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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 40 TO FACILITY OPERATING LICENSE NO. DPR-35

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION UNIT NO. 1

DOCKET NO. 50-293

Introduction

By application dated July 6, 1979, Boston Edison Company (BECo or licensee) proposed an amendment to the Technical Specifications in several areas, each of which was described in an attachment to the letter. Attachment A concerning a change to the method of calibrating the APRM system, and Attachment B concerning the duration of IPCLRT were not addressed in this SER for reasons explained in the amendment issuing letter.

On September 27, 1979, BECo proposed an Administrative TS change which supplemented Attachment D to the July 6, 1979 submittal. Both submittals are evaluated in this report.

I. Update Safety Related Snubbers

1. Discussion

Attachment C proposed four changes in Table 3.6.1. They are:

1.1. The deletion of snubbers SS-2-10-17, SS-2-10-18, and SS-3-3-1 from Table 3.6.1.

1.2. The change of designation of snubbers SS-6-10-1 to SS-6-10-10, and SS-2-20-5 to SS-2-30-5.

1.3. The change of elevation to 42' for snubbers SS-20-20-1, SS-2-20-2, SS-2-20-3, and SS-2-20-4.

1.4. The change of prefix SS to S for snubbers located outside the drywell.

2. Evaluation

2.1 Deletion of Snubbers

The proposed deletion of three snubbers from Table 3.6.1 is an updating effort to reflect plant revisions made in 1976 and 1978. Snubbers SS-2-10-17 and SS-2-10-18 were attached to the reactor recirculation pump discharge valve 4" by-pass lines. Both lines and snubbers were removed in 1976 as reported in the 1976 annual 10 CFR 50.59 report. Snubber SS-3-3-1 was attached to the control rod drive system return line. This line and snubber were removed as reported in the 1978 annual 10 CFR 50.59 report. The updating effort on Table 3.6.1 has no impact on plant safety.

2.2 Change of Designation of Snubbers

The re-number of snubber designation, corrects some previous typographical errors. It has no impact on plant safety.

2.3 Change of Elevation for Snubbers

The change of elevation of snubbers reflects the actual position. It has no impact on plant safety.

2.4 Change of Prefix for Snubbers

The change of prefix for snubber designation offers better identification of the snubber locations. It has no impact on plant safety.

3. Conclusion

Since the proposed revisions add to the clarity of Table 3.6.1, and do not compromise plant safety, their implementation should be permitted.

II. Station Organization Chart and ORC Composition

1. Discussion

Attachment D proposed restructuring Figure 6.2.2, "Pilgrim 1 Station Organization" to accommodate organization changes at the Station. Specifically, several new positions were created to increase the station management's attention toward the Health Physics Program. In particular, the position of Chief Radiological Engineer was created to head the Health Physics

Program. In addition, the Composition of the Operations Review Committee (ORC) was revised to include the Chief Radiological Engineer as a member. The September 27, 1979 submittal proposed further restructuring of Figure 6.2.2 to provide for an Assistant Station Manager who will also serve as Vice Chairman of the ORC.

2. Evaluation

We agree that the creation of new positions including Senior ALARA Engineer, ALARA Engineer, ALARA Health Physics Technicians, and Senior Waste Management Engineer under the Chief Radiological Engineer should improve the Health Physics Program at Pilgrim. Further, we concur with the change in the organization to improve the workload distribution through the Station, including the position of Assistant Station Manager and additions to ORC membership.

3. Conclusion

We conclude that the proposed changes to the Pilgrim 1 Station Organization are designed to strengthen the station management and are therefore, acceptable.

III. Response Time Requirement for ADS

1. Discussion

Attachment E proposed a change in the setting of the Automatic Depressurization System (ADS) blowdown timer from "120 ± 5 seconds" to "greater than or equal to 90 to less than or equal to 120 seconds". The purpose of this change is to assure that the actual value used is less than that used in the ECCS analysis (120 seconds) and to provide margin in setpoint to account for calibration errors and drift.

