



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 139 TO FACILITY OPERATING LICENSE NO. DPR-35

EVALUATION OF NRC GENERIC LETTER 88-01 RESPONSE

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION

DOCKET NO. 50-293

1.0 INTRODUCTION

By letters dated February 5, 1985, April 10, and June 13, 1991, the Boston Edison Company (the licensee) requested an amendment to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. The proposed amendment would change the Technical Specifications by imposing a new limit of 2 GPM increase, average over any 24 hour period, of reactor coolant leakage into the primary containment from unidentified sources. The limiting condition for operation (LCO) would apply only when the reactor has been in the RUN mode for more than 24 hours. More specific operational requirements are also proposed for the reactor coolant leakage detection system and the reactor pressure boundary leak detection system to account for the redundancy of the components within subsystems.

The NRC staff did not complete action on the amendment request pending the development of a revised staff position regarding the IGSCC problems as provided in Generic Letter (GL) 88-01.

Boston Edison Company, the licensee submitted its responses to NRC Generic Letter (GL) 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping" for the Pilgrim Nuclear Power Station by letters dated August 4, 1988, and June 19, 1989. GL 88-01 requested licensees and construction permit holders to resolve the (IGSCC) issue for BWR piping made of austenitic stainless steel that is 4 inches or larger in nominal diameter and contains reactor coolant at a temperature above 200° Fahrenheit during power operation, regardless of Code classification. The licensee was requested to address the following:

1. Their current plans regarding pipe replacement and/or other measures taken to mitigate IGSCC and to provide assurance of continued long term integrity and reliability of the subject piping.
2. Their Inservice Inspection (ISI) Program as required by GL 88-01, to be implemented at the next refueling outage for austenitic stainless steel piping, and that conforms to the staff positions on inspection schedules, methods and personnel and sample expansion.
3. A proposed Technical Specification change to include a statement, in the section on ISI, that the ISI Program for piping covered by the scope of this letter will follow staff positions on schedule, methods and personnel, letter sample expansion in GL 88-01 (See model BWR Standard Technical Specifications enclosed in GL 88-01). It is recognized that the Inservice Inspection and

Testing sections regarding these welds may be removed from the Technical Specifications through the TS improvement program. In this case, this requirement would remain with the ISI section when it is removed to an alternative document.

4. Confirmation of plans to ensure that the Technical Specifications related to leakage detection will be in conformance with the staff positions on leak detection included in GL 88-01.
5. Their plans to notify the NPC, in accordance with 10 CFR 50.55a(g), of any identified flaws that do not meet the IWB-3500 criteria of Section XI of the Code in regard to continued operation without evaluation of the flaw, or a change found in the condition of welds previously known to be cracked. Such notification should include evaluation of the flaw, justification for continued operation and/or your repair plans.

## 2.0 EVALUATION

The licensee's response to GL 88-01 has been reviewed by the staff with the assistance of its contractor, Viking Systems International (VSI). The staff reviewed Technical Evaluation Report (TER) VSI's evaluation of the licensee's response to GL 88-01. The staff review of the TER concurred with the evaluations, conclusions, and recommendations contained in the TER with some exception:

1. The licensee's position to exclude from the scope of applicability of GL 88-01, the welds in the portion of the RWCU piping outboard of the isolation valves. As a minimum the licensee should prepare an inspection plan of the RWCU piping outboard of the isolation valves on a sampling basis with justification.
2. The licensee's position on sample expansion does not comply with the requirements in GL 88-01.
3. The licensee's position not to amend the Technical Specification (TS) to include an ISI statement as required in GL 88-01.

In a supplemental response to these issues dated November 15, 1990, the licensee agreed to perform an inspection of 10% of the 67 non-safety related RWCU piping welds during each refueling cycle. If a flaw is discovered and IGSCC is determined as the probable cause, another 10% will be inspected. If an IGSCC induced flaw is discovered in the second sample, plans will be made to replace RWCU and non-code piping in subsequent refueling outages. Additionally, the licensee will revise their augmented inspection program to reflect the sample expansion guidance of the generic letter which is acceptable to the staff. Finally, the Technical Specification change submittal of February 4, 1985, is acceptable to the staff as in conformance with GL 88-01 for leakage monitoring.

The licensee interim revisions to their Augmented Inspection program to include statements of compliance with GL 88-01 position on schedule, methods and personnel as well as the commitment on RWCU welds inspection and sample expansion is acceptable to the staff.

The staff has re-evaluated the frequency of leakage monitoring. After discussion with several BWR licensees the staff concluded that monitoring every four hours creates an unnecessary administrative hardship on the plant operators. Therefore, the staff takes exception to the TER recommendation and considers the licensee's position to monitor unidentified leakage every eight hours acceptable.

### 3.0 STATE CONSULTATION

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

### 4.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC 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 (50 FR 12137). 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 Commission 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 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: June 26, 1991