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VPNPD-88-026  
NRC-88-005

January 13, 1988

Mr. A. Bert Davis, Regional Administrator  
U. S. NUCLEAR REGULATORY COMMISSION  
Region III  
799 Roosevelt Road  
Glen Ellyn, Illinois 60137

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PRIORITY ROUTING	
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GRS	IKL
DBA	CT
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FILE

Dear Mr. Davis:

DOCKET NOS. 50-266 AND 50-301  
SINGLE FAILURE POTENTIAL IN 4160 VOLT SAFEGUARDS SWITCHGEAR  
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Wisconsin Electric Power Company, licensee for the Point Beach Nuclear Plant, hereby provides notice, pursuant to the provisions of the U.S. Nuclear Regulatory Commission's regulations at 10 CFR Part 21, "Reporting of Defects and Noncompliance," regarding a defect discovered at the Point Beach Nuclear Plant which had potential for creating a substantial safety hazard. This defect involves an apparent design deficiency in the interlocking arrangement for the emergency power supplies to the 4160 Safeguards Switchgear.

In response to IE Information Notice 87-61, "Failure of Westinghouse W-2 Type Circuit Breaker Cell Switches," we had investigated the application of cell switches in the Point Beach reactor trip breakers. During this investigation we established that W-2 cell switches are not used in reactor trip application at Point Beach and the use of other cell switches in the reactor trip circuits did not result in problems similar to those discussed in the notice. Nonetheless, we judged it prudent to investigate the use of cell switches in other breaker arrangements at Point Beach. As a result of that work, we have determined that a single failure of a W-2 cell switch on the bus tie breakers between 4160V safeguards busses 1-A05 and 1-A06 or 2-A05 and 2-A06, in Units 1 and 2 respectively, would prevent the automatic closure of the supply breakers to these busses from the associated emergency diesel generators. A diagram of the busses and breakers involved is attached. The details of this design deficiency are discussed for the Unit 1 breaker arrangement and are equally applicable for Unit 2.

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Tie breaker 61 provides a means to tie together safeguards busses 1-A05 and 1-A06. These busses supply the 4160 Volt power to Train A and Train B safeguards loads. The tie breaker is provided for use during a unit shutdown to facilitate maintenance on the normal bus supply breakers, 57 and 63. A cell switch associated with tie breaker 61 provides an interlock in the automatic closing circuits for both breakers 60 and 66, preventing automatic closure of those breakers when tie breaker 61 is closed. The purpose of this interlock is to prevent automatic paralleling of both emergency diesel generators following a fast start without synchronization.

We have postulated that a single failure in this cell switch could, in the event of a loss of offsite power, prevent the automatic closure of breakers 60 and 66 and thereby temporarily disable emergency power to both trains of 4160 Volt safeguards equipment. This failure would not, however, prevent the 60 and 66 supply breakers from being closed manually by the control room operator from the unit's control board. The plant Emergency Operation Procedures direct the operators to manually energize the 1-A05 and 1-A06 busses should automatic breaker closure not occur. However, in the event of a design basis loss of coolant accident coincident with a loss of off-site power and this single failure, we cannot assure that operator action would occur in a sufficient time to preclude consequences more severe than analyzed in the safety analysis report. Accordingly, the potential exists for the creation of a substantial safety hazard due to this design deficiency as defined in 10 CFR Part 21.

The postulated cell switch failure would occur only after operation of the tie breakers. These tie breakers are not normally operated. The operability of the automatic closing circuit for the emergency diesel generator supply breakers (60 and 61) is demonstrated during the performance of ORT-3, "Safety Injection Actuation with Loss of Energized Safeguards AC," during each refueling outage. This test was successfully completed on both units during their last refueling outages. We have also verified by electrical continuity testing that these cell switches are properly positioned and will not prevent automatic diesel generator breaker closure.

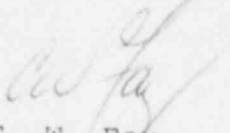
We are investigating possible modifications to the interlock and indicating circuitry of these tie breakers which would eliminate the potential for this undetected single failure. In the interim, we have implemented administrative controls which will confirm the proper position of the tie breaker 61 and 72 cell switches should operation of either tie breaker be necessary.

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This design deficiency was evaluated at a Nuclear Engineering Safety Review Committee meeting held on January 11, 1988. We anticipate we can complete our corrective action evaluation for this situation and provide a schedule for a permanent resolution within 60 days. We shall provide this information to the NRC.

