

June 29, 1988

Docket No. 50-293

DISTRIBUTION

Docket

NRC & Local PDRs

PDI-3 RF

SAVarga

ACRS (10)

BABoger

Gray File

MRushbrook

DGMcDonald

OGC-WF

E. Jordan

B. Grimes

Mr. Ralph G. Bird
Senior Vice President - Nuclear
Boston Edison Company
Pilgrim Nuclear Power Station
RFD #1, Rocky Hill Road
Plymouth, Massachusetts 02360

Dear Mr. Bird:

SUBJECT: PILGRIM SAFETY ENHANCEMENT PROGRAM - REQUEST FOR ADDITIONAL
INFORMATION

REFERENCE: TAC NUMBER 65356

By letter dated February 22, 1988 you responded to our initial assessment of the Pilgrim Safety Enhancement Program (SEP) dated August 21, 1987. We indicated in our initial assessment that additional information and clarification were needed in some specific areas of the SEP. The information requested was provided in your response.

The staff has reviewed your response and needs additional information relating to the Backup Nitrogen Supply System and the Drywell Spray System which are detailed in the enclosure to this letter.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Original signed by:

Daniel G. McDonald, Jr., Senior Project Manager
Project Directorate I-3
Division of Reactor Projects I/II

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

MRushbrook
PDI-3
MRushbrook
06/29/88

DGMcDonald
PDI-3
DGMcDonald:ah
06/29/88

DIR:PDI-3
RHWessman
06/29/88

8807120557 880629
PDR ADOCK 05000293
P PDR

June 29, 1988

Docket No. 50-293

Mr. Ralph G. Bird
Senior Vice President - Nuclear
Boston Edison Company
Pilgrim Nuclear Power Station
RFD #1, Rocky Hill Road
Plymouth, Massachusetts 02360

Dear Mr. Bird:

DISTRIBUTION

Docket
NRC & Local PDRs
PDI-3 RF
SAVarga
BABoger
MRushbrook
DGMcDonald
OGC-WF
E. Jordan
B. Grimes

ACRS (10)
Gray File

SUBJECT: PILGRIM SAFETY ENHANCEMENT PROGRAM - REQUEST FOR ADDITIONAL INFORMATION

REFERENCE: TAC NUMBER 65356

By letter dated February 22, 1988 you responded to our initial assessment of the Pilgrim Safety Enhancement Program (SEP) dated August 21, 1987. We indicated in our initial assessment that additional information and clarification were needed in some specific areas of the SEP. The information requested was provided in your response.

The staff has reviewed your response and needs additional information relating to the Backup Nitrogen Supply System and the Drywell Spray System which are detailed in the enclosure to this letter.

The reporting and/or recordkeeping requirements contained in this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

Original signed by:

Daniel G. McDonald, Jr., Senior Project Manager
Project Directorate I-3
Division of Reactor Projects I/II

Enclosure:
Request for Additional
Information

cc w/enclosure:
See next page

701
PDI-3
MRushbrook
06/29/88

PDI-3
DGMcDonald:ah
06/29/88

DIR:PDI-3
RHwessman
06/29/88

Mr. Ralph G. Bird
Boston Edison Company

Pilgrim Nuclear Power Station

cc:

Mr. K. L. Highfill
Station Director
Pilgrim Nuclear Power Station
RFD #1 Rocky Hill Road
Plymouth, Massachusetts 02360

Mr. Ralph G. Bird
Senior Vice President - Nuclear
Boston Edison Company
Pilgrim Nuclear Power Station
RFD#1, Rocky Hill Road
Plymouth, Massachusetts 02360

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

Charles V. Barry
Secretary of Public Safety
Executive Office of Public Safety
One Ashburton Place
Boston, Massachusetts 02108

Office of the Attorney General
1 Ashburton Place
20th 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
475 Allendale Road
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

ENCLOSURE

PILGRIM NUCLEAR POWER STATION
DOCKET NO. 50-293
REQUEST FOR ADDITIONAL INFORMATION
PILGRIM SAFETY ENHANCEMENT PROGRAM

1. Check valve 31-CK-167 has been identified as the containment isolation valve for the Backup Nitrogen Supply System. The use of a simple check valve is, in general, unacceptable for purposes of containment isolation. Identify any other valve(s) that could provide isolation capability for the system and details relating to the valve(s) identified including the associated piping.
2. BECo reanalysis of a spectrum of MSLB accidents was performed to address the effect on the drywell response and in particular the thermal response of the drywell liner. BECo should confirm that the effect of spray nozzle modifications has similarly been considered for the relevant spectrum of accidents used for determining the equipment qualification environmental envelope. Summarize the analysis and results of the evaluation of the effects of reduced spray flow on equipment qualification.
3. In the reanalysis of the drywell response to MSLB accidents, the revised calculation (described briefly in BECo Safety Evaluation 2133) assumed a spray droplet size of 1mm. Discuss the basis for this assumption and describe how water impingement on drywell walls and other surfaces is accounted for in the calculation of the drywell atmosphere temperature. Discuss any differences between the revised calculation and that analysis which served as the licensing basis for Pilgrim.
4. While not the sole mitigating feature in reducing the consequences of pool bypass, drywell sprays do influence the plants response to drywell pipe breaks with pool bypass, especially in limiting the break sizes of interest. Discuss the effect of reducing drywell spray flow rates on pool bypass capability.
5. Discuss the effect of reduced drywell spray flow capacity on the capability to limit or terminate pool chugging loads.
6. It is noted that Pilgrim has experienced a problem with clogging of drywell spray nozzles and that the proposed modification would dramatically reduce the number of nozzles. The revised design is inherently more vulnerable to such an issue. Therefore, it is our view that BECo should provide for additional surveillance to assure that corrective actions have been successful in addressing the problem of rusting in the spray header and potential nozzle clogging. Describe the measures that will be taken to confirm clogging of drywell spray nozzles will not impair spray operability.