GULF STATES UTILITIES COMPANY
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June 26, 1991
RBG-35251
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 Company (GSU) 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 revise the test frequency requirements for the Diesel Generators identified in Technical Specification 3/4.8.1.1. The Attachment to this letter and the Enclosures provide the justifications proposed revisions to the Technical Specifications and the associated bases.

Should you have any questions, please contact Mr. L. L. Dietrich of my staff at (504) 381-4866.

Sincerely,

W. H. Odell
Manager - Oversight
River Bend Nuclear Group

LAE/LLD/pj

Attachment

9107030218 910626
PDR ADOCK 05000458
P PDR

cc: U. S. Nuclear Regulatory Commission
611 Ryan Plaza Drive, Suite 1000
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NRC Resident Inspector
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Mr. G. A. Miller, Administrator
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Louisiana Department of Environmental Quality
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Mr. Doug Pickett
U.S. Nuclear Regulatory Commission
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

STATE OF LOUISIANA	)	
PARISH OF WEST FELICIANA	)	Docket No. 50 58
In the Matter of	)	
GULF STATES UTILITIES COMPANY	)	
(River Bend Station - Unit 1)		

AFFIDAVIT

W. H. Odell, being duly sworn, states that he is a Manager-Oversight for 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.

W. H. Odell

Subscribed and sworn to before me, a Notary Public in and for the State and Parish above named, this 26th day of June, 1991. My Commission expires with Life.

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

ATTACHMENT

GULF STATES UTILITIES COMPANY
RIVER BEND STATION
LICENSE NPF-47

AC SOURCES
(91-07)

Licensing Document: Technical Specifications

Items: 4.8.1.1.3
Table 4.8.1.1.2-1

Pages: 3/4 8-10,11

REASON FOR REQUEST:

The current requirements of Technical Specification (TS) Table 4.8.1.1.2-1 Note ** states that "The associated test frequency shall be maintained until seven consecutive failure free demands have been performed and the number of valid failures in the last 20 valid demands has been reduced to one." This note may only be used when the number of failures in the last twenty demands is greater than or equal to 2. The proposed change will allow the use of Note ** to terminate weekly surveillance testing when 7 consecutive failure free starts have been achieved and there is one or less valid failures in the last 20 starts. This change can be accomplished by relocating footnote "**" from it's current location under the "NUMBER OF FAILURES IN THE LAST 20 VALID TESTS" so that it is immediately after "at least once per 7 days" under the "TEST FREQUENCY" column.

Technical Specification 4.8.1.1.3 "Reports" currently requires that two reporting criteria are followed. The first requirement is that all diesel generator failures be reported to the NRC. The second requirement is that an expanded report to the NRC be prepared when the number of diesel generator failures exceeds 7 in the last 100 valid demands on a per nuclear unit basis. The proposed TS change would allow a report to be generated on a diesel generator unit basis to eliminate the need for a dual counting system, one for diesel generator test frequency and one for reporting.

These changes are being requested to reduce unnecessary testing of diesel generators at River Bend in the spirit of Generic Letter 84-15, and to make the reporting criteria consistent with the testing criteria.

DESCRIPTION:

River Bend Station (RBS) Technical Specification 3/4.8.1, AC Sources - Operating, specifies the operability requirements for AC sources at RBS during Operational Conditions 1, 2, and 3 as well as those surveillance requirements which must be performed to demonstrate the operability of these AC sources. Specification 4.8.1.1.2 specifies the surveillances specifically required to demonstrate operability of the diesel generators (DGs). The surveillance requirements stated in 4.8.1.1.2.a are required to be performed on a STAGGERED TEST BASIS in accordance with the frequency specified on Technical Specification Table 4.8.1.1.2-1, Diesel Generator Test Schedule. Surveillance Requirements 4.8.1.1.2.4a,b and 5 require the DG to be started, verified to accelerate to the required speed and attain the required voltage and frequency within the required time, synchronized to offsite power, and run loaded for at least 60 minutes.

