

December 10, 1980

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Office of Nuclear Reactor Regulation
ATTENTION: Mr. T. A. Ippolito, Chief
Operating Reactors Branch No. 2
United States Nuclear Regulatory Commission
Washington, D. C. 20555

BRUNSWICK STEAM ELECTRIC PLANT UNIT NOS. 1 AND 2
DOCKET NOS. 50-325 AND 50-324
LICENSE NOS. DPR-71 AND DPR-62
EFFECT OF SPILLAGE ON ECCS PERFORMANCE

Dear Mr. Ippolito:

Your April 25, 1980 letter requested information concerning the effects on ECCS performance of a DC power supply failure and of the loss of equipment due to water spillage. For our Brunswick Steam Electric Plant (BSEP) Unit Nos. 1 and 2, Carolina Power & Light Company (CP&L) responded to the question of DC power supply failure in a September 11, 1980 letter. This letter provides the requested information regarding the effect of water spillage.

Redundant safety-related equipment within primary containment is designed and installed in two divisions with physical separation existing between the divisions. The recirculation loop discharge and suction piping is also arranged such that spillage resulting from a recirculation loop line break would spill only on equipment in one of the divisions without affecting equipment in the other division.

In the design of the BSEP pressure suppression containment (i.e., drywell-torus), flooding is not considered to be a credible accident environment due to the high volume, low hydraulic resistance flow paths from the drywell to the torus which would immediately direct LOCA blowdown flow or spillage away from the drywell. Therefore, flooding as a result of spillage is not considered.

Safety-related equipment within primary containment which is in the path of spillage from a recirculation loop line break has equipment enclosures designed to protect the equipment from the effects of this spillage. A recent inspection of this equipment was performed in both Unit 1 and Unit 2 primary containments which verified that the equipment enclosure cover gaskets, covers, and hold down screws were in place.

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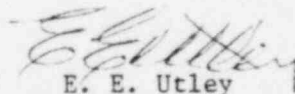
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In addition, IE Bulletin 79-01B has required substantial studies addressing the qualification of this Class 1E equipment. A portion of this bulletin addresses the ability of Class 1E equipment within primary containment to withstand a postulated harsh environment after a LOCA. This environment includes spray and humidity, which could be considered a harsher environment than spillage, although flooding level is also appropriately addressed.

Considering the above, we have concluded that a loss of primary containment safety-related equipment due to water spillage, following a recirculation loop discharge or suction line break will not add to, or change, the previously supplied equipment listing of the effect of a DC power supply failure on ECCS performance.

Yours very truly,



E. E. Utley
Executive Vice President
Power Supply and
Engineering & Construction

RMP/DEM/jc (573-219)