

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

REGION III

Report No. 50-255/80-06

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 1 thru 30, and May 1 thru 2, 1980

Inspectors: *R. L. Spensard*
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Reactor Projects Section 3-1

Inspection Summary

Inspection from April 1 thru May 2, 1980 (Report No. 50-255/80-06)

Areas Inspected: Routine resident inspection program activities including activities during long-term shutdown; cleanliness; preparations for startup; and action on previously identified items. Special inspections of licensee activities relating to the NRC Order Modifying License DPR-20 dated November 9, 1979 and activities relating to coping with small-break loss of coolant accidents. The inspections involved 184 onsite inspection hours by four NRC inspectors.

Results: No items of noncompliance or deviations were identified in any of the areas inspected.

DETAILS

1. Persons Contacted

- *R. B. DeWitt, Vice President, Nuclear Operations
- ** *J. G. Lewis, General Manager, Palisades
- *F. W. Buckman, Director, Nuclear Activities Department
- ** *H. Keiser, Operations and Maintenance Superintendent
- ** *H. Palmer, Technical Superintendent
- ** *G. Petitjean, Technical Engineer
- *J. Schepers, Action Team Supervisor
- **W. Skibitsky, Operations Superintendent
- **R. McCaleb, Quality Assurance Superintendent
- **G. Gilbody, Quality Assurance Engineer
- **J. Breson, General Engineer
- R. Muzzi, Graduate Engineer
- E. Wong, General Engineer
- C. Smith, Shift Supervisor
- W. Thompson, Shift Supervisor
- D. Kaupa, Shift Supervisor
- J. Richter, Control Operator
- R. Nelson, Outage Coordinator

Several other members of the plant operations, technical, and chemistry/health physics staffs were also contacted.

*Present at management meeting on April 22, 1980.

**Present at management meeting on May 2, 1980.

2. Activities During Long Term Shutdown

The inspectors reviewed selected licensee activities and records to ascertain compliance to applicable requirements.

- a. Control Room Logbook
- b. Shift Supervisor's Logbook
- c. Operations Daily/Weekly Logsheets
- d. Daily Orders Logbook

Several tours of selected accessible plant areas were conducted to assess equipment and plant conditions, radiological controls, security, and general safety.

One item considered reportable under 10 CFR 50.72 was witnessed (unexpected brief loss of service water April 1, 1980) and observed to be quickly corrected and properly reported.

No items of noncompliance or deviations were identified.

3. Preparations for Startup

Various licensee activities in preparation of plant systems for startup were witnessed or reviewed.

- a. Equipment Outage Requests (EOR's): licensee processing of about a dozen EOR's for return-to-service of safety-related systems or components was reviewed to ascertain adherence to plant Administrative Procedures.
- b. System Testing: licensee personnel were observed conducting the following:
 1. Procedure RO-12, Containment High-Pressure Spray System Tests. This test as observed April 24, 1980, was not successful in that hydrazine outlet valves did not time open in one minute as required. Further, the containment spray valves were subsequently modified to provide a faster opening time. The test was subsequently performed successfully.
 2. Local leak-rate testing of 48" containment ventilation supply and exhaust blank flanges. Successful testing was observed on both the supply and exhaust systems on April 15, 1980.
- c. Checklists: licensee personnel were observed conducting portions of safety-related checklists.
 1. CL 22.1 "Emergency Diesel Generators" (1-1 Diesel)
 2. CL 16 "Component Cooling Water" (inside containment)

Discussions with the personnel performing the checklists indicated they are complete, accurate, and organized to prevent confusion. Minor imperfections or possible improvements identified during actual conduct of the checklists were observed to engender proper processing of temporary procedure changes as required under the Administrative Procedures.

No items of noncompliance or deviations were identified.

4. Cleanliness

Several tours of all areas of the containment building were made during this inspection to observe cleanup activities, progress and status prior to building isolation. The various apparent deficiencies and questions identified during specific cleanliness inspections on April 28 and 30 and on May 1 and 2, 1980, were provided to the licensee for action. The cleanup was still incomplete at the conclusion of the inspection and will be examined further during future inspections.