Technical Specification Table 4.8.1.1.2-1 requires the DG to be tested on one of two test frequencies (monthly or weekly) based on the DG's previous performance history. Specifically, Table 4.8.1.1.2-1 requires the DG to be tested at least once per 31 days if the number of valid failures in the last 20 valid tests is $\leq$ 1 and if the number of valid failures in the last 100 valid tests is $\leq$ 4. Table 4.8.1.1.2-1 requires the DG to be tested at least once per seven days if the number of valid failures in the last 20 valid tests is $\geq$ 2 and/or if the number of valid failures in the last 100 valid tests is $\geq$ 5. Footnote "**" (which, per the existing format, currently applies only to the "$\geq$ 2 valid failures in the last 20 valid tests" criterion) states that the weekly test frequency must be maintained until seven consecutive failure-free demands have been performed <u>and</u> the number of valid failures in the last 20 valid tests has been reduced to one. However, since this footnote currently applies only to the "$\geq$ 2 valid failures in the last 20 valid tests" criterion, monthly testing cannot be resumed until the number of valid failures in the last 100 valid tests has been reduced to $\leq$ 4, even if the requirements of the footnote have been satisfied.

SUMMARY:

In accordance with 10CFR50.90, the following changes to Technical Specification Table 4.8.1.1.2-1, Diesel Generator Test Schedule, are being proposed:

> It is proposed that the placement of footnote "**" on " $\geq$ 2" under the "NUMBER OF FAILURES IN THE LAST 20 VALID TESTS" column be moved to follow "at least once per 7 days" under the "TEST FREQUENCY" column. This proposed change will allow the resumption of monthly surveillance testing of a DG when the requirements of the footnote have been satisfied (i.e., the

performance of seven consecutive failure-free demands and the number of valid failures in the last 20 valid tests has been reduced to one) regardless of the number of valid failures in the last 100 valid tests. This proposed change will allow the resumption of monthly testing when it has been demonstrated that adequate reliability of the DG has been restored, regardless of the circumstances which required increased testing.

It is proposed that Surveillance Requirement 4.8.1.1.3, Reports, be changed to require the additional information recommended in Regulatory Position C.3.b of Regulatory Guide 1.108, Revision 1, August 1977, be included in the SPECIAL REPORT if the number of failures in the last 100 valid tests is greater than or equal to seven on a per diesel generator basis instead of on a "per nuclear unit" basis. This proposed change is consistent with the guidance of NRC Generic Letter 84-15 for determining failure rates for each DG at a site and would avoid the need for a dual counting system, one for determining DG tests frequency and one for reporting.

These proposed changes have previously been approved for the Perry Nuclear Power Plant (NPF-58 Amendment Nos. 12 and 27) and the Clinton Power Station (NPF-62 Amendment 49). Justification for these proposed changes is provided below.

JUSTIFICATION FOR PROPOSED CHANGES:

Technical Specification Table 4.8.1.1.2-1, Diesel Generator Test Schedule, specifies the required test frequency for the individual DGs based on the number of valid failures in the last 20 and 100 valid tests performed on that DG.

A note to the table (footnote "**") explains that for failures in excess of one in 20 or 5 in 100 last valid tests, the weekly frequency must be maintained until the seven consecutive failure-free demands have been performed and the number of failures in the last 20 valid demands has been reduced to one.

Currently no such provision exists for exiting the increased testing frequency requirements when five or more failures have occurred in the last 100 valid tests. Thus, for the case when a DG which has experienced five or more failures in the last 100 valid tests, the technical specification table could require maintaining the increased testing frequency significantly longer than in the previous case after repairs have restored the DG's reliability. This proposed change seeks to use the same criterion for demonstrating restored DG reliability regardless of the circumstances which resulted in the increased testing frequency requirement.

On July 2, 1984, the NRC issued Generic Letter 84-15 to provide licensees with guidance on improving DG reliability by reducing the number of cold fast starts of DGs, obtaining DG reliability data, and attaining and maintaining a DG reliability goal. Enclosure 1 to Generic Letter 84-15 described the basis for reducing cold fast starts and its resultant improvement in DG reliability, and also discussed the correlation between excessive DG testing (other than cold fast starts) and its resultant degradation of diesel engines.

