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May 9, 2000

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
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Subject: River Bend Station
Docket No. 50-458
License No. NPF-47
Request to Conduct Flow Only Uprate via Phased Implementation of
License Amendment Request (LAR) 99-15, Changes to Technical
Specifications for Power Uprate of River Bend Station

File No.: G9.5, G9.4.2

- Reference:
- 1) Entergy Operations, Inc. (EOI) Letter to NRC, RBG-45077, dated July 30, 1999 (LAR 99-15)
 - 2) U. S. Nuclear Regulatory Commission letter to EOI dated February 25, 2000 (Meeting Minutes of February 10, 2000 Meeting)
 - 3) NEDC-32778P Safety Analysis Report for River Bend 5% Power Uprate

RBF1-00-0110
RBG-45337

Ladies and Gentlemen:

In the reference (1) letter, EOI requested a license amendment to NPF-47 and Appendix A – Technical Specifications, of the River Bend Station (RBS). The request extends operation of RBS from its current licensed power level of 2894 megawatts thermal (MWt) by five percent to an uprated power level 3039 MWt. The proposed changes were developed using generic guidelines for boiling water reactors (BWR) power uprates described in General Electric (GE) reports.

During previous communication with your staff, including Reference 1 and 2, EOI has discussed performing a phased implementation of the requested License Amendment. The phased implementation would allow River Bend Station to increase licensed thermal power

APD 1

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enclosures support our plans to implement the 5% Power Uprate at RBS in two phases; a Flow Only Uprate to be implemented on line and a reactor pressure increase phase to be completed during a future refueling outage.

In this review of the original submittal EOI identified the need for two temporary changes to allow implementation on-line. These changes are discussed in Enclosure 2. As discussed in the GE report, Enclosure 5, the implementation of the flow-only phase supports the conclusions of the original submittal. Therefore, the original No Significant Hazards Consideration evaluation provided in the initial submittal remains valid for the permanent changes to the License and Technical Specifications. A No Significant Hazards Consideration evaluation is provided for the two temporary changes needed to implement the flow-only phase while on-line.

Enclosure 1 is an oath and affirmation executed in accordance with 10 CFR 50.30(b). Enclosure 2 is a detailed description of those specific proposed technical specifications (Submitted as LAR 99-15) that must be implemented to allow a Flow Only Uprate at River Bend Station. The enclosure provides details that support an immediate implementation of those Technical Specification changes required for the Flow Only Uprate while deferring the remaining changes until the modifications necessary for reactor pressure increase are completed.

Enclosure 3 is the proposed License Condition and Technical Specifications needed to support implementation of Flow Only Uprate. Enclosure 4 identifies commitments supporting the implementation of Flow Only Uprate.

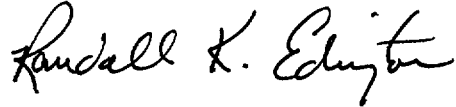
An affidavit executed by General Electric supporting a request for proprietary treatment of portions of the submitted information in accordance with 10 CFR 2.790(b)(1) is provided with Enclosure 5 which also provides the detailed comparison of the original RBS 5% Power Uprate SAR (Reference 3) to those plant conditions that will exist with a Flow Only 5% Power Uprate. The portions of the report that are proprietary should be withheld from public disclosure in accordance with 10 CFR 2.790(a)(4).

No new modifications are required to support the phased implementation of Power Uprate. We intend to implement those changes necessary to support the flow only portion of uprate soon after the NRC completes its review and approves LAR 99-15. All changes requested in Reference 3 will be effective after River Bend makes the necessary plant modifications to support the pressure increase phase of Power Uprate.

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If you have further questions, contact Mr. Barry M Burmeister of my staff at 225-381-4148.

Sincerely,



Randall K. Edington

RJK/bmb
enclosures

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

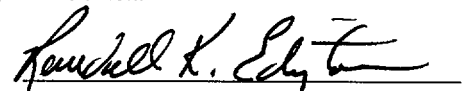
IN THE MATTER OF

ENTERGY GULF STATES, INC.

ENTERGY OPERATIONS, INC.

AFFIRMATION

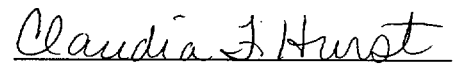
I, Randall K. Edington, state that I am Vice President – River Bend Station, Entergy Operations, Inc. (EOI), that on behalf of EOI, I am authorized to sign and file with the U. S. Nuclear Regulatory Commission, this River Bend Station License Amendment Request (LAR) 1999-15, Supplement 1, consisting of proposed changes to the River Bend Station Technical Specifications, that I signed this letter as Vice President - River Bend Station, for Entergy Operations, Inc.; and that the statements made and the matters set forth herein are true and correct to the best of my knowledge, information, and belief.

