

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/85009(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: April 9 through May 6, 1985

Inspectors: E. R. Swanson

R. L. Higgins

C. D. Anderson

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

*5/31/85*  
Date

Inspection Summary

Inspection on April 9 through May 6, 1985 (Report No. 50-255/85009(DRP))

Areas Inspected: Routine, unannounced inspection by resident inspector of previous inspection findings; allegations; operational safety; maintenance; surveillance; engineered safety features walkdown; and independent inspection areas. The inspection involved a total of 171 inspector-hours onsite by three NRC inspectors including 15 inspector-hours on site during off-shifts, and 12.5 inspector-hours in the regional office by one of the inspectors.

Results: Of the seven areas inspected no violation or deviations were found in six areas. One violation was identified in the area of previous inspection findings (10 CFR 50.59 violation - Paragraph 2).

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## 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
- \*D. W. Rogers, Technical Engineer
- #\*D. L. Fitzgibbon, Licensing Engineer
- \*R. E. McCaleb, Quality Assurance Director
- M. Evans, Training Secretary
- D. Lamp, Training Instructor
- # W. Merwin, Training Supervisor
- # D. Smith, Human Resources Manager
- D. Willemin, Training Instructor

#### Former Consumers Power Company Personnel

P. Buttonow, Former Training Instructor

\*Denotes those present at the Management Interview on May 9, 1985.

#Denotes those present at the exit meeting on May 6, 1985.

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. Action on Previous Inspection Findings

(Closed) Unresolved Item (255/85008-02): The East Safeguards Equipment Room air cooler was isolated during the period of March 6 to March 28, 1985 due to leakage. The NRC has concluded that the isolation of the cooler by a remotely controlled valve did not constitute a violation of Technical Specification (T.S.) 3.3. The basis for this conclusion is that the cooler would not likely be required within the first 10 minutes of an accident, procedures and a tag existed to direct operators to place the cooler in service, operators were aware of the unusual lineup and could reasonably be expected to place the cooler in service. The exact wording of T.S. 3.3 was also significant in this determination in that it did not clearly require, as does Standard Technical Specifications, the operability of "...other required auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function..." This "operability" position was clearly identified in Information Notice No. 83-56 following a similar event at Calvert Cliffs involving the same components. Although no licensee action was required

to be taken on this Information Notice, the licensee's Plant Review Committee concluded that operability of the coolers is required for operability of the safeguards pumps.

The NRC has also concluded that 10 CFR 50.59 was violated in that a change was made to a system (ESF room cooler) described in the Final Safety analysis Report without a safety evaluation and review being conducted to determine that an unreviewed safety question did not exist (when cooling water flow was temporarily operator initiated instead of being automatically initiated). The failure to perform the 10 CFR 50.59 review is also considered responsible for the inappropriate approval of temporary changes to procedures, which required operator action to initiate flow to the cooler and thereby constituted a change of intent in the procedure. The failure to perform a 10 CFR 50.59 review is a violation, as noted in the Appendix (255/85009-01).

(Open) Violation (50-255/85002-02): Housekeeping tours did not conform with requirements of plant procedures. Administrative Procedure 4.04 "Plant Housekeeping" was revised so that documentation of housekeeping tours is not required unless the problems identified cannot be resolved on the shift in which they were identified. This change is in conflict with the Nuclear Operations Department Standard P-13 which requires a program to verify housekeeping requirements and to document these verifications (Section 5.1.6). The licensee is pursuing resolution of this discrepancy through revision of Standard P-13.

One violation and no deviations were identified.

3. Auxiliary Operator Quiz Cheating Allegation (RIII-84-A-0190)

On December 21, 1984, an individual wrote a letter to the Region III office regarding an alleged incident of cheating on a weekly auxiliary operator (non-licensed personnel) quiz on January 28, 1983. On May 6, 1985, a Region III Inspector conducted a special investigation at the site to determine if the allegation was true, and, if true, how the incident affected the pass/fail determination of the students and what procedures have been implemented to prevent recurrence of a similar incident.

The alleged stated that a drawing of the component cooling system was left on the board during a portion of a weekly auxiliary operator quiz, thereby compromising a question on the quiz which required the examinee to draw the component cooling water system. Discussion with members of the Palisades Plant training department could not establish conclusively whether this event actually took place, since it allegedly occurred more than two years ago.

Five individuals, including the alleged, took the quiz. The alleged and one of the other individuals are no longer employed at the Palisades plant. The alleged failed the quiz as it was originally graded, and would also have failed the quiz if the suspect question was deleted. The quizzes for the three individuals still employed at the Palisades

plant were checked to ascertain whether deleting the suspect question would have changed the pass/fail determination for any of them. All three would have passed the quiz whether or not the question was deleted.

Training Department Procedure 4, issued on September 10, 1984, provided specific guidance for the proctors of training department exams and quizzes. However, it did not specify the actions which the proctor should take prior to administration of the exam to ensure that no training materials were left in the testing room which could compromise portions of the exam. The Training Supervisor committed to revise the procedure to include specific guidance for the proctor prior to the administration of examinations.

Conclusion: The allegation as it pertained to cheating on a weekly Auxiliary Operator quiz could not be substantiated although it was noted that procedural controls to preclude such an occurrence were not present. Notwithstanding, a review of test scores for those individuals present at the quiz showed that pass/fail determinations would not have been affected even if the allegation had been substantiated. As a result of concerns raised by the allegation, the licensee is revising procedures to address additional actions to be taken by the proctor prior to administration of examinations. These actions are designed to preclude materials being left in the testing room which could compromise test scores. These procedures will be reviewed during a subsequent inspection; the proposed changes when completed will be adequate to preclude the type of event dealt with herein. The allegation is considered closed.

The inspector met with licensee representatives (denoted in Paragraph 1) on May 6, 1985, and summarized the scope and findings of the inspection activities.

No violations or deviations were identified.

#### 4. Operational Safety

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 security alarm stations to observe work activities and testing in progress and to observe plant equipment condition, cleanliness, fire safety, health physics and security measures, and adherence to procedural and regulatory requirements.

No violations or deviations were identified.



## 5. Maintenance

The inspector reviewed and/or observed the following 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.

MO 85-ESS-0086      Repair T-102 Level indicator/transmitter

MO-84-FPS-0120 Installation of Panel C-150A

MO-84-SPS-0168(1) Addition of Z-phase resistor to Diesel Generator  
1-2 output breaker

During the repair of T-102 (Spray Additive Tank) level transmitter LT-0437A it was noted that the Instrument and Controls (I&C) technicians performing the work were not on a Radiation Work Permit while in a Radiological Controlled Area (RCA). Further investigation revealed:

- a. The technicians were not aware that a RWP was required for work in the particular work area and stated that they had not previously used one.
- b. The procedure (in hand) MSI-I-3, precaution 4.1.1 states that work in a RCA requires a RWP.
- c. The work area was properly posted as requiring a RWP and dosimeters. The workers did not have self reading dosimeters.
- d. Planning/Evaluation of the M.O. by the I and C Planner indicated that no RWP or radiological controls would be required. Later discussion indicated that he assumed the work would only involve the remote indicator, not the transmitter.

This violation of the licensee procedures for access to a RCA appeared to be a result of inadequate training and poor radiological work practices within the I and C group. This procedural violation is cited in inspection report 50-255/85010(DRSS).

No other violations or deviations were identified.

## 6. 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. Containment Isolation Valve Test - Test QO-05

The surveillance of the fire barrier in containment which had caused overheating and damage to pressurizer heater cables was concluded on April 8, 1985. The surveillance of the temperature of the restored fire barrier was conducted according to an agreement documented in a Confirmatory Action Letter (CAL) from the NRC to Consumers Power Company dated July 13, 1984. Temperature readings were taken twice per shift from November 26 to December 7, 1984; once a day from December 8, 1984 to January 7, 1985; and, once a week from January 8 to April 8, 1985. Full power temperature readings stabilized at about 108 degrees F for one RTD and 132 degrees F for the other. Neither temperature increased by more than 9 degrees F between readings. The licensee cancelled the temporary surveillance on April 30, 1985. These actions complete those agreed to under the CAL.

During observation of QO-05 it was noted that the procedure requires exercising of the valves prior to timing the stroke. The initial stroke of valve CV-1064 was 36.87 seconds compared to a required time of 25 seconds. Subsequent stroking of the valve took 5.55 seconds and was considered successful. Not taking the data on the first (as found) stroke of a valve is an unresolved item pending review by Region III specialist (255/85009-02).

No violations or deviations were identified.

#### 7. Engineered Safety Features Walkdown

The inspector performed a walkdown of the Iodine Removal System (Tanks T-102 and T-103 and associated piping) 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 inspector also verified that Technical Specification Testing required by Table 4.2.2 item 12, "Iodine Removal System" was addressed in approved procedures. During this review it was found that check valves 3402 ES and 3403 ES were tested with demineralized water header pressure of about 100 pounds instead of under a pressure differential "...no greater than that observed during the preoperational test" as specified in ASME Section XI, Article IWV-3522. Correction of the test procedure (RO-12) is an open item (255/85009-03).

No violations or deviations were identified.

## 8. 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. One instance of contaminated equipment storage in an area not designated for radioactive material storage was noted and promptly corrected by the licensee.
- 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 Secondary and Central Alarm Stations were observed.
- c. An ongoing review of all licensee corrective action program items at the Event Report level was performed.
- d. Inspection of Station Batteries

The licensee's FSAR section 8.4.2 appears to commit to comply with the testing recommended in IEEE450-1973, IEEE308-1974, NRC BTP EICSB 6 and NUREG-0212. It is not clear what commitments the licensee has made to these documents. Certain discrepancies from recommendations made in these documents and in the vendor's (C&D) manual are itemized as follows:

- o A service test is not conducted following load changes but an administrative mechanism exists for review of additional loads to be added. There does not appear to be a vehicle for updating the service test (RE-83A) for additional loads.
- o A Technical Specification change request will be submitted to allow testing on a refueling basis as opposed to the currently specified 18 month frequency. The licensee will exceed the 18-month frequency for the battery service test before the next scheduled outage.
- o Licensee procedures specify the performance of an equalizer charge only when the individual cell voltage (ICV) drops below 2.13. Additional criteria recommended include an ICV varying .04 volts from the battery average, specific gravity of a cell .010 below the battery average and average specific gravity dropped .010 from acceptance values.

- o An equalizer charge is required by licensee procedures before performance of the service test. This does not appear to meet the intent of the testing to demonstrate the "as found" condition of the battery in meeting its design requirements (IEEE 450-1980 section 5.3.6.6).
- o ICVs and specific gravity readings are compensated for temperature, but not for electrolyte level. The C & D manual states that a 1/2 inch variation in level correlates to .015 change in specific gravity.
- o There is no station procedure for addition of acid to a station battery. The licensee considers this to be required only in rare instances.
- o Operating procedures do not provide any guidance with respect to battery temperature limits.
- o Licensee procedures use a criteria for securing an equalizer charge of all ICVs within .05 volts of battery average. The vendor manual section 9.2 refers to ICVs being within .04 volts of battery average: "Under such conditions the fully charged specific gravity, corrected for level and temperature, will be close to the nameplate rating." This implies that the fully charged state of the battery requires the ICVs to be within +/- .04 volts of the average, not +/- .05 volts.
- o IEEE 450-75 considers an 85% battery capacity to warrant yearly testing and 90% to be degraded. The licensee procedures specify 80% capacity to be the acceptance criteria.
- o It is not clear whether trending of the battery performance is done adequately to determine impending end of battery life.

The above apparent discrepancies were discussed with the licensee representative on May 9, 1985. Resolution of these concerns is an open item (255/85009-04).

- e. The inspector attended portions of the quarterly Nuclear Safety Board meeting held on April 17, 1985 at the Palisades Site and verified that the quorum and topics reviewed met the Technical Specifications requirements.

No violations or deviations were identified.

#### 9. TMI Action Plan Item I.A.1.3.2

The current minimum shift crew onsite requirements are found in 10 CFR 50.54(m). The licensee has implemented this requirement in Administrative Procedure 4.01 "Shift Operations." The Emergency Preparedness section routinely reviews emergency staffing. This item is considered closed.



10. Open Items

Open Items are matters which have been discussed with the licensee, which will be reviewed further by the inspector, and which involve some action on the part of the NRC or licensee or both. Open items disclosed during the inspection are discussed in Paragraphs 7 and 8.

11. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, violations or deviations. An unresolved item disclosed during this inspection is discussed in Paragraph 6.

12. Management Interview

A management interview (attended as indicated in Paragraph 1) was conducted on May 9, 1985, following the inspection. The scope and findings of the inspection were discussed and the licensee acknowledged the violation of 10 CFR 50.59 discussed in Paragraph 2.

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.