



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

GULF STATES UTILITIES COMPANY

RIVER BEND STATION, UNIT 1

REVISION TO DIESEL GENERATOR TECHNICAL SPECIFICATIONS

1.0 INTRODUCTION

By letter dated August 7, 1987, Gulf States Utilities Company (GSU) requested changes to the Technical Specifications for the diesel generators at River Bend Station, Unit 1. The requested changes involve revisions to the Action statements of Technical Specification Section 3.8.1.1. In July 1984, the staff issued Generic Letter 84-15 on diesel generator reliability. One of the principal objectives of this letter was to reduce the number of diesel generator "fast starts" which the staff had determined results in premature diesel engine degradation. Other diesel generator start tests were also targeted for reduction on the basis that excessive testing results in degradation of diesel engines. The recommendations of Generic Letter 84-15 regarding testing of the diesel generators have previously been incorporated into the River Bend Technical Specifications. GSU indicates that their proposed changes would result in further reducing the number of excessive test starts and reduce unnecessary hardship on the equipment.

2.0 EVALUATION

River Bend Technical Specification 3.8.1.1, Actions a and f, currently require that the diesel generators (DGs) be demonstrated operable by starting and running loaded for a period of one hour when one or both offsite circuits are inoperable. GSU is proposing that this demonstration of diesel generator operability be deleted. The licensee contends that adequate assurance of DG operability is maintained by the diesel generator testing frequencies specified in the normal Technical Specification surveillance requirements. In addition GSU references IE Information Notice No. 84-69 and Supplement 1 which warn against the danger of losing both the diesel generator and an offsite power supply when they are operated in parallel. They are especially vulnerable in this mode to grid disturbances when the offsite power system is in a degraded mode such as may be the case when an offsite power source is lost. In order to meet the present River Bend Technical Specification which requires loading of the diesel generators for a period of an hour when an offsite power source is lost, a diesel generator must be operated in parallel with a remaining offsite power source to achieve the required loading.

While the staff agrees there is a danger of losing both the diesel generator and an offsite power supply when they are operated in parallel, the staff also concludes that it is necessary to provide additional assurance of diesel generator operability when an offsite power source is lost, since there is a greater likelihood of needing the diesel generators during this period. The staff therefore concludes that GSU's proposal to completely delete the operability test requirement of the diesel generators when offsite power supplies are lost is not acceptable. However, because the potential of simultaneously losing both a diesel generator and an offsite power supply does exist when they are operated in parallel, the staff recommends that GSU propose deletion of the diesel generator loading requirement from the River Bend Technical Specification 3.8.1.1, Actions a and f.

GSU is also proposing changes to River Bend Technical Specification 3.8.1.1, Actions b, c, d, and g and Section 3/4.8.1 of the Bases. These Action statements currently require that with a diesel generator inoperable due to any cause other than preplanned preventative maintenance or testing, the remaining diesel generators be demonstrated operable by starting and running loaded for a period of one hour. GSU is proposing that the phrase "due to any cause other than preplanned preventative maintenance or testing" be deleted and the phrase "as a result of a valid failure" be added. The revised Action statements would then require that with a diesel generator inoperable as a result of a valid failure the remaining diesel generators be demonstrated operable by starting and running loaded for a period of one hour.

GSU's reason for proposing this change is to reduce the number of unnecessary test starts on redundant diesel generators when the cause for inoperability on the original diesel generator is clearly not a common mode or generic type failure which could also affect the availability of the redundant diesel generators. The licensee states that if a DG was discovered inoperable while in the standby service mode (i.e., no failure during a valid test) then the potential common-mode/generic failure can be investigated and operability of the remaining diesel generators verified without increased testing. According to GSU's discussion, therefore, a valid failure is only one that occurs to a diesel generator while it is operating during a valid test, and any inoperability of a diesel generator discovered while it is in the standby mode would not be a valid failure and would not require testing of the redundant diesel generators under the proposed technical specification.

The staff does not agree that inoperability of a diesel generator discovered while it is in standby versus inoperability as a result of a failure during operation forms a correct basis for determining the action to be taken with regard to whether the inoperability has common-mode/generic implications. The same cause for inoperability could be discovered while the diesel generator is in the standby mode or undergoing a test based solely on circumstance, and yet in

one case a test of the remaining diesel generators would be required and in the other the test would not be required. Further, the testing of the remaining diesel generators is needed not only to verify there is no common-mode problem but also to provide added assurance of the availability of the remaining onsite AC sources when one of them is lost. The staff concludes that this additional assurance is necessary regardless of whether the initial failure has common-mode implications and therefore concludes that the proposed technical specification change is not acceptable.

With regard to the above testing to provide added assurance of the availability of the remaining onsite AC sources, GSU references IE Information Notice 84-69 and Supplement 1 which warn that when a diesel generator is operated connected to offsite or nonvital loads, the emergency power system is not independent of disturbances on the nonvital and offsite power systems that can adversely affect emergency power availability. GSU states that assurance of availability is therefore lessened by a demonstration of operability requiring connection of the diesel generators to offsite and nonvital loads at a time when one other diesel generator is already inoperable. The staff agrees there is an increased danger of losing both the diesel generator and an offsite power supply when they are operated in parallel; however, the staff still concludes that it is necessary to provide added assurance of the remaining onsite AC sources when one of them is lost. Therefore, similar to the recommendation in the first part of this evaluation, the staff recommends that GSU propose deletion of the diesel generator loading requirement from the River Bend Technical Specification 3.8.1.1, Actions b, c, d, and g.

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Dated: January 14, 1988