



# MISSISSIPPI POWER & LIGHT COMPANY

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May 24, 1985

O. D. KINGSLEY, JR.  
VICE PRESIDENT - NUCLEAR OPERATIONS

U. S. Nuclear Regulatory Commission  
Office of Nuclear Reactor Regulation  
Washington, D. C. 20555

Attention: Mr. Harold R. Denton, Director

Dear Mr. Denton:

SUBJECT: Grand Gulf Nuclear Station  
Units 1 and 2  
Docket Nos. 50-416 and 50-417  
License No. NPF-29  
File: 0260/0189  
Environmental Qualification of  
Drywell Vacuum Breaker Position  
Switches; O.L. Condition 2.C.(35)  
AECM-85/0148

This letter documents discussions with your Mr. Jack Kudrick (CSB) regarding the environmental qualification of the drywell purge and post-LOCA vacuum breaker position switches. In addition, Mississippi Power & Light (MP&L) is providing a description of the vacuum breaker position switch design for complying with Operating License (O.L.) Condition 2.C.(35).

MP&L considers that based on the GGNS unique design as discussed below, environmental qualification of the position switches on the vacuum breaker check valves (E61-F001 A&B, F002 A&B, and F004 A&B) is not required at GGNS. The Post-LOCA Vacuum Relief System and the Drywell Purge Systems each consist of two 10" lines that penetrate the drywell which can be used for vacuum relief. Each line contains at least one vacuum breaker check valve in series with a motor operated isolation valve (MOV) which isolates the drywell during normal operation and during the initial portion of an accident when the drywell is pressurized following a LOCA. The position switches on these MOVs (E61-F003 A&B and F005 A&B) have been qualified to withstand their expected LOCA environment in accordance with the NUREG-0588/10CFR50.49 requirements. Since the primary concern for having position indication of the vacuum relief system valves is to identify potential bypass leakage, this can be accomplished using the qualified position indication on the associated MOVs instead of the check valves. However, to provide surveillance on closure of the vacuum breaker check valves during normal operation non-qualified position switches will be installed on the check valves in accordance with O.L. Condition 2.C.(35).

An additional concern raised by Mr. Kudrick regarding the possible need for operator action in the emergency procedures in order to assure vacuum relief and prevent bypass leakage can be addressed by describing the system initiation logic on the MOVs. In the event of a LOCA, the motor operated valves close (if open), and are interlocked closed for the first 30 seconds

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following the LOCA signal to allow blowdown to be completed. After 30 seconds has elapsed, the drywell purge system motor operated valves may be opened manually or the valves will automatically open if drywell pressure was greater than the containment pressure by lpsi and falling. The Post-LOCA vacuum relief valves may also be opened manually or the valves will open automatically if the drywell pressure is less than containment pressure by lpsi and the drywell pressure was at one time greater than containment pressure by lpsi. Based on this, no operator action is specifically required and no revision to the GGNS emergency procedures is considered necessary.

In order to meet the requirements of Operating License Condition 2.C.(35), MP&L plans to install a single proximity type position switch on each of the six vacuum breaker check valves (F004 A&B in the Post LOCA Vacuum Relief System and F001 A&B and F002 A&B in the Drywell Purge System). Separate position indication for each of the six check valves will be provided in the control room with a single common annunciator alarm. The redundancy of position indication as required by the license condition will be met (1) between the vacuum relief lines by providing single switches on redundant check valves (i.e. F004 A and F004 B) and (2) within the vacuum relief lines by providing check valve and MOV isolation valve position indication (i.e. F004 A and F005 A) in each line. MP&L considers this design to be sufficient to meet the license condition.

MP&L will submit proposed technical specification changes associated with the system modification by August 1, 1985.

Please advise, if you require any additional information.

ODK:dmm  
Attachment



cc: Mr. J. B. Richard (w/a)  
Mr. R. B. McGehee (w/a)  
Mr. N. S. Reynolds (w/a)  
Mr. G. B. Taylor (w/o)  
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