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Docket No. 50-293

Mr. G. Carl Andognini
Boston Edison Company
M/C NUCLEAR
800 Boylston Street
Boston, Massachusetts 02199

Dear Mr. Andognini:

The Commission has issued the enclosed Amendment No. 38 to Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment consists of changes to the Technical Specifications in response to your request dated January 16, 1976.

This amendment changes the Technical Specifications to relax pump operability requirements in systems where spare pumps are installed in excess of system requirements.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

/s/

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:
1. Amendment No. 38 to DPR-35
2. Safety Evaluation
3. Notice

cc w/enclosures:
See page 2

acp

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SURNAME	SSheppard	JHannon:mjf	WGammill	KRAMER	TIppolito	
DATE	11/21/79	11/21/79	11/21/79	11/23/79	11/23/79	

cc:

Mr. Paul J. McGuire
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917 15th Street, N. W.
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Henry Herrmann, Esquire
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Plymouth Public Library
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Plymouth, Massachusetts 02360

Massachusetts Department of Public Health
ATTN: Commissioner of Public Health
600 Washington Street
Boston, Massachusetts 02111

Water Quality & Environmental Commissioner
Department of Environmental Quality
Engineering
100 Cambridge Street
Boston, Massachusetts 02202

Mr. David F. Tarantino
Chairman, Board of Selectmen
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Plymouth, Massachusetts 02360

Director, Technical Assessment Division
Office of Radiation Programs (AW 459)
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Agency
Region I Office
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Boston, Massachusetts 02203

Energy Facilities Siting Council
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One Ashburton Place
Boston, Massachusetts 02108

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

BOSTON EDISON COMPANY

DOCKET NO. 50-293

PILGRIM NUCLEAR POWER STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 38
License No. DPR-35

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by the Boston Edison Company (the licensee) dated January 16, 1976, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   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 and paragraph 3.B of Facility License No. DPR-35 is hereby amended to read as follows:

   3.B Technical Specifications

   The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 38, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: November 23, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 38

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Revise Appendix A as follows:

Remove the following pages and insert identically numbered pages:

105
106
107
115

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENT
3.5.A Core Spray and LPCI Subsystems (Cont'd)	4.5.A Core Spray and LPCI Subsystems (Cont'd)
4. From and after the date that one of the RHR (LPCI) pumps is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding thirty days provided that during such thirty days the containment cooling subsystem, the remaining active components of the LPCI Subsystem, and all active components of both core spray subsystems and the diesel generators are operable.	4. When it is determined that one of the RHR (LPCI) pumps is inoperable at a time when it is required to be operable, the containment cooling subsystem, the remaining active components of the LPCI Subsystem, both core spray systems and the diesel generators shall be demonstrated to be operable immediately and the operable LPCI pumps daily thereafter.
5. From and after the date that the LPCI subsystem is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding seven days unless it is sooner made operable, provided that during such seven days the containment cooling subsystem (including 2 LPCI pumps) and active components of both core spray subsystems, and the diesel generators required for operation of such components if no external source of power were available shall be operable.	5. When it is determined that the LPCI subsystem is inoperable, both core spray subsystems, the containment cooling subsystem and the diesel generators required for operation of such components if no external source of power were available shall be demonstrated to be operable immediately and daily thereafter.
6. If the requirements of 3.5.A cannot be met, an orderly shutdown of the reactor shall be initiated and the reactor shall be in the Cold Shutdown Condition within 24 hours.	

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT

3.5.B Containment Cooling Subsystem

1. Except as specified in 3.5.B.2, 3.5.B.3, and 3.5.F.3 below, both containment cooling subsystem loops shall be operable whenever irradiated fuel is in the reactor vessel and reactor coolant temperature is greater than 212°F, and prior to reactor startup from a Cold Condition.

4.5.B Containment Cooling Subsystem

1. Containment Cooling Subsystem Testing shall be as follows:

	Item	Frequency
a.	Pump & Valve Operability	Once/3 months
b.	Pump Capacity Test Each RBCCW pump shall deliver 1700 gpm at 70 ft. TDH. Each SSWS pump shall deliver 2700 gpm at 55 ft. TDH.	After pump maintenance and every 3 months
c.	Air test on drywell and torus headers and nozzles	Once/5 years

LIMITING CONDITION FOR OPERATION	SURVEILLANCE REQUIREMENT
3.5.B Containment Cooling Subsystem (Cont'd)	4.5.B Containment Cooling Subsystem (Cont'd)
2. From and after the date that one containment cooling subsystem loop is made or found to be inoperable for any reason, continued reactor operation is permissible only during the succeeding seven days unless such subsystem loop is sooner made operable, provided that the other containment cooling subsystem loop, including its associated diesel generator, is operable.	2. When one containment cooling subsystem loop becomes inoperable, the operable subsystem loop and its associated diesel generator shall be demonstrated to be operable immediately and the operable containment cooling subsystem loop daily thereafter.
3. If the requirements of 3.5.B cannot be met, an orderly shutdown shall be initiated and the reactor shall be in a Cold Shutdown Condition within 24 hours.	
C. HPCI Subsystem	C. HPCI Subsystem
1. The HPCI Subsystem shall be operable whenever there is irradiated fuel in the reactor vessel, reactor pressure is greater than 104 psig, and prior to reactor startup from a Cold Condition, except as specified in 3.5.C.2 and 3.5.C.3 below.	1. HPCI Subsystem testing shall be performed as follows:

a.	Simulated Automatic Actuation Test	Once/operating cycle
b.	Pump Operability	Once/month
c.	Motor Operated Valve Operability	Once/month
d.	Flow Rate at 1000 psig	Once/3 months
e.	Flow Rate at 150 psig	Once/ operating cycle