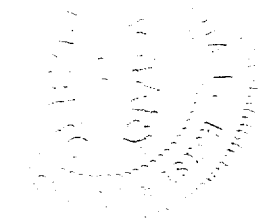

Randall K. Edington

STATE OF LOUISIANA
PARISH OF WEST FELICIANA

SUBSCRIBED AND SWORN TO before me, a Notary Public, commissioned in the Parish and State above named, this 8th day of May, 2000.

(SEAL)


Claudia Hurst
Notary Public



ENCLOSURE 2

**ENTERGY OPERATIONS, INC.
RIVER BEND STATION
DOCKET 50-458/LICENSE NO. NPF-47
LICENSE AMENDMENT REQUEST 99-15
Supplement 1**

Licensing Document Involved

The proposed changes affect the River Bend Station (RBS) Operating License and Technical Specifications (TS) and associated Bases sections identified in Enclosure 3 of Reference 1; Entergy Operations, Inc. (EOI) Letter to NRC, RBG-45077, dated July 30, 1999 (LAR 99-15) and the General Electric's report for RBS, in this submittal (Enclosure 5). This supplement to LAR 99-15 identifies those changes to the RBS operating license necessary to implement the power uprate in a phased approach.

Background

Reference 1 proposed an amendment consisting of a number of changes which will permit uprated power operation for RBS. EOI proposes to implement these changes in a phased approach as outlined in a meeting with the NRC staff on February 10, 2000. In this letter Phase 1 refers to the flow only portion of uprate, Phase 2 refers to the final uprate which includes both the flow and pressure increases.

The initial analyses and evaluations supporting these changes were completed using the guidelines in Topical Report NEDC-31897P-A, "Generic Guidelines For General Electric Boiling Water Reactor Power Uprate," (Reference 1), approved by NRC letter dated September 30, 1991. Resolution of generic issues associated with power uprate was addressed in Topical Report NEDC-31984P, "Generic Evaluations of General Electric Boiling Water Reactor Power Uprate," (Reference 2), approved by NRC letter dated July 31, 1992. A review of the initial submittal was conducted to assure that RBS can be safely uprated with only the steam and feedwater flow increase without invalidating the original conclusions of the flow and pressure uprate analyses.

The plant-specific evaluations to support the proposed phased implementation are documented in GE's report for RBS NEDC-32778P, Supplement 1 (Enclosure 5). This report demonstrates that RBS can operate safely with a flow only increase prior to implementing the pressure increase. These evaluations support the flow-only (Phase 1) implementation with the changes identified below and the final pressure increase (Phase 2) implementation at a later time.

Evaluation of Previously Submitted Changes

Enclosure 3 is a table that summarizes the TS and Bases changes included in the original submittal that are needed to support the flow only power uprate. These changes are also identified in Table 11-1 of Enclosure 5. Enclosure 3 contains the affected page listing and copies of the appropriate Operating License and TS pages for RBS marked-up to show the proposed changes for flow only. Each operating license and TS change is evaluated below using the initial flow and pressure item numbers as identification:

- **Operating License**

License Condition 2.C.(1), "Maximum Power Level, will be changed from "2894 megawatts thermal" to "3039 megawatts thermal" as the new value for 100 percent rated power.

- **Technical Specifications**

1. Rated Thermal Power is increased from 2894 MWt to 3039 MWt in Section 1.1, "Definitions," of the RBS TS.

Evaluation

The flow only increase is bounded by the initial evaluation contained in Reference 1 Enclosure 7. This change will be implemented during the flow-only, Phase 1, portion of the implementation (Reference Enclosure 5 of this supplement for further details).

2. The Thermal Power Safety Limit of TS 2.1.1.1 will be lowered from 25 to 23.8 percent. This change is to maintain the same power value with respect to absolute thermal power, flow, and pressure.

Evaluation

As discussed in the initial submittal; Section 9.1 of Enclosure 7, the Thermal Power Safety Limit is based upon generic analyses, with BWR-6 being the limiting design. To maintain the basis for thermal transient analyses in design, the Reactor Thermal Power (RTP) is reduced to 23.8 %. As evaluated in Enclosure 5 of this submittal, the flow only increase is bounded by the initial evaluation contained in Enclosure 7 of the initial submittal. This change will be implemented during the flow-only, Phase 1, portion of the uprate implementation.

