the bottom valve is approximately 40 hours. This includes time for operator training (~ 6 hours), IFTS surveillance and post modification testing (~ 12 hours), and movement of new fuel into the upper containment (~24 hours). The time the carriage will be in the lower pool will be a fraction of this 40-hour period based on the operation of the system. The only time the carriage should be in the lower position is during the final stages of IFTS testing, short periods during operator training, or while loading new fuel into the carriage. All other times the carriage is expected to be either in the transfer tube with the bottom valve closed or in the upper pool with the bottom valve closed. Note that while the carriage is in motion in the IFTS tube (i.e. travel to or from the lower pool), while the IFTS tube is draining, and while the IFTS tube is filling, the bottom valve is closed and can not be opened due to the system interlocks. It can be seen from the above discussion that the carriage will not be in the bottom pool the entire time during the scheduled activities associated with opening the bottom valve. However, the below PSA discussion will assume that the carriage will be in the lower pool blocking the closure of the bottom valve for the entire 40-hour period.

Based on this 40 hour period, the core damage frequency for LOSP events while the carriage is in the lower position is expected to be no more than 2.28E-08/yr (7.49E-6/yr * 40 hours/cycle * 1 cycle/1.5 years * 1 year/365 days*1day/24hours = 2.28E-08/year). Therefore, the core damage frequency for events which lead to the inability to close the lower valve either from the IFTS control panel or manually is only expected to be 2.28E-08/yr.

c. If the bottom valve was open at the initiation of a full or partial LOSP event, the bottom valve would have to be closed using a manual hydraulic actuator. (Minor modifications to the IFTS bottom valve hydraulic system will be required.) If the carriage is in the lower IFTS pool at the time of the LOSP, then the carriage would have to be manually winched up before the lower valve could be completely closed. This would require a containment entry. During a severe accident, a containment entry may not be feasible.

   Entergy will establish contingency actions, within approved station procedures, to enable the manual closure of the IFTS bottom valve during a loss of offsite power. These contingencies will include the actions necessary to manually operate the lower IFTS upender and IFTS winch in order to raise the IFTS carriage to a position above the bottom valve, when required, prior to its closure. Equipment and tools required for the performance of these contingency actions, including lighting sufficient to perform the tasks during LOSP conditions, will be staged in the area prior to operation of the IFTS bottom valve while in Modes 1, 2, or 3. Personnel required to perform these contingencies will also be trained on the actions and associated procedures prior to operation of the IFTS bottom valve while in Modes 1, 2, or 3.

2. **Please confirm that the structural analyses performed in support of the LAR adequately address the pool hydrodynamic loads associated with release of containment atmosphere through an open IFTS bottom valve in those sequences that can clear the IFTS water seal (e.g., small break loss-of-coolant accidents (LOCAs) with suppression pool bypass and short-term station blackout events). This includes loads on the IFTS transfer tube, the spent fuel storage pool, and adjacent spent fuel racks.**

Response:

The IFTS water seal in the lower pool has the capability to withstand accident containment pressure from a LBLOCA and SBLOCA. This is based on historically low values of actual drywell bypass leakage < 10% of the design value.

In the unlikely event that the value of drywell bypass leakage degrades to > 10% between measurements, the effects of the release into the lower pools is considered inconsequential. This is based of the slow rate of development of the pressure (low flow, slow volume displacement) due to the limited size of the piping delivering the release (4" diameter) to the larger IFTS tube in the lower pools.

Three segregated chambers make up the fuel building spent fuel pool: the fuel storage pool which contains the fuel racks, the transfer (IFTS) pool, and the cask pool. The chambers are separated by concrete walls 3' and 4' thick. Two gates, ~25' deep, allow communication between the fuel storage pool and the other two (IFTS and cask) chambers. The IFTS pool contains the lower IFTS gate valve and a fuel bundle up-ender. Turbulence from IFTS tube bubbling is essentially restricted to the IFTS pool, except for the 4' wide gap in the wall at the location of the gate. The 2' and 3' concrete walls are structurally robust for containing the water disturbance from bubbling.

