



**Consumers  
Power  
Company**

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September 9, 1975

Mr Robert A. Purple  
Division of Reactor Licensing  
US Nuclear Regulatory Commission  
Washington, DC 20555

DOCKET 50-255, LICENSE DPR-20 -  
PALISADES PLANT, AO-75-19

Attached is Abnormal Occurrence (AO) Report No 75-19 covering dropped shutdown rod No 11. This occurrence appears to be similar to AO-75-18 and an investigation into the cause of these failures has begun.

David A. Bixel (Signed)

David A. Bixel  
Assistant Nuclear Licensing Administrator

CC: JGKepler, USNRC  
File

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ABNORMAL OCCURRENCE REPORT  
Palisades Plant

1. Report No: AO-75-19.
2. a. Report Date: Sept 9, 1975.  
b. Occurrence Date: August 30, 1975.
3. Facility: Palisades Plant, Covert, MI.
4. Identification of Occurrence: Control Rod No 11 dropped into the core.

This incident was identified as an abnormal occurrence by Technical Specifications 3.10.6(c). The shutdown rods shall not be inserted below their exercise limit until all regulating rods are inserted.

5. Conditions Prior to Occurrence: The plant was operating at the steady state power level of 80%.
6. Description of Occurrence: At 0811 hours on August 30, 1975, Control Rod No 11 dropped into the core. Turbine runback reduced plant power to 70%. Plant power was further reduced to 60%.
7. Designation of Apparent Cause of Occurrence: The apparent cause of the incident was a shorted clutch coil.
8. Analysis of Occurrence: Control Rod No 11 was classified inoperable under Section 3.10.4(b) of the plant Technical Specifications. Plant operation can continue with one inoperable rod.

Core flux tilts were calculated to be 7% to 8% which is within the limits of Technical Specification Section 3.10.3. Reactivity of the dropped rod was less than 0.2%. (Technical Specifications limit on potential ejected rod worth is 1%.)

9. Corrective Action: The immediate corrective action was to replace the clutch. While the dropping of a control rod is an anticipated event provided for within the plant Technical Specifications (and generally does not represent a safety problem), we recognize that a generic problem may exist with the control rod drive mechanism (CRDM) clutches. In an effort to resolve this problem, we have begun an investigation of the clutch failures that have recently occurred and hope to determine the mode and/or cause of the failures. Clutch coil operating conditions are being checked as a part of this investigation.
10. Failure Data:
  - a. CRDM No 11 manufacturer is Combustion Engineering, Inc and the piece is J-2966-163-001.

The dual clutch assembly manufacturer is Combustion Engineering, Inc and the piece number is CND-SE-3998-1.

- b. This mode of failure on CRDM clutches has occurred in the past at the Palisades Plant. See AO-73-9 transmitted by letter dated August 20, 1973 and AO-75-18 transmitted by letter dated August 28, 1974.