GULF STATES UTILITIES COMPANY

RIVER BEND STATION POST OFFICE BOX 220 ST. FRANCISVILLE, LOUISIANA 70775

AREA CODE 504 635-8094 346-8651

November 17, 1989
RBG-31781
File Nos. G9.5, G9.42

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Gentlemen:

River Bend Station - Unit 1
Docket No. 50-458

Gulf States Utilities (GSU) Company hereby files an application to amend the River Bend Station - Unit 1 Technical Specifications, Appendix A to Facility Operating License NPF-47, pursuant to 10CFR50.90. This application is filed to request changes in accordance with guidance provided in Generic Letter 88-16. These changes will provide administrative requirements for relocating cycle specific parameters to a Core Operating Limits Report. The attachment to this letter and its enclosures provide the justifications and proposed revisions to the Technical Specifications, Bases and a sample report.

Your prompt attention to this application is appreciated.

Sincerely,

J. C. Deddens
Senior Vice President
River Bend Nuclear Group

JCD/LAE/LLD/BMB/ch

Attachments

A001
1/1

cc: U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
Arlington, TX 76011

Mr. Walt Paulson, Project Manager
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

NRC Resident Inspector
P. O. Box 1051
St. Francisville, LA 70775

Mr. William H. Spell, Administrator
Nuclear Energy Division
Louisiana Dept. of Environmental Quality
P. O. Box 14690
Baton Rouge, LA 70898

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

STATE OF LOUISIANA)

PARISH OF WEST FELICIANA)

In the Matter of) Docket No. 50-458

GULF STATES UTILITIES COMPANY)

(River Bend Station - Unit 1)

AFFIDAVIT

J. C. Deddens, being duly sworn, states that he is a Senior Vice President of Gulf States Utilities Company; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the documents attached hereto; and that all such documents are true and correct to the best of his knowledge, information and belief.

J. C. Deddens

Subscribed and sworn to before me, a Notary Public in and for the State and Parish above named, this 14th day of November, 1989. My Commission expires with Life.

Claudia F. Hurst
Notary Public in and for
West Feliciana Parish, Louisiana

ATTACHMENT

PROPOSED
GULF STATES UTILITIES COMPANY
RIVER BEND STATION
DOCKET 50-458/LICENSE NO. NPF-47

CORE OPERATING LIMITS REPORT SUBMITTAL
(89-03)

LICENSING DOCUMENT INVOLVED: TECHNICAL SPECIFICATIONS
(See Enclosure 1)

REASON FOR REQUEST:

In accordance with 10CFR50.90 GSU requests changes to the Technical Specification to remove cycle-specific parameter limits from the Technical Specifications in accordance with guidance provided in Generic Letter 88-16 dated October 1988. The proposed changes will provide for the administrative requirements for a formal Core Operating Limits Report (COLR), which will contain the relocated cycle-specific limits. GSU requests to amend the Technical Specifications contained in Appendix A to the River Bend Station (RBS) Operating License NPF-47 to include the new COLR report and to delete the specific limits from the Technical Specifications.

The proposed change will reduce the administrative burden on the NRC Staff and GSU to submit Technical Specifications change prior to each fuel cycle without changing the present technical requirements of determining cycle specific changes using NRC-approved methods and acceptance criteria. An additional benefit of this change would allow the delay in the reference loading pattern computations of approximately 6 months. This delay will allow a more accurate inclusion of present cycle operation into the computations thereby allowing an improved prediction of future fuel operational requirements.

DISCUSSION

Generic Letter 88-16, dated October 4, 1988, entitled "Removal of Cycle-Specific Parameter Limits From Technical Specifications" contains guidance for an alternative that eliminates the need for a license amendment to update the cycle-specific parameter limits before each fuel cycle. This generic letter is based on submittals from the Oconee and the Brunswick plants which were lead plants for this type of change. Use of the Generic Letter 88-16 alternative consists of three separate actions to modify Technical Specifications: (1) the addition to the Technical Specifications of a defined formal report (COLR) that includes the values of the cycle-specific parameter limits that have been established using an NRC-approved methodology and which are consistent with the applicable limits of the safety analysis as addressed in the Updated Safety Analysis Report (USAR), (2) the additional requirement to submit a report (the COLR) to the Nuclear Regulatory Commission for their information, and (3) modification of existing individual Technical

Specifications to eliminate cycle-specific parameter limits and to note in their place that the cycle-specific parameters shall be maintained within the limits provided in the COLR.