Refer to River Bend Updated Safety Analysis Report (USAR) Figures 1.2-20 through 23 and Figures 9.1-7, 20, 22 and 33 for drawings of the Fuel Building general arrangement, IFTS and Spent Fuel Pool arrangements.

3. **Please justify why the current commitment to close the upper gate valve and both IFTS drain line isolation valves during periods when the system is not in use should not be extended to include the IFTS bottom gate valve as well, and why this commitment should not be incorporated in the RBS TSs.**

Response:

In order to comply with the current commitments for closing the IFTS upper gate valve and drain valves, the system must be configured with the bottom gate valve closed. Extending the commitments to also include the IFTS bottom gate valve is not necessary given the interlocks described below.

During the periods when the Inclined Fuel Transfer System (IFTS) is not in use, the IFTS carriage must be stored in the containment (raised position) to enable closure of the upper gate valve. With the IFTS carriage is in this raised position, it is located above the upper gate valve, but still extends through the IFTS sheave box and open flap valve. IFTS system interlocks prevent opening of the IFTS bottom gate valve when the IFTS flap valve is open to prevent the creation of a drain pathway from the upper containment pools via IFTS into the lower pools. Interlocks also exist that prevent the IFTS bottom valve from opening when the IFTS tube is flooded, using head pressure of the water column above the bottom gate valve to operate a blocking valve in the bottom valve hydraulics.

Entergy believes that the current commitment to close the upper gate valve and the drain valves whenever the IFTS system is not in use should not be incorporated into the TS. This position is based on existing regulatory guidance as explained below:

NRR Office Letter 803, Rev. 3, states in part:

> "The escalation of commitments into license conditions, requiring prior NRC approval of subsequent changes, should be reserved for matters that satisfy the criteria for inclusion in technical specifications by 10 CFR 50.36 or inclusion in the license to address a significant safety issue. Routine commitments on technical matters that do not satisfy the above criteria for license conditions should be discussed in the staff's safety evaluation but should not be escalated into formal license conditions...For the time being, the staff should continue imposing conditions on license amendments that involve, as a vital element of the staff's approval, the subsequent placement of information in a particular mandated licensing-basis document. Commonly, this type of amendment relocates requirements from a facility's technical specifications to its UFSAR. "

Entergy does not believe the subject commitment meets the criteria of 10 CFR 50.36 for inclusion into the TS or as a license condition. However, Entergy understands the current commitment is an important element of the staff's approval and intends to place that commitment in the RBS commitment tracking system, station procedures, and in the Bases of the TS once the proposed amendment is approved by the staff. A mark-up of the Bases change that Entergy will make in accordance with the Bases Control Program is provided for your information as Attachment 2.

The four criteria that specify items for which an LCO must be established are provided in 10 CFR 50.36. The criteria are:

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 Bases 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 Bases 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 safety assessment has shown to be significant to public health and safety.

The commitment to close of the upper gate and the two drain valves while the IFTS system is not in use are not initial conditions of a DBA or transient analysis. The commitment is an operating restriction intended to lower the probability of a Large Early Release Frequency (LERF) even lower than that evaluated for the 60 day LCO period. The upper gate valve closure is not credited in the LOCA dose analysis supporting removal of the IFTS blind flange. The IFTS drain line, however, is required to have a containment isolation provision to support the LOCA dose analysis for removal of the IFTS blind flange. This is accomplished by a dedicated operator manually closing the IFTS drain valve when directed. As committed, the drain valve will be treated as a primary containment isolation valve and will be maintained in accordance with the primary containment leakage rate testing program (TS 5.5.13) to ensure its leak tightness. Therefore, since the commitment to close the valves whenever the IFTS system is not in use is more restrictive than the LOCA dose analysis assumptions, the commitment should only be reflected in the TS Bases for the LCO time limit rather than in the TS itself or as a license condition. This approach is consistent with NRC regulations and policy described in OL 803.