Enclosure 3 to Generic Letter 84-15 described an acceptable example of a performance program for attaining and maintaining DG reliability above the threshold level of concern. It prescribed increasing the surveillance test frequency where previous testing indicated failure counts in excess of a specified value (equivalent to a reliability of less than or equal to 0.95/demand) until restored reliability was demonstrated. It also considered disqualification when the demonstrated reliability is less than 0.90/demand and subsequent requalification of the DG in accordance with a prescriptive testing program, including seven consecutive successful demands without a failure within 30 days, and 14 successful consecutive successful demands within 74 days of the DG being restored to operable status. Additional, more restrictive criteria applied should a failure occur during the above testing.

While increasing the testing frequency of a DG is still considered to be an acceptable method to demonstrate that reliability of a DG has been restored, the discussions in Enclosure 1 to Generic Letter 84-15 regarding reduction of unnecessary testing and changes to the Standard Technical Specifications (as described in Appendix A of the Generic Letter), such as changing the previously recommended test frequency of once per 3 days contained in Regulatory Guide 1.108 to once per seven days, clearly indicate that unnecessary DG testing should be avoided if other methods of demonstrating and/or restoring DG reliability exist. This proposed change seeks to avoid the possibility of a situation developing which would require continued DG testing at an increased frequency even after demonstrating that acceptable reliability has been restored. Such continued testing is excessive and not consistent with the intent of Generic Letter 84-15.

The NRC's April 25, 1985, Safety Evaluation (SE) supporting issuance of Amendment No. 48 to the North Anna Unit 2 operating license reflects the basis for Table 4.8.1.1.2-1 in the current RBS Technical Specifications. The SE discusses reliability goals, accelerated testing and incentives for engine overhaul and their relation to the improvement of DG reliability. As stated in the SE, the original accelerated testing frequency for North Anna was based upon the number of failures in the last 100 starts (consistent with NUREG 0123, Standard Technical Specifications, and

Regulatory Guide 1.108). The expansion of the accelerated test frequency table to include the number of failures in the last 20 starts (as prescribed in Generic Letter 84-15) was to provide an early indication (based on two or more failures in the last 20 starts) of a 0.90 or lower reliability.

The intent of the latter criterion, the SE notes, is to provide a timely response to the possibility of abrupt DG degradation. Increasing the test frequency should provide a faster accumulation of test data upon which to judge the reliability of the DG. This additional data can then be used to distinguish between failures which occur close together simply due to random chance, and those failures that are indicative of an abrupt decline in the actual reliability.

This weekly (accelerated) test schedule is continued until two conditions have been satisfied; first, seven consecutive successful tests have been accumulated, and second, the failures in the most recent 20 tests have been reduced to one. Seven successful tests indicate a reliability of at least 0.90/demand but at only the 50% confidence level. Continuing the accelerated testing until the number of failures is one out of 20 adds further assurance that the DG reliability has not degraded below the 0.90/demand level. It was intended that this method of returning to the normal testing interval of once per 31 days, upon satisfying the two conditions above, be only applicable to the case where two or more failures occurred in the last 20 starts, not to the case where five or more failures occurred in the last 100 starts.

The North Anna submittal proposed an explicit, direct incentive for the utility to take major corrective action on the DG by proposing the inclusion of a note in their technical specifications that would establish the following provision: If the licensee performs a thorough and comprehensive, complete overhaul of a DG that is approved by the DG manufacturer such that the DG would be rebuilt to like-new conditions, the licensee may in return for the overhaul receive the benefit of "wiping the slate clean" of all previous failures on that DG if an acceptable reliability could be demonstrated. This provision (which now exists in most plants' technical specifications, including River Bend Station's) provided an incentive for a utility to consider the option of overhauling a DG in order to resume testing of the DG at the normal (monthly) frequency. Notwithstanding, it is significant to note that an engine overhaul would focus on the internal engine components and therefore may not necessarily address the most statistically prevalent failure modes. The maintenance program required by Technical Specification 4.8.1.1.2.f.1 requires that the diesel generators be inspected in accordance with manufacturer's recommendations for this class of service. The diesel generator maintenance program at River Bend Station requires that periodic overhauls of the engine be performed. The technical specification changes that GSU is requesting will not eliminate this requirement.

