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Randall K. Edington
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August 30, 2000

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

Subject: River Bend Station
Docket No. 50-458
License No. NPF-47
Supplement to License Amendment Request (LAR) 2000-02, "Changes to Fuel Building and Fuel Building Ventilation System Requirements"

Reference: 1) Letter from Entergy Operations, Inc. (EOI) to USNRC, dated May 8, 2000, License Amendment Request (LAR) 2000-02, "Changes to Fuel Building and Fuel Building Ventilation System Requirements"
2) Letter from EOI to USNRC, dated July 30, 1999, LAR 99-15, "Changes to Technical Specifications for Power Uprate of River Bend Station"

File Nos.: G9.5, G9.42

RBEXEC-00-028
RBF1-00-0186
RBG-45475

Gentlemen:

This letter supplements License Amendment Request (LAR) 2000-02. LAR 2000-02, as submitted by Reference 1, requested that the NRC approve and issue Technical Specification changes to the fuel building and fuel building ventilation system requirements by July 30, 2000. This supplement revises the desired issue date for the proposed Technical Specification amendment and provides clarifying information of the relationship between LAR 2000-02 and the request for power uprate, LAR 99-15 (Reference 2).

A001

As discussed previously with the staff, EOI has reevaluated the need date for the Technical Specification amendment requested by LAR2000-02 and determined that an amendment issue date of September 15, 2000, would accommodate our schedule needs. The September issue date is based on the need to ship used control rod blades to a disposal facility this year.

A meeting between EOI and the staff was held on August 15, 2000, concerning LAR 2000-02. The discussions of the desired issue date led to questions regarding the order in which the two LARs (LAR 2000-02 and LAR 99-15) may be issued. It is EOI's position that LAR 2000-02 may be issued prior to approval of the power uprate requested by LAR 99-15 since the LOCA analysis would simply be more conservative for current power operations.

As a point of clarification, the analysis for LAR 2000-02 included changes to input assumptions to account for the proposed future power uprate (LAR 99-15). Details regarding the revised DBA LOCA analysis were provided as Attachment 4 to Reference 1. In Attachment 4, the LOCA dose consequences for the analysis were compared to the power uprate analysis results. Thus, the percentage increases in dose consequences and changes in available margin discussed in LAR 2000-02 are in relation to the power uprate LOCA dose calculations. Nevertheless, the analysis and the dose calculation results are conservative for the proposed Technical Specification changes associated with the fuel building requirements.

There were two major changes included in the revised LOCA analysis for LAR 2000-02 to accommodate the proposed future power uprate. First was the increase in core thermal power (from 3039 MWt to 3100 MWt) which resulted in an increase in the source term available for release. Second was the increase in the positive pressure period (that time period when secondary containment exceeds - 0.25 inches w.g. with respect to atmosphere). The LOCA analysis performed to support LAR 2000-02 included both of these assumptions. That analysis is bounding for the changes to the fuel building requirements if they were implemented without the power uprate and would remain valid after power uprate was approved. Because the analysis for LAR 2000-02 bounds the proposed fuel building TS changes with or without power uprate, we believe LAR 2000-02 may be issued prior to approval of LAR 99-15.

Additional information concerning assumptions in both analyses is attached as Tables 1, 2, and 3. This information may be beneficial to the staff in better understanding the differences between the analyses and our conclusion that the analysis results for LAR 2000-02 are conservative and bounding for both requests. Table 1 provides a list of input assumptions common to both analyses. Table 2 shows the changes in input assumptions between the current approved analysis (Amendment 111), the power uprate analysis (LAR 99-15) and the Fuel Building analysis (LAR 2000-02). Table 3 provides a comparison of the LOCA dose results for the different analyses.

No commitments are included herein and there are no changes to the evaluations or analyses submitted in the original request. Enclosure 1 is an affidavit supporting the facts set forth in this letter. If you have any questions, please contact Mr. Ron Byrd at (601) 368-5792.

Sincerely,

Randall K. Edington

RKE / RJK/ RWB
Enclosure (1)
Attachments (Tables 1, 2, and 3)

cc: U. S. Nuclear Regulatory Commission
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ENCLOSURE 1

BEFORE THE UNITED STATES NUCLEAR REGULATORY COMMISSION

LICENSE NO. NPF-47

DOCKET NO. 50-458

IN THE MATTER OF ENTERGY GULF STATES, INC. AND ENTERGY OPERATIONS, INC.