One item of interest involved discovery that the containment sump screens were almost completely coated with some unidentified material. The screens were examined by an NRC inspector while they were being cleaned, and the material appeared slimy, was rather insubstantial, and probably not capable of preventing flow to safeguards pump suction or of damaging the pumps. There was a general consensus the materials (or organisms) were deposited on the screens on one or more of the several occasions when sump water level has been high.^{1/} Some of these occurred while the plant was in power operation^{1/} while others occurred during the current shutdown. Licensee review of this matter and final verification of screen cleanliness will be addressed during a future inspection.

No items of noncompliance or deviations were identified.

5. Action on Previously Identified Items

(Closed) Noncompliance Item (IR 50-255/80-02): Failure to leak-test on restoration of primary containment boundary. The containment pressure switch manifolds, specifically cited in the noncompliance item, have been modified such that the primary containment boundary is now formed by dual manual isolation valves instead of a pipe-cap. The modified system has been hydrostatically tested and a local leak-rate test performed, results of which were reviewed by the inspector. The valves added to the system have been numbered, tagged, and added to appropriate checklists and procedures; specifically including CL 3.3 "Containment Integrity" and Procedure VAS-1-2, review of which originated the noncompliance. The inspector's review substantiated the information stated in the licensee's letter dated April 8, 1980.

(Closed) Containment Purging and Isolation Capability at Power (Reference NRC letters dated November 29, 1978 and September 27, 1979; licensee letters dated December 28, 1978, March 1, 1979, and November 21, 1979; and LER 79-09): The licensee has made commitments and instituted^{2/} controls to prevent purging with PCS temperature above 210°F, ^{2/} has verified systems testing does not negate isolation capability of the system being tested or of other systems, and has modified isolation systems to "latch"^{3/} and not automatically reset if an isolation occurs and then clears.^{3/}

- 1/ IE Inspection Report No. 50-255/78-22
- 2/ IE Inspection Report No. 50-255/79-09
- 3/ IE Inspection Report No. 50-255/80-05

(Closed) Unresolved item (255/79-20-1): Licensee has developed test procedures for PORV's and tested them both such that both valves are now within ASME Section XI frequency requirements for testing.

(Closed) Unresolved item (255/79-20-2): Licensee has had the accident analyses for the excessive cooldown event rerun using 34 gpm flow from the charging pump and can demonstrate an acceptable minimum DNBR of 1.40.

No items of noncompliance or deviations were identified.

6. Order Modifying License

This inspection included a review of selected items relating to the NRC Order Modifying License DPR-20 dated November 9, 1979. Considerable previous inspection effort addressed licensee activities pursuant to the Order; 4/ 5/ 6/ leaving review of three areas, as discussed below:

a. Accuracy Check of Operating and Emergency Procedures

All system operating procedures (SOP's) and emergency operating procedures (EOP's) were re-examined by licensee personnel for accuracy in the identification and service description of valves and other controls in safety-related systems. This complete re-check was verified by the inspectors. The following procedures were also independently reviewed:

SOP-5 "Containment Air Cooling and Hydrogen Recombining System"

SOP-35 "Neutron Monitoring System"

SOP-20 "High Pressure Control Air System for Air-Operated Valves"

EOP-1 "Reactor Trip"

EOP-8.1 "Loss of Coolant Accident"

EOP-8.2 "Steam Generator Tube Rupture"

4/ IE Inspection Report No. 50-255/79-22

5/ IE Inspection Report No. 50-255/79-24

6/- IE Inspection Report No. 50-255/80-02

The licensee had identified and corrected a few inaccuracies. No problems were identified during the inspector's review.

b. Specificity of Lineup Control in System Operating Procedures

The licensee had agreed to a repeat review of a cross-section of SOP's to assure valve and control position specifications were sufficiently detailed to assure proper lineup. Instead of a cross-section, the licensee reviewed all SOP's concerning this item. This complete recheck was verified by the NRC inspectors. A few cases were identified for which the licensee agreed improved specificity was desirable to positively prevent misalignment. Corrective action was taken for these cases.

c. Technical Specification Surveillance Procedures

The inspectors independently reviewed a number of revised T/S surveillance procedures to assure valves and controls in safety-related systems were properly realigned after manipulation, as follows:

QO-5 "Valve Test Procedure (Includes Containment Isolation Valves"