Reference to thermal power appears in TS 1.4, Examples 1.4-2 and 1.4-3, and TS 3.2.1, 3.2.2, 3.2.3, 3.3.1.1, 3.4.3.1 and 3.7.5.

3. The Reactor Steam Dome Pressure used to determine Control Rod Scram times on Table 3.1.4-1 will increase from 1050 to 1059 psig.

Evaluation

In the initial submittal Section 2.5 of Enclosure 7, the SCRAM time requirements are discussed. As evaluated in Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal and does not require adjustments when the system pressure is not increased. Therefore this change is not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate implementation.

4. The Control Rod Drive (CRD) charging water header minimum pressure value will be changed from 1520 to 1540 psig. This change will maintain scram time design.

Evaluation

In the initial submittal Section 2.5 of Enclosure 7, the SCRAM time requirements are discussed. As evaluated in Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal and does not require adjustments when the system pressure is not increased. Therefore this change is not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate implementation.

5. The Standby Liquid Control (SLC) system Boron-10 enrichment and concentration criteria contained in TS 3.1.7 will be increased.

Evaluation

As discussed in the initial submittal; Section 9.3.1 of Enclosure 7, the Anticipated Transients Without Scram (ATWS) mitigation requirements defined in 10 CFR 50.62 were analyzed for the uprated conditions to demonstrate compliance with the ATWS acceptance criteria. As evaluated in Enclosure 5 of this submittal, the flow only increase is bounded by the initial evaluation contained in the initial submittal. This change will be implemented during the flow-only, Phase 1, portion of the uprate implementation.

This limit is included in TS 3.1.7, Action A, and SR 3.1.7.3.

6. The surveillance test discharge pressure for the standby liquid control pump is increased from 1220 psig to 1250 psig. This value appears in SR 3.1.7.7 and the corresponding Bases Section B 3.1.7.

Evaluation

As discussed in the initial submittal Enclosure 7 Section 6.5, the surveillance test pressure is based on the maximum SLCS injection pressure. As evaluated in section 6.5 of Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal and will not require adjustments when the system pressure is not increased. Therefore this change is not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate implementation.

7. The allowable value for the Reactor Vessel Steam Dome Pressure - High Scram setpoint is increased from 1079.7 psig to 1109.7 psig. The chosen allowable value is acceptable based on the analytical limit for the parameter and the reactor vessel design.

Evaluation

As discussed in the initial submittal Section 5.3.1 and consistent with the analytical limit in Table 5-1 of Enclosure 7, the reactor vessel steam dome high pressure scram limit is increased because the steam dome operating pressure is increased. As evaluated in Section 5.3.1 of Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal and will not require adjustments when the system pressure is not increased. Therefore this change is not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate implementation.

8. The allowable value for the ATWS-RPT Reactor Steam Dome Pressure - High setpoint is increased from 1135 psig to 1165 psig, a 30 psi increase. The Allowable Value appears in TS SR 3.3.4.2.4.

Evaluation

As discussed in the initial submittal Section 5.3.2, and consistent with the analytical limit in Table 5-1 of Enclosure 7, the ATWS-RPT high pressure setpoint initiates a trip of the recirculation pumps, thereby adding negative reactivity following events in which a scram does not (but should) occur. As evaluated in Section 5.3.2 of Enclosure 5 of this submittal, the flow only increase is bounded by the initial evaluation contained in the submittal and will not require adjustments when the system pressure is not increased. Therefore this change is not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate implementation.

- 9a. The MSR/V lift setpoints will be increased. The safety function, relief function and the Lo-Lo Set function will need revision.

Evaluation

As discussed in the initial submittal Section 5.3.3 of Enclosure 7, consistent with the increase in nominal reactor dome pressure shown in Table 1-2, and the analytical limit in Table 5-1, the MSR/Vs are designed to prevent overpressurization of the reactor pressure vessel during abnormal operational transients. As evaluated in Section 5.3.3 of Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal and will not require adjustments when the system pressure is not increased. Therefore, these changes are not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate implementation. The current values appear in SR 3.4.4.1 in the TS and will remain until the final uprate implementation. The change to the tolerance range of the Safety valves is discussed below.

- b. In addition to the changes in the Unit TS's to account for the increased reactor pressure RBS proposes changing the present -2 / +0 % tolerance on the safety function lift setpoint for the SRVs to +/-3%. This change is consistent with the assumptions of the safety analysis for power uprate and the recommendations of the Licensing Topical Report (LTR), NEDC-31753P.

