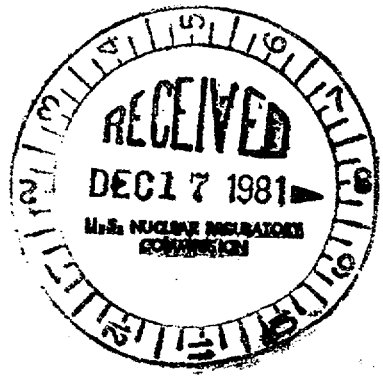
Docket File
DMB-016

December 10, 1981



Docket No. 50-293

Mr. A. Victor Morisi
Boston Edison Company
M/C Nuclear
800 Boylston Street
Boston, MA 02199

Dear Mr. Morisi:

The Commission has issued the enclosed Amendment No. 51 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station Unit 1. This amendment consists of changes to the Technical Specifications in response to your letter BECo #81-257 dated November 4, 1981. This amendment was authorized by telephone on November 4, 1981 and was confirmed by letter dated November 5, 1981.

The amendment grants relief from the requirements of the Technical Specifications (3.7.B.1.c, 3.7.B.1.e, 3.7.B.2.a, and 3.7.B.2.c) regarding the operability requirements for the Standby Gas Treatment System and the Control Room High Efficiency Air Filtration System for the initiation of fuel movement and during fuel handling operations for the period November 4, 1981 through November 24, 1981.

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

Sincerely,

Kenneth T. Eccleston, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:
1. Amendment No. 51 to DPR-35
2. Safety Evaluation
3. Notice

cc: w/enclosures
See next page

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Mr. A. Victor Morisi
Boston Edison Company

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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. 51
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 November 4, 1981 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 Operating 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. 51, 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 November 4, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 10, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 51

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Revise Appendix A as follows:

Remove the following pages and insert identically numbered pages:

158
158A
158B
158C

3.7.B Standby Gas Treatment System and Control Room With Efficiency Air Filtration System

1. Standby Gas Treatment System

a. Except as specified in 3.7.B.1.c below, both trains of the standby gas treatment system and the diesel generators required for operation of such trains shall be operable at all times when secondary containment integrity is required or the reactor shall be shutdown in 36 hours.

b. (1.) The results of the in-place cold DOP tests on HEPA filters shall show ≥99% DOP removal. The results of halogenated hydrocarbon tests on charcoal adsorber banks shall show ≥99% halogenated hydrocarbon removal.

(2.) The results of the laboratory carbon sample analysis shall show ≥95% methyl iodide removal at a velocity within 10% of system design, 0.5 to 1.5 mg/m^3 inlet methyl iodide concentration, ≥70% R.H. and ≥190°F.

* c. From and after the date that one train of the Standby Gas Treatment System is made or found to be inoperable for any reason, continued reactor operation or fuel handling is permissible only during the succeeding seven days providing that within 2 hours and daily thereafter, all active components of the other standby gas treatment train shall be demonstrated to be operable.

d. Fans shall operate within ±10% of 4000 cfm.

*Conditional Relief granted from this LCO for the period November 4 through November 24, 1981

4.7.B Standby Gas Treatment System and Control Room High Efficiency Air Filtration System

1. Standby Gas Treatment System

a. (1.) At least once every 18 months, it shall be demonstrated that pressure drop across the combined high efficiency filters and charcoal adsorber banks is less than 8 inches of water at 4000 cfm.

(2.) At least once every 18 months, demonstrate that the inlet heaters on each train are operable and are capable of an output of at least 14 kW. Perform an instrument functional test on the humidistats controlling the heaters.

(3.) The tests and analysis of Specification 3.7.B.1.b.2 shall be performed at least once every 18 months or following painting, fire or chemical release in any ventilation zone communicating with the system while the system is operating that could contaminate the HEPA filters or charcoal adsorbers.

(4.) At least once every 18 months, automatic initiation of each branch of the standby gas treatment system shall be demonstrated, with Specification 3.7.B.1.d satisfied.

(5.) Each train of the standby gas treatment system shall be operated for at least 15 minutes per month.

(6.) The tests and analysis of Specification 3.7.B.1.b.(2) shall be performed after every 720 hours of system operation.

3.7.B (Continued)

*e. Except as specified in 3.7.B.1.c, both trains of the standby gas treatment system shall be operable during fuel handling operations. If the system is not operable fuel movement shall not be started (any fuel assembly movement in progress may be completed).