AFFIRMATION

I, Randall K. Edington, state that I am Vice President - Operations of Entergy Operations, Inc. at River Bend Station; that on behalf of Entergy Operations, Inc., I am authorized by Entergy Operations, Inc., to sign and file with the Nuclear Regulatory Commission, this supplement to River Bend Station License Amendment Request (LAR) 2000-02, "Change to Fuel Building and Fuel Building Ventilation System Requirements," that I signed this letter as Vice President - Operations at River Bend Station of Entergy Operations, Inc.; and that the statements made and the matters set forth therein are true and correct to the best of my knowledge, information, and belief.

Randall K. Edington

STATE OF LOUISIANA
PARISH OF WEST FELICIANA

SUBSCRIBED AND SWORN TO before me, a Notary Public, commissioned in the Parish above named, this 30th day of August, 2000.

(SEAL)

Claudia F. Hurst
Notary Public

Table 1

LOCA Input Assumptions – Constant

Parameter	Value
Primary Containment Leakage Rate	0.26%/day
Leakage bypassing secondary containment	170,000 cc/hr
ESF Leakage	60 gph=1 gpm
Drywell Bypass A/√K	1.0 ft^2
Suppression Pool Iodine Decontamination Factor • Elemental • Organic • Particulate	 10 1 1
Containment Volume Drywell Volume	1,191,590 ft^3 $2.36x10^5$ ft^3
Annulus free volume	357,400 ft^3
Auxiliary Building Free Volume	$1.16x10^6$ ft^3
Annulus recirculation system parameters • Flow rate • Mixing efficiency • Exhaust flow	 47,250 cfm (min.) 50% 2,500 cfm
Building initial vacuum Annulus Auxiliary Building	 ≤3.0 in W.G. ≤0.0 in W.G.
SGT Building Design Exhaust Flow Aux. Building Exhaust Flow	12,500 cfm 10,000 cfm
Minimum SGTS exhaust flow	1,500 cfm
Adsorption and filtration efficiencies (%) • Organic iodine • Elemental iodine • Particulate iodine	 99 99 99
Control Room (CR) Volume	240,702 ft^3
CR Ventilation Parameters • Ingress/egress • Intake (filtered) • Discharge • Recirculation (filtered)	 10 cfm 1947.6 cfm 1947.6+10=1957.6 cfm 1947.6 cfm
CR filter efficiency (Intake/Recirc.)	99%
CR filter actuation time	66 sec
Control Room χ/Q (Local Intake) – Containment Release 0-8 hrs. 8-24 hr. 24-96 hr. 96-720 hr.	 $1.62x10^{-3}$ sec/m^3 $1.20x10^{-3}$ sec/m^3 $4.05x10^{-4}$ sec/m^3 $6.48x10^{-5}$ sec/m^3

Table 1 (cont.)

LOCA Input Assumptions – Constant

Limiting Control Room χ/Q values for secondary containment bypass 0-8 hr 8-24 hr 1-4 days 4-30 days	 4.04×10^{-3} sec/m^3 3.03×10^{-3} sec/m^3 9.29×10^{-4} sec/m^3 1.62×10^{-4} sec/m^3
Offsite Dispersion Factors (χ/Q) – Containment Release EAB 0-2 hr. LPZ 0-8 hr. 8-24 hr. 24-96 hr. 96-720 hr.	 8.58×10^{-4} sec/m^3 1.13×10^{-4} sec/m^3 7.89×10^{-5} sec/m^3 3.65×10^{-5} sec/m^3 1.21×10^{-5} sec/m^3
Limiting 0-2 hr EAB χ/Q value for secondary containment bypass	9.01×10^{-4} sec/m^3
Limiting LPZ χ/Q values for secondary containment bypass 0-8 hr 8-24 hr 1-4 days 4-30 days	 1.14×10^{-4} sec/m^3 8.00×10^{-5} sec/m^3 3.71×10^{-5} sec/m^3 1.23×10^{-5} sec/m^3
Breathing Rate (offsite) 0-8 hrs. 8-24 hrs. 24-720 hrs.	 3.47×10^{-4} m^3/sec 1.75×10^{-4} m^3/sec 2.32×10^{-4} m^3/sec
Breathing Rate (Control Room)	$3.47 \times 10^{-4} m^3$/sec
Dose Conversion Factors	ICRP 30
Control Room Occupancy Factor • 0 – 24 hours • 1 – 4 days • 4 – 30 days	 1.0 0.6 0.4
Suppression Pool Peak Temperature	< 185F
Information Notice 91-56 Term • Flow Rate • Start Time • Duration	 50 gpm 24 hrs. 30 min.
Suppression Pool Volume (Calculated Minimum/Assumed in Calculation)	123,180/120,000 ft^3
Iodine Chemical Fractions • Elemental • Organic • Particulate	 91% 4% 5%
Airborne Fractions • Noble Gases • Halogens	 100% 25%

