



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 188 TO FACILITY OPERATING LICENSE NO. DPR-49

IOWA ELECTRIC LIGHT AND POWER COMPANY  
CENTRAL IOWA POWER COOPERATIVE  
CORN BELT POWER COOPERATIVE

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

1.0 INTRODUCTION

By letter dated April 22, 1992 and supplemented by another letter dated April 23, 1992, the licensee requested an amendment to its operating license to incorporate reactor water cleanup (RWCU) system leak detection instrumentation requirements into the Technical Specifications. An internal review had indicated that additional leak detection instrumentation was necessary for a 50-foot section of the 4-inch RWCU return line which is routed through the first floor of the reactor building. During the last refueling outage, the licensee installed the instrumentation, and administrative controls are currently in effect which require it to be maintained in an operable status consistent with the content of this amendment request.

2.0 EVALUATION

The Duane Arnold Energy Center (DAEC) currently has steam leak detection for the RWCU equipment rooms that includes high ambient temperature, high differential temperature and high differential flow detection. This instrumentation is reflected in Technical Specifications Table 3.2-A, "Instrumentation That Initiates Primary Containment Isolation."

The licensee has installed four dual element thermocouples to detect leaks along the entire run of the RWCU return piping which operate identically to those of the existing ambient temperature monitoring equipment for the RWCU system. The associated temperature switches provide redundant signals to Division I and Division II of the Primary Containment Isolation System (PCIS) logic and initiate automatic closure of the RWCU system isolation valves. Operational safety has been enhanced by the installation of the thermocouples and adding them to the TS will ensure their availability to provide leak detection and isolation capabilities for the RWCU system.

The trip setting for the new instrumentation provides maximum sensitivity to a postulated leak in RWCU piping while avoiding spurious isolations of the system and the " $\leq$ " notation ensures conservative adjustment of the setpoint. Surveillance requirements for the new instrumentation are already addressed by the requirements of Table 4.2-A, Item 9, for reactor cleanup area high temperature.

The supplemental information in the letter dated April 23, 1992 was editorial in nature and did not contain substantive changes to the original submittal.

The staff has reviewed the licensee's submittal which requests changes to its technical specifications to incorporate the reactor water cleanup (RWCU) system leak detection instrumentation requirements. Based on its review, the staff concludes that the requested change is acceptable.

### 3.0 STATE CONSULTATION

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

### 4.0 ENVIRONMENTAL CONSIDERATIONS

This amendment involves a change to a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or a change to a surveillance requirement. 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 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 (57 FR 24673). 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 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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Date: November 12, 1992