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

REGION III

Report No. 50-255/81-15

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: July 6-11 and 13-31, 1981

Inspectors: for B. L. Jorgensen DCBoyd 8/20/81

per J. K. Heller DCBoyd 8/20/81

Approved By: D. C. Boyd, Chief DCBoyd 8/20/81
Reactor Projects Section 1A

Inspection Summary

Inspection during July 1981 (Report No. 50-255/81-15)
Areas Inspected: Routine resident inspection program items, including: operational safety; surveillance; maintenance; preparations for refueling; organization and administration; IE Bulletins; and independent inspection. The inspection involved 172 inspector-hours onsite, including 50 off-shift inspection hours.
Results: No items of noncompliance were identified in any of the inspected areas.

DETAILS

1. Persons Contacted

*R. W. Montross, General Manager
*J. S. Rang, Operations/Maintenance Superintendent
*H. J. Palmer, Technical Superintendent
*G. H. R. Petitjean, Technical Engineer
R. E. McCaleb, Quality Assurance Administrator
*D. K. Powers, Shift Technical Advisor
W. S. Skibitsky, Operations Superintendent
G. W. Ford, Senior Engineer (STA)
W. L. Burmeister, Shift Technical Advisor
A. F. Brookhouse, Shift Supervisor (SRO)
S. Ghidotti, Shift Supervisor (SRO)
A. S. Kanicki, Shift Supervisor (SRO)
D. W. Kaupa, Shift Supervisor (SRO)
R. E. Mieras, Shift Supervisor (SRO)
E. I. Thompson, Shift Supervisor (SRO)
S. F. Pierce, Radioactive Materials Control Supervisor
B. L. Schaner, Operation Supervisor
K. M. Farr, Public Affairs Director
W. E. Adams, Senior Engineer (STA)
W. P. Mullins, Plant Health Physicist
D. P. Spry, Property Protection Advisor
W. R. Burgess, Shift Supervisor (SRO)

*Denotes those present at Management Interview August 4, 1981.

Numerous other members of the plant Operations/Maintenance, Technical, and Chemistry/Health Physics staff were also contacted briefly.

2. Operational Safety Verification

The inspector observed control room operations, reviewed applicable logs and conducted discussions with control room operators during the month of July 1981. The inspector verified the operability of selected emergency systems, reviewed tagout records and verified proper return to service of affected components. Tours of containment, auxiliary and turbine buildings were conducted to observe plant equipment conditions, including potential fire hazards, fluid leaks, and excessive vibrations and to verify that maintenance requests had been initiated for equipment in need of maintenance. The inspector by observation and direct interview verified that the physical security plan was being implemented in accordance with the station security plan. A tour of the security fence was conducted.

The inspector observed plant housekeeping/cleanliness conditions and verified implementation of radiation protection controls. During the month, the inspector independently verified system lineups for operability using licensee checklists on the iodine removal system,

the alternate shutdown panel (C-33), and the emergency diesel generator systems. The inspector also witnessed portions of the radioactive waste systems controls and independently surveyed a radwaste truck awaiting shipment.

The following items were identified and brought to the attention of appropriate licensee personnel as a result of various inspection tours.

a. Cigarette butts were noted in a non-smoking area (cable spreading room) and accumulated on the floor at an entrance to the radiation controlled area.

b. Trash bags marked "Caution - Radioactive Material" were being used for and stored as noncontaminated trash in one of the emergency diesel rooms.

c. On July 31 the inspector determined the monthly fire extinquisher inspection was incomplete. When notified, the licensee assigned personnel sufficent to complete the inspections as required.

These items were also discussed at the management interview.

The plant was shut down on July 11 and remained in the cold shutdown condition throughout the remainder of the month while repairs and general maintenance were completed, particularly on a primary coolant pump seal. Two events occurred during the shutdown period which were specifically reviewed by the inspector. First, on July 14, an inadvertent safety injection actuation was activated on the "right" channel. The breaker to Inverter No. 2 opened (for reasons not determined) causing loss of power to the vital 120 v. panel carrying one low-pressure SIS relay and associated SIS block. When power was restored, the SIS relay actuated before the block could be re-established. The only effect on the plant was a brief primary system boration. The "right" LPSI pump was operating in the shutdown cooling mode and was unaffected, while all HPSI pumps were disabled as required for shutdown overpressure protection and could not actuate. Normal conditions were restored in a matter of minutes and NRC was notified pursuant to 10 CFR 50.72. The second event involved a loss of shutdown cooling capability for about 1.5 hours on July 18 when the shutdown heat exchanger outlet valve failed closed with water in its control air system. Alternate cooling means were available but proved unnecessary as the licensee identified and corrected the problem before primary system temperatures reached 200°F. Personnel were staged as a precaution to isolate the containment building equipment hatch should it have become necessary. Core flow was maintained throughout the event. In each of the above circumstances, the licensee's response actions were both timely and appropriate.

