

CP&L**Carolina Power & Light Company**

Company Correspondence

Brunswick Nuclear Plant
P. O. Box 10429
Southport, NC 28461-0429

JUN 30 1993

File: B09-13510C
Serial: BSEP 93-0098U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555BRUNSWICK NUCLEAR PLANT, UNITS 1 AND 2
DOCKET NOS. 50-325 & 50-324
LICENSE NOS. DPR-71 & DPR-62.
SUPPLEMENTAL SPECIAL REPORT 1-93-004

Gentlemen:

On March 29, 1993, Brunswick Nuclear Plant submitted Special Report (SR) 1-93-004 to the Nuclear Regulatory Commission. The Special Report detailed plans to repair Deluge Valve 20 due to failure of the latch arm gasket. There had been recurring problems with the deluge valve latch arm gaskets and methods for permanent repair/replacement of the Deluge Valve System have been under investigation. The following summarizes the results of the investigation and provides the updated status referenced in Special Report 1-93-004.

The original design of the sprinkler systems in the Reactor, Diesel Generator, Service Water and Radwaste Buildings utilized a standard deluge valve actuated by the fire detection system. Brunswick Nuclear Plant has a Primed Pre-action System. The system is primed by a bypass line on the deluge valves. This bypass line allows full system pressure (150+ psig) on the downstream side of the deluge valve. The additional pressure on the downstream side of the valve is the reason for the latch arm gasket failures. The deluge valves were designed for applications with a minimum amount of downstream pressure (20 - 30 psig). The additional pressure does not affect operability of the existing deluge valves or prevent them from performing their required function as verified by periodic test procedures.

Brunswick Nuclear Plant is currently considering a permanent conversion of the sprinkler system design from a Primed Pre-action System to a Wet Pipe System. This change would delete the function of the deluge valves by removing the valve internals and eliminating the automatic tripping function. This proposal will be submitted through the appropriate management approval cycle.

A temporary repair package (Engineering Evaluation Report 93-0312) has been

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issued to return sprinkler systems back to service should failures occur. This repair has been implemented for three deluge valves and will continue to be in place during the development and implementation of the permanent design change. Implementation of the permanent design change will be scheduled in accordance with the site priority system in order to integrate this change into other work activities associated with the fire protection system.

Yours very truly,



J. M. Brown, Unit 1 Plant Manager

JFM/jfm

Enclosure:

cc: Mr. S. D. Ebnetter
Mr. P. D. Milano
BSEP NRC Residents Office