RO-12 "CHP Spray System Tests"

QO-8 "ESS Check Valve Operability Test"

RI-26 "Narrow Range Pressure Indication and Shutdown Cooling Line Interlock Calibration"

MO-18 "Inservice Test Procedure Component Cooling Water Pumps"

MO-22 "Inservice Test Procedure HPSI Pumps"

MO-23 "Inservice Test Procedure LPSI Pumps"

RO-28 "Control Room Ventilation"

RO-52 "Fire Suppression Water System Functional Test and Pump Capacity Test"

No misalignment or improper control problems were identified in these reviews. Two instances were noted where assurance against pump damage during testing could be improved. These were identified to the licensee for correction. Other minor items or questions of a technical nature were also discussed with licensee personnel.

Based on the inspection activities described above and completed during previous inspections, it was concluded the licensee has satisfactorily complied with those requirements of the November 9 Order which provide prerequisites to plant startup.

The licensee, by letter dated April 10, 1980, described his program of corrective actions pursuant to the Order. By letter dated April 25, 1980, NRC notified the licensee of removal of the license modification prohibiting plant startup.

No items of noncompliance or deviations were identified.

7. Small-Break Loss-of-Coolant Accident Items

This inspection included further review of licensee activities to cope with small-break LOCA's, some of which were examined during a previous inspection. Specifically, the completeness and effectiveness of licensee training concerning small-break LOCA's, as provided to NRC-licensed personnel, was reviewed.

At the conclusion of this inspection, training was incomplete in that three SRO-licensed personnel and one RO-licensed individual had not completed the stipulated items and satisfactorily fulfilled written examination requirements. This was discussed at the management interview, with the licensee acknowledging his commitment to complete training prior to an NRC-licensed individual assuming control of licensed activities after plant criticality. This will be reviewed further during a future inspection, and is now considered an open item.

The lesson plans used in the training were reviewed and found to be inclusive of the significant information required concerning system transient response, instrumentation, diagnosis, and specific procedural interfacing.

Three licensee Reactor Operators (RO) and four licensed Senior Reactor Operators were interviewed to determine the effectiveness of the training provided. The RO's were very knowledgeable regarding the applicable procedures and background. The SRO's were not very conversant with the applicable procedures. Discussions indicated that they had not had any time to study the procedure and to commit the immediate actions to memory. Much of their training had been through routing of the procedures and classroom material. This was discussed with the licensee and the licensee stated the SRO's would be given the time to study and provided with individually tailored instruction prior to assuming SRO duties in the control room on an operating reactor.

The inspector verified that the licensee had incorporated comments from the previous inspection ^{8/} concerning EOP 8.1, EOP 8.2 and EOP 1 and that the procedures had been reviewed and approved in accordance with the technical specifications.

8. Management Interviews

A management interview was conducted on April 22, 1980 (attended as noted in Paragraph 1, above) for discussion of final findings in review of licensee activities for the NRC Order Modifying Licensee DPR-20 dated November 9, 1979. The inspectors summarized their reviews and findings as described in Paragraph 6 of these Details, and the licensee discussed the scope and findings, the methodology, and the management of his activities with the inspectors and with Mr. R. F. Heishman of the Region III Office of Inspection and Enforcement.

A management interview was conducted on May 2, 1980 (attended as noted in Paragraph 1, above) at the conclusion of the inspection. The following matters were discussed, with licensee remarks as noted.

- a. The inspectors described the scope and findings of the inspection.
- b. The containment cleanup was discussed, with the licensee concurring some cleanup work remained to be done, including additional work in the containment sump.
- c. The inspectors noted the NRC Order Modifying Licensee DPR-20 dated November 9, 1979, had been lifted and they had no further questions on this matter.
- d. The status of training of licensed personnel to cope with small-break LOCA's was reviewed. The inspectors noted some personnel have yet to complete training requirements. The licensee stated such training will be complete prior to an individual's assuming operational responsibilities in a critical plant.
- e. The lack of effective training for the SRO's on the modified SBLOCA procedures was discussed. The licensee stated a desire to study the item and reply subsequent to the inspection. Subsequently the licensee stated the SRO's would be given additional time to study prior to startup with each receiving a individually tailored program during that time.