Consumers Power Company

General Offices: 212 West Michigan Avenue, Jackson, Michigan 49201 • Area Code 517 788-0550

April 23, 1975

Division of Reactor Licensing
US Nuclear Regulatory Commission
Washington, DC 20555

Re: Docket 50-255
License DPR-20
Palisades Plant
AO-10-75

Gentlemen:

Attached is an abnormal occurrence report (AO-10-75) covering the "failure-to-update" of in-core readings on the Primary Data Logger.

Yours very truly,

Ralph B. Sewell (Signed)

WGF/mel

Ralph B. Sewell
Nuclear Licensing Administrator

CC: JGKeppler, USNRC

50-255 inquiry

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ABNORMAL OCCURRENCE REPORT
Palisades Plant

1. Report Number: AO-10-75, Docket 50-255.

2. a. Report Date: April 23, 1975.

   b. Occurrence Date: April 13, 1975.

3. Facility: Palisades Plant, Covert, Michigan.

4. Identification of Occurrence: Failure of in-core readings on Primary Data Logger to update.

5. Conditions Prior to Occurrence: Plant operating at 80% of full power.

6. Description of Occurrence: While preparing an INCA run, it was noted that the in-core readings used to substitute inputs for in-core 45 were the same at 80% as at 70%. Upon review of past Primary Data Logger printouts, it was found that the in-core printout had not updated since 1500 hours on 4-9-75. Upon discovery of the above, the Primary Data Logger was put in step; reset; and started. In-cores updated properly then.

7. Designation of Apparent Cause of Occurrence: A deficiency in the software. The program is being analyzed to find this deficiency and correct program.

8. Analysis of Occurrence: This is an abnormal occurrence as defined by Section 3.11 of Technical Specifications since readout of in-cores was not operable and the plant was at 80% full power. Investigation revealed that the analog scan routine for in-core detectors was updating. However, the process variable table section for in-cores was not updated. The scan check program was satisfactory. However, the process variable update section was checking the process variable update for only "special inputs" and not for neutron detectors (in-cores). A modification to the software is necessary to include checking process variable update for neutron detectors.

   Several in-core alarms were initiated during the fourth day period when the process variable table (for in-cores only) was not updated. This is only possible if the scan is functioning since the in-core alarm check routines are initiated after the in-core is read (scanned) and before it is stored in the process variable table for updating. It is after the in-core is "alarmed checked" and prior to its storage in the process variable table where the occurrence existed. (Further investigation is required under Item 1 of the corrective action.)

8. Analysis of Occurrence: (Contd)

Appendix B of the Technical Specifications specifies linear heat rate limits and power distribution monitoring. These specifications are more stringent than those contained in Appendix A. No violations of these linear heat rate limits were experienced. The calculated linear heat rate limit is 96% full power and corrective action, if no power distribution is obtained in 24 hours, is to reduce power to 85% of the limit which is 81%. The plant operated at a maximum of 80% full power during the "failure-to-update" period.

No power distributions were affected since the last one taken was prior to failure to update, and the problem was subsequently discovered upon taking data for another power distribution. Since the primary function of the Primary Data Logger is to provide alarm indications (also for primary rod position indication), this function was not compromised for any inputs, including neutron detectors (ie, in-cores). However, the literal statement of Technical Specifications 3.11 states that "readout" for in-cores must be available and due to a lack of table updating this was not available. Hence, this is considered an abnormal occurrence only in the sense of the "wording" of Section 3.11 and not in the sense that functions described in the bases of such were unavailable.

Based on the foregoing, we have concluded that there was no potential for an increase in risk to the public health and safety.

9. Corrective Action: The following have been or will be accomplished.

   a. In-core scan update programs will be corrected and tested.

   b. The "Sequence Error Buzzer" to Primary Data Logger alarm light will be wired in.

   c. The master checklist will be modified to ensure that the "buzzer" is turned on whenever the plant is at or above 50% full power.

   d. The operating procedures will be modified so that the control room operator will sign the Primary Data Logger log hourly if the buzzer is disabled when above 50% full power.

10. Failure Data: On August 6, 1973 (Reference AO-8-73 dated 8-16-73), there was a similar occurrence when the table failed to update.