

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

# SAFETY EVALUATION BY OFFICE OF NUCLEAR REACTOR REGULATION

### PILGRIM NUCLEAR POWER STATION (PNPS)

## BOXTON EDISON COMPANY

### DOCKET NO. 50-293

## 1.0 Introduction

NUREG-0737 Item II.B.1, "Reactor Coolant System Vents" addresses the capability to vent from the reactor coolant system (RCS) noncondensible gases which may inhibit core cooling during natural circulation. The requirements and guidance for Item II.B.1 (as clarified) and the information and documentation to be provided by the Boston Edison Company (licensee) were idenditied in NUREG-0737.

# 2.0 Evaluation

The enclosed Technical Evaluation Report (TER) was prepared for us by Lawrence Livermore Laboratory (LLL) as part of a technical assistance contract program. The TER provides LLL's technical evaluation of the compliance of the licensee's submittals with NRC provided criteria.

The Boiling Water Reactor Owners Group (BWROG) has submitted documentation to demonstrate how the RCS venting requirements are satisfied for General Electric Boiling Water Reactors. The licensee, in its letter of June 3, 1982 endorsed the response of the BWROG on this matter. Based upon the applicability of the BWROG position to Pilgrim and its specific review of the PNPS design, LLL has concluded that the existing systems at Pilgrim are sufficient to effectively vent noncendensible gases from the RCS and meet the requirements of NUREG-0737 Item II.B.1 and paragraph (c)(3)(iii) of 10 CFR 50.44.

The following areas, which are outside the scope of the contractor's review, are discussed separately below a) Operating Guidelines and Procedures, b) Technical Spacifications, c) Seismic and Environmental Qualification, and d) Inservice Inspection.

a) Operating Guidelines and Procedures:

The staff has reviewed the existing systems used to remove decay heat from the core and concludes that these systems will at the same time vent the RCS or are available to vent the RCS. Furthermore, operator responses to indications of inadequate core cooling, such as low core water level are the same for both steam and non-condensible gases. Therefore, we find that explicit instructions for venting non-condensible gases are not necessary. New emergency procedure

B304290230 B30414 PDR ADDCK 05000293 PDR guidelines recently approved by the staff will breaden the scope of procedures used to cope with inadequate core cooling events. The new emergency procedure guidelines utilize existing core cooling systems, and do not alter the staff conclusion that venting is inherent provided that procedures to assure core cooling are followed. Based on the above arguments, we conclude that the existing systems and methods of core cooling will assure the capability to vent non-condensible gases.

# b) Technical Specifications:

The existing Technical Specifications for the Automatic Depressurization System (ADS) values require that the values be operable as a condition for RCS pressurization. The ADS value accumulator capacity is currently under staff review (TMI Action Plan Item II.K.3.28) to verify that each value may be opened at least five times. Pending satisfactory resolution of item II.K.3.28, we find the existing Technical Specifications on ADS value operability sufficient to cover the use of ADS values as vents.

# c) Seismic and Environmental Qualification and

### d) Inservice Inspection Requirements

The use of existing systems as RCS vents does not place additional demands that require changes to the seismic and environmental qualification or the inservice inspection program. Therefore, no additional requirements beyond those presently applicable to PNPS are necessary.

#### 3.0 Conclusion

Based upon our review of the contractor's report of its evaluations and our review of the additional areas identified in a) through d) above, we conclude that the venting capability for PNPS meets the criteria of NUREG-0737 Item II.B.1 and is therefore acceptable. Consequently, we consider this issue resolved for Pilgirm.

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Dated: APR 1 4 1983

Enclosure: TER