



**Consumers  
Power**

**POWERING  
MICHIGAN'S PROGRESS**

Palisades Nuclear Plant: 27780 Blue Star Memorial Highway, Covert, MI 49043

**G B Slade**  
*General Manager*

March 12, 1991

Nuclear Regulatory Commission  
Document Control Desk  
Washington, DC 20555

**DOCKET 50-255 - LICENSE DPR-20 - PALISADES PLANT -  
CIRCUIT AND RACEWAY SCHEDULE ENHANCEMENT PROJECT - ADDITIONAL INFORMATION**

A previous Consumers Power Company submittal dated September 4, 1990 provided information concerning the objectives and schedule for the Circuit and Raceway Schedule (CRS) Enhancement Project. This letter is an update of the previous submittal. In summary, activities are progressing as planned and, although several separation discrepancies have been identified, no safety significant conditions which would involve loss of electrical or protective system independence have been identified.

Background

NRC Inspection Report 90010 reviewed efforts initiated by Consumers Power Company to resolve previously identified issues associated with the physical routing and separation of electrical cable and raceway at Palisades. These issues were identified by Consumers Power Company as a result of our Configuration Control Project (CCP) design basis reconstitution activities and involved several examples of installed electrical cable and raceway that did not conform to the Final Safety Analysis Report (FSAR) criteria for routing channelized electrical circuits. At the time of inspection, we had already initiated a project to enhance the completeness and accuracy of design information contained in our electrical circuit and raceway (CRS) databases under the CRS Enhancement Program and had instituted an effort to formalize our electrical cable and raceway separation requirements.

The CRS Enhancement Program has been incorporated into the defined CCP work scope under CCP Task 2.2B, and is encompassed under the overall Electrical Cable and Raceway Separation Issue Resolution Plan that CCP has undertaken to resolve electrical separation issues. The CRS Enhancement Program is an example of expanded CCP work scope that evolved from issues that were identified by the CCP. In addition to the CCP responsibilities assigned under the Electrical Cable and Raceway Separation Issue Resolution Plan, CCP has also been tasked with other responsibilities related to electrical design issues, identification of electrical system design bases, correction of panel wiring diagrams, and update of tools used during design of electrical modifications.

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Our September 4, 1990 letter provided a discussion of the specific objectives and the planned implementation schedule for these activities.

### Corrective Measures

The status of the seven corrective measures identified in our September 4, 1990 letter is as follows:

1. The design and licensing basis for channelization and physical separation of electrical circuits has been reconstituted and consolidated in a single document, the "Electrical Separation Design Criteria and Licensing Basis."

Status: Issued as Electrical Engineering Separation Criteria, Practices and Exceptions ( Procedure No EGAD-PROJ-03) in December 1990.

2. Guidance has been developed in Administrative Procedure 9.35, "Circuit and Raceway Schedule," for control and entry of design information in the Cable and Raceway Schedule database.

Status: Issued

3. Cable routing requirements and practices have been incorporated into the following Engineering Manual Guidelines: EM-22-04, "Channel Separation - Cable Routing Instructions;" and EM-22-05, "Cable Sizing Guideline - Ampacity."

Status: Issued - EM-22-05 enhanced and reissued as Procedure No. EGAD-PROJ-08

4. Cable routing requirements and practices are in the process of being incorporated into the following Engineering Manual Guidelines: EM-22-03, "Fire Protection - Cable Route Verification;" and EM-22-07, "Cable Separation Guidance." Completion of this action is currently expected prior to December 31, 1990.

Status: Issued

5. A physical review of installed cable raceways will be performed in order to identify installations that do not meet design requirements. Completion of this action is currently expected prior to September 30, 1991.

Status: Activity planned for June/July 1991.

6. Design information relative to the channelization and physical routing of electrical circuits and raceways will be enhanced. This action will include validation and completion of information contained in the CRS database and is currently expected to be completed prior to September 30, 1992.

Status: Ongoing

#### A. Circuit and Raceway Channelization

Assignment of safety channel to circuits and raceways has been completed based on reviews of schematic and location

drawings. Of the 12,962 circuits in the CRS, 12,749 have been assigned channel data. Similarly, of the 9,620 raceways in the CRS, 9,404 have been assigned channel data. The remaining circuits and raceway are being evaluated to confirm their existence and to obtain the additional information necessary to complete channel assignments.

B. Physical Verification of Information

Physical verification during 1991 of missing or questionable information in the CRS is planned. This verified information is necessary to determine cable ampacity and to complete the channel assignments.

7. Electrical cable separation and channelization anomalies identified during our review of physical raceway installations will be evaluated and appropriately dispositioned. The schedule for resolution of these items is dependent on the number and type of items identified during the review.

Status: Ongoing. Evaluation of the few channelized circuits which appear to be misrouted has begun. To date, all circuits evaluated have been acceptable for use without modification of the cable routing.

Conclusion

The activities identified in the Electrical Cable and Raceway Separation Issue Resolution Plan are progressing as planned.

The channelization and separation discrepancies which have been identified and evaluated at this time have not resulted in identification of a safety-significant condition involving a loss of electrical or protection system independence. Palisades has taken an aggressive position in its response to the identified electrical cable routing and channelization discrepancies through the Electrical Cable and Raceway Separation Issue Resolution Plan. This plan addresses the casual factors for these conditions and proposes actions to prevent reoccurrence. The key provisions of this plan include: 1) publication of clear procedural guidance relative to cable routing design criteria, 2) availability of reliable circuit design information, 3) field review of installed raceways, and 4) evaluation and resolution of identified cable routing and channelization discrepancies. As we have done in the past, we will evaluate potential cable routing and separation discrepancies for safety significance and operability impact when they are identified. Compensatory and corrective measures will be pursued, as necessary.



Gerald B Slade  
General Manager

CC Administrator, Region III, USNRC  
NRC Resident Inspector - Palisades