Table 2

LOCA Input Assumptions – Variable

Parameter	**Current Analysis (Amendment 111)**	**LAR 99-15 (Power Uprate)**	**LAR 2000-02 (Fuel Building)**
Power level	3039 MWt	3100 MWt	3100 MWt
Annulus bypass leakage • To Fuel Building • To Auxiliary Building • To Environment Total annulus bypass leakage	 6,750 cc/hr 6,750 cc/hr 0 cc/hr 13500 cc/hr	 6,750 cc/hr 6,750 cc/hr 0 cc/hr 13500 cc/hr	 0 cc/hr 0 cc/hr 13,500 cc/hr 13,500 cc/hr
Positive Pressure Period • Annulus Start Time (P>-0.25" w.g.) • Duration	 20.5 sec. 195.5 sec.	 24 sec. 700 sec.	 0 sec. 700 sec.

Table 3
LOCA Dose Results

LOCA Computer Files' Descriptions

- **CONTAIN** - This file determines the dose consequences of air leakage from the primary and secondary containment buildings.
- **PVLCS** – This file determines the dose consequences due to the secondary containment bypass leakage term. This leakage is assumed to be released directly to the environment.
- **LIQUID** – This file determines the dose consequences of liquid leakage of ESF systems into the auxiliary building.
- **IN91-56** – This file models the gross failure of a passive component outside of secondary containment. This file is not impacted by secondary containment assumptions. Note that the power level previously assumed for this term was 3100 MWt so the impact of Power Uprate was already considered in the Amendment 111 submittal.

Location	Dose	Contributor	Amendment 111 LOCA Dose USQ	LAR 99-15 Power Uprate	LAR 2000-02 Fuel Building
EAB	Whole Body	CONTAIN	4.127E+00	4.848E+00	4.910E+00
		PVLCS	4.797E-01	4.893E-01	4.893E-01
		LIQUID	2.398E-02	8.546E-02	8.546E-02
		IN91-56	0.000E+00	0.000E+00	0.000E+00
		Total	***4.63***	***5.42***	***5.48***
	Thyroid	CONTAIN	1.264E+01	4.014E+01	4.248E+01
		PVLCS	1.918E+01	1.956E+01	1.956E+01
		LIQUID	6.016E+00	2.092E+01	2.092E+01
		IN91-56	0.000E+00	0.000E+00	0.000E+00
		Total	***37.84***	***80.62***	***82.96***
LPZ	Whole Body	CONTAIN	2.581E+00	2.708E+00	2.718E+00
		PVLCS	1.834E-01	1.871E-01	1.871E-01
		LIQUID	5.913E-03	1.406E-02	1.406E-02
		IN91-56	4.260E-02	4.260E-02	4.260E-02
		Total	***2.81***	***2.95***	***2.96***
	Thyroid	CONTAIN	8.999E+00	1.276E+01	1.585E+01
		PVLCS	3.730E+01	3.804E+01	3.804E+01
		LIQUID	4.826E+00	6.867E+00	6.867E+00
		IN91-56	6.394E+01	6.394E+01	6.394E+01
		Total	***115.1***	***121.6***	***124.7***
MCR	Whole Body	CONTAIN	3.595E-01	4.003E-01	4.020E-01
		PVLCS	5.719E-02	5.834E-02	5.834E-02
		LIQUID	6.302E-05	9.845E-05	9.845E-05
		IN91-56	1.038E-05	1.038E-05	1.038E-05
		Total	***0.42***	***0.46***	***0.46***
	Skin	CONTAIN	7.697E+00	8.380E+00	8.405E+00
		PVLCS	1.124E+00	1.147E+00	1.147E+00
		LIQUID	4.703E-04	7.302E-04	7.302E-04
		IN91-56	1.309E-04	1.309E-04	1.309E-04
		Total	***8.82***	***9.53***	***9.55***
	Thyroid	CONTAIN	2.453E+00	2.872E+00	4.021E+00
		PVLCS	3.006E+00	3.067E+00	3.067E+00
		LIQUID	4.548E-01	6.645E-01	6.645E-01
		IN91-56	4.168E-01	4.168E-01	4.168E-01
		Total	***6.33***	***7.02***	***8.17***