GSU's submittal was developed using the Generic Letter (88-16), the Brunswick lead BWR submittal and a letter from General Electric (J. S. Charnley to NRC M. W. Hodges) dated May 10, 1989 which identified the cycle-specific limits which may be included in the COLR. GSU's submittal is based on the RBS Cycle 3 limits as approved by the NRC in Amendment 33 to License NPF-47 dated January 30, 1989.

Fuel used at RBS is designed in accordance with NRC approved methods described in General Electric Standard Application for Reload Fuel (GESTAR) NEDE-24011-P-A, United States Supplement, and approved amendments. The RBS fuel design is supplemented by a plant-cycle unique analysis using GESTAR which confirms that the proposed limits are in compliance with NRC approved acceptance criteria using NRC approved methods contained in GESTAR. As a result, all limits being removed from the Technical Specifications and included in the COLR comply with the guidance provided in the Generic Letter. The transfer of these parameters to the COLR will not change the requirement to maintain the plant within these same cycle-specific limits as required by the Technical Specifications. Only the requirement to obtain NRC review of the specific limits prior to operation, has been removed.

The following Technical Specifications parameters have been identified as the cycle-specific limits that may be relocated to the formal COLR report in accordance with the guidance provided in Generic Letter 88-16 and the referenced letter from GE to the NRC. These changes are described below and the proposed revisions are contained in Enclosure I.

Power and Flow Dependent MCPR Limits (Section 3.2.3); The Technical Specification Minimum Critical Power Ratio (MCPR) Operating Limit is determined by adding the delta CPR from the most limiting cycle specific anticipated operational occurrence (AOO) analysis to the Safety Limit MCPR in Specification 2.1.2. Flow and power dependent MCPR limits ($MCPR_f$ and $MCPR_p$ respectively) are required to prevent fuel design and safety criteria from being exceeded in the event of an AOO during plant operation at less than rated flow or power conditions. The applicability of these MCPR operating limit adjustments to specific operating cycles, fuel designs and core loading patterns are confirmed as new fuel designs are introduced or as modifications to the power/flow dependent MCPR limits are made. In addition, these limits can be sensitive to the analysis methodology used during the evaluations of AOOs; therefore these limits should be transferred to the COLR.

MAPLHGR (Section 3.2.1); The Technical Specification maximum average planar linear heat generation rate (MAPLHGR) power distribution limits are provided for each bundle type in the core as new bundle designs and enrichments are loaded. These Technical Specification values are determined by considering both thermal-mechanical and emergency core cooling system evaluations.

LHGR (Section 3.2.4); Plant Technical Specification linear heat generation rate (LHGR) limits are fuel design dependent and as a result can change with each reload. Therefore, consistent with the relocation of the MAPLHGR and MCPR power distribution limits, the LHGR Technical Specification power distribution limits should also be relocated in the COLR.

Flow Biased APRM, Scram Trip and Rod Block (Sections 2.2.1, 3.2.2 and 3.3.6; Recirculation flow rate biased APRM scram and rod block settings are established to provide adequate margin to plant Safety Limits while allowing acceptable operating margin. This setpoint is in part determined from the rod withdrawal error AOO analysis results for the fuel cycle application. Based on these considerations, the flow biased APRM scram and rod block settings should be removed from the Technical Specifications. In addition to the scram and rod block settings, the 6 second time delay, described in Table 3.3.1-7 footnote **, which simulates the thermal power time constant of the fuel should also be removed and relocated to the COLR. Future fuel designs proposed by General Electric may result in changes to these settings while complying with acceptance criteria using approved methods. This footnote change is proposed at this time to allow the inclusion of these fuel designs in future reloads without additional revision submittals to the License. GSU will not use these fuel designs until approved for use by the NRC either generically or in a plant specific submittal. Approved expanded domain analysis may also change the equations for these flow biased settings.

To implement the guidance provided in the generic letter, GSU has identified the administrative requirements of the Technical Specifications to be revised to support use of the COLR. These changes are described below and the proposed revisions are contained in Enclosure I.

Definitions (Section 1.0); This section of the Technical Specification was modified to include a definition of the Core Operating Limits Report that requires cycle/reload-specific parameter limits to be established on a unit-specific basis in accordance with an NRC-approved methodology that maintains the limits of the safety analysis. The definition notes that plant operation within these limits is addressed by individual specificaitons.

