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Rick J. King Director Nuclear Safety Assurance

June 7, 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 (RAI) Information regarding License Amendment Request (LAR) 1999-30, "IFTS Blind Flange"

References:

1. Letter from Entergy Operations, Inc. (EOI) to USNRC, dated December 20, 1999, License Amendment Request (LAR) 1999-30, "IFTS Blind Flange"

File Nos.: G9.5, G9.42

RBF1-01-0122 RBG-45744

Gentlemen:

By letter dated December 20, 1999, Entergy Operations, Inc. submitted License Amendment Request (LAR) 1999-30. LAR 1999-30 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) regarding operator dose was forwarded to Entergy. Attachment 1 provides Entergy's response to the question.

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This document contains no new commitments. 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 June 7, 2001.

Very truly yours,

avines for

RJK / gpn attachment (1)

CC:

U. S. Nuclear Regulatory Commission Region IV 611 Ryan Plaza Drive, Suite 400 Arlington, TX 76011

NRC Senior Resident Inspector P. O. Box 1050 St. Francisville, LA 70775

Mr. Robert E. Moody Project Manager U.S. Nuclear Regulatory Commission M/S OWFN 07D01 Washington, DC 20555

Mr. Prosanta Chowdhury Program Manager - Surveillance Division Louisiana Department of Environmental Quality Office of Radiological Emergency Planning & Response P. O. Box 82215 Baton Rouge, LA 70884-2215

## ATTACHMENT 1

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## LETTER NO. RBF1-01-0122

# LICENSE NO. NPF-47

### ENTERGY OPERATIONS, INC.

# DOCKET NO. 50-458

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### **Question:**

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In your dose evaluation for the IFTS designated operator, you described the various sources that contributed to the dose to this operator following a LOCA. Your evaluation assumed a TID-14844/Regulatory Guide 1.3 source term in calculating the dose contribution from containment shine, suppression pool shine, and airborne isotopes in the Fuel Building. Instead of using the same source term (i.e., TID-14844) to calculate the dose contribution to the operator from the IFTS drain line and tank, you referenced a July 1996 GE report as justification for stating that this operator would not get any dose from the IFTS drain line and tank (by assuming that fuel damage will not occur within 121 seconds of a LOCA). Since TID-14844 assumes that instantaneous fuel damage occurs following a LOCA, the use of a 121 second delay time (for the IFTS drain line and tank dose calculation) appears to be a request to apply a timing-only selective application of the alternate source term (AST) under 10 CFR 50.67 and Regulatory Guide 1.183 based on the referenced BWROG report. Please confirm that the staff's understanding is your intent. If you are planning on using the timing-only selective application of the AST, you must revise your dose calculations for the dedicated operator so that all dose contributions (i.e., dose contributions from the IFTS drain line and tank, containment shine, suppression pool shine, and airborne isotopes in the Fuel Building) are consistent with the AST timing assumption.

#### **Response:**

By letter dated December 20, 1999 (Reference 1), Entergy applied for a license amendment in accordance with 10 CFR 50.90 to permit limited operation of the IFTS during power operations. In that request, Entergy described contingency plans to isolate the IFTS transfer tube drain line in the unlikely event that a LOCA occurred during drain-down of the IFTS tube. Although the valve would normally be closed electrically from the IFTS panel, the plans included a backup contingency of stationing a designated operator to manually close the valve, such as would be needed during a loss of off-site power. Entergy performed an evaluation to determine the dose consequences to the designated operator during such a postulated event.

As noted above, the evaluation assumed a TID-14844/Regulatory Guide 1.3 source term in calculating the dose contribution from containment shine, suppression pool shine, and airborne isotopes in the Fuel Building. Doses from the drain line and the IFTS tank were excluded based upon NUREG-1465 Alternate Source Term (AST) insights. It was our intent to selectively use the AST release timing only insight in conjunction with the TID-14844 source term. Entergy did not apply the insight beyond the drain line and tank dose considerations since application to the drain line and the tank dose alone confirmed that the designated operator dose would conservatively be less than GDC 19 limits. However, we recognize that applying the dose timing insight to the entire scenario of concern would project a more accurate and slightly lower operator dose. The dose calculation has been revised applying the timing insight to the

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appropriate aspects of the analysis. The results demonstrate that the previously submitted operator dose of 3.8 rem is conservative. The revised dose results are 3.76 rem.

It was Entergy's intent to apply the timing-only insight in a selective application of the Alternate Source Term as part of the license amendment request. The amendment request, in part, represented a limited scope application of a single aspect of the new source term methodology. The proposed change replaced the assumption of an instantaneous release of fission products into the drywell with a more realistic scenario in which the gap release is delayed by up to 121seconds. It was Entergy's expectation that, whether implicitly or explicitly addressed, issuance of a single amendment addressing the request of Reference 1 would constitute approval for the selective AST application. This approval would enable RBS to incorporate the assumption of delayed fuel gap releases into its licensing basis for selective application. In this manner, RBS would also be able to use it in the evaluation of the amendment requested by Reference 3, which expands the use of the IFTS during power operations.

The technical justification supporting the specific release timing was provided by reference to the generic BWR analysis performed by General Electric. That analysis, performed to better model BWR phenomenology in support of industry efforts related to NUREG 1465, is documented in a report titled "Prediction of the Onset of Fission Gas Release from Fuel in a Generic BWR" (Reference 2). The report was reviewed and accepted by the NRC (Reference 4). In the NRC acceptance letter it was noted "the staff has found the subject report to be acceptable for referencing in license amendment applications or other changes, as appropriate, for all operating BWRs to the extent specified and under the limitations stated in the enclosed USNRC safety evaluation.", and the report is applicable to the River Bend Station.

In summary, Entergy confirms that it was the intent of Reference 1 to request, in part, approval of a timing-only limited scope application of the alternate source term (AST) under 10 CFR 50.67 based on the referenced BWROG report.

#### References

- 1. Letter RBG-45202 from R. K. Edington to USNRC, License Amendment Request (LAR) 99-30, "IFTS Blind Flange", dated December 20, 1999.
- 2. General Electric Company Report; "Prediction of the Onset of Fission Gas Release from Fuel in Generic BWR", July 1996.
- 3. Letter RBG-45632 from R. K. Edington to USNRC, License Amendment Request (LAR) 2000-27, "IFTS Operation in Modes 1,2 and 3", dated January 24, 2001.
- 4. Letter from S.P. Sekerak (USNRC) to W.A. Eaton (Entergy GGNS), "Acceptance of BWROG Report "Prediction of the Onset of Fission Gas Release from Fuel in Generic BWR," dated July 1996", dated September 9, 1999.