

December 16, 1992

Docket No. 50-293

DISTRIBUTION:

~~Docket File 50-293~~
NRC & Local PDRs
PDI-3 Reading
S. Varga
J. Calvo
W. Butler
T. Clark
R. Eaton
J. Harold

OGC - 15B18
Dennis Hagan - MNBB3206
G. Hill (4)-P1-22
Wanda Jones- P370
C. Grimes - 11F23
ACRS (10) - P315
OPA - 2G5
OC/FDCB-MNBB11104
J. Linville, Region 1

Mr. Roy A. Anderson
Senior Vice President - Nuclear
Boston Edison Company
Pilgrim Nuclear Power Station
RFD #1 Rock Hill Road
Plymouth, Massachusetts 02360

SUBJECT: ISSUANCE OF AMENDMENT NO. 144 TO FACILITY OPERATING LICENSE NO. DPR-35, PILGRIM NUCLEAR POWER STATION (TAC NO. M84678)

The Commission has issued the enclosed Amendment No. 144 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment is in response to your application dated October 8, 1992.

This amendment revises Technical Specifications to incorporate an asterisk referencing a footnote granting relief to allow only one train of SGTS and CRHEAF system operable prior to and during refueling activities during RFO #9.

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

Sincerely,

/S/

Ronald B. Eaton, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 144 to License No. DPR-35
2. Safety Evaluation

cc w/enclosures:
See next page

LA:PDI-3	PM:PDI-3	PM:PDI-3	OGC	SPtB	D:PDI-3
TClark <i>JLC</i>	REaton <i>[Signature]</i>	JHarold <i>[Signature]</i>	EHOLLER <i>[Signature]</i>	JKudrick <i>[Signature]</i>	WButler <i>[Signature]</i>
12/03/92	12/13/92	12/103/92	12/10/92	12/14/92	12/16/92

OFFICIAL RECORD COPY
Document Name: A:\PIM84678.AMD

9212300215 921216
PDR ADOCK 05000293
P PDR

DFOI



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

December 16, 1992

Docket No. 50-293

Mr. Roy A. Anderson
Senior Vice President - Nuclear
Boston Edison Company
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, Massachusetts 02360

Dear Mr. Anderson:

SUBJECT: ISSUANCE OF AMENDMENT NO. 144 TO FACILITY OPERATING LICENSE NO.
DPR-35, PILGRIM NUCLEAR POWER STATION (TAC NO. M84678)

The Commission has issued the enclosed Amendment No. 144 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment is in response to your application dated October 8, 1992.

This amendment revises Technical Specifications to incorporate an asterisk referencing a footnote granting relief to allow only one train of SGTS and CRHEAF system operable prior to and during refueling activities during RFO #9.

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

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald B. Eaton".

Ronald B. Eaton, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 144 to License No. DPR-35
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. R. A. Anderson

Pilgrim Nuclear Power Station

cc:

Mr. E. Thomas Boulette,
Vice President of Nuclear
Operations & Station Director
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, Massachusetts 02360

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

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

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

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

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

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

Mr. Paul G. Hamilton
Licensing Division Manager
Boston Edison Company
25 Braintree Hill Park
Braintree, Massachusetts 02184

Mr. H. Vernon Oheim
Manager, Reg. Affairs Dept.
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, Massachusetts 02360

Mr. David Terantino
Nuclear Information Manager
Pilgrim Nuclear Power Station
RFD #1, Rocky Hill Road
Plymouth, Massachusetts 02360

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

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

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

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

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



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

BOSTON EDISON COMPANY

DOCKET NO. 50-293

PILGRIM NUCLEAR POWER STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 144
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 October 8, 1992, 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 set forth in 10 CFR Chapter I;
 - 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:

9212300224 921216
PDR ADOCK 05000293
P PDR

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No.144 , 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 its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director
Project Directorate I-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: December 16, 1992

ATTACHMENT TO LICENSE AMENDMENT NO. 144

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.

<u>Remove</u>	<u>Insert</u>
158	158
158A	158A
158B	158B
158C	158C

LIMITING CONDITIONS FOR OPERATION

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 $\geq 99\%$ DOP removal. The results of halogenated hydrocarbon tests on charcoal adsorber banks shall show $\geq 99\%$ halogenated hydrocarbon removal.
 - (2.) The results of the laboratory carbon sample analysis shall show $\geq 95\%$ methyl iodide removal at a velocity within 10% of system design, 0.5 to 1.5 mg/m³ inlet methyl iodide concentration, $\geq 70\%$ R.H. and $\geq 190^\circ$ F. The analysis results are to be verified as acceptable within 31 days after sample removal, or declare that train inoperable and take the actions specified 3.7.B.1.c.

SURVEILLANCE REQUIREMENTS

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.
 - (3.) The tests and analysis of Specification 3.7.B.1.b. 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.

LIMITING CONDITIONS OPERATION

SURVEILLANCE REQUIREMENTS

3.7.B (Continued)

4.7.B (Continued)

* 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, irradiated fuel handling, or new fuel handling over spent fuel pool or core is permissible only during the succeeding seven days providing that within 2 hours all active components of the other standby gas treatment train shall be demonstrated to be operable.

d. Fans shall operate within $\pm 10\%$ of 4000 cfm.

* e. Except as specified in 3.7.B.1.c, both trains of the Standby Gas Treatment System shall be operable during irradiated fuel handling, or new fuel handling over the spent fuel pool or core. If the system is not operable, fuel movement shall not be started. Any fuel assembly movement in progress may be completed.

(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.

b. (1.) In-place 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.