4. With a full utilization of the IFTS during power operation, the IFTS tube and drain lines will become a part of the containment pressure boundary and radiation barrier. Provide a summary of the evaluation of the IFTS tube and drain lines, including online components and supports, to demonstrate their design adequacy in sustaining the plant operational transients, design basis accident loads and load combinations.

Response:

The following documents contain the evaluation of the IFTS tube and drain line components which are part of the containment boundary, for the loadings specified above. These documents will be available on-site for review.

IFTS Tube {Calc. G13.18.10.0*015 (ER 99-0700)}

The IFTS Tube may be subjected to potential accident environmental temperatures and pressures in the containment, resulting from removal of the IFTS blind flange during modes 1, 2 and 3. The IFTS Tube was evaluated for a temperature 285° F and 40 psig (90 psig total, including 50 psig water column), corresponding to severe accident conditions.

The effects of post-LOCA environmental conditions are combined with additional loadings resulting from utilization of the IFTS during plant operation as discussed in response to item 6.

IFTS Penetrations {Calc. 219.710-FAD-1021 (ER 99-0700)}

Only the containment penetration is exposed to the post-LOCA containment atmosphere, which is no different than that following removal of the IFTS blind flange and transportation of new fuel in modes 1, 2 and 3. Therefore, the IFTS containment penetration will not be subjected to loadings different from those already evaluated. The remaining penetrations are not affected by the removal of the IFTS blind flange and transportation of new fuel during modes 1, 2 and 3.

IFTS Containment Bellows {Calc. 219.710-FAD-1021 (ER 99-0700)}

The IFTS Containment bellows are a currently part of the containment pressure boundary and do not experience any change in conditions as a result of removal of the IFTS blind flange.

IFTS Bottom Valve (F42-HYVF004) {Doc. 0223.336-000-025A}

The IFTS transfer tube bottom valve F42-HYVF004 has rated pressure of 500 psig, which is sufficient to retain the maximum containment design pressure of 15 psig and 50 psig (maximum) water column.

IFTS Drain Line {Calc. AX-144B (ER 99-0922)}

The IFTS drain line was reanalyzed to include the effects of potential post accident containment pressures and temperatures. A temperature and pressure value of 285° F and 90 psig, respectively, were used in the piping analysis. Additionally, dynamic effects of seismic, SRV actuations and LOCA events on the piping stresses and pipe supports were also evaluated.

Analysis Details:

Utilization of the IFTS system, with the IFTS blind flange removed during plant operation (modes 1, 2 & 3) could potentially subject the IFTS drain line to post-LOCA containment environmental conditions and hydrodynamic loading in conjunction with seismic and operating loads. Piping reanalysis was performed to include these additional loads.

The dynamic analysis (modal) of the drain piping includes enveloped response spectra analysis for seismic events utilizing code case N-411, and multiple level response spectrum analysis for hydrodynamic (SRV actuation & LOCA) loadings utilizing Reg. Guide 1.61 damping. The thermal analysis uses a maximum post-LOCA temperature of 285° F. The results of the dynamic loadings are combined by square root of the sum of squares (SRSS) method, prior to combining with static loads by absolute summation.

The piping analysis model includes concentrated mass in addition to the distributed pipe weight. For valves with actuators, the eccentricity of the actuator mass and frequency of the valve stem are included in the model. The piping analysis assumes potential failure of the drain tank nozzle which acts as an anchor for the piping system. The pipe supports are qualified for loads resulting from the piping analysis. Modifications to two pipe supports were completed as a result of increases in piping loads.

Results of the piping analysis indicate that the stresses in the piping and inline components (flanges) are within the code (ASME Section III and ANSI B31.1) allowable limits, with the highest primary stress to allowable ratio of 0.791. Pipe supports meet code design requirements with the specified modifications.

IFTS Drain Valve (SFT-MOV101) {Calc. AX-144B (ER 99-0922); Doc. 0228.216-050-004}

Valve SFT-MOV101 on the drain line is rated at 150 psig, which is sufficient to retain the maximum containment design pressure of 15 psig and 50 psig (maximum) water column. Additionally, the accelerations imposed on the valve and actuator due to seismic loading and hydrodynamic effects of SRV actuations and LOCA were determined to be within the allowable limits.