*Conditional Relief granted from this LCO for the period November 4 through November 24, 1981

4.7.B (Continued)

b. (1.) Inplace cold DOP testing shall be performed on the HEPA filters after each completed or partial replacement of the HEPA filter bank and after any structural maintenance on the HEPA filter system housing which could affect the HEPA filter bank bypass leakage.

(2.) Halogenated hydrocarbon testing shall be performed on the charcoal adsorber bank after each partial or complete replacement of the charcoal adsorber bank or after any structural maintenance on the charcoal adsorber housing which could affect the charcoal adsorber bank bypass leakage.

3.7.B (Continued)

2. Control Room High Efficiency Air Filtration System

*a. Except as specified in Specification 3.7.B.2.c below, both trains of the Control Room High Efficiency Air Filtration System used for the processing of inlet air to the control room under accident conditions and the diesel generator(s) required for operation of each train of the system shall be operable whenever secondary containment integrity is required and during fuel handling operations.

b. (1.) The results of the in-place cold DOP tests on HEPA filters shall show ≥99% DOP removal. The results of the halogenated hydrocarbon tests on charcoal adsorber banks shall show ≥99% halogenated hydrocarbon removal when test results are extrapolated to the initiation of the test.

(2.) The results of the laboratory carbon sample analysis shall show ≥95% methyl iodide removal at a velocity within 10% of system design, 0.05 to 0.15 mg/m^3 inlet methyl iodide concentration, ≥70% R.H., and ≥125°F.

*c. From and after the date that one train of the Control Room High Efficiency Air Filtration System is made or found to be incapable of supplying filtered air to the control room for any reason, reactor operation or refueling operations are permissible only during the succeeding 7 days. If the system is not made fully operable within 7 days, reactor

*Conditional Relief granted from this LCO for the period November 4 through November 24, 1981

4.7.B (Continue)

2. Control Room High Efficiency Air Filtration System

a. At least once every 18 months the pressure drop across each combined filter train shall be demonstrated to be less than 3 inches of water at 1000 cfm.

b. (1.) The tests and analysis of Specification 3.7.B.2.b shall be performed once every 18 months or following painting, fire or chemical release in any ventilation zone communicating with the system while the system is operating.

(2.) Inplace cold DOP testing shall be performed after each complete or partial replacement of the HEPA filter bank or after any structural maintenance on the system housing which could affect the HEPA filter bank bypass leakage.

(3.) Halogenated hydrocarbon testing shall be performed after each complete or partial replacement of the charcoal adsorber bank or after any structural maintenance on the system housing which could affect the charcoal adsorber bank bypass leakage.

(4.) Each train shall be operated with the heaters in automatic for at least 15 minutes every month.

(5.) The test and analysis of Specification 3.7.B.2.b.(2) shall be performed after every 720 hours of system operation.

3.7.B (Continued)

shutdown shall be initiated and the reactor shall be in cold shutdown within the next 36 hours and irradiated fuel handling operations shall be terminated within 2 hours. (Fuel handling operations in progress may be completed).

d. Fans shall operate within ± 10% of 1000 cfm.

4.7.B (Continued)

c. At least once every 18 months the following shall be demonstrated:

(1) Automatic initiation of the control room high efficiency air filtration system.

(2) Operability of heaters at rated power.

3. Perform an instrument functional test on the humidistate controlling the heaters.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 51 TO LICENSE NO. DPR-35

BOSTON EDISON COMPANY

DOCKET NO. 50-293

PILGRIM NUCLEAR POWER STATION UNIT 1

1.0 INTRODUCTION

By letter dated November 4, 1981 (BECo. 81-257), the Boston Edison Company (licensee) requested relief from the requirements of the Technical Specifications (Section 3.7.B.1.c, 3.7.B.1.e, 3.7.B.2.a., and 3.7.B.2.c) regarding the operability requirements for the Standby Gas Treatment System and the Control Room High Efficiency Air Filtration System for the initiation of and during fuel movement in refueling operations.

2.0 BACKGROUND

A recent engineering analysis was performed by Boston Edison in response to Inspection and Enforcement Bulletin 80-11 (Masonry Wall Design). This analysis has revealed the potential failure of 3 walls located in the Turbine Building due to High Energy Pipe Breaks Outside Containment*, Tornado Depressurization or Seismic events. The failure of the walls would impact certain safety systems which are required for refueling mode operations. These systems are the Standby Gas Treatment System, High Efficiency Control Room Air Filtration System, the Residual Heat Removal System, and the Standby Liquid Control System. Their failure would be caused by the loss of the power cables in a raceway on the wall. The Licensee has declared the first two of these systems to be inoperable due to this potential failure mode and has developed a corrective design modification to remedy the deficiency. However, the modifications will not be completed until December 1, 1981.