BASES:

3.5.B Containment Cooling Subsystem

The containment cooling subsystem for Pilgrim I consists of two independent loops, each of which to be an operable loop requires one LPCI pump, two RBCCW pumps, and two SSW pumps to be operable. There are installed spares for margin above the design conditions. Each system has the capability to perform its function; i.e., removing 64 x 10^6 Btu/hr (Ref. Amendment 18), even with some system degradation. If one loop is out-of-service, reactor operation is permitted for seven days with daily testing of the operable loop and the appropriate diesel generator.

With components or subsystems out-of-service, overall core and containment cooling reliability is maintained by demonstrating the operability of the remaining cooling equipment. The degree of operability to be demonstrated depends on the nature of the reason for the out-of-service equipment. For routine out-of-service periods caused by preventative maintenance, etc., the pump and valve operability checks will be performed to demonstrate operability of the remaining components. However, if a failure, design deficiency, etc., caused the out-of-service period, then the demonstration of operability should be thorough enough to assure that a similar problem does not exist on the remaining components. For example, if an out-of-service period were caused by failure of a pump to deliver rated capacity, the other pumps of this type might be subjected to a capacity test. In any event, surveillance procedures, as required by Section 6 of these specifications, detail the required extent of testing.

Since some of the SW and RBCCW pumps are required for normal operation, capacity testing of individual pumps by direct flow measurement is impractical. The pump capacity test is a comparison of measured pump performance parameters to shop performance tests combined with a comparison to the performance of the previously tested pump. These pumps are rotated during operation and performance testing will be integrated with this or performed during refueling when pumps can be flow tested individually. Tests during normal operation will be performed by measuring the shutoff head. Then the pump under test will be placed in service and one of the previously operating pumps secured. Total flow indication for the system will be compared for the two cases. Where this is not feasible due to changing system conditions, the pump discharge pressure will be measured and its power requirement will be used to establish flow at that pressure.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 38 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 January 16, 1976, Boston Edison Company (BECo or licensee) proposed an amendment to the Technical Specification Limiting Conditions for Operation and Surveillance Requirements for Containment Cooling System (Suppression Pool Cooling Subsystem) pumps. This change would relax pump operability requirements in certain systems where spare pumps are installed in excess of system requirements.

Discussion

Each of two independent Containment Cooling System loops requires one Residual Heat Removal (RHR) pump, two Reactor Building Closed Cooling Water (RBCCW) pumps, and two Salt Service Water (SSW) pumps to be operable. There are two RHR pumps available per loop, three RBCCW pumps available per loop, and two SSW pumps available per loop, with an installed common spare. All four RHR pumps are required for the Low Pressure Coolant Injection (LPCI) mode of operation of the RHR System, and thus no excess capacity exists (assuming a single failure). However, there is installed excess capacity in the RBCCW and SSW subsystems.

The licensee's proposal would eliminate unnecessary operability and surveillance requirements for the installed spare pumps.

Evaluation

The original Bases for 3.5.B, Containment Cooling Susbsystem, recognized the installed spare pumps provided margin in excess of the design requirements. It was felt necessary to avoid the loss of margin by including the spare pumps in the TS LCO/Surveillance requirements. While this approach was clearly conservative, it is acceptable for safety to insure the redundant cooling capacity of these systems, assuming a single failure. Sufficient redundancy exists with the spare pumps inoperable to allow operation without requiring shutdown and maintenance on the spare pumps.

We have reviewed the proposed technical specifications against the current GE Standard Technical Specifications (NUREG-0123 Revision 2 dated August 1979). We find that the licensee's proposal equals or exceeds the GE STS in degree of conservatism. Certain editorial changes were made in the licensee's submittal for the sake of clarity and consistency. These changes were discussed with and agreed to by the BECo licensing staff.

Environmental Consideration

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, negative declaration, or environmental impact appraisal will 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 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: November 23, 1979

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NO. 50-293

BOSTON EDISON COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 38 to Facility Operating License No. DPR-35, issued to Boston Edison Company (the licensee), which revised the Technical Specifications for operation of the Pilgrim Nuclear Power Station Unit No. 1 (the facility) located near Plymouth, Massachusetts. The amendment is effective as of its date of issuance.

This amendment changes the Technical Specifications to relax pump operability requirements in systems where spare pumps are installed in excess of system requirements.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4), an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of the amendment.

For further details with respect to this action, see (1) the application for amendment dated January 16, 1976, (2) Amendment No. 38 to License No. DPR-35, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Plymouth Public Library on North Street in Plymouth, Massachusetts 12360. A single copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 23 day of November 1979.

FOR THE NUCLEAR REGULATORY COMMISSION

Thomas A. Ippolito, Chief
Operating Reactors Branch #3
Division of Operating Reactors