IFTS Drain Valve (F42-F003) {Calc. AX-144B (ER 99-0922); Doc. 0223.336-000-043}

Valve F42-MOVF003 on the drain line is rated at 150 psig, which is sufficient to retain the maximum containment design pressure of 15 psig and 50 psig (maximum) water column. Additionally, the accelerations imposed on the valve and actuator due to seismic loading and hydrodynamic effects of SRV actuations and LOCA were determined to be within the allowable limits.

Analysis Details (Valves SFT-MOV101 & F42-F003):

In addition to the potential increases in pressure and temperature resulting from the proposed utilization of the IFTS system, with the IFTS blind flange removed during plant operation (modes 1, 2 & 3), the IFTS drain line valves may be subjected to additional inertial loading due to hydrodynamic events. The piping analysis model for the IFTS drain line incorporates the mass, eccentricity and valve stem natural frequency of each motor operated valve. The accelerations experienced by the motor actuated valves, as determined by the piping analysis, have been compared to the vendor specified acceleration allowables and determined to be within the specified limits.

The additional loadings resulting from movement of fuel through the IFTS tube during modes 1, 2 & 3, concurrent with a DBA, include increased temperatures of up to 285° F and containment pressures up to 55 psia, corresponding to severe accident condition. Effects of concurrent loading due to seismic and hydrodynamic events are also considered.

5. **Confirm whether the spent fuel pool analysis accounts for the slushing effect during an safe shutdown earthquake to ensure that the depth of water above the fuel is at 23', as a minimum, to provide sufficient hydraulic pressure overcome the containment peak pressure. Also provide a summary of the analysis.**

Response:

The River Bend spent fuel pool low water level alarm setpoint is at elevation 112' 1". The River Bend pool wall curb is at elevation 113' 4". This gives a normal free board height of the spent fuel pool of 1' 3". The minimum water level to maintain the Tech Spec minimum water coverage of 23' over the spent fuel is only 108' 4". At this water level the free board height of the spent fuel pool would be 5' 0". The RBS spent fuel pool structural analysis accounts for all loading during a seismic event, but the maximum swell height was not analyzed. However, the maximum suppression pool sloshing was evaluated and it was determined to be a maximum of 2' 3". The maximum swell height in the fuel pool is expected to be less that that seen in the suppression pool. However, if the spent fuel pool swell is assumed to be equal to that of the suppression pool, water loss from the pool at normal pool level would be minimal since the normal free board height is 1'3" and the duration of an SSE is only 15 seconds. Additionally, there would be no water loss at the Tech Spec minimum water level of 108' 4" since the free board height of 5' 0" is greater that the expected swell height. Therefore, during a seismic event the water level in the spent fuel pool would not drop below the minimum Tech Spec level of 23 feet above the spent fuel.

6. **With the proposed full utilization of the IFTS, discuss the effects of the addition of new fuel bundles on the existing dynamic analytical model and the existing structural responses to LOCA and seismic events.**

Response:

While in the process of fuel transfer during Modes 1, 2 and 3, the IFTS tube could potentially be subjected to seismic, hydrodynamic loadings and effects of containment post-LOCA environment. Therefore, in addition to the loadings discussed in Item 4, above, the IFTS tube qualification includes the effects of two fuel bundles located in the most adverse location within the IFTS tube, in conjunction with loadings associated with plant modes 1, 2 and 3 (seismic, hydrodynamic and post-LOCA environment). This evaluation, documented in Calculation G13.18.10.0*015, ensures IFTS tube pressure integrity under the most adverse loading. No other IFTS system components associated with the containment pressure boundary will be affected as a result of fuel transfer during modes 1, 2 and 3.

