

March 22, 1995

Mr. E. Thomas Boulette, Ph.D
Senior Vice President - Nuclear
Boston Edison Company
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, MA 02360

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SUBJECT: ISSUANCE OF AMENDMENT NO. 160 TO FACILITY OPERATING LICENSE NO.
DPR-35, PILGRIM NUCLEAR POWER STATION (TAC NO. M90994)

Dear Mr. Boulette:

The Commission has issued the enclosed Amendment No. 160 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment is in response to your application dated November 22, 1994.

This amendment revises the allowable leak rate for the main steam isolation valves from the current 11.5 standard cubic feet per hour (scfh) for each valve, to a maximum combined main steam line leak rate of 46 scfh.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register Notice.

Sincerely,

Original signed by

Ronald B. Eaton, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-293

- Enclosures: 1. Amendment No. 160 to
License No. DPR-35
2. Safety Evaluation

cc w/encls: See next page

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

March 22, 1995

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Senior Vice President - Nuclear
Boston Edison Company
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Sincerely,

A handwritten signature in black ink, appearing to read "Ronald B. Eaton", is written over a horizontal line.

Ronald B. Eaton, Senior Project Manager
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-293

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License No. DPR-35
2. Safety Evaluation

cc w/encls: See next page

E. Thomas Boulette
Boston Edison Company
cc:

Mr. Leon J. Olivier
Vice President of Nuclear
Operations & Station Director
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, MA 02360

Resident Inspector
U. S. Nuclear Regulatory Commission
Pilgrim Nuclear Power Station
Post Office Box 867
Plymouth, MA 02360

Chairman, Board of Selectmen
11 Lincoln Street
Plymouth, MA 02360

Chairman, Duxbury Board of Selectmen
Town Hall
878 Tremont Street
Duxbury, MA 02332

Office of the Commissioner
Massachusetts Department of
Environmental Protection
One Winter Street
Boston, MA 02108

Office of the Attorney General
One Ashburton Place
20th Floor
Boston, MA 02108

Mr. Robert M. Hallisey, Director
Radiation Control Program
Massachusetts Department of
Public Health
305 South Street
Boston, MA 02130

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. Alan Shiever
Licensing Division Manager
Boston Edison Company
600 Rocky Hill Road
Plymouth, MA 02360-5599

Pilgrim Nuclear Power Station

Mr. Robert V. Fairbanks
Manager, Reg. Affairs Dept.
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, MA 02360

Mr. David F. Tarantino
Nuclear Information Manager
Pilgrim Nuclear Power Station
RFD #1, Rocky Hill Road
Plymouth, MA 02360

Mr. Thomas Rapone
Secretary of Public Safety
Executive Office of Public Safety
One Ashburton Place
Boston, MA 02108

Mr. David Rodham, Director
Massachusetts Emergency Management
Agency
400 Worcester Road
P.O. Box 1496
Framingham, MA 01701-0317
Attn: James Muckerheide

Chairmen, Citizens Urging
Responsible Energy
P. O. Box 2621
Duxbury, MA 02331

Citizens at Risk
P. O. Box 3803
Plymouth, MA 02361

W. S. Stowe, Esquire
Boston Edison Company
800 Boylston St., 36th Floor
Boston, MA 02199

Chairman
Nuclear Matters Committee
Town Hall
11 Lincoln Street
Plymouth, MA 02360



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

BOSTON EDISON COMPANY

DOCKET NO. 50-293

PILGRIM NUCLEAR POWER STATION

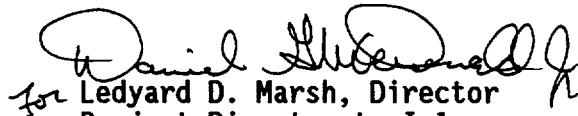
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 160
License No. DPR-35

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for amendment filed by the Boston Edison Company (the licensee) dated November 22, 1994, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION


for Ledyard D. Marsh, Director
Project Directorate I-1
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 22, 1995

ATTACHMENT TO LICENSE AMENDMENT NO. 160

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove

3/4.7-5

Insert

3/4.7-5

LIMITING CONDITIONS FOR OPERATION

3.7 CONTAINMENT SYSTEMS (Cont)

A. Primary Containment (Cont)

5. All containment isolation check valves are operable or at least one containment isolation valve in each line having an inoperable valve is secured in the isolated position.

Primary Containment Isolation Valves

2. b. In the event any automatic Primary Containment Isolation Valve becomes inoperable, at least one containment isolation valve in each line having an inoperable valve shall be deactivated in the isolated condition. (This requirement may be satisfied by deactivating the inoperable valve in the isolated condition. Deactivation means to electrically or pneumatically disarm, or otherwise secure the valve.)*

* Isolation valves closed to satisfy these requirements may be reopened on an intermittent basis under ORC approved administrative controls.

