

July 15, 1999

Mr. Theodore A. Sullivan
Vice President Nuclear and Station Director
Boston Edison Company
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, MA 02360

SUBJECT: PILGRIM NUCLEAR POWER STATION - ISSUANCE OF AMENDMENT
RE: SURVEILLANCE CAPSULE PULL (TAC NO. MA4928)

Dear Mr. Sullivan:

The Commission has issued the enclosed Amendment No. 182 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment is in response to your application dated March 3, 1999.

The amendment will modify the Pilgrim Nuclear Power Station Technical Specification Table 4.6-3, "Reactor Vessel Material Surveillance Program Withdrawal Schedule." The amendment will change the withdrawal schedule for the upcoming reactor vessel surveillance capsule pull from approximately 15 effective full power years to approximately 18 effective full power years.

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:

Alan B. Wang, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-293

- Enclosures: 1. Amendment No. 182 to License No. DPR-35
2. Safety Evaluation

cc w/encls: See next page

NRC FILE CENTER COPY

DISTRIBUTION: See next page

DOCUMENT NAME: G:\PDI-2\Pilgrim\MA4928.AMD

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	PDI-2/PM		PDI-2/LA	E	EMCB		OGC <i>MB</i>		PDI-2/SC
NAME	AWang/vw <i>Bow</i>		TClark <i>to check only</i>		M Mitchell		<i>R</i> Bachmann		J Olliford <i>for</i>
DATE	6/30/99		6/30/99 <i>m BOD 5/25/99 BAC w/15/99</i>		4/19/99		7/1/99		7/14/99

OFFICIAL RECORD COPY

DFOM

9907190143 990715
PDR ADOCK 05000293
P PDR

100066



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

July 15, 1999

Mr. Theodore A. Sullivan
Vice President Nuclear and Station Director
Boston Edison Company
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, MA 02360

SUBJECT: PILGRIM NUCLEAR POWER STATION - ISSUANCE OF AMENDMENT
RE: SURVEILLANCE CAPSULE PULL (TAC NO. MA4928)

Dear Mr. Sullivan:

The Commission has issued the enclosed Amendment No. 182 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment is in response to your application dated March 3, 1999.

The amendment will modify the Pilgrim Nuclear Power Station Technical Specification Table 4.6-3, "Reactor Vessel Material Surveillance Program Withdrawal Schedule." The amendment will change the withdrawal schedule for the upcoming reactor vessel surveillance capsule pull from approximately 15 effective full power years to approximately 18 effective full power years.

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,

A handwritten signature in cursive script that reads "Alan Wang".

Alan B. Wang, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-293

Enclosures: 1. Amendment No. 182 to License No. DPR-35
2. Safety Evaluation

cc w/encls: See next page

Pilgrim Nuclear Power Station

cc:

Mr. Ron Ledgett
Executive Vice President
800 Boylston Street
Boston, MA 02199

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. C. Stephen Brennon
Licensing Division Manager
Boston Edison Company
600 Rocky Hill Road
Plymouth, MA 02360-5599

Mr. Jack Alexander
Manager, Reg. Relations and
Quality Assurance
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360-5599

Mr. David F. Tarantino
Nuclear Information Manager
Pilgrim Nuclear Power Station
600 Rocky Hill Road
Plymouth, MA 02360-5599

Ms. Kathleen M. O'Toole
Secretary of Public Safety
Executive Office of Public Safety
One Ashburton Place
Boston, MA 02108

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

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

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

John M. Fulton
Assistant General Counsel
Boston Edison Company
800 Boylston St., 36th Floor
Boston, MA 02199

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

Mr. William D. Meinert
Nuclear Engineer
Massachusetts Municipal Wholesale
Electric Company
P.O. Box 426
Ludlow, MA 01056-0426

Ms. Mary Lampert, Director
Massachusetts Citizens for Safe Energy
148 Washington Street
Duxbury, MA 02332



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. 182
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 March 3, 1999, 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, and paragraph 3.B of Facility Operating License No. DPR-35 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 182, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

9907190145 990715
PDR ADOCK 05000293
P PDR

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

FOR THE NUCLEAR REGULATORY COMMISSION

A handwritten signature in black ink, appearing to read "James W. Clifford".

James W. Clifford, Chief, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical
Specifications

Date of Issuance: July 15, 1999

ATTACHMENT TO LICENSE AMENDMENT NO. 182

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

3/4.6-13

Insert

3/4.6-13

Note: Tables 4.6-1 and 4.6-2 have been deleted.

PNPS
TABLE 4.6-3

REACTOR VESSEL MATERIAL
SURVEILLANCE PROGRAM WITHDRAWAL SCHEDULE

<u>Capsule Number</u>	<u>Effective Full Power Years (EFPY)</u>
1	4.17
2	18 (approx.)
3	32 (End of Life)



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 182 TO FACILITY OPERATING LICENSE NO. DPR-35

BOSTON EDISON COMPANY

PILGRIM NUCLEAR POWER STATION

DOCKET NO. 50-293

1.0 INTRODUCTION

By letter dated March 3, 1999 [1], Boston Edison Company (BECo, the licensee), requested that the Nuclear Regulatory Commission (NRC) review and approve its proposed Technical Specification (TS) change to modify its reactor pressure vessel (RPV) surveillance capsule withdrawal schedule. The proposed change would change the date of withdrawal of the next surveillance capsule in TS Table 4.6-3 from 15 effective full-power years (EFPY) of operation to 18 EFPY. BECo's submittal was made in accordance with the provision of Title 10 of the Code of Federal Regulations, (10 CFR), Section 50.90, which specifies that when license holders desire to amend their license, an amendment application must be filed with the Commission, as specified in 10 CFR 50.4. This provision is invoked since the facility TSs are incorporated directly as part of the facility's license.

