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S. W. Shields
Senior Vice President
Nuclear Division

September 7, 1982
S82-18
SVP-0019

Mr. James G. Keppler,
Regional Administrator
U.S. Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Docket Nos.: STN 50-546
STN 50-547
Construction Permit Nos.:
CPPR - 170
CPPR - 171

Marble Hill Nuclear Generating Station - Units 1 and 2

Dear Mr. Keppler:

On August 5, 1982, Mr. T. D. Geib of Public Service Company of Indiana, Inc. (PSI) notified your office of a potentially reportable item as required by 10 CFR 50.55(e). Westinghouse identified an undetectable failure mode which could exist in on-line testing circuits for their Solid State Protection System (SSPS).

Periodic testing of the SSPS includes actuation of master relays which actuate Safeguards systems. When a preselected master relay is energized, a proving lamp in series with the output (slave) relay coil confirms electrical continuity. Operation of the relay is prevented by reducing the coil voltage from 120VAC to 15VDC during the test. Subsequent tests from the Safeguards Test Cabinets energize each output relay to confirm actuation of the Safeguards device. In those instances where actuation of the final device would disrupt plant operation, a proving lamp verifies relay contact movement, field wiring, and electrical continuity through the final device.

As mentioned above, output relay coil continuity is confirmed, without operating the relay by reducing the circuit voltage to 15VDC from 120VAC. Operation of the master relay by means of the pushbutton test switch also removes the shunt from the proving lamp and allows the 15VDC to energize it to confirm continuity through the output relay coil.

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Mr. James G. Keppler

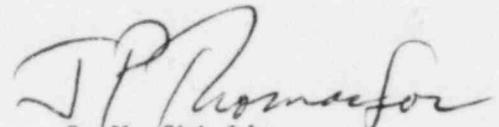
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Upon completion of the master relay and output relay coil continuity tests, 120VAC circuit voltage is restored. However, if the switch contacts which shunt the proving lamp should fail to reclose as expected, 120VAC would be applied to the proving lamp in the event the system were called upon to operate. Since plant operators would receive no indication of the contacts' failure to reclose, this situation might remain undetected. Depending on the output relay coil impedance and the number of output relays being operated by the master relay contacts, the current through the proving lamp could cause it to burn open before the output relays energized. In such an instance, associated Safeguards devices in the affected train would not actuate. Westinghouse is reviewing this item to determine alternatives in design changes.

This letter is intended to fulfill the requirements of an interim report as required by 10 CFR 50.55(e). A further report will be filed on or before January 14, 1983. If you have any questions, please feel free to contact me.

Sincerely,



S. W. Shields

SWS/TDG/jl

cc: Director of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

J. E. Konklin
J. J. Harrison