SURVEILLANCE REQUIREMENTS

4.7 CONTAINMENT SYSTEMS (Cont)

A. Primary Containment (Cont)

4. Combined main steam lines: 46 scfh @ 23 psig.

where $x = 45$ psig
 $L_t = .75 L_a$
 $L_a = 1.0\%$ by weight of the contained air @ 45 psig for 24 hrs.

Primary Containment Isolation Valves

2. b. 1 The primary containment isolation valves surveillance shall be performed as follows:
 - a. At least once per operating cycle the operable primary containment isolation valves that are power operated and automatically initiated shall be tested for simulated automatic initiation and closure times.
 - b. Test primary containment isolation valves:
 1. Verify power operated primary containment isolation valve operability as specified in 3.13.
 2. Verify main steam isolation valve operability as specified in 3.13.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 160 TO FACILITY OPERATING LICENSE NO. DPR-35
BOSTON EDISON COMPANY
PILGRIM NUCLEAR POWER STATION
DOCKET NO. 50-293

1.0 INTRODUCTION

By letter dated November 22, 1994, the Boston Edison Company (the licensee) submitted a request for changes to the Pilgrim Nuclear Power Station Technical Specifications (TSs). The requested changes would revise the allowable leak rate for the main steam isolation valves (MSIVs) from the current 11.5 standard cubic feet per hour (scfh) for each valve, to a maximum combined main steam line leak rate of 46 scfh.

2.0 EVALUATION

Each of Pilgrim's four main steam lines contain two (inboard and outboard), quick-closing MSIVs. The safety function of the MSIVs is to isolate the reactor system to minimize loss-of-coolant inventory and provide primary containment to limit radiological release. In the case of a steam line break, as evaluated in Updated Final Safety Analysis Report (UFSAR) Section 14.5.4, closure of the MSIVs terminates the blowdown of reactor steam in sufficient time to prevent an uncontrolled release of radioactivity from the reactor vessel to the environment. In the case of a loss-of-coolant accident (LOCA), as evaluated in Section 14.5.3 of the UFSAR, the MSIVs isolate the reactor from the environment and prevent the direct release of fission products from the containment.

The allowable leak rate of 11.5 scfh specified for each of the MSIVs is used to quantify a maximum volume of primary containment atmosphere that can bypass the secondary containment and leak directly to the environment following a design basis LOCA. The TSs requirements assure that this MSIV leakage will not exceed the maximum leak rate of 46 scfh which was the leakage assumed in our LOCA radiological analyses. The calculated results are evaluated against the dose guidelines contained in 10 CFR Part 100 for offsite and 10 CFR Part 50, Appendix A, General Design Criteria (GDC) 19 for the control room. The testing requirements for these valves are found in 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." The type C test requirements in Appendix J typically result in the valves being tested every refueling outage by local pressurization with air ≥ 23 psig, and the current TS limit per valve of 11.5 scfh.

A change is proposed to TS Section 4.7.A.2.a.4 to revise the acceptance criteria for allowable MSIV leakage from an individual valve leakage criteria to a maximum total combined main steam line leakage. The allowable leakage of 11.5 scfh per valve would be replaced with a maximum combined main steam line leakage of 46 scfh.

The proposed amendment results in no change in radiological consequences of the design basis LOCA as currently analyzed for PNPS. These analyses were calculated using the combined total leakage factor of 46 scfh for determining acceptance to the regulatory limits for the offsite, control room, and Technical Support Center (TSC) doses as contained in 10 CFR Part 100 and 10 CFR Part 50, Appendix A, GDC 19. The proposed change does not compromise existing radiological equipment qualification, since the combined total leakage rate of 46 scfh has been factored into our existing equipment qualification analyses for 10 CFR 50.49.

There is no modification to the MSIVs or other plant system or structure associated with this amendment which could impact their capability to perform their design function. The total MSIV leakage rate of 46 scfh is included in the current radiological analyses for the assessment of dose exposure following an accident. This proposal changes the allowable leakage rate from a per valve to a total combined line leakage acceptance criteria but does not change the cumulative allowable value. The allowable leak rate limit specified for the MSIVs is used to quantify the maximum amount of bypass leakage assumed in the LOCA radiological analysis. Results of the analysis are evaluated against the dose guidelines contained in GDC 19 and 10 CFR Part 100. The margin of safety in this context is considered to be the difference between the calculated dose exposures and the guidelines provided in GDC 19 and 10 CFR Part 100. Therefore, since the maximum allowable leakage for each valve was assumed and used as the total allowable leakage for the purpose of calculating potential dose, the margin of safety is not affected because the dose levels remain the same.

The proposed change does not change the radiological consequences of the design basis LOCA due to the fact that the maximum leakage rate remains the same. The current radiological analyses were calculated using the maximum leakage rate as the proposed change. This proposal changes the allowable leakage rate from a per valve rate to total combined line leakage acceptance criteria but does not change the cumulative allowable value.

Based on the facts as stated above, the NRC staff find this amendment change 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

The 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 and changes surveillance requirements. 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 issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (60 FR 3671). 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.

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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: K. Cotton

Date: March 22, 1995