2.0 REGULATORY REQUIREMENTS AND STAFF POSITIONS

Nuclear power plant licensees are required by 10 CFR Part 50, Appendix H, to implement RPV surveillance programs to "monitor changes in the fracture toughness properties of ferritic materials in the reactor vessel beltline region...which result from exposure of these materials to neutron irradiation and the thermal environment." Regarding RPV surveillance program design and specimen testing, 10 CFR Part 50, Appendix H, incorporates by reference the editions of the American Society for Testing and Materials (ASTM) Standard Practice E 185, "Conducting Surveillance Tests for Light-Water Cooled Nuclear Power Reactor Vessels," through the 1982 edition. Under 10 CFR Part 50, Appendix H, the licensee's RPV surveillance program design and withdrawal schedule is required to meet the requirements of the edition of ASTM E 185 that is current on the issue date of the American Society of Mechanical Engineers (ASME) Code to which the RPV was purchased, although later editions may be used, up to and including the 1982 edition. The test procedures and reporting requirements must however meet the requirements of the 1982 edition of ASTM E185, to the extent practical for the configuration of the specimens in the capsules.

As referenced in Pilgrim TS 4.6.A., the edition of ASTM E 185 to which the Pilgrim RPV surveillance program was designed was the 1966 edition (ASTM E 185-66). Paragraph 4.6 of the ASTM E 185-66 addresses the withdrawal schedule as follows, "[i]t is recommended that sets of specimens be withdrawn at three or more separate times. One of the data points obtained shall correspond to the neutron exposure of the component near the end of its design

life." As apparent from the March 3, 1999, submittal, and as verified in subsequent discussions with BECo via teleconference on April 8, 1999, the licensee indicated that although it was not directly incorporated in the Pilgrim licensing basis, Table 1 from the 1982 edition of E 185 had been used for additional guidance when the 15 EFPY withdrawal date in TS Table 4.6-3 for the second capsule was originally established.

3.0 LICENSEE'S DETERMINATION

In its March 3, 1999, submittal, BECo stated that its reason for requesting this TS change was that after the removal of the second capsule, only one additional capsule would be available from the Pilgrim RPV surveillance program and that it must remain in the RPV until the end of the vessel's life. In addition, BECo stated their intent, at this time, to participate in a Boiling Water Reactor Vessel and Internals Project (BWRVIP) initiative to develop an integrated surveillance program for BWRs. The BWRVIP intends to submit this program by the end of 1999 for the NRC staff review and approval. BECo noted that to take full advantage of this program, a deferral of the withdrawal of the next Pilgrim surveillance capsule is needed.

With regard to the impact of the surveillance capsule deferral on RPV integrity, BECo determined that the capsule deferral would not challenge their ability to operate the RPV safely. However, it does defer a TS required surveillance. BECo noted that the Pilgrim operational practices would not be changed as a result of the deferral and that the existing TS pressure-temperature (P-T) limit curves which were reviewed and approved by the NRC in 1992 were expected to remain conservative and not be affected by the proposed capsule deferral. BECo stated that this would be the case since the method incorporated in the Pilgrim TS for establishing P-T limits does not rely on credit being given for the use of surveillance data, but rather uses the generic methodology of Regulatory Guide (RG) 1.99, Revision 2 [2].

4.0 STAFF EVALUATION

The NRC staff reviewed the information supplied by the licensee and the regulatory requirements stated in section 2.0 above. The staff agrees with the licensee that the deferral of the second capsule withdrawal from 15 to 18 EFPY is acceptable from both a regulatory and technical standpoint. The staff reached these conclusions because compliance with the ASTM E 185-66, as required for Pilgrim by 10 CFR Part 50, Appendix H, is non-prescriptive with regard to withdrawal of the second surveillance capsule. As noted in Section 2.0, the only specific withdrawal requirement in E 185-66 is that one capsule (data point) be obtained at near end-of-license exposure levels. Therefore, withdrawal of the second capsule at 18 EFPY is in compliance with 10 CFR Part 50, Appendix H. In addition, the staff agrees that the establishment of P-T limits based on the procedures of RG 1.99, Revision 2, will continue to provide an appropriately conservative assessment of the RPV P-T limits. The staff has also been informed of the BWRVIP's intent to submit an ISP by the end of 1999 [3] and agrees that it is technically appropriate for Pilgrim to defer its second capsule withdrawal in order to fully participate in the ISP.

The NRC staff has concluded that deferral of the withdrawal of the second Pilgrim RPV surveillance capsule from 15 EFPY to 18 EFPY is acceptable. Therefore, the proposed change to the Pilgrim TS Table 4.6-3 is acceptable.

5.0 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.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes the 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 (64 FR 27316). 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.

7.0 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: M. Mitchell

Date: July 15, 1999

8.0 REFERENCES

- [1] T. A. Sullivan, BECo, to U.S. Nuclear Regulatory Commission, Document Control Desk, "Request for Technical Specification Change Concerning Vessel Material Surveillance Interval (Capsule Pull)," March 3, 1999.
- [2] U.S. Nuclear Regulatory Commission Regulatory Guide 1.99, Revision 2, "Radiation Embrittlement of Reactor Vessel Materials," May 1988.
- [3] M. A. Mitchell, USNRC, to K. R. Wichman USNRC, "Trip Report, BWRVIP Meeting on Integrated Surveillance Program, March 30 - April 1, 1999," April 7, 1999.