Evaluation

This change would affect TS Surveillance Requirement 3.4.4.1 and Bases. The NRC has approved an increase in lower bound tolerance of the SRVs in Amendment 109 to NPF-47. This increase in tolerance will remain during the Phase 1 portion of the implementation. The requested increase in upper bound tolerance included in the initial submittal will be implemented with the pressure increase, Phase 2, portion of the uprate implementation.

10. The upper and lower bounds on reactor pressure, for purposes of performing reactor core isolation cooling (RCIC) pump flow rate surveillance tests at high pressure, are increased by 30 psi.

Evaluation

As discussed in the initial submittal Section 3.8, and consistent with the analytical limit in Table 5-1 of Enclosure 7, the reactor operating pressure range for RCIC surveillance tests at high pressure would be increased to correspond with the increase in normal reactor operating pressure that accompanies power uprate. As evaluated in section 3.8 of Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal and will not require adjustments when the system pressure is not increased. Therefore this change is not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate implementation.

11. A change to the Main Steam Line Flow - High reactor isolation trip in the RBS TSs.

Evaluation

The main steam line flow rate is discussed in The initial submittal; Section 5.3.4 of Enclosure 7, the analyses is consistent with the uprated reactor conditions. As evaluated in Section 5.3.4 of Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal Enclosure 7. These changes are necessary to implement during the flow-only portion to support the higher steam flow necessary to support the increased reactor power.

These changes will modify Table 3.3.6.1-1, Item 1c, "Main Steam Line Flow Allowable Values," of the TS as follows:

<u>Steam Line</u>	<u>Current Value</u>	<u>Proposed Value</u>
A	151.0 psid	190.0 psid
B	161.0 psid	194.0 psid
C	158.0 psid	194.0 psid
D	169.0 psid	194.0 psid

This change will be implemented during the flow-only, Phase 1, portion of the uprate implementation.

12. A change to the Thermal Power limits of Specification 3.4.1, "Recirculation Loops Operating," during Single Loop Operation from 83% to 79% to maintain analysis assumptions.

Evaluation

As discussed in the initial submittal; Section 3.4 of Enclosure 7, the current limitations on maximum core power during Single Loop Operations (SLO) will be maintained. As evaluated in Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal Enclosure 7. This change will be implemented during the flow-only, Phase 1, portion of the uprate implementation.

This change will revise Specification 3.4.1 and associated changes in the Bases of this specification.

13. An increase of 30 psi in the Pressure Isolation Valve (PIV) surveillance test SR 3.4.6.1 of the RBS TSs.

Evaluation

As identified in the initial submittal, Enclosure 7 Section 1.3, the reactor pressure is increased by 30 psi. As evaluated in Enclosure 5 of this submittal, the flow only increase does not increase the reactor pressure and will not require adjustment when the system pressure is not increased. Therefore this change is not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate implementation.

14. The Reactor Coolant System pressure and temperature limits are changed to account for the increased neutron flux resulting from power uprate conditions, as required, in Figure 3.4.11-1 of the RBS TS.

Evaluation

As discussed in the initial submittal; Section 3.3.1 of Enclosure 7, the reactor pressure vessel (RPV) embrittlement caused by neutron exposure of the vessel wall is predicted to increase the integrated fluence over the period of plant life. As evaluated in Section 3.3.1 of Enclosure 5 of this submittal, the flow only increase is bounded by the evaluation contained in the initial submittal Enclosure 7. This change will be implemented during the flow-only, Phase 1, portion of the uprate implementation.

15. A change is proposed to Specification 3.4.12 and Bases of the RBS TS to increase the reactor steam dome operating pressure from 1045 psig to 1075 psig.

Evaluation

As discussed in the initial submittal, Enclosure 7 Section 3.2, the design of the reactor coolant pressure boundary remains at 1250 psig and the ASME Code allowable peak remains at 1375 psig. As evaluated in Section 3.2 of Enclosure 5 of this submittal, the flow only increase does not increase the reactor pressure and will not require adjustment when the system pressure is not increased. Therefore this change is not required for the flow only phase of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate.

Bases Changes

This change is discussed in the initial submittal Section 7.3 of Enclosure 7. As evaluated in Section 7.3 of Enclosure 5 of this submittal, the flow only increase does not significantly change the system conditions and will not require adjustment when the system pressure is not increased. Therefore this change is not required for the flow only, Phase 1, of the uprate. This change will be implemented with the pressure increase, Phase 2, portion of the uprate.

