



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 27 TO FACILITY OPERATING LICENSE NO. NPF-2  
AND AMENDMENT NO. 16 TO FACILITY OPERATING LICENSE NO. NPF-8  
ALABAMA POWER COMPANY  
JOSEPH M. FARLEY NUCLEAR PLANT, UNIT NOS. 1 AND 2  
DOCKET NOS. 50-348 AND 50-364

Introduction

By letter dated August 3, 1982, Alabama Power Company (APCo) proposed to change the Technical Specification loading requirements for the 24-hour test run of the emergency diesel generators. Subsequent to discussions with the NRC staff, APCo submitted a revision of this proposal by letter dated August 20, 1982.

Discussion

Technical Specification 4.8.1.1.2.c.5 requires a 24-hour test run of each of the emergency diesel generators (EDG) during each refueling outage. The specification requires the EDG's to be loaded to the 2000-hour rating for the full duration of the test run. This degree of loading was arrived at after consideration of a number of factors, including that for some of the five EDG's the accident loads that are automatically sequenced onto the EDG approach the 2000-hour rating.

In the August 3, 1982 letter, APCo proposed a two-stage test loading. The first two hours would be at the worst case accident load value or the continuous duty rating, whichever is greater. The subsequent 22 hours would be at the continuous duty ratings. APCo proposed this loading scheme as a permanent change to the Technical Specifications. The justification was given as follows:

1. The EDG manufacturer (Colt Industries) indicates that testing at greater than 60-90% of the continuous load does not contribute to the assurance of dependability or longevity.
2. During certain accident scenarios, APCo stated that loads beyond the continuous duty rating could be manually removed within 2 hours. The loads to be removed are the river water pumps that would be needed only if the emergency cooling water pond (the safety grade, ultimate heat sink) dam should fail.

During telephone discussions between the NRC staff, the APCo staff and the Bechtel staff on August 10 and 13, 1982, we indicated that, as long as the accident analysis required loading the river water pumps on an automatic basis, we could not approve a permanent change to test the EDG's at a lower loading.

Subsequently, APCo's August 20, 1982 letter revised the earlier proposal. First, APCo committed to submit new analysis that will justify deletion of the river water pump system on an automatic basis. Second, the automatic sequencing of the EDG would then be changed to delete the river water pumps and hence reduce the automatic loads to below the continuous duty ratings. Third, advance approval on a one-time basis was requested to conduct the next 24-hour test run in the two stages described earlier. Our evaluation of APCo's proposals, as modified, is as follows.

#### Evaluation

Surveillance testing of the loading of the EDG is based on a number of factors, including the magnitude of any automatically sequenced accident loads. River water system pumps are currently automatic loads. However, at the Farley plant the river water system serves as a backup to the emergency cooling pond, which is a safety-grade ultimate heat sink for all postulated accidents. The pond and its dam are seismic Category I; designed, constructed, and tested in accordance with all applicable standards. If the dam withstands the postulated seismic event, the river water system would not be needed except for makeup. APCo has outlined this rationale and we believe it is likely that they will be able to justify the deletion of the river water pumps as automatic loads on the EDG. The river water pumps would remain available as a manual backup. However, the future APCo analysis will require some time to complete and then will require NRC staff review and approval.

APCo is concerned that testing at overload conditions could have a detrimental impact on long-term EDG reliability. They argue that sufficient test results have already been accumulated to establish a statistical basis for the EDG reliability. We have reviewed this data and have determined that modifying the loading on a one-time basis will not impact the confidence in the reliability of the EDG or their capability to operate under overload conditions if the need should arise.

To support the two-stage load testing, APCo has agreed to implement procedures to remove the river water pumps loads from the EDG's within two hours. Further, they agree to implement procedures that will explicitly limit the manually-connected loads to the continuous duty rating. We consider this limitation of loads basic to our agreement.

### Summary

We conclude that it is likely that APCo will be able to justify deleting the river water pumps from the automatic loads on the EDG. Procedures will be in place to reduce the automatic loads to the continuous duty level and to prevent manual loadings from exceeding this level. The statistical benefit to be gained from this one-time test at the 2000-hour loading for the full 24-hour period is offset by the concern for long-term reliability. Therefore, on a one-time basis which expires September 1, 1983, we find the proposed 2-stage testing to be acceptable.

### Environmental Consideration

We have determined that the amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: September 20, 1982

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