



Point Beach Nuclear Plant
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NPL 97-0100

April 16, 1997

U.S. NUCLEAR REGULATORY COMMISSION
Document Control Desk
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Washington, DC 20555

Gentlemen:

DOCKETS 50-266 AND 50-301
MAIN CONTROL BOARD WIRING SEPARATION
OPERABILITY DETERMINATION
AND RESTORATION PLAN
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

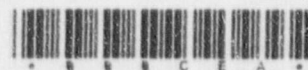
As reported in LERs 301/91-001-01 and 266/96-007-00, the original design and wiring practices used inside the PBNP main control boards did not include rigorous application of physical separation criteria for wires associated with redundant trains of safety-related equipment and independent instrument channels. This physical separation is one of the important design features that ensure a single fault within one train or channel circuit does not cause damage to the other train or channel circuit and thereby disable a safety function.

Prior to the issuance of the above referenced LERs, we had not considered physical separation of redundant wiring in the main control boards as part of our design or licensing basis. This judgment was based on the controlled environment provided for these circuits and the overcurrent protection which provided adequate assurance that a single fault would not affect more than one safety-related train or channel. As described in the LER, we determined that such physical separation was, in fact, part of the design basis for PBNP and that there existed a significant number of situations where the required separation did not exist. As a result of this discovery, several actions were taken:

- (1) Operability of the main control boards was evaluated with respect to a lack of physical separation. The control boards were determined to be operable based on the limited potential for fault initiation in the controlled environment and the existence of overcurrent protection for all circuits in the main control board. This operability determination has recently been revised and is enclosed for your review.
- (2) As described in the enclosed operability determination, all circuits in the main control boards were reviewed to ensure adequate overcurrent protection. For those circuits with inadequate protection, corrective action was taken to provide the appropriate protection. With one exception noted in the operability determination, these actions have been completed.

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- (3) A long-term plan to provide physical separation inside the main control boards was created. That plan included a pilot program to rewire a number of circuits during the Fall 1996 Unit 2 outage (U2R22).

Recently, we have accepted the position that physical separation criteria should be considered a licensing basis requirement for wiring inside the main control boards. Therefore, we have revised our operability determination and developed a more ambitious plan to restore the subject wiring to full compliance.

On March 10, 1997, we participated in a telephone conference with NRC Staff. The purpose of this conference was to inform the staff of the status of our investigations and corrective actions related to identified instances of lack of redundant train wire separation in the main control boards. During the conference, we described the basis for our operability determination and our plan to restore the required separation for the non-conforming circuits. During the conference, we committed to docket this information.

The plan for the completion of wire separation in the main control boards (1C03, 1C04, 2C03, 2C04, C01, and C02) is based on performing all necessary rewiring during the next refueling outage for each unit. As-built walkdowns of control panel C02 will be completed in time to provide wire routing information so wire rerouting within panel C02 can occur during the next refueling outage for each unit. We plan to correct all situations of inadequate physical separation for the Unit 1 main control board wiring during the next Unit 1 refueling outage (U1R24). This plan includes correcting all situations in common panels C01 and C02 for Unit 1 and common circuits. We plan to correct all situations of inadequate physical separation for the Unit 2 main control board wiring including Unit 2 related wiring in common panels C01 and C02 during the next Unit 2 refueling outage (U2R23).

As discussed during our March 10, 1997 telephone conference, we have established that Unit 1 and Unit 2 are operable with the identified nonconforming condition associated with the main control board wiring physical separation. Our operability determination demonstrates that redundant safety-related circuits would not be degraded by a single fault. The qualification of wire terminations, wire insulation, and overcurrent protection provide the appropriate level of protection for those instances where separation criteria are not met. In addition, the protection provided by overcurrent devices and insulation is supplemented by the controlled environment of the main control boards, which minimizes the potential for fault initiation. Our corrective action plan and schedule were developed commensurate with the condition's importance to safety. Based on the existing protection provided for the circuits, and the aggressive schedule for effecting repairs, no additional compensatory measures have been deemed necessary. A copy of our operability determination is enclosed for your review.

We have considered the guidance in Generic Letter 91-18 and have concluded that main control board wiring physical separation is not a Unit 1 or Unit 2 restart issue. We have also reviewed

guidance in Generic Letter 91-18 regarding the application of 10 CFR 50.59 and have reviewed 10 CFR 50.59 implementation guidance in SECY-97-035. We have concluded that a 10 CFR 50.59 evaluation is not required for this nonconforming condition. Pursuant to the requirements of 10 CFR 50, this condition will be appropriately corrected or resolved in accordance with our Appendix B corrective action program.

Please contact us if you have any questions.

Sincerely,

A handwritten signature in dark ink, appearing to read "Douglas F. Johnson", is written over a horizontal line.

Douglas F. Johnson
Manager -
Regulatory Services and Licensing

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Enclosure

cc: NRC Resident Inspector
NRC Regional Administrator
PSCW