



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 101 AND 65 TO FACILITY OPERATING  
LICENSE NOS. NPF-39 AND NPF-85  
PHILADELPHIA ELECTRIC COMPANY  
LIMERICK GENERATING STATION, UNITS 1 AND 2  
DOCKET NOS. 50-352 AND 50-353

1.0 INTRODUCTION

By letter dated February 22, 1995, the Philadelphia Electric Company (the licensee) submitted a request for changes to the Limerick Generating Station, Units 1 and 2, Technical Specifications (TS). The requested changes would revise several TS Surveillance Requirements to clarify the emergency diesel generator (EDG) acceptable steady state voltage range.

2.0 EVALUATION

Currently, TS Surveillance Requirements 4.8.1.1.2.a.4, 4.8.1.1.2.e.2, 4.8.1.1.2.e.4.b, 4.8.1.1.2.e.5, 4.8.1.1.2.e.6.b, 4.8.1.1.2.e.8.b, and 4.8.1.1.2.h require an emergency diesel generator steady state voltage range of  $4285 \pm 420$  volts. The change proposed by the licensee would reduce the acceptable range to  $4280 \pm 120$  volts. The rationale for this reduced range is discussed in the following paragraph.

The lower limit of this range (i.e., 4160 volts) is based on the minimum required steady state EDG voltage. By its calculation, the licensee determined that 4160 volts is the minimum acceptable value for starting and running equipment connected to the 4160 and 480 volt distribution systems. In its submittal, the licensee stated "This voltage accounts for voltage drops through the distribution system and results in acceptable end terminal device starting and running voltage." The upper limit of this range (i.e., 4400 volts) is based on the maximum acceptable voltage of the equipment powered from the 4000 volt buses. In its submittal, the licensee stated "NEMA Standard MG1-20.45.1 states that 4kV motors shall operate successfully at voltage ten percent above the rated voltage (4000V)."

The staff reviewed the licensee's proposal against the recommendations in Regulatory Guide (RG) 1.9, Revision 3, "Selection, Design, and Qualification of Diesel-Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants." The recommendations in RG 1.9, Rev. 3, call for using the "required voltage" value for testing the EDG. The information provided

by the licensee demonstrates that the proposed steady state voltage range is a more appropriate "required voltage" than the current TS range. Therefore, the licensee's proposal is acceptable.

The licensee also proposed a clarification of a statement in TS Surveillance Requirement 4.8.1.1.2.e.2, which addresses the EDG's ability to reject a load of greater than or equal to the residual heat removal (RHR) pump motor. The licensee proposed adding the statement "after steady state conditions are reached, voltage is maintained at  $4280 \pm 120$  volts." This clarification maintains the allowable voltage range for the RHR motor reject transient at the existing TS value (i.e.,  $4285 \pm 420$  volts) and adds the stipulation that the voltage return to a steady state voltage range consistent with the previously discussed revisions.

The licensee's proposal provides an appropriate clarification of the current TS wording and is therefore acceptable.

### 3.0 STATE CONSULTATION

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

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change surveillance requirements. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (60 FR 20525). Accordingly, the amendments meet 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 amendments.

### 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: S. Dembek

Date: August 24, 1995