The fuel loading schedule and subsequent plant start-up from the refueling outage would be impacted unless the modifications can be done in parallel with the fuel loading. However the current Technical Specifications do not allow the initiation of loading without full operability of the Standby Gas Treatment System and they also require the operability of the Control Room High Efficiency Air Filtration System during fuel handling operations. Each system also possesses Limiting Conditions for Operation, with one train inoperable, which are less than the time needed to complete the wall modifications. Therefore, the licensee has requested relief from the current requirements, on the basis of providing interim compensating measures, for the period of November 4 through November 24, 1981, for fuel loading.

*Wall failure from HELB is not feasible in cold shutdown.

3.0 EVALUATION

The review of the safety concerns is divided into three areas. First, it is shown that the probability of an event (Seismic or Tornado) during fuel handling operations is small. Second, the licensee's compensating measures provide adequate assurance that the system will be available if needed to mitigate the consequences of a fuel handling accident. Third, that the systems are not required to limit offsite doses within those of 10 CFR 100.

The licensee has evaluated the probability of a fuel handling accident in conjunction with a block wall failure. The total probability was determined to be 1.0x10E-5/refueling. The NRC staff has also conservatively estimated the probability of block wall failure while handling fuel and the estimate is comparable to that of Boston Edison.

The licensee has committed to the following compensating actions while the single train of each of the two systems is declared inoperable:

1. The Standby Gas Treatment System (Train B) and the Control Room High Efficiency Air Filtration System (Train B) train will be continuously operated during all irradiated fuel handling activities. Train B of the Standby Gas Treatment System has valve MO-N-113 disconnected (ie. failed) in the open position to ensure system function in the event of a wall failure. These systems will be monitored to assure operability and irradiated fuel handling operations will be terminated if either of the systems (Train B) is found or made to be inoperable.

2. The RHR system will be restored to full functional status immediately upon failure of the wall. The licensee will have procedures in place prior to fuel movement which direct actions to restore the functional capability of the RHR system. Subsequent to procedure execution, only a protective feature of one set of RHR pumps will be inoperative with all other shutdown cooling system features fully operable. The failure of this pump protective feature was determined by the licensee to be the only concern during this mode of operations.

3. A procedure will be in place prior to the start of fuel movement, which requires the immediate termination of fuel handling (moves in progress may be completed) in the event that a Tornado Watch is issued in the area of the plant.

No compensatory actions are necessary for the Standby Liquid Control System since the Licensee has demonstrated that the system will perform its intended function if required. This system is required during control rod drive testing during loading.

The licensee has evaluated the radiological effects of a fuel handling accident assuming that the SGTS is inoperable. It has been determined that if the fuel movement takes places more than 120 hours after reactor shutdown, the limits of 10 CFR 100 regarding doses at the site boundary would not be exceeded. The subject fuel movement will not be initiated prior to 120 hours after reactor shutdown.

We have determined that the licensee has provided adequate assurance regarding accident mitigation during the period necessary to complete the fuel loading. Therefore, we grant the requested relief from the Technical Specifications 3.7.B.1.c, 3.7.B.1.e, 3.7.B.2.a., and 3.7.B.2.c for the period from November 4 through November 24, 1981.

4.0 ENVIRONMENTAL CONSIDERATIONS

We have determined that the amendment does not involve 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.

5.0 CONCLUSIONS

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: December 10, 1981

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. 51 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 was authorized by telephone on November 4, 1981 and was confirmed by letter dated November 5, 1981; therefore, the amendment became effective November 4, 1981.

The amendment grants relief from the requirements of the Technical Specifications (3.7.B.1.c, 3.7.B.1.e, 3.7.B.2.a, and 3.7.B.2.c) regarding the operability requirements for the Standby Gas Treatment System and the Control Room High Efficiency Air Filtration System for the initiation of fuel movement and during fuel handling operations for the period November 4, 1981 through November 24, 1981.

The application for 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 it 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 the issuance of the amendment.

For further details with respect to this action, see (1) the application for amendment dated November 4, 1981, (2) Amendment No. 51 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 02360. 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 Licensing.

Dated at Bethesda, Maryland this 10th day of December, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION

Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing