

October 29, 1987

Docket No.: 50-293

Boston Edison Company
ATTN: Mr. Ralph E. Bird
Senior Vice President - Nuclear
800 Boylston Street
Boston, Massachusetts 02199

SUBJECT: ISSUANCE OF AMENDMENT NO. 108 TO FACILITY OPERATING LICENSE NO. DPR-35
(TAC# 65494) PILGRIM NUCLEAR POWER STATION

Dear Mr. Bird:

The Commission has issued the enclosed Amendment No. 108 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment consists of changes to the Technical Specifications in response to your application dated May 22, 1987.

This amendment revises the Technical Specification Table 3.2.B to clarify the requirements for the undervoltage relays.

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

Sincerely,

15/
Richard H. Wessman, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects I/II

Enclosures:

1. Amendment No. 108 to DPR-35
2. Safety Evaluation

cc w/enclosures:
See next page

OFC	: PDI-3	: PDI-3	: PDI-3	: OGC-BETHESDA:ACTDIR/PDI-3:	:
NAME	: MRushbrook	: GRequa	: RWessman:lm	: <i>Wessman</i>	: <i>Reaver</i>
DATE	: 10/11/87	: 10/15/87	: 10/15/87	: 10/20/87	: 10/28/87

OFFICIAL RECORD COPY

8711040038 871029
PDR ADDCK 05000293
P PDR



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

October 29, 1987

Docket No.: 50-293

Boston Edison Company
ATTN: Mr. Ralph E. Bird
Senior Vice President - Nuclear
800 Boylston Street
Boston, Massachusetts 02199

SUBJECT: ISSUANCE OF AMENDMENT NO. 108 TO FACILITY OPERATING LICENSE NO. DPR-35
(TAC# 65494) PILGRIM NUCLEAR POWER STATION

Dear Mr. Bird:

The Commission has issued the enclosed Amendment No. 108 to Facility Operating License No. DPR-35 for the Pilgrim Nuclear Power Station. This amendment consists of changes to the Technical Specifications in response to your application dated May 22, 1987.

This amendment revises the Technical Specification Table 3.2.B to clarify the requirements for the undervoltage relays.

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

Sincerely,

A handwritten signature in black ink, appearing to read "R. H. Wessman".

Richard H. Wessman, Senior Project Manager
Project Directorate I-3
Division of Reactor Projects I/II

Enclosures:

1. Amendment No. 108 to DPR-35
2. Safety Evaluation

cc w/enclosures:
See next page

Mr. Ralph G. Bird
Boston Edison Company

Pilgrim Nuclear Power Station

cc:

Mr. K. P. Roberts, Nuclear Operations
Pilgrim Nuclear Power Station
Boston Edison Company
RFD #1, Rocky Hill Road
Plymouth, Massachusetts 02360

Boston Edison Company
ATTN: Mr. Ralph G. Bird
Senior Vice President - Nuclear
800 Boylston Street
Boston, Massachusetts 02199

Resident Inspector's Office
U. S. Nuclear Regulatory Commission
Post Office Box 867
Plymouth, Massachusetts 02360

Mr. Richard N. Swanson, Manager
Nuclear Engineering Department
Boston Edison Company
25 Braintree Hill Park
Braintree, Massachusetts 02184

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

Ms. Elaine D. Robinson
Nuclear Information Manager
Pilgrim Nuclear Power Station
RFD #1, Rocky Hill Road
Plymouth, Massachusetts 02360

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

Assistant Secretary Peter W. Agnes
Executive Office of Public Safety
One Ashburton Place
Room 213
Boston, Massachusetts 02108

Office of the Attorney General
1 Ashburton Place
19th Floor
Boston, Massachusetts 02108

Mr. Robert M. Hallisey, Director
Radiation Control Program
Massachusetts Department of
Public Health
150 Tremont Street, 2nd Floor
Boston, Massachusetts 02111

Regional Administrator, Region I
U. S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pennsylvania 19406

Mr. James D. Keyes
Regulatory Affairs and Programs Group
Leader
Boston Edison Company
25 Braintree Hill Park
Braintree, Massachusetts 02184



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. 108
License No. DPR-35

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Boston Edison Company (the licensee) dated May 22, 1987 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:

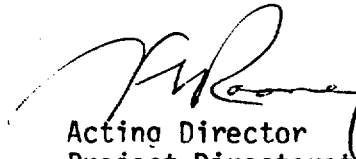
8711040039 871029
PDR ADDCK 05000293
P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 108, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective 30 days after the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Acting Director
Project Directorate I-3
Division of Reactor Projects I/II

Attachment:
Changes to the Technical
Specifications

Date of Issuance: October 29, 1987

ATTACHMENT TO LICENSE AMENDMENT NO. 108

FACILITY OPERATING LICENSE NO. DPR-35

DOCKET NO. 50-293

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised pages are identified by amendment number and contain vertical lines indicating the areas of change. The corresponding overleaf pages are provided to maintain document completeness.

Remove Pages

50
50a
53a

Insert Pages

50
50a
53a

PNPS
 TABLE 3.2.B (Cont'd)
INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

<u>Minimum # of Operable Instrument Channels Per Trip System (1)</u>	<u>Trip Function</u>	<u>Trip Level Setting</u>	<u>Remarks</u>
2	Startup Transformer Loss of Voltage	At 0 Volts between 1.1 to 1.2 seconds Time Delay	<ol style="list-style-type: none"> 1. Trips Startup Transformer to Emergency Bus Breaker. 2. Locks out automatic closure of Startup Transformer to Emergency Bus. 3. Initiates starting of Diesel Generators in conjunction with loss of auxiliary transformer. 4. Prevents simultaneous starting of CSCS components. 5. Starts load shedding logic for Diesel Operation in conjunction with (a) Low Low Reactor Water Level and Low Reactor Pressure or (b) High drywell pressure or (c) Core Standby Cooling System components in service in conjunction with Auxiliary Transformer breaker open.

PNPS
 TABLE 3.2.B (Cont'd)
INSTRUMENTATION THAT INITIATES OR CONTROLS THE CORE AND CONTAINMENT COOLING SYSTEMS

<u>Minimum # of Operable Instrument Channels Per Trip System (1)</u>	<u>Trip Function</u>	<u>Trip Level Setting</u>	<u>Remarks</u>
2	Startup Transformer Degraded Voltage	3745V \pm 2% with 9.2 \pm 0.5 seconds time delay	<ol style="list-style-type: none"> 1. Trips Startup Transformer to Emergency Bus Breaker. 2. Locks out automatic closure of Startup Transformer to Emergency Bus. 3. Initiates starting of Diesel Generators in conjunction with loss of auxiliary transformer. 4. Prevents simultaneous starting of CSCS components. 5. Starts load shedding logic for Diesel Operation in conjunction with (a) Low Low Reactor Water Level and Low Reactor Pressure or (b) High drywell pressure or (c) Core Standby Cooling System components in service in conjunction with Auxiliary Transformer breaker open.

PNPS
 TABLE 3.2.B.1
INSTRUMENTATION THAT MONITORS EMERGENCY BUS VOLTAGE

<u>Minimum # of Operable Instrument Channels Per Trip System</u>	<u>Function</u>	<u>Setting</u>	<u>Remarks</u>
1	Emergency 4160V Buses A5 & A6 Degraded Voltage Annunciation (1)	3850V \pm 2% with 9.2 \pm 0.5 seconds time delay	Alerts Operator to possible degraded voltage conditions

(1) In the event that the alarm system is determined inoperable, commence logging safety related bus voltage every 1/2 hour until such time as the alarm is restored to operable status.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR
REACTOR REGULATION
SUPPORTING AMENDMENT TO OPERATING LICENSE DPR-35
BOSTON EDISON COMPANY
PILGRIM NUCLEAR POWER STATION, UNIT 1
DOCKET NO. 50-293

1.0 INTRODUCTION

By application dated May 22, 1987, Boston Edison Company (the licensee) requested an amendment to the technical specifications for Facility Operating License No. DPR-35 for Pilgrim Nuclear Power Station, Unit 1. The amendment reflects the following changes to the functional description and trip setpoints for under-voltage instrumentation on safety related buses:

- a. Periodic verification of one of two trip setpoints has been deleted for startup transformer loss of voltage;
- b. Descriptions have been changed for the startup transformer loss of voltage, startup transformer degraded voltage, and 4160 volt buses A5 and A6 degraded voltage annunciation; and
- c. The trip setting tolerances have been changed for degraded voltage annunciation and startup transformer loss of voltage.

