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

November 15, 1974

Mr. James G. Keppler, Director
Region III, Directorate
of Regulatory Operations
US Atomic Energy Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Re: Docket 50-255
License DPR-20
Palisades Plant
UE-2-74

Dear Mr. Keppler:

Attached is an Unusual Event Report (UE-2-74) covering a problem with the start-up transformer differential current protection relays. This unusual event is similar to the one reported on May 26, 1972. A preliminary investigation of the present problem has indicated that our recent revision of the differential relay arrangement has not completely resolved the original problem. The investigation is continuing and we are confident that an adequate revision to the differential relaying system can be made and spurious operation eliminated.

Adequate protection of the start-up transformer is being provided by the overcurrent protective device.

Yours very truly,

Ralph B. Sewell

Ralph B. Sewell
Nuclear Licensing Administrator

DAB/map

CC: Directorate
of Licensing
USAEC
Washington, DC

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UNUSUAL EVENT REPORT
Palisades Plant

1. Unusual Event: UE-2-74

2A. Report Date: November 15, 1974

2B. Event Date: October 17, 1974

3. Facility: Palisades Plant, Covert, Michigan

4. Identification of Occurrence: Start-Up Transformer Trip During SIS Test

5. Condition Prior to Occurrence: The plant was at hot standby.

6. Description of Event: The quarterly safety injection system (SIS) test was in progress with the left channel part of the test having been successfully completed. When the right channel test was initiated, off-site power was lost. The diesel generators started and automatically closed to provide plant power. Off-site power was restored in about one half hour.

7. Designation of Apparent Cause of Occurrence: The installation of the current transformers associated with the differential relays appears to be the cause of the problem. This is complicated because of incompatability problems associated with 345 kV to 2.4 kV step-down situation.

8. Analysis of Occurrence: Operation of the SIS would have been dependent on the plant emergency diesel generators. The SIS is designed to operate off of the diesel generators and would have performed properly.

9. Corrective Action: The three-phase differential relays have been removed from service pending an investigation by our Relay Protection Department. Overcurrent protection devices remain installed and provide adequate transformer protection. Even so, because of the added transformer protection available utilizing a differential relay system, we plan to reinstall the differential relay system when a suitable design can be achieved.

   The Safety Audit and Review Board will conduct a review of the differential relay system and any appropriate testing program prior to plant operation (at power) with differential relays in service on the start-up transformer.

   The SIS test has been successfully completed with the differential relays out of service.

10. Failure Data: This same failure occurred in May 1972 under similar conditions. At that time, the differential relay system was removed from service and was not reinstalled until after it was modified in January 1974.