



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. DPR-25

COMMONWEALTH EDISON COMPANY

DRESDEN NUCLEAR POWER STATION, UNIT NO. 3

DOCKET NO. 50-249

1.0 INTRODUCTION

By letters dated March 19, 1984 (Ref. 1) and April 9, 1984 (Ref. 2), Commonwealth Edison Company (the licensee) proposed modifications to the Technical Specifications (TS) for Dresden Unit 3. In addition, an August 2, 1984 letter transmitted a copy of the proposed TS page in the recently approved reformatted TS style with no change in the technical content from the earlier submittals. The changes specify the Maximum Average Planar Linear Heat Generation Rate (MAPLHGR) operating limits for both unpressurized and pressurized 8X8R fuel types beyond planar average exposures of 30 000 MWd/STU.

A Notice of Consideration of Issuance of Amendment to License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing related to the requested actions in the March 19, and April 9, 1984 letters was published in the Federal Register on May 23, 1984 (49 FR 21827). No requests for hearings or comments were received.

2.0 EVALUATION

The licensee's submittals provided MAPLHGR limits for resident fuel types 8DRB265L and P8DRB265L in the Dresden Unit 3 core. The submittals proposed extension of the limits to 40 000 MWd/STU from the presently approved limit of 30 000 MWd/STU. Although the methodology (Ref. 3) used is generically applicable for the determination of MAPLHGR limits, the staff previously concluded (Ref. 4) that the effects of enhanced fission gas release at high burnups (i.e., greater than 20 000 MWd/STU) were not adequately considered in the analysis. In response to this concern, the fuel vendor (General Electric) requested (Refs. 5-6) that credit for approved, but unapplied, ECCS evaluation model changes and calculated peak cladding temperature margin be used to avoid MAPLHGR penalties at higher burnups. This proposal was found acceptable provided that certain plant-specific analytical considerations were met. These were that (1) no additional credit is taken in the analysis for the ECCS evaluation model changes and (2) the peak cladding temperature for each fuel type and burnup does not exceed that assumed in Table 2 of the Reference 6 letter. The General Electric Standard Application for Reactor Fuel (GESTAR II - Ref. 7) has been modified (Section S.2.5.2.5) to incorporate these considerations.

In addition to the MAPLHGR limit extension, the licensee's submittals requested slightly higher MAPLHGR limits for P8DRB265L fuel in the range 1250-25 000 MWd/STU. Reference 3 provides a licensing basis for this change, which the staff finds acceptable. The change has also been approved previously for Dresden Unit 2 (Ref. 8).

3.0 FINDINGS

The licensee has proposed an extension to the MAPLHGR limits for two of the fuel types in the Dresden Unit 3 core. Based on a previous approval of the generic methods used to determine these limits, the staff finds the proposed MAPLHGR limits acceptable.

4.0 ENVIRONMENTAL QUALIFICATION

This amendment involves a change in the installation or use of a facility component located within the restricted area. The 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 occupation radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR Section 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 this amendment.

5.0 CONCLUSION

The staff 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ACKNOWLEDGEMENT

The following staff members have contributed to this evaluation:

M. Dunenfeld
R. Gilbert

Dated: September 14, 1984

REFERENCES

1. Letter from B. Rybak (CECo) to Harold R. Denton (NRC), Subject: Proposed Amendment to Technical Specification for Facility Operating License DPR-25, dated March 19, 1984.
2. Letter from B. Rybak (CECo) to Harold R. Denton (NRC), Subject: Supplementary Information to Proposed Amendment to Technical Specification - Extension of MAPLHGR Curve, dated April 9, 1984.
3. General Electric Company, NEDO-24146A, Revision 1, "Loss-of-Coolant Accident Analysis Report for Dresden Units 2, 3 and Quad Cities Units 1, 2, Nuclear Power Station", dated April 1979 as subsequently modified by Errata and Addenda 1 through 12.
4. Letter from D. F. Ross, Jr. (NRC) to G. Sherwood (GE) dated January 18, 1978.
5. Letter from R. E. Engel (GE) to T. A. Ippolito (NRC) dated May 6, 1981.
6. Letter from R. E. Engel (GE) to T. A. Ippolito (NRC) dated May 28, 1981.
7. General Electric Company, NEDE-24011-P-A-6, "General Electric Standard Application for Reactor Fuel," April 1983 (Proprietary).
8. Letter from D. M. Crutchfield (NRC) to D. L. Farrar (CECo) dated April 7, 1983.