



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 78 TO FACILITY LICENSE NO. DPR-30

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

DOCKET NO. 50-265

1. Introduction

By letter dated May 12, 1981, Commonwealth Edison Company (CECo, the licensee) proposed that changes be made to the technical specifications (TS) for Quad Cities Unit 2. These changes would (1) correct the reactor protection system (RPS) delay and response times as given in the TS to the more restrictive values that were used in the licensing basis, and (2) provide for use of the average power range monitor (APRM) gain adjustment for operation at higher-than-normal power peaking. These changes are identical to those reviewed by the staff and approved for Unit 1, by letter dated December 5, 1980.

2. Discussion and Evaluation

RPS Delay and Response Times

The RPS delay time is the time from opening of the sensor contact to opening of the trip actuation contacts. The licensee proposes to change the RPS delay time now given in the TS (100 msec) to the more restrictive value (50 msec) used by the General Electric Company (GE) in the licensing analysis.

Since the RPS delay time given in the TS should be consistent with that used in the licensing analysis, the change of the RPS delay time from 100 msec to 50 msec is acceptable.

Similarly, the RPS response time is the time lapse between reaching the neutron sensor setpoint and the start of control rod motion. The licensee proposes to change the RPS response time of 390 msec now given in the TS to the more restrictive value of 290 msec used in the licensing analysis. Since the TS value should be consistent with that used in the licensing analysis, the change of the RPS response time from 390 msec to 290 msec is acceptable.

APRM Gain Adjustment

The licensee has proposed TS changes that would allow use of APRM gain adjustments rather than reducing APRM trip setpoints when operating at higher than normal power peaking; i.e., whenever the maximum fraction of limiting power density (MFLPD) exceeds the fraction of rated thermal power (FRP). This establishes an initial APRM signal closer to the flow-biased setpoints, and so has the same effect as

reducing the actual scram and rod block setpoints. The proposed changes also require that the ratio FRP/MFLPD multiplier shall apply only above 25% rated thermal power, in order to be consistent with the LHGR surveillance requirement, and in agreement with Standard Technical Specifications.

Operation in the manner described above, i.e., use of APRM gain adjustments rather than reducing APRM setpoints for operation when MFLPD exceeds FRP, has previously been reviewed for Quad Cities Unit 1, and approved by letter dated December 5, 1980. In our evaluation of the present application we have determined that the same considerations apply for Unit 2. On the basis of the foregoing, proposed operation in the manner described is acceptable.

3. Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

4. Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety, the amendment does not involve a significant hazards consideration. (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

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Dated: February 17, 1983