Analysis Details:

Transfer of new non-irradiated fuel during plant operation (modes 1, 2 & 3) could potentially subject the IFTS tube to hydrodynamic loading in conjunction with seismic and operating loads, while in the process of transferring fuel. The original design specification for IFTS tube requires the inclusion of seismic loading concurrently with the operating loads. However, hydrodynamic loads were not required to be included with operating loads since the IFTS system is used during plant outages, only. Proposed use of the IFTS system during plant operation requires that additional loading due to SRV actuations and LOCA events be included with the seismic and operating loads.

Although, the original (GE) qualification of the IFTS tube includes seismic and hydrodynamic loadings (combined by SRSS), it is not clear whether the dynamic analysis for hydrodynamic loads includes the weight of fuel bundles in the IFTS tube. Therefore, the tabulated stresses in original qualification are extrapolated to account for hydrodynamic loading, conservatively assuming that the tabulated stresses include only seismic loading with the weight of the fuel bundle.

The specification for IFTS tube specifies a conservative generic seismic building response spectra and requires that the IFTS tube seismic qualification include the weight of two fuel bundles. For the purpose of full utilization of the IFTS, the evaluation methodology consists of extrapolation of the results of the original seismic analysis (which include the fuel weight) to account for increases in building accelerations due to SRV and LOCA events. The increase in pressure stress and reduction in allowable stresses due to exposure of the IFTS to the post-LOCA containment environment are also included in the evaluation of faulted stresses.

The results of the evaluations indicates that with the proposed change, the stresses in the IFTS tube will remain within the code specified allowables (ASME Section III).

7. **With the proposed full utilization of the IFTS during the plant power operation, substantial weight of new fuel bundles will be added to the upper pool during plant power operation. Provide an evaluation of the upper pool structure and the upper pool fuel rack to demonstrate that these components are adequate to sustain the combination of seismic and LOCA loads, and other operational transients (such as transients involving safety relief valves).**

Response:

Existence of new non-irradiated fuel in the containment building fuel racks during plant modes 1, 2 and 3, could subject the fuel rack and associated civil structures to increased dynamic loading resulting from SRV actuations and LOCA. Evaluation of the fuel racks and associated civil structures for loadings imposed under plant modes 1, 2 and 3 will be documented in ER-RB-2000-0836-000.

8. Discuss the consequences resulting from failure of the transport mechanism for the new fuel bundles in the IFTS tube during LOCA and earthquake events.

Response:

Since new fuel has little radioactivity to escape if it should be damaged, there is no fuel handling accident with new fuel which requires isolation of the containment. Thus, the seal provided by the water in the IFTS is not required to mitigate the consequences of any fuel handling accident. Since there is no irradiated fuel, before initial criticality, there are no design basis accidents which could result in the release of radioactivity to the environment. Thus, the seal provided by the water in the IFTS is not required to mitigate the consequences of any design-basis accidents before initial criticality. (Ref. RBS SER Supplement 3 Section 9.1.4).

Also, since the IFTS is single failure proof, the worst (non-radiological) consequence from the effects of a hydrodynamic event is the stranding of new fuel bundles in the tube. Tube qualification analyses demonstrate that stresses remain below allowable values and the single-failure proof quality of the IFTS is not compromised or altered.

ATTACHMENT 2

TO

LETTER NO. RBF1-01-0152

LICENSE NO. NPF-47

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-458

FOR INFORMATION ONLY

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.6.1.3.3

This SR verifies that each primary containment manual isolation valve and blind flange located inside primary containment, drywell, or steam tunnel, and required to be closed during accident conditions, is closed. The SR helps to ensure that post accident leakage of radioactive fluids or gases outside the primary containment boundary is within design limits. For devices inside primary containment, drywell, or steam tunnel, the Frequency of "prior to entering MODE 2 or 3 from MODE 4, if not performed within the previous 92 days," is appropriate since these devices are operated under administrative controls and the probability of their misalignment is low.