* During RFO #9, one train can be without its safety-related bus and/or emergency diesel generator without entering the LCO action statement provided the following conditions are met:

- Fuel movement will not occur until five days following reactor shutdown.
- Prior to and during fuel movement, the SBO D/G or the Shutdown Transformer is required to be operable and capable of supplying power to the emergency bus.
- Fuel movement will not occur until the reactor vessel is flooded up to elevation 114'.
- The train of SGTS and CRHEAF without its safety related bus or without its emergency diesel generator will have power supplied from a normal offsite source via a non safety-related bus. The normal offsite sources consist of either the Startup Transformer on Unit Auxiliary Transformer (Backscuttle Mode).

LIMITING CONDITIONS OPERATION

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 $\geq 99\%$ DOP removal. The results of the halogenated hydrocarbon tests on charcoal adsorber banks shall show $\geq 99\%$ 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 $\geq 95\%$ methyl iodide removal at a velocity within 10% of system design, 0.05 to 0.15 mg/m³ inlet methyl iodide concentration, $\geq 70\%$ R.H., and $\geq 125^\circ$ F. The analysis results are to be verified as acceptable within 31 days after sample removal, or declare that train inoperable and take the actions specified in 3.7.B.2.c.

* During RFO #9, one train can be without its safety-related bus and/or its emergency diesel generator without entering the LCO action statement provided the conditions listed on page 158A are met.

SURVEILLANCE REQUIREMENTS

4.7.b (Continued)

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 6 inches of water at 1000 cfm or the calculated equivalent.
- 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.) In-place 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.

LIMITING CONDITIONS & OPERATION

3.7.B (Continued)

- * 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 providing that within 2 hours all active components of the other CRHEAF train shall be demonstrated operable. If the system is not made fully operable within 7 days, reactor 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 $\pm 10\%$ of 1000 cfm.

SURVEILLANCE REQUIREMENTS

4.7.B (Continued)

- c. At least once every 18 months demonstrate that the inlet heaters on each train are operable and capable of an output of at least 14 kw.
- d. Perform an instrument functional test on the humidistats controlling the heaters once per 18 months.

- * During RFO #9, one train can be without its safety-related bus and/or its emergency diesel generator without entering the LCO action statement provided the conditions listed on page 158A are met.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 144 TO FACILITY OPERATING LICENSE NO. DPR-35

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION

DOCKET NO. 50-293

1.0 INTRODUCTION

By letter dated October 8, 1992, Boston Edison Company (the licensee) requested an amendment to Technical Specifications (TS) to Facility Operating License No. DPR-35 for Pilgrim Nuclear Power Station. The amendment would temporarily remove the requirement for both trains of fuel movement and during fuel handling operations involving irradiated fuel from TS sections 3.7.B.1.c, 3.7.B.1.e, 3.7.B.2.a, and 3.7.B.2.c.

The requested changes would support a planned sequencing of safety systems maintenance and/or refurbishment during their next refueling outage (RFO), #9. A discussion of the proposed changes and the NRC staff evaluation and findings relative to each are addressed in Section 2 of this Safety Evaluation.

2.0 EVALUATION

The licensee is implementing an outage work management concept during RFO #9 that takes an entire equipment loop out of service for maintenance activities. This concept conflicts with the TS when handling irradiated fuel because removal of an equipment loop makes the related emergency electric power source (diesel generator and associated 4KV bus) unavailable to supply emergency power to the associated trains of SGTS and CRHEAF. The existing Limiting Condition of Operation (LCO) allows a 7 day period to restore the system to operable condition or discontinue activities involving irradiated fuel. The temporary TS change is requested to address this conflict by allowing irradiated fuel activities to commence and continue for RFO #9.

The SGTS is one of four subsystems of the Secondary Containment System (SCS) used to limit the release of radioactive materials below 10 CFR 100 limits. SGTS is used to maintain secondary containment at 0.25 inches of water negative pressure upon containment isolation. The TS bases state that only one of the two trains is needed.

The CRHEAF system is a subsystem of the Main Control Room Environmental Control System designed to initiate in the event of an accident to provide a

source of filtered outside air to the control room. The Final Safety Analysis Report (FSAR) section 10.17 states that there are two independent trains of CRHEAF and only one is needed to provide the system's safety function.

During RFO #9 the licensee will maintain one train of SGTS and CRHEAF operable with both normal and emergency safety-related power sources available. The other train will be available using non-safety related power sources but will not have an emergency safety backup source.

The licensee will implement compensatory measures described below for both SGTS and CRHEAF.

Compensatory Measures

- Fuel movement will not occur until 5 days following reactor shutdown.
- Fuel movement will not occur until the reactor vessel is flooded up to elevation 114' to provide an enlarged coolant inventory.
- The train of SGTS and CRHEAF without its safety-related bus and without its emergency diesel generator will have power supplied from a normal offsite source via a non safety-related bus. The normal offsite source consist of either the Startup Transformer or Unit Auxiliary Transformer (Back-feed Mode).

These measures will give added assurance that SGTS and CRHEAF will not be needed or will perform their designed function although one train will not be operable within the strict application of existing TS requirements.

The provisions set forth in this amendment request are limited to operations during RFO #9. If during refueling operations the SGTS or the CRHEAF train with the emergency power source available becomes inoperable by the TS definition, the licensee will complete any fuel assembly movement in progress and shall not start any new fuel movement (TS LCO sections 3.7.B.1.e. or 3.7.B.2.c, respectively). If the SGTS train without the emergency power source available becomes inoperable by the TS definition (excluding emergency power source availability) the continued operations are permissible only during the succeeding seven days providing that within 2 hours all active components of the other SGTS train shall be demonstrated to be operable (TS LCO section 3.7.B.1.c).

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. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluent 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 (57 FR 48813). 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: Jefferey Harold

Date: December 16, 1992