



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 4 TO FACILITY OPERATING LICENSE NO. NPF-37

COMMONWEALTH EDISON COMPANY

BYRON STATION, UNIT NO. 1

DOCKET NO. STN 50-454

1.0 INTRODUCTION

By applications dated July 30, 1986 and August 5, 1986, Commonwealth Edison Company (the licensee) request amendments to the Technical Specifications for Byron Station, Units 1 and 2. The July 30, 1986 letter requested three changes: (1) replace "0%" with "predicted value" at end of cycle life for determining target flux difference, page 3/4 2-2; (2) delete exact grid plane locations, page 3/4 2-7; and (3) delete the maximum total weight of uranium, page 5-4. The August 5, 1986 letter requested two changes: (1) remove minimum level, but retain minimum gallons, for the Diesel Fuel Supply day tank, page 3/4 7-4; and (2) delete "during shutdown" for the 18-month surveillance of seismic monitoring instrumentation, page 3/4 3-44.

2.0 DISCUSSION AND EVALUATION

2.1 Target Flux Difference

Since the target flux difference at the end of cycle is a predicted value which is not necessarily zero and may vary from cycle to cycle, the proposed change will result in more accurate interpolation and is, therefore, acceptable.

2.2 Grid Plane Locations

Core reloads may utilize two regions of fuel, one with a reduced rod bow and the other with standard rod bow design. The grid plane locations are slightly different for these regions and thus deleting the exact grid plane locations from the Technical Specifications will accommodate these reload specific differences. The staff was concerned, however, that this might allow more of the core to be exempt from meeting the F_{xy} limits. The licensee proposed adding the phrase "such that no more than 20% of the total core height in the central core region is affected" to eliminate this problem. We have reviewed this change with this addition and find it acceptable.

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2.3 Weight of Uranium

This change is similar to maximum fuel weight changes recently made on other units (Catawba Units 1 and 2, Trojan and Farley Units 1 and 2). Due to variations in the fuel manufacturing process and a new fuel pellet design, a slight difference in the maximum uranium weight per fuel rod has arisen. This may continue to arise in future reloads. The proposed change is sought to account for differences in fuel between the two units and from cycle to cycle. The maximum fuel rod weight is not used as a direct input to any safety analysis and no safety analyses are affected by the deletion of this value. Thus, we find this change acceptable.

2.4 Day Tank Level

This change deletes reference to "level of 71%" but retains 420 gallons as the minimum amount of fuel in the day tank for the Diesel Fuel Supply System. The licensee proposed this change to accommodate differences in the instruments and tank dimensions for Units 1 and 2.

Using only gallons in the Limiting Condition for Operation is consistent with the Westinghouse Standard Technical Specifications for similar tanks. Furthermore, the amount of fuel required is not being changed and is still consistent with the accident analyses. Therefore, the staff finds the change acceptable.

2.5 Delete "during shutdown"

The original Technical Specifications required that a certain surveillance of seismic monitoring instrumentation be performed at least once per 18-months, during shutdown. "During shutdown" was included because it was thought that doing this surveillance during shutdown would reduce occupational exposure. However, although the seismic instrumentation is located inside containment, the surveillance tests are performed outside containment. Thus, occupational exposure is not a consideration.

Furthermore, some of this instrumentation is common to both units and both units are usually not shutdown at the same time. Thus, it is not practical to perform these surveillances during shutdown.

Therefore, the staff finds that deletion of the words "during shutdown" is acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

The staff has determined that the amendment involves no increase in the amounts, and no change in the types, of any effluents that may be released offsite and that there is no increase in individual or cumulative occupational 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 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.

4.0 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.

5.0 PRINCIPAL CONTRIBUTORS:

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Dated: October 29, 1986