

SUPPLEMENTAL SAFETY EVALUATION  
INITIAL PLANT TEST PROGRAM  
PERRY NUCLEAR POWER PLANT, UNITS 1 AND 2

Our Safety Evaluation Report (NUREG-0887, dated May 1982) included the results of our review of the Initial Plant Test Program FSAR through amendment 6. The FSAR now includes 17 amendments. In reviewing the changes to the Initial Plant Test Program in amendments 7 thru 17, additional information was required from the applicant to complete the review. This information was requested by letters from B. J. Youngblood, NRC, to M. R. Edelman, Cleveland Electric Illuminating Company (CEI), dated February 21, 1985, and March 19, 1985.

The applicant responded with the necessary information in letters from M. R. Edelman, CEI, to B. J. Youngblood, NRC, dated April 19 and 29, 1985. Subject to confirmation by FSAR amendment of the information in the April 19 and 29, 1985 letters, the revised Initial Plant Test Program for Perry Nuclear Power Plant, Units 1 and 2, is acceptable.

In amendment 17, exception was taken to the provision for 2 hours testing at 110 percent of rated load in section C 2.a.(3) of Regulatory Guide 1.108, Periodic Testing of Diesel Generator Units Used as Onsite Electric Power Systems at Nuclear Power Plants. The staff felt that the rationale supporting the exception should be clarified. The applicant stated that the standby diesel generator (SDG) units (DIV. I and DIV. II) shall demonstrate full-load carrying for an interval of not less than 24 hours at a load

equivalent to the continuous ratings of each SDG. The applicant further noted that the continuous rating exceeds both the maximum accident load and the maximum load required for forced shutdown; and, therefore, the 24 hour testing at rated load is an adequate demonstration of the SDG capabilities.

The SDGs at a number of nuclear power plants including Perry are under review by the staff and have special operating restrictions because of problems experienced by the diesel generators of their particular vendor. These plants all have Transamerica Delaval, Inc., (TDI) diesel generators. The TDI problem and status with respect to Perry is discussed in detail in NUREG-0887, Supplemental Safety Evaluation Report related to the operation of Perry Nuclear Power Plant, Units 1 and 2, April 1985.

The staff has not completed its review of the adequacy of the Perry crankshafts for their rated load (7000KW and overload 7700KW) capacities. However, the staff has concluded in the interim that the Perry crankshafts have a load capacity of at least 5740KW which exceeds the maximum emergency service load requirements for these engines.

Limiting preoperational testing to 7000KW, as proposed by the applicant, would reduce the potential for damaging the crankshaft while providing a conservative test relative to the maximum emergency load requirement. For this reason, the staff approves the proposed exception to the 2 hour overload test. The proposed preoperational test program will still exceed the interim 5740KW load capacity estimate; therefore, the staff is requiring that

preoperational testing involving operation in excess of 5740KW shall be followed by a crankshaft inspection to verify that the crankshafts are free of damage as stated in the letter from B. J. Youngblood, NRC, to M. R. Edelman, CEI, dated March 25, 1985.