



Carolina Power & Light Company
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November 15, 1996

SERIAL: BSEP 96-0428

U. S. Nuclear Regulatory Commission
ATTENTION: Document Control Desk
Washington, DC 20555

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
RESOLUTION OF SPENT FUEL STORAGE POOL SAFETY ISSUES
(NRC TAC NO. M88094)

Gentlemen:

By letter dated September 19, 1996, the Nuclear Regulatory Commission (NRC) staff provided to Carolina Power & Light Company (CP&L) the results of the staff's review of spent fuel storage pool safety issues. The NRC staff indicated in this letter that the results provided therein were for information only. The NRC staff observed that ten operating reactors, including the Brunswick Steam Electric Plant, Units 1 and 2, do not provide certain design features for detecting a loss of spent fuel pool cooling.

The NRC staff invited CP&L to comment on the safety significance of the design features, the accuracy of the staff's understanding of the Brunswick-specific design features described in the report, existing administrative controls or other means for protecting from the design concerns described in the staff's report, and the cost of potential modifications to address the design features described in the September 19, 1996 letter. The Company's comments on these topics are provided in Enclosure 1.

Please refer any questions regarding this submittal to Mr. William Murray at (910) 457-2842.

Sincerely,

Mark A. Turkal
Supervisor —Licensing
Brunswick Nuclear Plant

WRM/wrm

Enclosure

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cc: U. S. Nuclear Regulatory Commission
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NRC Senior Resident Inspector - Brunswick Units 1 and 2:

U.S. Nuclear Regulatory Commission
ATTN.: Mr. David C. Trimble, Jr. (Mail Stop OWFN 14H22)
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The Honorable H. Wells
Chairman - North Carolina Utilities Commission
P.O. Box 29510
Raleigh, NC 27626-0510

ENCLOSURE 1

BRUNSWICK STEAM ELECTRIC PLANT, UNIT NOS. 1 AND 2
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INTRODUCTION:

By letter dated September 19, 1996, the Nuclear Regulatory Commission (NRC) staff provided to Carolina Power & Light Company (CP&L) the results of the staff's review of spent fuel storage pool safety issues. The NRC staff indicated in this letter that the results provided therein were for information only; however, the NRC staff stated that any comments provided by CP&L would be considered in developing NRC plans for inspections and other activities associated with the planned regulatory analysis. The NRC staff observed that ten operating reactors, including the Brunswick Steam Electric Plant, Units 1 and 2, do not provide certain design features for detecting a loss of spent fuel pool cooling.

The NRC staff invited CP&L to comment on the safety significance of the design features, the accuracy of the staff's understanding of the Brunswick-specific design features described in the report, existing administrative controls or other means for protecting from the design concerns described in the staff's report, and the cost of potential modifications to address the design features described in the September 19, 1996 letter. The Company's comments on these topics are provided below.

CP&L COMMENTS:

Safety Significance of the Design Features

Of the ten design features identified in the NRC staff's September 19, 1996 letter, the only item applicable to the Brunswick Plant is the limited capability of instrumentation which would notify Operations personnel of a sustained loss of spent fuel pool cooling (i.e., the lack of a direct-reading high spent fuel pool temperature alarm). Carolina Power & Light Company believes that the addition of a design feature to provide a direct-reading high spent fuel pool temperature alarm will not provide a significant safety enhancement due to the existing administrative controls which will identify a loss of spent fuel pool cooling or provide an indication of inadequate spent fuel pool cooling.

Accuracy of Information

Carolina Power & Light Company has reviewed the NRC staff's September 19, 1996 document and has not identified any information provided therein that is inaccurate.

Administrative Controls

The following administrative controls currently exist and provide high confidence that a loss of spent fuel pool cooling would be detected or would provide an indication of inadequate spent fuel pool cooling:

1. Control Room Operators check the spent fuel pool temperature, point 17 on recorder E41-TR-R605, once per shift during all modes of operation in accordance with plant procedure 1(2)OI-03.4.1. The temperature probe which provides the input of spent fuel pool temperature for the above recorder is located in the common piping upstream of the fuel pool cooling heat exchangers. Because of this, the Spent Fuel Pool Cooling System must be in service (partial or full) in order to obtain an accurate indication of the spent fuel pool temperature. Therefore, no increase in the spent fuel pool temperature would be observed on a full loss of the Spent Fuel Pool Cooling System. However, an abnormal temperature rise, caused by a partial loss of the Spent Fuel Pool Cooling System or a partial or full loss of the cooling water supply (RBCCW) to the fuel pool cooling heat exchangers, would be identified.
2. Auxiliary Operators check for proper operation of the spent fuel pool cooling equipment once per day during all modes of operation in accordance with plant procedure 1(2)OI-03.4.2. Therefore, a partial or full loss of spent fuel pool cooling would be identified.
3. During normal operation of the system with the fuel pool cooling filter-demineralizers in service, filter-demineralizer low flow annunciators, 1-FPF-01-2-7 and 2-9 and 2-FPF-02-2-1 and 2-3, would provide an indication of a partial or full loss of spent fuel pool cooling.
4. The fuel pool cooling pumps have low discharge pressure switches which provide one of the inputs to a general fuel pool cooling trouble annunciator, 1(2)-A-04-6-7. This annunciator would provide an indication of a partial or full loss of spent fuel pool cooling.

Potential Modification Costs

The Company has assessed the scope of a potential plant modification to address the NRC staff's concern with the lack of a direct-reading high spent fuel temperature alarm. One approach to such a modification would involve the installation of a temperature probe on the north wall of the spent fuel pool between the skimmer surge tank openings. A bracket, attached to the curb around the spent fuel pool. New conduit and cable could be installed to support a temperature indicator in the back panel area of the control room with main control room annunciation. The minimum cost for this potential plant modification has been estimated to be approximately \$60,000.

Summary

Carolina Power & Light Company has concluded that existing administrative controls will identify a loss of spent fuel pool cooling or provide an indication of inadequate spent fuel pool cooling. Therefore, CP&L believes that the addition of a design feature to provide a direct-reading high spent fuel pool temperature alarm will not provide a significant safety enhancement.