



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 121 TO FACILITY OPERATING LICENSE DPR-35

BOSTON EDISON COMPANY

PILGRIM NUCLEAR STATION

DOCKET NO. 50-293

1.0 INTRODUCTION

By application dated May 20, 1987, Boston Edison Company (the licensee) requested an amendment to the Technical Specifications for Facility Operating License No. DPR-35 for the Pilgrim Nuclear Station. The Amendment would change the Anticipated Transient Without Scram (ATWS) Recirculation Pump Trip/Alternate Rod Insertion (RPT/ARI) system analog trip unit calibration procedure, which consists of injecting a simulated electrical signal into the measurement channels without physically "valving-out" the transmitter. The BASES wording on page 77 is modified to reflect the proposed changes.

2.0 EVALUATION

The Pilgrim Station ATWS RPT/ARI system uses Rosemount transmitters to monitor reactor vessel high pressure and low water level. Technical Specifications Table 4.2.6 currently specifies that the instrument functional test should be performed according to Note (1). Note (1) states that functional testing should be done initially once per month until exposure hours reach 2.0×10^5 ; thereafter, according to Figure 4.1.1, at an interval not less than one month nor more than three months. The transmitters should be calibrated once per operating cycle and the trip units should be calibrated once every three months. The proposed change would add a reference to Note (7), in addition to Note (1), to the column headed "Instrument Functional Test," and would also substitute Note (7) for the current wording found in the "calibration" column.

Note (7) states:

Calibration of analog trip units will be performed concurrent with functional testing. The functional test will consist of injecting a simulated electrical signal into the measurement channel. Calibration of associated analog transmitters will be performed each refueling outage.

GE topical report NEDO-21617 "Analog Transmitter/Trip Unit System for Engineered Safeguard Sensor Trip Inputs" provides the basis for Rosemount Transmitter performance reliability. The staff SER dated June 27, 1978 accepted the once per cycle functional test frequency for this type of analog transmitter.

The proposed Technical Specification will allow the licensee to perform the analog trip unit functional test without valving-out the transmitter. The simulated electrical test signal will be injected at the trip unit, rather than at the transmitter. The trip units are located in the instrument room, but the transmitters are located in a higher radiation area. This change will minimize radiation exposure on testing personnel performing the instrument surveillance test.

This procedure for testing trip units has been implemented on Pilgrim's Reactor Protection System and Engineered Safeguard System trip units. The introduction of Note (7) on Table 4.2.G will make the ATWS RPT/ARI system consistent with other Pilgrim technical specifications that involve analog transmitter/trip units.

Accordingly, the staff has determined that the proposed test procedure does not affect plant safety and is acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 published a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the 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

Based on our review, the staff finds that the proposed changes to Technical Specification Table 4.2.G and the modified BASES wording on page 7; are acceptable on an interim basis. The staff is preparing a generic letter regarding implementation of the Technical Specification for the ATWS mitigation systems required by 10 CFR 50.62. The requirements developed from that generic letter will supersede current requirements in the Pilgrim Technical Specifications, including those affected by this amendment.

5.0 ACKNOWLEDGEMENT:

Principal Contributor: H. Li

Dated: September 8, 1988