



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NO. NFF-29

ENERGY OPERATIONS, INC., ET AL.

GRAND GULF NUCLEAR STATION, UNIT 1

DOCKET NO. 50-416

1.0 INTRODUCTION

By letter dated August 13, 1991, the licensee (Entergy Operations, Inc.) submitted a request for changes to the Grand Gulf Nuclear Station, Unit 1 Technical Specifications (TS). The amendment changes from 2 hours to 24 hours the time requirement for demonstrating the operability of the remaining diesel generators (DGs) when DG 13 is inoperable.

2.0 EVALUATION

With the loss of offsite AC power, the Diesel Generators (DGs) and their associated distribution supply power to safety-related equipment required for the safe shutdown of the facility and the mitigation and control of accident conditions within the facility. DG 13 provides emergency power for the High Pressure Core Spray system only. DGs 11 and 12 provide redundant power supplies for the remaining required safety systems.

In NUREG/CR-4550, Vol. 6, Rev. 1, Part 1 (Analysis of Core Damage Frequency: Grand Gulf, Unit 1, Internal Events), Table 5.4-1, certain events are ranked in accordance with their contributions to risk reduction. The risk reduction value for failure of DG 13 to start is cited as  $6.81E-7$ , whereas the comparable values for DGs 11 and 12 are  $4.85E-7$  and  $4.87E-7$  respectively. It is reasonable to conclude that the safety significance of the three DGs is comparable; however, the current time requirement for demonstrating operability of the remaining DGs is 24 hours when either DG 11 or 12 is inoperable, and 2 hours when DG 13 is inoperable. There is no basis for this disparity.

In Generic Letter (GL) 84-15, "Proposed Staff Actions to Improve and Maintain Diesel Generator Reliability," the staff concluded that excessive DG testing results in unnecessary mechanical stress and wear on the engines. The GL provides "Typical Technical Specifications" that contain a 24 hour requirement for demonstrating operability of remaining DGs when one is inoperable. In 1990, 10 of 12 DG starts at Grand Gulf would not have been necessary with a 24 hour requirement. In addition, 2 of the 10 DG starts were the result of unplanned events which shifted a significant portion of the licensee's readily

available resources to verifying the operability of the remaining DGs instead of returning DG 13 to an operable status. The maintenance history of DG 13 demonstrates that planned maintenance and unplanned simple repairs are normally completed within 24 hours.

This TS change will reduce the number of required DG engine starts not associated with normal surveillance requirements and will allow the licensee flexibility in application of its resources. The result will be greater DG availability and reliability. The staff concludes that changing the TS requirement from 2 hours to 24 hours provides a net benefit to safety and is acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Mississippi State official was notified of the proposed issuance of the amendment. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (56 FR 47236). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: R. Twigg

Date: March 9, 1992