Temporary Implementation Changes

To support implementation of the flow-only uprate, phase 1, while on-line, specifications that could be affected during the transition from the current 2894 to 3039 MWt power levels were evaluated. This evaluation was based on the initial GE Safety Analysis Report, Reference 1, and the supplement to this report, Enclosure 5. In addition, the thermal limits necessary to support the uprated conditions will be determined in accordance the current processes of Specification 5.6.5, Core Operating Limits Report (COLR).

EOI has identified two Technical Specifications which can restrict the ability to increase power above current licensed limits while on-line. These restrictions are the result of the need to maintain compliance with the TS during transition.

The process used to implement the flow-only phase of the uprate while on line will be to have the plant at a power level within the current licensed limits of 2894 MWt, contained in the pre-uprate COLR. The uprated COLR will be implemented and then changes to nuclear instrumentation, plant recalibrations, and remaining revisions will be made prior to ascending in power. The plant configuration will remain within the allowed configuration for 2894 MWt for those setpoints limits and calibrations not changed to the configuration allowed by 3039 MWt.

The (re)calibrations and changes to the thermal limits of this transition period is anticipated to last no more than 30 days. EOI proposes to address the following changes in a license condition (LC) proposed in Enclosure 3. Due to the short term of the changes proposed EOI, believes the use of an LC to address the issues will reduce the complication of a permanent change to the TS.

16. A temporary change is proposed to Surveillance 3.3.1.1.2 of the RBS TS to increase the tolerance of the Average Power Range Monitors (APRMs) from +/-2% to -2 +7% for a period of 30 days.

Evaluation

EOI has determined the need for temporary relief to Technical Specification Surveillance (SR) 3.3.1.1.2. This relief will be necessary to implement the flow only uprate while at power operation. This specification requires APRMs to be within 2% of the Rated Thermal Power (RTP) value, as defined in Section 1.1 of the Technical Specifications. The on-line, flow only, uprate implementation will result in an indicated 5% increase in RTP. As a consequence, the instruments will then be calibrated to a reference of approximately 95% of the uprated RTP. When the current tolerance is included the APRMs will be reading approximately 3 to 7 % high.

The Reactor Protection System APRMs are discussed in Section 7.2 of the RBS USAR and the BASES for Specification 3.3.1.1. This system initiates a reactor trip when reactor power is increasing as assumed in the transient analyses contained in Section 15 of the RBS USAR. Therefore the safety function of the APRMs are to initiate a reactor trip prior to exceeding the upper bound of the power level(s). With a reactor trip set below the level assumed in the analyses (trip set relative to 2894 MWt, analyses relative to 3039 MWt) the results would be more conservative i.e., less stressful on the fuel and reactor systems

At the beginning of the flow only implementation period (the RTP is changed from 2894 to 3039) the APRMs would be set 5% high relative to actual allowed thermal power (3039 MWt) and therefore, not within the required 2% tolerance. As a result, at the initiation of uprate all APRMs would be out of calibration and must be declared inoperable in accordance with specifications SR 3.0.1 and LCO 3.0.2. LCO 3.3.1.1 ACTION B would mandate in each trip system to have a channel in the trip condition or ACTION G to be followed. ACTION G requires the plant to be in MODE 2 within 6 hours. The recalibration of the APRMs within this time period is not practical.

With the non-recalibrated APRM channels (i.e. calibrated relative to 2894 MWt versus 3039 MWt) reading at an equivalent 95% of the uprated power the resulting peak power will be no greater than that calculated in the accident analysis. As a result this “out-of-tolerance” condition will be no less conservative than the analysis assumptions. In addition as noted above, the uprated COLR limits will be in place during the transition period. Therefore, this inoperable condition is an acceptable condition within the existing analysis.

EOI proposes an increase in the tolerance band to -2 +7% during the implementation transition period. The proposed change will allow the APRMs to be re-calibrated to the correct reference RTP. This proposed relaxation will allow temporary relief from SR 3.3.1.1.2 for the period of flow only implementation. This relaxation will allow time to recalibrate each APRM from the initial condition of approximately 3 to 7 % high (of the 3039 MWt RTP) to +/-2% of the uprated power condition, thereby restoring compliance.

EOI proposes to limit time to complete the uprate implementation to 30 days. This will allow the necessary time to complete the recalibrations in an effective and safe manner. The time is based on maintaining the assurances built into the normal maintenance planning process. In addition, as discussed below, other instrumentation in the APRM system will need (re)calibration. This time period will allow the changes needed on this system to be conducted at one time on a per-channel basis, reducing the possibility of error and allowing a more efficient integration of work.

A No Significant Hazards Consideration is provided to support this additional request.

