

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/85-005(DRP)

Docket No. 50-255

License No. DPR-20

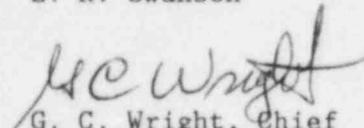
Licensee: Consumers Power Company  
212 West Michigan Avenue  
Jackson, MI 49201

Facility Name: Palisades Nuclear Generating Plant

Inspection At: Palisades Site, Covert, MI

Inspection Conducted: February 5 through March 4, 1985

Inspector: E. R. Swanson

Approved By:   
G. C. Wright, Chief  
Reactor Projects Section 2A

3/20/85  
Date

Inspection Summary

Inspection on February 5 through March 4, 1985 (Inspection Report  
No. 50-255/85-05(DRP))

Areas Inspected: Routine, unannounced inspection by resident inspector of operational safety; maintenance; surveillance; engineered safety features walkdown; reportable events; and independent inspection areas. The inspection involved a total of 81 inspector-hours onsite by one NRC inspector including 23 inspector-hours onsite during off-shifts.

Results: Of the six areas inspected no items of noncompliance or deviations were found in five areas. One item of noncompliance was identified in the area of surveillance (Safety Injection Tanks sampled late - Paragraph 4).

## DETAILS

### 1. Persons Contacted

#### Consumers Power Company (CPCo)

- \*J. F. Firlit, General Manager
- \*J. G. Lewis, Plant Technical Director
- R. D. Orosz, Engineering and Maintenance Manager
- C. E. Axtell, Health Physics Superintendent
- \*R. M. Rice, Plant Operations Manager
- C. S. Kozup, Plant Operations Superintendent
- H. M. Esch, Plant Administrative Manager
- W. M. Hodge, Property Protection Supervisor
- D. W. Rogers, Technical Engineer
- \*D. L. Fitzgibbon, Licensing Engineer

\*Denotes those present at the Management Interview.

Numerous other members of the plant Operations/Maintenance, Technical, and Chemistry Health Physics staffs, and several members of the contract Security forces, were also contacted briefly.

### 2. Operational Safety

- a. The inspector observed control room activities, discussed these activities with plant operators, and reviewed various logs and other operations records throughout the inspection. Control room indicators and alarms, log sheets, turnover sheets, and equipment status boards were routinely checked against operating requirements. Pump and valve controls were verified proper for applicable plant conditions. On several occasions, the inspector observed shift turnover activities and shift briefing meetings.

Tours were conducted in the turbine and auxiliary buildings, and central alarm station to observe work activities and testing in progress and to observe plant equipment conditions, cleanliness, fire safety, health physics and security measures, and adherence to procedural and regulatory requirements.

- b. On February 8, 1985 the licensee reduced reactor power to around 20% to permit the addition of oil to the "D" Primary Coolant Pump. On the morning of February 9, the turbine started losing vacuum and the operators ran the load and reactor power below 15% to prevent a reactor trip. The turbine tripped on reverse power. The cause of the vacuum leak was a faulty check valve in the auxiliary steam system. Oil was added to the Primary Coolant pump, the check valve was repaired, and the unit returned to power.

- c. Following completion of test QO-1, "Safety Injection System Test", on February 12, 1985 the inspector found the status light "PRESSURIZER HEATERS BLOCKING RELAYS ACTUATED" still illuminated. Licensed Operators and the Shift Engineer were asked if this meant that the Safety Injection function of de-energizing the pressurizer heaters was disabled and their conclusion was that it was not a problem. During a tour of the control room on February 18, 1985, the inspector noted that the status light was still lighted with a tag affixed noting that a maintenance order had been written to correct the problem. Shift personnel were again queried as to the meaning of the indicator. Further investigation by the licensee revealed that the "trip feature" was defeated by a test relay being energized. It was also found that the relay which opens MOV-2140 in the boric acid flow path to the charging pumps suction was also blocked by the energized test relay. This event was reported as a 4-hour non-emergency report at 1430 on the 18th. Later on the 18th, during trouble shooting, the condition cleared itself. The testing which initially actuated the test relay was repeated on February 19, 1985, but the condition did not recur.

The pressurizer heater trip feature was a result of the environmental equipment qualification review. The resultant modification prevented overheating of containment penetrations, and subsequent loss of containment integrity, which could be caused by submergence of the pressurizer heater transformers inside containment. The licensee stated that this trip function is redundant to the breaker overload trip function.

The boric acid flow path valve not opening would have prevented the contents of the concentrated boric acid tanks from being pumped to the suction of the charging pumps. The alternate gravity feed path was operable, and the Safety Injection and Refueling Water Tank could also be aligned to provide a borated water source for the charging pumps as required by Technical Specifications.

A number of concerns are raised by this event which the licensee is addressing in their Event Report corrective action system. Among the more significant:

- The same situation occurred previously and may be due to a generic relay problem (November 15, 1984).
- Operators were not aware that the status light was alarming a real condition. They were led to believe it was a faulty indication.
- Procedure QO-01 did not restore the SI system to a fully operable condition.
- Compliance with Technical Specifications was demonstrated only by post event record review (tracking system is not real time).