2.0 EVALUATION

The Pilgrim technical specifications currently require that the startup transformer loss of voltage relays must be calibrated once per operating cycle at two voltage points, i.e., 0 volts at 1.1 seconds time delay and 3094 volts with 18 seconds time delay. The proposed change deletes the requirement that these relays be calibrated at 3094 volts with 18 seconds time delay. In justification of this change, the licensee indicated that in 1977 the NRC required additional

8711040040 871029
PDR ADOCK 05000293
PDR

undervoltage devices be installed to provide improved degraded voltage protection. These additional devices have been installed at Pilgrim, are calibrated once per operating cycle, and provide a higher and faster trip level setting (3745 volts with 9.2 seconds time delay versus 3094 volts with 18 seconds time delay) for degraded voltage protection. With the installation of these additional undervoltage devices, the degraded voltage functional safety requirement for the startup transformer loss of voltage relays was made unnecessary and has, thus, been removed by the proposed change to the Pilgrim technical specifications. Based on the above, the staff agrees that calibration at 3094 volts with 18 seconds time delay was made unnecessary and concludes that its removal from the technical specifications provides clarification, is consistent with the NRC Standard Technical Specifications, and is acceptable.

The licensee has also proposed a revised functional description for undervoltage instrument channels associated with startup transformer loss of voltage, startup transformer degraded voltage, and buses A5 and A6 degraded voltage annunciation. The licensee, in justification, indicated that specific identification of components in the undervoltage instrument channels is provided in procedures. Listing of relays but not timers in the functional description led to questions regarding testing of timers. Specific reference to relays has, thus, been deleted from the technical specification. Periodic surveillance of relays has not changed and remains as part of procedure. The staff agrees that specific reference to all components in the undervoltage instrument channels (i.e., relays, timers, cables, and potential transformers) should be included in test procedures and need not be specifically referenced in the technical specifications. The staff concludes that the proposed revised functional descriptions provide clarification, are consistent with NRC Standard Technical Specifications, and are therefore, acceptable.

The remaining changes, described below, involve greater calibration tolerances for the time delay trip setting.

For startup transformer loss of voltage, the time delay setting has been changed from 0 volts with 1.1 seconds to 0 volts with 1.1 to 1.2 seconds time delay. The licensee in justification indicated that the revised trip level setting includes a 0.1 second tolerance and defines the acceptable accuracy required for this electro-mechanical relay. The staff concludes that this increased calibration tolerance of 0.1 second does not constitute a significant reduction in the margin of safety, is consistent with NRC standard technical specifications, and is, therefore, acceptable.

For emergency 4160 volt buses A5 and A6 degraded voltage annunciation, the time delay setting has been changed from 9.2 ± 0.0092 seconds to 9.2 ± 0.5 seconds. The licensee, in justification, indicated that the degraded voltage alarm timers are of the same type and accuracy as those used for safety related degraded voltage trip which have a 9.2 ± 0.5 second time delay setting for trip. These timers provide a similar but non-safety related alarm actuation function. Therefore, the trip and alarm instrument timers should have the same specification and tolerances. The existing degraded voltage alarm channel setting tolerance is overly conservative and is, thus, being revised. Based on the above, the staff agrees and finds the greater calibration tolerance acceptable.

3.0 ENVIRONMENTAL CONSIDERATIONS

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The 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 published a proposed finding that the amendment involves no significant

hazards consideration and there has been no public comment on such finding. 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.

4.0 CONCLUSION

We have concluded, based on the consideration 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, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Knox

Dated: October 29, 1987

AMENDMENT NO.108 TO FACILITY OPERATING LICENSE DPR-35 -
PILGRIM NUCLEAR POWER STATION

DISTRIBUTION: w/enclosures:

Docket No. 50-293 ←
NRC PDR
Local PDR
PDI-3 Reading
GRequa
RWessman
MRushbrook
OGC-Bethesda
T. Barnhart (4)
E. O. Jordan
J. Partlow
D. Hagan
ACRS (10)
E. Butcher
Wanda Jones
OPA
LFMB
Tech. Review Branch