

ATTACHMENT TO LICENSEE EVENT REPORT NO. 80-005/03L-0

Wisconsin Electric Power Company
Point Beach Nuclear Plant Unit 2
Docket No. 50-301

With the unit at 100% steady state power, it was noted at 1415 hours on June 9, 1980 that the safeguards buses were improperly energized. Instead of the A05 bus being independently supplied by the A03 bus, it was supplied by the A06 bus via the bus tie breaker. A05 and A06 are the two high voltage safeguards buses for the unit. The discovery of the improper electrical lineup was made during a training walk-down, and proper lineup was promptly restored following discovery of the improper lineup.

Shutting the tie breaker between the A05 and A06 buses threatened to cause a reduction in the degree of redundancy provided by engineered safety feature systems.

In order for the breaker to cause problems, the following sequence of events would have to occur. First, there would have to be a total loss of off-site power, that is all four tie lines would have to be knocked out of service. Then, the bus tie breaker would have to fail to open. This would be another component failure since the breaker is designed to open automatically on a loss of AC. At this point, the emergency diesel generators would not automatically phase to the Unit 2 safeguards buses; however, they would phase to Unit 1. This is due to the fact that a failure of this single breaker to open during a loss of AC accident would prevent both emergency diesel generators from automatically supplying power to their respective Unit 2 buses because of an interlock. The output breakers for each emergency diesel generator are interlocked to the tie breaker between the A05 and A06 buses. Thus, a failure of the A05 and A06 buses' tie breaker to open automatically on loss of AC would prevent the emergency diesel generator output breakers from closing. This single component failure coupled with loss of AC would prevent both emergency diesel generators from automatically supplying power to their associated safeguards buses during a loss of AC accident.

The operator would immediately know that the diesels did not phase in on Unit 2 and must either recognize that the bus tie breaker failed to open and manually open it, or manually synchronize the diesels to their buses. Sufficient time, approximately one to two hours, would exist to do this since the steam driven auxiliary feed pump would be operating and supplying water to the steam generators for decay heat removal. Condensate tank water and service water would be available for steam generator feedwater. The primary system temperature, pressure, and level would not significantly change since the steam generator atmospheric dumps would be maintaining temperature and there would be no letdown. Loss of power to the letdown motor-operated valve and/or all charging pumps will secure letdown by initiating closure of the orifice valves.

Thus, sufficient time, indicators, and options are available to the operator to mitigate any adverse consequences of this low probability event.

The diesels were available to supply power at all times; the automatic feature could be prevented only if the closed tie breaker would have failed to open.

The improper electrical lineup has been attributed to personnel error and is postulated as occurring subsequent to the performance of the loss of AC test conducted on May 2, 1980, but prior to the unit returning critical on May 12, 1980. The unit was shut down for refueling during this time period. The breaker cannot be closed once the unit is electrically lined up properly and loaded without going through a rather elaborate sequence of events.

To prevent future recurrence of this event, the electrical layout board will be modified to provide unique identification of the A05 and A06 buses' tie breaker. This modification will also include like tie breakers between other safeguards buses. Also, procedures will be changed to include an electrical lineup check after performance of the loss of AC test and prior to return to power.

This event is being reported in accordance with Technical Specification 15.6.9.2.B.3. The event was discussed with the NRC Resident Inspector on the morning of June 10 and "red phone" notification was made at 0845 hours the same day. A 24-hour written report was also submitted on June 10. After performing a complete evaluation of the event it was determined that this event did not require either "red phone" notification or a 24-hour report.