2. Evaluation

The lower value is sufficiently greater than the High Pressure Coolant Injection System (HPCI) starting time (25 seconds) and (in the licensee's opinion) the response time of a trained operator to maintain the probability of false initiation of the ADS at an acceptably lower level. The proposed ADS timer trip setpoint is consistent with the Standard Technical Specifications (STS) for General Electric Boiling Water Reactors, NUREG 0123 Revision 2 August 1979 and satisfies the requirements of IEEE Std. 279-1971.

3. Conclusion

We find that this change will not compromise the effectiveness of the ADS to provide its design protection and that it is desireable to assure compatibility between the Technical Specification and LOCA analysis. We therefore conclude that this change is acceptable.

IV. Reactivity Shutdown Margin Demonstration

1. Discussion

Attachment F requested a change in the wording of the Technical Specification bases to allow shutdown margin demonstration by a method different than that listed in the bases for Specification 3.3.A.1. The two rod method (pulling the strongest worth rod and a diagonally adjacent rod to a specified position) is listed in the bases as the method of demonstrating shutdown margin at PNPS.

2. Evaluation

The licensee desires to have the option of using the dispersed uniform insequence control rod withdrawal sequence method of demonstrating shutdown reactivity margin. The reason is to avoid highly peaked flux distributions which can lead to sudden unexpected criticals with fast periods. The dispersed uniform withdrawal sequence is designed specifically to minimize rod worths, thus substantially reducing the probability of high reactivity insertion incidents. The licensee proposed to perform this test at beginning of life (BOL) fuel cycle conditions, cold xenon-free. This is consistent with the NUREG-0123 Revision 2 August 1979 bases.

3. Conclusion

We agree that the proposed reactivity shutdown margin demonstration offers a more conservative approach and is acceptable.

V. IRM High Flux Instrument Calibration

1. Discussion

In Attachment G, the licensee has proposed a Full Calibration of the IRM High Flux Channels once per operating cycle. This was done to clarify the functional and calibration test requirements of the Nuclear Instrumentation Intermediate Range Monitoring (IRM) system, in response to an IE Inspection Report 50-293/78-18 and followup correspondence dated September 21, 1978.

2. Evaluation

We have reviewed the licensee's proposal in conjunction with the current TS requirements to verify overall conformance with GE STS. We find that the proposed change is consistent with STS requirements for IRM Channel Calibration and is therefore acceptable. Further, we find that the current TS requirement for IRM Funcational Test in Table 4.1.1 is consistent with STS functional test requirements. Also, the current TS requirement for IRM Calibration Test in Table 4.1.2 is the equivalent of the STS Channel Check, except that the minimum frequency is not specified. The STS requires an IRM Channel Check (Instrument Check, as defined in PNPS TS) at least once every 12 hours. We verified that station procedures require the equivalent of an IRM Channel Check each shift. This is acceptable until such time as BECo adopts the STS for Pilgrim Nuclear Power Station.

3. Conclusion

We conclude that the licensee's proposal is consistent with GE STS and satisfies the requirements of IEEE Std. 279-1971 and is therefore, acceptable.

VI. MSIV Test Requirements

1. Discussion

Attachment H requested removal of the current power restriction requirement of 50% reactor power when verifying closure time of Main Steam Isolation Valves. During a previous refueling outage at Pilgrim, a pressure averaging manifold was installed to allow the testing of MSIV's and the turbine stop and control valves at full power levels and thus eliminate the need for costly power reductions. Amendment No. 34 to Facility Operating License No. DPR-35 dated September 19, 1978 changed the trip level setting for the High Flow Main Steam Line instruments from $\leq$120% to $\leq$140% of rated steam flow. The setpoint was changed to decrease the possibility of an automatic closure of all MSIV's and the attendant reactor scram which can occur when performing valve closure time testing.

2. Evaluation

The licensee has stated that the proposed change was intended to be included in Amendment No. 34 and was inadvertently omitted. We have reviewed the previous Safety Evaluation associated with Amendment No. 34 and agree that it satisfies all concerns related to safety.

3. Conclusion

We conclude that the removal of the power restriction for testing MSIV's is acceptable.

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 Section 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 the amendment.

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 accidents previously considered and does not involve a significant decrease in a safety margin, 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: February 4, 1980