Regardless of the number of failures a DG has experienced, there is a direct incentive for maintaining DG reliability. Resolution of DG reliability problems are therefore taken very seriously and are vigorously pursued at RBS. As previously stated, complete overhauls of a DG may not significantly contribute to a reduction of the most statistically prevalent failures if they are not related to the internals of the engine. Therefore, GSU believes that monthly testing of a DG should be allowed when, in lieu of a complete overhaul, acceptable reliability of the DG has been demonstrated to have been restored by the successful performance of seven consecutive failure-free demands and the DG has demonstrated a reliability of greater than 0.90 over its last 20 valid tests.

With respect to the proposed change to the reporting requirements of Technical Specification 4.8.1.1.3 from a per-nuclear-unit basis to a per-diesel-generator basis, this proposed change, as previously stated, is in keeping with the guidance of Generic Letter 84-15 for determining failure 2rates of each DG at a site. It is appropriate that test failures are determined on a per-diesel-generator basis. The proposed change would make the reporting criteria consistent with the testing criteria and would avoid the need for a dual counting system, one for determining DG test frequency and one for reporting.

A change to the Bases for this specification is requested to clarify the new testing requirements. This change will include the criteria goals of an overall reliability of > 95 % and to attain ≥ 90 % to return to monthly testing. The requirement to return to weekly testing if the number of failures is greater than or equal to 2 in 20 or 5 in 100. Because the Bases is not part of the technical specifications as described in 10CFR50.36 no Significant Hazard Consideration determination is provided.

BASIS FOR NO SIGNIFICANT HAZARDS CONSIDERATION:

As required by 10CFR50.92, the following is provided to the NRC in support of a "No Significant Hazards Considerations" determination.

I. Probability or Consequences of Any Accident Previously Evaluated:

These proposed changes will still require that acceptable reliability has been restored for the affected DG prior to resuming monthly surveillance testing. Regardless of the number of failures a DG has experienced, there is still a direct incentive for maintaining DG reliability. The proposed changes to the reporting requirements in no way affect diesel generator operation. Maintaining acceptable reliability of DGs assures that they will reliably perform their function of providing emergency standby power for safety systems designed

to mitigate the consequences of accidents. Therefore, these proposed changes do not result in a significant increase in the probability or consequences of any accident previously evaluated.

II. Possibility of a New or Different Kind of Accident:

These proposed changes do not result in any change to the plant design or operation which could introduce a new failure mode. Therefore, these proposed changes cannot create the possibility of a new or different kind of accident from any accident previously evaluated.

III. Margin of Safety:

The ability to reduce unnecessary testing of DGs, following corrective actions to restore the DG's reliability and demonstration that its reliability has been restored regardless of its demonstrated reliability prior to the corrective actions, should result in an increase in the margin of safety with respect to reliability. Regardless of the number of failures a DG has experienced, there is still a direct incentive for maintaining DG reliability. Therefore, these proposed changes do not result in a significant reduction in a margin of safety.

As discussed above the proposed change does not increase the probability or consequences of a previously evaluated accident and will not create a new or different kind of accident. Also, because adequate margin has been shown with respect to all design limits, the proposed change does not result in a reduction to the margin of safety. Therefore, GSU concludes there are no significant hazards involved.

REVISED TECHNICAL SPECIFICATION:

The requested revisions to the technical specifications are provided in Enclosure I. The requested revisions to the Bases are included in Enclosure II.

SCHEDULE FOR ATTAINING COMPLIANCE:

River Bend Station is currently in compliance with this specification. GSU requests the modifications to the diesel generator requirements be implemented within 60 days after receiving the approved amendment.

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.

ENVIRONMENTAL IMPACT APPRAISAL:

Gulf States Utilities (GSU) has reviewed the proposed license amendment request against the criteria of 10CFR51.22 for environmental considerations. 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. Thus, GSU concludes 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.

LAR91-07.NRB

ENCLOSURE I