Please contact us if you have any questions concerning this notification.

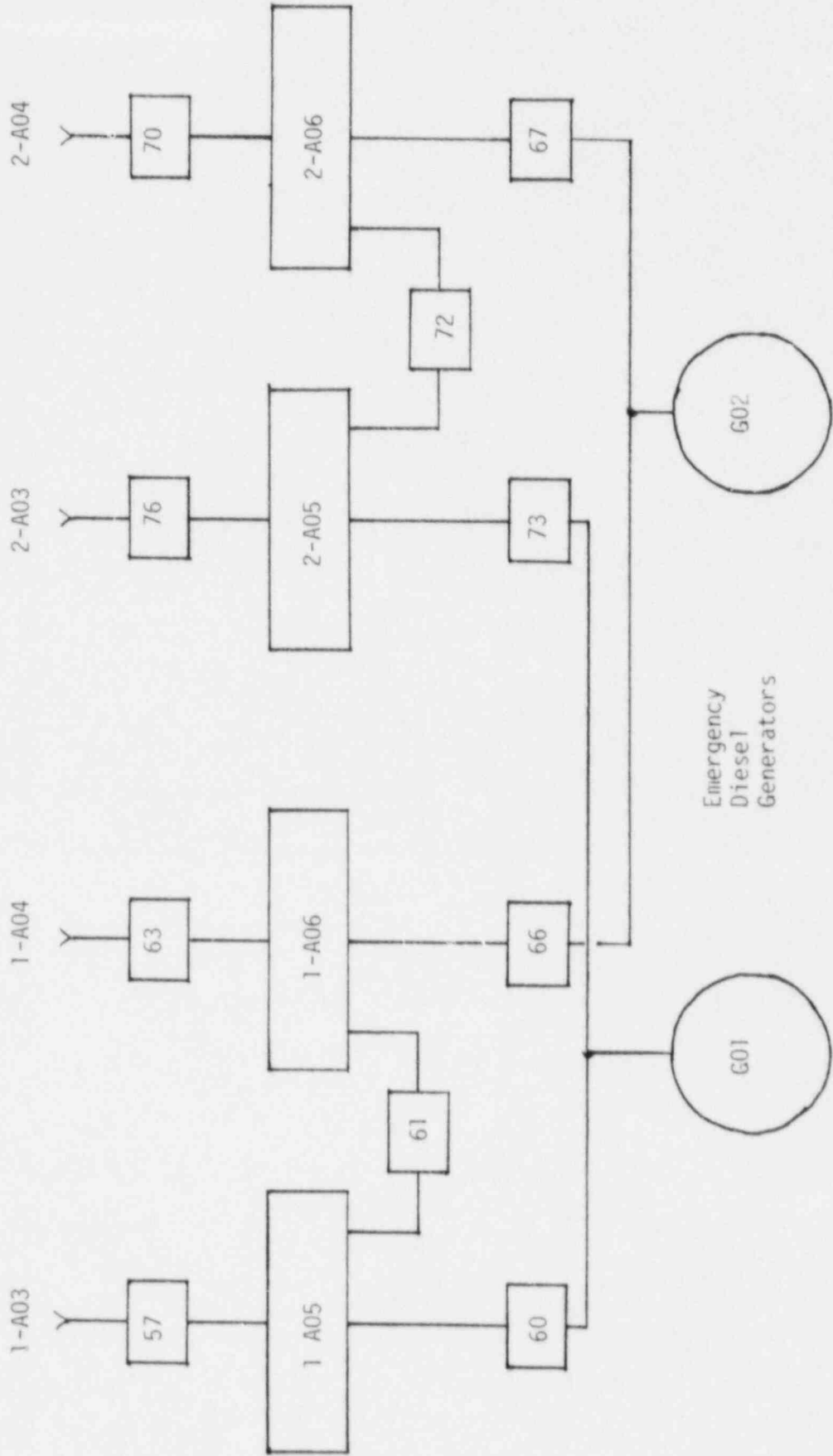
Very truly yours,

  
C. W. Fay  
Vice President  
Nuclear Power

Copies to Director, Office Nuclear Reactor Regulation (3)  
NRC Resident Inspector  
NRC Document Control Desk



NORMAL POWER SUPPLY



SIMPLIFIED SCHEMATIC OF BUS SECTIONS  
A05 AND A06 NORMAL AND EMERGENCY  
POWER SUPPLIES