Design Features (Section 5.3); This section includes a description of the fuel and control rod assembly designs in the Design Features section of Technical Specification. The descriptions include information on the number of fuel and water rods, cladding material, active fuel length, bundle enrichments, and control rod material and dimensions. These details may change with the loading of new, approved designs or different enrichments of the same design. Therefore, these descriptions have been revised to be a more general description. While this information will not be included in the COLR, the reload bundle types and reference core loading pattern will be included in the Supplemental Reload Licensing report which will be referenced in the COLR.

Administrative Controls (Section 6.9.3); The COLR will be prepared following completion of the analysis or revisions needed for each cycle. This report provides all parameters and figures necessary to implement the License requirements and will be issued to the controlled copy holders of the Operating License.

The reporting requirements for the COLR report have been added to the Administrative Control section the Technical Specifications. These specifications require the the COLR be submitted to the NRC Document Control Desk, upon issuance, with copies to the Regional Administrator and Resident Inspector. The COLR report provides the values of cycle-specific parameter limits that are applicable for the current fuel cycle. Furthermore, these revised specifications require that the values of these limits be established using the approved methodologies in NEDE-24011-P-A, "General Electric Standard Application for Reactor Fuel" (latest approved version) and that the values be consistent with all applicable limits of the safety analysis. The COLR report, including applicable revisions or supplements, will be issued to the NRC for each cycle upon completion of the necessary analysis to support continued operation of the plant. Any proprietray information will be distributed separately. A sample of the COLR based on cycle 3 analysis is included as Enclosure II.

As a result of the proposed changes to the Technical Specifications, revisions to the BASES have been identified which are necessary now, or may be required in future cycles, due to fuel or reload design. These Bases changes are described below and the proposed revisions are contained in Enclosure III.

Section B 2.2.1 (Reactor Protection System - APRM) identifies the simulated thermal time constant of 6 seconds to model the thermal transient characteristics of the General Electric fuel. This time constant may change in future fuel designs which are or will be approved by the NRC. To allow the BASES to continue to support approved fuel desings which may be utilized by GSU, this figure should be removed from the BASES and included in the COLR.

Section B 3/4.2.1 (APLHGR) identifies the exposure dependent maximum APLHGR limits for each bundle type in the Reactor Core. These limit figures may change with new bundle types; because these figures are now being included in the COLR, the references to the limiting APLHGR is revised.

Section B 3/4.2.3 (MCPR) identifies the power and flow dependent operating limits. These limits are sensitive to the fuel design and transient analysis methodology; as a result they become cycle specific values. The basis is revised to reference the COLR where cycle specific the information previously was located. The removal of the safety limit value is proposed for consistancy with Specification 2.1.2 which provides both the two and single recirculaton loop operational limits of 1.07 and 1.08. In lieu of providing both values of the safety limit MCPR in BASES of operating limit MCPR, GSU requests that a reference to Specification 2.1.2 for the safety limit values be included and the two recirculation loop

safety limit MCPR value (1.07) be removed from the BASES of Specifications /4.2.3.

Because these changes involve only the Bases, there are no changes or modifications made to the River Bend facility or Technical Specifications per 10CFR50.56 or to any existing Limiting Condition for Operation, Surveillance Requirement, or margin of safety. Therefore, this change does not 1) increase the probability or consequences of an accident previously evaluated, 2) create the possibility of a new or different kind of accident from any previously evaluated, or 3) reduce the margin of safety.

NO SIGNIFICANT HAZARDS CONSIDERATIONS

In accordance with the requirements of 10CFR50.92, a no Significant Hazards Considerations evaluation is provided for the technical specification changes described in the preceding paragraphs. Based on the guidance provided in NRC Generic Letter 88-16, the proposed change removes the values of cycle-specific parameter limits from the RBS Technical Specifications and makes related administrative and format changes. The change does not involve a significant hazards consideration for the following reasons:

1. The proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated. The abnormal operational transients analyzed in the RBS Updated Safety Analysis Report will remain bounding. There will be no change in the operation of the facility as a result of this amendment. No safety-related equipment or function is altered. The proposed amendment removes cycle-specific parameter limits from the Technical Specifications and references their inclusion in the CORE OPERATING LIMITS REPORT (COLR). NRC approved analytical methodology will continue to be used as the basis for the results that will now be reported in the COLR.