FOUR ~~Three~~ Notes are added to this SR. Note 1 provides an exception to meeting this SR in MODES other than MODES 1, 2, and 3. When not operating in MODES 1, 2, or 3, the primary containment boundary, including verification that required penetration flow paths are isolated, is addressed by LCO 3.6.1.10, "Primary Containment—Shutdown" (SR 3.6.1.10.1). The second Note allows valves and blind flanges located in high radiation areas to be verified by use of administrative controls. Allowing verification by administrative controls is considered acceptable since access to these areas is typically restricted during MODES 1, 2, and 3. Therefore, the probability of misalignment of these devices, once they have been verified to be in their proper position, is low. A third Note is included to clarify that PCIVs that are open under administrative controls are not required to meet the SR during the time that the PCIVs are open.

INSERT

SR 3.6.1.3.4

Verifying the isolation time of each power operated and each automatic PCIV is within limits is required to demonstrate OPERABILITY. MSIVs may be excluded from this SR since MSIV full closure isolation time is demonstrated by SR 3.6.1.3.6. The isolation time test ensures that the valve will isolate in a time period less than or equal to that assumed in the safety analysis. The isolation time and Frequency of this SR are in accordance with the Inservice Testing Program.

(continued)

Insert for B 3.6.1.3 (SR 3.6.1.3.3)

A fourth note is added to allow removal of the Inclined Fuel Transfer System (IFTS) blind flange when primary containment operability is required. This provides the ability to operate the IFTS system during Mode 1, 2, or 3. Requiring the fuel building spent fuel storage pool water level to be > el. 108'-4" (23 feet above the top of the fuel in the lower pool) ensures a sufficient depth of water over the outlet of the transfer tube bottom valve. This water prevents direct communication between the containment building atmosphere and the fuel building atmosphere via the inclined fuel transfer tube under DBA LBLOCA conditions. The spent fuel storage pool gate to the IFTS transfer pool will remain open, in order for the safety-related spent fuel storage pool instrumentation to provide level indication for the transfer pool. Since the IFTS transfer tube drain line is not isolated in a manner similar to the transfer tube, and the motor-operated drain valve may be opened while the blind flange is removed, administrative controls are required to ensure the drain line flow path is quickly isolated in the event of a LOCA. In this instance, administrative control of the IFTS transfer tube drain line isolation valve includes stationing a dedicated individual, who is in continuous communication with the control room, in the vicinity of the IFTS drain tank in the fuel building. This individual will initiate closure of the IFTS transfer tube drain line motor-operated isolation valve (F42-MOVF003) if a need for primary containment isolation is indicated. The IFTS tube, which is permitted to be opened during IFTS operation in Mode 1, 2, or 3, will be maintained closed by appropriate system valves (IFTS Bottom valve, upper gate valve and drain line MOVs) with the carriage stored in the upper pool whenever practical. This will include periods when the IFTS is not operating such as weekends and nights. Also, compensatory measures, providing a means for manual closure of the IFTS bottom valve in the event of a loss of offsite power, will be established prior to opening the bottom valve with the blind flange removed in Modes 1, 2, or 3.

The pressure integrity of the IFTS transfer tube, the seal created by water depth of the fuel building spent fuel storage pool, and the administrative control of the drain line flow path create an acceptable barrier to prevent the post-DBA LOCA containment building atmosphere from leaking into the fuel building.

ATTACHMENT 3

TO

LETTER NO. RBF1-01-0152

LICENSE NO. NPF-47

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-458

Attachment 3

Commitment Identification Form

Commitment	One-Time Action	Continuing Compliance
Entergy will establish contingency actions, within approved station procedures, to enable the manual closure of the IFTS bottom valve during a loss of offsite power. These contingencies will include the actions necessary to manually operate the lower IFTS upender and IFTS winch in order to raise the IFTS carriage to a position above the bottom valve, when required, prior to its closure. Equipment and tools required for the performance of these contingency actions, including lighting sufficient to perform the tasks during LOSP conditions, will be staged in the area prior to operation of the IFTS bottom valve while in Modes 1, 2, or 3. Personnel required to perform these contingencies will also be trained on the actions and associated procedures prior to operation of the IFTS bottom valve while in Modes 1, 2, or 3. *(extracted from attachment 1, page 3 of 11)*		X