17. A temporary change is proposed to Table 3.3.1.1-1 item 2.b of the RBS TS to allow for the implementation of the uprated APRM Flow Biased Simulated Thermal Power-High function to implement the COLR E1A limits based on a RTP of 3039 MWt. This request will be limited to 30 days.

EOI has determined the need for temporary relief to Technical Specification 3.3.1.1 Table 1 Item 2.b and SR 3.3.1.1.3 will be necessary to implement the flow only uprate while at power operation. These specifications require the flow control trip reference to conform to limits contained in the COLR and reactor conditions within 7 days after startup from a refueling outage. The flow only, uprate implementation will result in the trip reference curves changing their basis from 2894 to 3039 MWt while on-line.

This system is also discussed in Section 7.2 of the RBS USAR and the BASES for Specification 3.3.1.1. This system is to initiate a reactor trip when reactor transients result in entry into the low-flow high-power regions which may result in a reactor instability event. The system was installed in response to NRC Generic Letter 94-02 and accepted by the NRC in Amendment 106 to NPF-47. This system includes an APRM Flow Control Trip Reference (FCTR) which implements the trip function when entering the regions which may result in a

reactor instability event. This Enhanced Option I-A (E1A) solution will continue to be supported during the implementation period. The actual shape of the E1A stability curve implemented on the FCTR card will be determined in accordance with the requirements of Specifications 5.6.5, COLR and the approved methods referenced.

At the time of initiation of the uprate the FCTR limits will be based on a RTP of 2894 MWt and therefore the resulting curves will not be based on the final RTP of 3039 MWt. As discussed above, the plant will be in compliance with the limits applicable to operations at 2894 MWt just prior to initiating the implementation of the uprated 3039 MWt. The plant configuration will remain within the allowed configuration for 2894 MWt for those setpoints limits and calibrations not changed to the configuration allowed by 3039 MWt.

After the completion of the changes to the plant including the APRM and APRM FCTR adjustments power ascension to the uprated limits will be conducted. As discussed in Enclosure 5, the analyses of the plant at 3039 MWt is bounding to that of 2894 MWt. Therefore, these adjustments while limited to 2894 MWt will be a conservative configuration and plant response to an event will be within acceptable analyses.

These adjustments to the FCTR limits to address stability to within the uprated COLR will be complete within the 30 days in conjunction with the other APRM and implementation work prior to commencing power ascension above the current licensed limit of 2894 MWt. During this 30 day implementation period, the surveillance requirements contained in SR 3.3.1.1.1., 3.3.1.1.2, and 3.3.1.1.3 will be administratively controlled by EOI from the 2894 to 3039 MWt limits. This control is necessary to track the correct setpoints and limits of the individual instruments to the appropriate limits, 2894 or 3039 MWt. As each channel is changed from the 2894 to the 3039 limits the appropriate SR and limits will be applied. As a result after the 30 day period all necessary instruments will be recalibrated to the new 3039 limits prior to power ascension above 2894 MWt.

EOI proposes to return both functions to the uprated configuration concurrently as discussed in Item 16 above, on a per-channel basis. As above, the time to complete this re-calibration is to be limited to 30 days. This will allow the necessary time to complete the recalibrations in an effective and safe manner. The time is based on maintaining the current scheduling at RBS.

A No Significant Hazards Consideration is provided to support this additional request.

Environmental Impact Consideration

As discussed in Section 11.3 of GE Report GE-NE-A22-00081-45 "105% Power Uprate Evaluation Report For Entergy Operations Inc. River Bend Station Flow Increase Only Power Uprate" Enclosure 5 of this submittal, the Environmental assessment provided in the

initial submittal bounds the flow only phase of the uprate implementation. As a result this request will not change the findings included in the initial submittal.

EOI has reviewed this request against the criteria of 10CFR51.22 for environmental considerations. Since this request involves (i) no significant hazard consideration, (ii) no significant change in the types or significant increase in the amounts of any effluents that may be released offsite, and (iii) no significant increase in individual or cumulative occupational radiation exposure, EOI has concluded that the proposed change meets the criteria given in 10CFR51.22 (c)(9) for a categorical exclusion from the requirement for an environmental impact statement.

Notification of State Personnel

A copy of this amendment request has been provided to the State of Louisiana, Department of Environmental Quality - Radiation Protection Division.