2. The proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated. As stated above, no safety-related equipment, safety function, or plant operations will be altered as a result of this amendment. The requested change does not create any new accident mode. The proposed amendment is in accordance with the guidance provided in Generic Letter 88-16 for licensees requesting removal of the values of cycle-specific parameters from Technical Specifications. The establishment of these limits in accordance with an NRC-approved methodology and the incorporation of these limits into the COLR will ensure that proper steps have been taken to maintain the values of these limits. Furthermore, the submittal of the COLR to the Commission will allow the Staff to continue to trend the values of these limits without the need for prior Staff approval of these limits and without introduction of an unreviewed safety question.

3. The proposed amendment does not alter the requirement that the plant be operated within the limits for cycle-specific parameters nor the required remedial actions that must be taken if these limits are not met. While it is recognized that such limits are

essential to plant safety, the values of such limits can be determined in accordance with NRC-approved methods without affecting nuclear safety. The removal of the values of these limits from the RBS Technical Specifications is coincident with their incorporation into the COLR that is submitted to the NRC. Hence, appropriate measures exist to control the values of these limits. Therefore, the proposed changes are administrative in nature and do not impact the operation of the facility in a manner that involves a reduction in the margin of safety. Indeed, as stated in Generic Letter 88-16, the proposed amendment is responsive to industry and NRC efforts on improvements in Technical Specifications, and will result in a resource savings for the licensee and the NRC by eliminating the majority of license amendment requests for changes in values of cycle-specific parameters in Technical Specifications.

Based upon the above considerations, the proposed change does not result in a significant increase in the probability or the consequences of any accident previously evaluated, does not create the possibility of a new or different kind of accident than previously evaluated and does not result in a reduction in the margin of safety. Therefore, GSU concludes that no significant hazards considerations are involved with approval of the proposed change.

REVISED TECHNICAL SPECIFICATIONS

The requested revisions are provided in Enclosure I. A sample of the COLR using Cycle 3 analysis is included as Enclosure II. The revised Bases are included as Enclosure III.

SCHEDULE FOR ATTAINING COMPLIANCE

River Bend Station is currently in compliance with the applicable Technical Specifications. The third refueling outage is currently scheduled to begin September 15, 1990. GSU requests this proposed change be approved by January, 1990 to allow an improved prediction of future fuel cycle requirements. GSU also requested this amendment become effective 60 days after the date of NRC approval to allow completion and submittal of the initial COLR. During the period from NRC approval until the initial COLR submittal GSU will maintain all limits in the license.

NOTIFICATION OF STATE PERSONNEL

A copy of the amendment application and this submittal is being provided to the State of Louisiana, Department of Environmental Quality-Nuclear Energy Division.

ENVIRONMENTAL IMPACT APPRAISAL

Gulf States Utilities Company (GSU) has reviewed the proposed license amendment against the criteria of 10CFR51.22 for environmental considerations. As shown above, the proposed changes do not involve a significant hazards consideration, nor increase the types and amounts of effluents that may be released offsite, nor significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, GSU concludes that the proposed changes meet the criteria given in 10CFR51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.

ENCLOSURE I

CORE OPERATING LIMITS REPORT SUBMITTAL
89-03

TECHNICAL SPECIFICATION REVISION SUMMARY

Subject (Section)	Revision
INDEX	Add new definition item 1.9 "Core Operating Limits Report" (COLR)
List of Figures (1.0)	Transfer MAPLHGR Figures 3.2.1-1, 2, 3, 4, 5, 6 to the COLR; 3.2.3-1, 2
Definitions (1.0)	Add new definition for Item 1.9 "Core Operating Limits Report (COLR)"
Setpoints (2.2.1)	Transfer single and two recurculation loop flow biased setpoints from Table 2.2.1-1 item 2.b to the COLR
Average Planar Linear Heat Generation Rate (3/4.2.1)	Revise to include reference to the COLR for MAPLHGR Limits
APRM Setpoints (3/4.2.2)	Transfer single and two recirculation loop setpoints to the COLR
Minimum Critical Power Ratio (3/4.2.3)	Revise to include reference to the COLR for MCPR Limits and transfer Figures 3.2. 3-1 and 2
Linear Heat Generation Rate (3/4.2.4)	Revise to include reference to the COLR for the LHGR Limits
Reactor Protection System Response Times (3.3.1)	Transfer the second thermal time constant to the COLR
Control Rod Block Instrument Setpoints (3.3.6)	Transfer the single and two loop recirculation loop flow biased setpoints from Table 3.3.6-2 item 2.a. to the COLR
Design Features - Fuel Assemblies (5.3)	Revise description to allow fuel designs approved per NEDE-24011-P-A-US to be used.
Administrative Controls (6.9.3)	Include requirement for the Core Operating Limits Report submittal.