



# MISSISSIPPI POWER & LIGHT COMPANY

*Helping Build Mississippi*

P. O. BOX 1640, JACKSON, MISSISSIPPI 39205

July 20, 1981

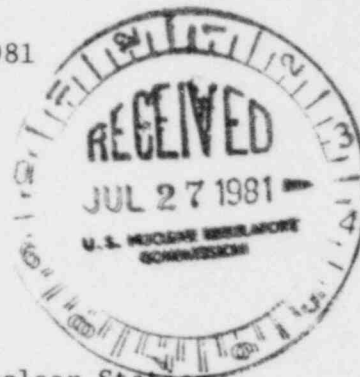
NUCLEAR PRODUCTION DEPARTMENT

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  
File 0290/1053/0310  
Bypassed and Inoperable Status  
Indication and Optical  
Isolators  
AECM-81/246



Mr. Jim Knight, of the Instrumentation & Control Systems Branch (ICSB), indicated concerns to Mississippi Power & Light Company (MP&L) during a meeting between General Electric and the NRC held in San Jose, California, June 9 & 10, 1981, regarding the Bypassed and Inoperable Status Indication System and optical isolator qualification.

As we understand, a clarification of intentions is required in regard to administrative controls referenced in the discussion of infrequently operated valves which could impair ESF system performance (FSAR 7.5.1.3).

To address this concern MP&L has established a requirement in the approved plant administrative procedures to place the "out of service" manual bypass switch to the bypass position prior to performing any operation not automatically monitored which could impair the system's operation. In addition, FSAR 7.5.1.3 will be revised to include the required commitment as outlined above. The proposed revision is attached for your review and will be incorporated into the next available FSAR amendment.

In addition to the above concern, Mr. Knight requested additional information regarding the qualification of optical isolators used in the Grand Gulf control room design. Optical isolators are located in a non-harsh environment; i.e., the control room, and have been qualified to meet IEEE 323-1971. However, optical isolators are being qualified to meet IEEE 323-1974 and other criteria to verify their performance. These criteria include electromagnetic interference, aging assemblies to worst case thermal environments, and the effects of light output degradation.

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The qualification program to meet IEEE 323-1974 is expected to be complete by October 1, 1981. This information will be incorporated into the next available amendment to the Grand Gulf FSAR following our review of the qualification summaries.

If you have any questions or require further information, please contact this office.

Yours truly,



L. F. Dale  
Manager of Nuclear Services

JTB/JGC/JDR:lm  
Attachment

cc: Mr. N. L. Stampley  
Mr. G. B. Taylor  
Mr. R. B. McGehee  
Mr. T. B. Conner

Mr. Victor Stello, Jr., Director  
Office of Inspection & Enforcement  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

#### 7.5.1.3 Bypassed and Inoperable Status Indication

Bypasses within the engineered safety feature systems are indicated on the ESF panels by lights and are alarmed by the plant annunciator.

Automatic indication is provided in the control room to inform the operator that a system is inoperable. Annunciation is provided to indicate that a system or part of a system is not operable. For example, the reactor protection (trip) and the containment and reactor vessel isolation system have annunciators lighting and sounding whenever one or more channels of an input variable are bypassed. Bypassing is not allowed in the trip logic or actuator logic. Bypasses of certain infrequently used pieces of equipment, such as manual locked open valves, are not automatically annunciated in the control room; however, capability for manual activation of each system level bypass indicator is provided by means of handswitches in the control room for those systems that have these infrequently used bypasses.

Further examples of automatic indication of inoperability are listed below.

If any circuit breaker of an engineered safety feature system is racked out, indication is provided in the control room.

All motor control center control circuits related to engineered safety-feature systems are individually monitored. If control voltage is lost as a result of tripping of a motor starter feeder breaker or removal of a fuse in the control circuit, indication is provided in the control room.

All engineered safety feature systems which contain a control switch with test mode capability or may be put into a test mode by the insertion of a test jack are designed to provide continuous control room indication that test mode has been selected.

Operation of manual valves, use of manual disconnects, or other operations occurring once a year or less frequently which could impair engineered safety feature system performance, are controlled by administrative procedures which require the manual activation of the system inoperative indication prior to performing any operation. Following the completion of such operations, operability is verified by system testing prior to placing the system back in service. Thus, the probability of system bypasses existing undisclosed between periodic functional tests is minimal.