References:

1. NEDC-31897P-A, "Generic Guidelines For General Electric Boiling Water Reactor Power Uprate," May 1992.
2. NEDC-31984P, "Generic Evaluations of General Electric Boiling Water Reactor Power Uprate," July 1991; and Supplements.
3. GE REPORT GE-NE-A22-00081-45 "105% Power Uprate Evaluation Report For Entergy Operations Inc. River Bend Station Flow Increase Only Power Uprate," April 2000

NO SIGNIFICANT HAZARDS CONSIDERATION:

To support implementation of the flow-only phase of the uprate while on-line a determination was made to find what specifications could be affected or place restrictions on the ability to complete the transition from the current 2894 to 3039 MWt power levels. EOI has identified TS requirements which can restrict the ability to increase power above current licensed limits. These restrictions are the result of the need to maintain compliance with the TS and, as discussed below, the requested changes are of limited safety significance.

The request does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The increase of the Average Power Range Monitors (APRMs) calibration tolerance for the period of implementation of 30 days will allow the APRMs to be recalibrated to the uprated Rated Thermal Power (RTP) level. The current RTP is lower than the final and therefore the reactor protection based on this RTP will be conservative to the final RTP by approximately 5%. The recalibration will be accomplished using approved plant procedures and processes. With the APRMs initially set conservatively the plant will remain within all assumptions of the safety analysis during the period of re-calibration. These changes will not affect the consequences of any accident evaluated because the allowed APRM calibration will always be maintained within the setpoints in the original uprated analysis which bounds the condition while less than 2894 MWt. In addition, the proposed changes do not involve any change in method of operating the plant. Existing procedures will ensure that the associated limits assumed in the safety analysis are not violated. Therefore, these changes have no effect on the consequences of an accident.

The change to the APRM Flow Biased Simulated Thermal Power - High trip will be accomplished on each channel during the time the recalibration of the APRM to the new RTP. These limits are implemented through a Flow Control Trip Reference (FCTR) on each APRM channel. The Period Based Detection and Fraction of Core Boiling Boundary will be available during the implementation period. If the applicable conditions are entered these limits will be in effect during the period the APRM Flow Biased Simulated Thermal Power - High trip is revised from the current power level based curves to the uprated curves. The changes to the limits will be conducted while within the pre-uprated limits to maintain the necessary limits during the implementation. As a result the analysis basis for these limits will also be maintained during the implementation period. Therefore, these changes will not increase the consequences of an accident.

The use of approved procedures and processes will ensure the calibration will remain within the assumptions of the safety analysis. The change in the time period to complete the implementation of the APRM calibration tolerance will not affect the probability of an accident as the methods will continue to maintain the APRM within the allowed analysis. These methods are within the existing design and licensing basis and therefore, cannot increase the probability or severity of an accident.

The change to the APRM Flow Biased Simulated Thermal Power- High trip allowing 30 days to complete the change to the uprated conditions will continue to support the basis for this function. The changes will not impede the protection provided by E1A from reactor oscillations thereby protecting the fuel from damage. The change in the APRM trip reference points are expected to be small therefore, the probability of an instability event is not significantly affected. Therefore, does not significantly increase the probability or severity of an accident.

On these bases, there will be no increase in the probability or consequences of an accident previously analyzed as a result of the proposed changes.

The request does not create the possibility of occurrence of a new or different kind of accident from any accident previously evaluated.

The proposed changes consist of an increase in tolerance of the APRMs and increasing the time period to complete the calibration of the APRMs. The change to the tolerance will maintain the plant within the analysis. The allowance to complete the recalibrations change will continue to maintain the plant within the uprated analysis which bounds the current analysis. Therefore the response of the plant will not exceed the approved uprated analysis. No new plant operating procedures or significant configurations will be introduced with this change. The APRMs do not initiate an event and the response of the plant will be maintained within that assumed in the safety analysis.

The change to the APRM Flow Biased Simulated Thermal Power- High trip will have a limited effect on the response of the plant to a transient. The changes to the FCTR will be conducted using current plant procedures and is limited in scope. Therefore, the response of the plant to a transient is not significantly changed from current analyses.

Therefore these changes do not create the possibility of occurrence of a new or different kind of accident from any accident previously evaluated.

The request does not involve a significant reduction in the margin of safety.

The proposed change is within all analyses submitted for the power uprate. The APRMs will continue to support the assumptions and analysis. The margin of safety associated with the APRM calibrations providing a reactor trip prior to reaching levels assumed in the uprated conditions will be maintained, therefore the margin of safety associated with the RPS system will be maintained. Existing plant procedures will continue to ensure that the initial conditions of the transient analyses are not violated.