A Licensee Event Report (LER) will be submitted and closeout of the event will be followed up under the LER.

3. Maintenance

The inspector reviewed and/or observed selected work activities and verified appropriate procedures were in effect controlling removal from and return to service, hold points, verification testing, fire prevention/protection, and cleanliness. The troubleshooting of NI-06 under Maintenance Order MO-85-NMS-0005 was observed, as was part of the work, and Jumper, Link and Bypass (JLB) controls utilized in replacing the limit switches on valves CV-3018 and 3036. Concerns relative to JLB controls are addressed separately in IE Report 50-255/85-003.

No items of noncompliance or deviations were identified.

4. Surveillance

The inspector reviewed surveillance activities to ascertain compliance with scheduling requirements and to verify compliance with requirements relating to procedures, removal from and return to service, personnel qualifications, and documentation. The following test activities were inspected:

- a. Cable Tray Temperature Monitoring - Test T-175
- b. Daily Control Room Surveillance - Test D/WO-1
- c. Personnel Air Lock Test - Test 50-4B
- d. HEPA and Charcoal Filter Testing (VF-66)-RO-85C/2FQ,3FQ
- e. Safety Injection System - Test QO-01 (Review only)
- f. Pressurizer Low Pressure SIS Initiation - Test MI-04

On February 13, 1985 the licensee reported that the Personnel Air Lock had failed the semi-annual between-the-doors test when leakage exceeded .6 La. Investigation found the equalizing valve was not clamped correctly as specified by Test SO-4a, and was leaking air into containment. After reclamping the valve the test was successfully completed.

During completed surveillance reviews on February 19, 1985, the licensee identified that boron sampling for three of the four Safety Injection Tanks, although successfully completed at 2206 on February 18, 1985, had not been performed within the required frequency of Technical Specification 4.0.2a, including the grace period. This violation is set forth in the appendix (255/85-005-01). The test exceeded the period by approximately seven hours even though the responsible individual had been notified verbally and in writing of the due date for the surveillance. The surveillance was not normally due this early in the month, but had been shifted due to the time of the plant startup. Corrective actions in response to a similarly late performance event in September 1984 are still outstanding and are documented in Licensee Event Report 84-18.

One item of noncompliance and no deviations were identified.

5. Engineered Safety Features Walkdown

The inspector performed a walkdown of the Auxiliary Feedwater System (AFW) and verified: that each valve in the flowpath was in its required position and operable, that power was aligned for components that activate on an initiation signal, that essential instrumentation was operable, and that no conditions existed which would adversely affect system operation. The following exceptions were noted using the licensee's checklist: several pipe caps missing from drain/vent valves, valve handwheel missing from a drain valve, valve labels missing, and the backup nitrogen supply to air operated valves in the AFW pump room appeared inoperable. The apparently inoperable nitrogen backup supply is considered an unresolved item since it potentially affects the operability of the air operated valves in the AFW room as described in FSAR articles 7.4.14 and 7.4.3.2 (255/85-05-02).

No items of noncompliance or deviations were identified.

6. Licensee Event Reports

Through direct observations, discussions with licensee personnel, and review of records, the following reportable events were examined to determine that reportability requirements were met, immediate corrective action were accomplished as appropriate, and corrective action to prevent recurrence has been accomplished per Technical Specification.

(Closed) LER 83-79 Revision 1: Primary Coolant Pumps low flow trips set incorrectly. The licensee submitted a corrected report to amend a statement made as to the time of discovery.

No items of noncompliance or deviations were identified.

7. Independent Inspection Activities

- a. The inspector made observations concerning radiological safety practices in the radiation controlled areas including: verification of proper posting; accuracy and currentness of area status sheets; verification of selected Radiation Work Permit (RWP) compliance; and implementation of proper personnel survey (frisking) and contamination control (step-off-pad) practices. Health Physics logs and dose records were routinely reviewed.
- b. The inspector observed physical security activities at various access control points, including proper personnel identification and search; and toured security barriers to verify maintenance of integrity. Access control activities for vehicles and packages were occasionally observed. Activities in the Central Alarm Station were observed.
- c. An ongoing review of all licensee corrective action program items at the Event Report level was performed.

- d. In followup of IE Report 84-27 paragraph 6.e, the operability of the Saturation Margin Monitor without its alarm function was discussed at length. Operability is required by Technical Specification 3.17 but the licensee now defines operability differently than it was described in information submitted to the NRC and as described in their updated FSAR. This is an Unresolved Item (255/85-05-03).

8. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during the inspection are discussed in Paragraphs 5 and 9.

9. Management Interview

A management interview (attended as indicated in Paragraph 1) was conducted on March 11, 1985, following the inspection. The following were discussed:

- a. The inspector discussed the scope and findings of the inspection as documented in these Details.
- b. The item of noncompliance in Paragraph 4 relating to the SI Tanks Surveillance was discussed.
- c. Two unresolved items contained in Paragraphs 5 and 9 above were discussed.
- d. The inspector also discussed the likely informational content of the inspection report with regard to documents or processes reviewed by the inspector during the inspection. The licensee did not identify any such documents/processes as proprietary.