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Duke Power Company
P.O. Box 1006
Charlotte, N.C. 28201-1006

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HAL B. TUCKER
Senior Vice President
Nuclear Generation
(704) 382-4531

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Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555
Attention: Docketing and Service Branch

Subject: Oconee Nuclear Station
Docket Numbers 50-269, -270, and -287
McGuire Nuclear Station
Docket Numbers 50-369 and -370
Catawba Nuclear Station
Docket Numbers 50-413 and -414
Duke Power Company Comments on the Proposed Revision to
10 CFR 50.63, "Loss of All Alternating Current Power"

The following discussion is in response to the NRC's request for comments on the proposed revision to the subject rule as it applies to emergency diesel generator (EDG) reliability. These comments are offered in consideration of determining a realistic approach to improving EDG reliability.

Background

The proposed rule and accompanying Regulatory Guide 1.9, Revision 3 are results of discussions and negotiations regarding EDG reliability that began with the station blackout (SBO) issue. The SBO issue highlighted that EDG reliability was a large contributor to core melt probability, and the industry committed to improve EDG reliability through Generic Issue B-56. A Nuclear Management and Resources Council (NUMARC) group and an NRC group worked on this issue concurrently, with the goal to develop a reliability plan that could be adopted by both groups. The result was that two plans were developed simultaneously; Appendix D to NUMARC 87-00 describes the industry position on EDG reliability, and draft Regulatory Guide 1.9, Rev. 3, describes the NRC's position. It was the intent of industry that the Regulatory Guide would incorporate by reference the contents of Appendix D of the NUMARC document; however, this was not the case.

Much effort went into discussions between NUMARC and the NRC on how reliability could be improved (especially in light of the recent industry figures which place reliability at 98%+). At the heart of the discussions was the issue of accelerated testing, which industry believes and NRC studies (NUREG-4590) confirm is one of the leading causes of EDG unreliability.

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Specific Comments

The issuance of the Regulatory Guide as a rule is not warranted. Development and use of a reliability program using NUMARC 87-00, Appendix D as guidance and elimination of accelerated testing will improve or maintain current reliability. Significant improvement of EDG reliability beyond the 98%+ level currently being experienced is an unrealistic expectation. We believe that development of reliability programs using the NUMARC document as guidance with the elimination of accelerated testing is a much more effective means of improving reliability than the issuance of fines on a daily basis until a specified number of successful starts is reached. Much of the intent of the rule is duplicated by the maintenance rule. In addition, in order to meet certain requirements of the proposed Guide, it is extremely possible that some utilities would have to install a "swing" diesel that may cost anywhere from \$20 million to \$100 million, depending on the site-specific circumstances and license requirements. This clearly exceeds the scope of the current backfit analysis.

There is redundancy and overlap with the proposed 3 in 20 failure reporting requirement and the 4 in 25 "problem diesel" requirement. It is recommended that the 3 in 30 be used as an early warning indication only, with no reporting requirement. Twenty demands represents too small a sample size to be statistically meaningful for use as anything but an early warning mechanism. The corrective action for the 4 in 25 "problem diesel", 7 consecutive starts, is acceptable; however the rule should consider giving utilities the flexibility to decrease this number or use simulated testing, depending on the resolution of the root cause of the valid failures. The problem diesel trigger would then be acceptable as proposed. In addition, Duke believes that reporting each diesel failure, as is currently the practice, serves no useful purpose. Duke recommends instead that a report be prepared upon reaching the 4 in 25, 5 in 50, and 8 in 100 triggers. This meets the intent of providing a reasonable and useful amount of information when it is needed. This is especially true as it relates to the requirement to make a 4-hour notification after a valid failure. Determining if a failure is valid or invalid can be an intricate process, taking on the order of days rather than hours. The statement should be corrected to state that a notification is required 4 hours after the failure is determined to be valid and a double trigger is exceeded. This will prevent many notifications that would otherwise be made in error.

The regulatory consequences for exceeding the double trigger are too severe. Imposing a Severity Level III violation and potential fines for each day that a ... exceeds a double trigger will be a signal to promote fast action, not quality

action. This proposed aspect of the regulation should be deleted. As previously noted, accelerated testing of the EDGs has been shown to do more harm than good; the constant testing, in some cases every 3 days for 2 years, has actually added to the overall unreliability of the machines. The proposed Guide requires accelerated testing when a double trigger and problem diesel trigger are exceeded. This is in direct conflict with the purpose of increasing reliability. This form of testing should be deleted. In lieu of this testing, Duke Power recommends the actions specified in NUMARC's 87-00, Appendix D as the appropriate action for recovery when a double trigger is exceeded.

The last paragraph of Section 2.1 should be clarified such that the post-maintenance test to declare the EDG operable does count if successful. If not successful, the test would not count and further troubleshooting would be pursued.

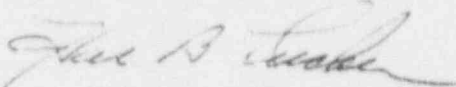
Equipment unavailability is addressed in the Maintenance Rule and the use of INPO industry-wide Plant Performance Indicator Program. Therefore, unavailability should not be addressed again in the proposed rule. Reliability and unavailability are competing goals and the NRC should not promote reduction of prudent maintenance activities to increase availability at the expense of reliability. As an example, the proposed rule indicates that the NRC assumed that EDG availability exceeds 99.3% as a part of the resolution to SBO. The proposed rule further assumes that this availability level will be achieved during power operation and during refueling outages. The latter is a drastic change from current practice. The ability to perform maintenance on EDGs, especially during outages, is necessary. High reliability in EDGs is only partially achieved through condition monitoring. On a per nuclear unit basis, an unavailability level of .007 is about 61 hours per year that a nuclear unit's diesels may be out of service. The current industry median of unavailability is about .017. Therefore, the .007 is grossly insufficient and will result in degraded reliability.

Table 1 of the Regulatory Guide allows tests 2.2.6 through 2.2.13 to be performed every 10 years. Currently, these tests are performed every refueling outage. This is a positive aspect of the Guide. However, some of these tests should be performed whenever a significant adjustment is made to the generator excitation or governor subsystems. In addition, the Guide should incorporate enhancements to testing allowed by Generic Letter 84-15 that permit slow starting of the engine and eliminate many of the detrimental effects of fast starting. The Guide should also address and permit the use of simulated testing in lieu of actual testing of the engine. This is especially important for certain subsystems such as controls. Furthermore, the Guide should specify the conditions required to restart on the hot start test as well.

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Thank you for this opportunity to comment on this proposed rule.
If there are any questions, please call Scott Gewehr at (704) 373-
7581.

Very truly yours,



Hal B. Tucker

cc: Mr. T. A. Reed, Project Manager
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop 14H25, OWFN
Washington, D. C. 20555

Mr. L. A. Wiens, Project Manager
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop 14H25, OWFN
Washington, D. C. 20555

Mr. R. E. Martin, Project Manager
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Mail Stop 14H25, OWFN
Washington, D. C. 20555

Mr. S. D. Ebnetter, Regional Administrator
U.S. Nuclear Regulatory Commission - Region II
101 Marietta Street, NW - Suite 2900
Atlanta, Georgia 30323

Mr. Aleck Serkiz
Office of Nuclear Regulatory Research
U. S. Nuclear Regulatory Commission
Mail Stop NLS314
Washington, D. C. 20555