The Period Based Detection and Fraction of Core Boiling Boundary will be available during the implementation period. If the applicable conditions are entered these limits will be in effect during the period the APRM Flow Biased Simulated Thermal Power - High trip is revised from the current power level based curves to the uprated curves. The changes to the limits will be conducted while within the pre-uprated limits to maintain the necessary limits during the implementation. As a result, the analysis basis for these limits will also be maintained during the implementation period. Therefore, during the change to the APRM Flow Biased Simulated Thermal Power-High function the response of the plant to the applicable events will be within acceptable limits.

Therefore, these requests do not involve a reduction in the margin of safety.

ENCLOSURE 3

ENTERGY OPERATIONS, INC. RIVER BEND STATION (RBS)

PROPOSED TECHNICAL SPECIFICATION (TS) CHANGE TO NPF-47, APPENDIX A POWER UPRATE PROJECT Flow only implementation

I. AFFECTED SPECIFICATIONS

Location	Description of Change
1.1 Definitions	Revise value of rated thermal power definition to uprated power level (3039 MWt) shown in Table 1-2.
2.1.1.1, 1.4-2, 3 3.2.1, 3.2.2, 3.2.3, 3.3.1.1, 3.4.3.1, 3.7.5, and B2.1.1	To maintain the same power value with respect to absolute thermal power, lower (from 25% to 23.8%) the low flow and pressure Thermal Power Safety Limit by the ratio of the power increase (1/1.05).
3.1.7 SR3.1.7.3	Consistent with the power uprate ATWS analysis basis in Section 9.3.1, increase the (C)(E) product minimum value from 413 to 570.
Table 3.3.6.1-1	Consistent with the increased rated steam flow shown in Table 1-2 and the discussion in Section 5.3.4, revise the Main Steam Line Flow - High pressure isolation trips, based on the analytical limits shown in Table 5-1.
3.4 3.4.1B	As discussed in Section 3.4, based on the ratio of the current rated to uprated % power values (100/105), decrease the thermal power value by 100/105 for single loop operation (SLO), to maintain the same SLO absolute thermal power range (83% to 79%).
Figure 3.4.11-1 SR3.4.11-1 B3.4.11	Replace the Minimum Reactor Pressure Vessel Metal Temperature vs. Reactor Vessel Pressure curves, as discussed in Section 3.3.1.1, with those shown in Figures 3-2a and 3-2b.
3.3.1.1 Item 2	License condition to address the temporary changes to allow implementation of uprate. <i>(Note; the proposed license condition is included with this submittal.)</i>

Proposed License Conditions
Specification 3.3.1.1
APRM calibrations

3.3.1.1 Table 1 Item 2:

A temporary change to increase the tolerance of the Average Power Range Monitors (APRMs) from +/-2% to -2 +7% of rated Reactor Thermal Power.

A temporary change to Table 3.3.1.1-1 item 2.b of the RBS TS to allow for the implementation of the uprated APRM Flow Biased Simulated Thermal Power- High function to implement the COLR E1A limits based on a RTP of 3039 MWt.

These changes will affect the compliance to SRs 3.3.1.1.1, 3.3.1.1.2, and 3.3.1.1.3. Compliance to the appropriate 2894 or 3039 MWt limits will be maintained during the transition period.

This allowance will be limited to a transition period of 30 days from the initiation of the uprated reactor thermal power limit of 3039 MWt.

ENCLOSURE 4

**ENTERGY OPERATIONS, INC.
RIVER BEND STATION (RBS)**

LIST OF COMMITMENTS

COMMITMENT	ONE-TIME ACTION*	CONTINUING COMPLIANCE*
<i>The plant configuration will remain within the allowed configuration for 2894 MWt for those setpoints limits and calibrations not changed to the configuration allowed by 3039 MWt.</i>	X	
<i>Required changes to the uprated COLR will be implemented and then changes to nuclear instrumentation, plant recalibrations, and remaining revisions will be made prior to ascending in power.</i>	X	
The system was installed in response to NRC Generic Letter 94-02 and accepted by the NRC in Amendment 106 to NPF-47. This system includes an APRM Flow Control Trip Reference (FCTR) which implements the trip function when entering the regions which may result in a reactor instability event. <i>This EIA solution will continue to be supported during the implementation period.</i>	X	

ENCLOSURE 5

**ENERGY OPERATIONS, INC.
RIVER BEND STATION (RBS)**

**GE REPORT GE-NE-A22-00081-45:
105% Power Uprate Evaluation Report For Entergy Operations Inc.
River Bend Station
Flow Increase Only Power Uprate
March 2000**

And associated GE AFFIDAVIT

(See attached.)