On July 30, the licensee notified NRC a corporate daily audit of plant activities as specified in an NRC Order dated March 9, 1981, had not been completed the previous day. A description of the circumstances will be provided to NRC in writing, including proposed corrective actions, and will be reviewed during a future inspection.

At the end of the month of July 1981, the licensee was preparing for plant startup. The inspector reviewed numerous Equipment Outage Request packages and licensee-completed checklists to verify proper return to service of systems and components prior to the startup.

The above reviews and observations were conducted to verify that facility operations activities were in conformance with the requirements established under technical specifications, 10 CFR, and controlling procedures.

No items of noncompliance or deviations were identified.

3. Monthly Maintenance Observation

Station maintenance activities of safety related systems and components listed below were observed/reviewed to ascertain that they were conducted in accordance with approved procedures, regulatory guides and industry codes or standards and in conformance with technical specifications.

The following items were considered during this review: the limiting conditions for operation were met while components or systems were removed from service; approvals were obtained prior to initiating the work; activities were accomplished using approved procedures and were inspected as applicable; functional testing and/or calibrations were performed prior to returning components or systems to service; quality control records were maintained; activities were accomplished by qualified personnel; parts and materials used were properly certified; radiological controls were implemented; and, fire prevention controls were implemented.

a. Replacement of an air-start motor on emergency diesel-generator 1-1.

b. Primary water storage tank level instrument calibration.

c. Preventive maintenance on breaker 152-108.

d. Replacement of control rod drive mechanism seals.

e. Changeout of "A" primary coolant pump seal, including hydrostatic stand testing of the replacement seal.

f. Replacement of secondary position indication strings.

No items of noncompliance or deviations were identified.

4. Monthly Surveillance Observation

The inspector observed technical specifications required surveillance testing on the systems/components identified below, and verified that testing was performed in accordance with adequate procedures, that test instrumentation was calibrated, that limiting conditions for

operation were met, that removal and restoration of the affected components were accomplished, that test results conformed with technical specifications and procedure requirements and were reviewed by personnel other than the individual directing the test, and that any deficiencies identified during the testing were properly reviewed and resolved by appropriate management personnel.

The inspector examined portions of the following test activities:

MI-2	Reactor Protective Trip Units
MC-11	Safeguards Boron Samples
QO-10	Containment Isolation Check Valve Test Procedure
RO-32	Containment Building Penetration Local Leak Rate Test (equipment hatch)

Complete data for several tests performed in June and July were reviewed. During this time the licensee developed and was initiating new requirements for review of surveillance procedures in response to noncompliances/problems identified in previous inspection reports.[1/2/] While the new systems were still being put into effect, a test procedure was once again improperly reviewed, a situation that may be corrected as the new review process is fully implemented. MO-24 "Inservice Test Procedure (Auxiliary Feedwater Pumps)" was reviewed by a shift supervisor and the steam driven auxiliary feedwater pump declared operable despite data (which the licensee now believes erroneous) showing the pump was inoperable. This mistake was discovered by an independent review and appropriate corrective action was taken, but the second review was not completed until seven days after the error was made.

Implementation of the review process revisions, including new timeliness requirements, will be examined in followup to the noncompliance previously noted.

No items of noncompliance or deviations were identified.

5. Preparations for Refueling

This inspection included a review of licensee procedures for the planned 1981 refueling outage, including review of the licensee's system for overall outage control. Approved procedures were judged technically adequate in the following specific areas:

a. Fuel handling and transfers

1/ IE Inspection Report No. 50-255/81-06.
2/ IE Inspection Report No. 50-255/81-10.

b. Inspection of fuel to be reused

c. Core reconstitution

d. Core verification

e. Handling and inspection of other core internals

No items of noncompliance or deviations were identified.

6. Organization and Administration

The inspector verified that the licensee organization is as provided by technical specifications or as modified by the licensee and properly reported to NRC. Personnel qualifications of individuals assigned to positions in the licensee's organization since the last review of this area[3/] were examined to verify such individuals satisfy qualifications requirements of the technical specifications, the QA program, or applicable national standards.

No items of noncompliance or deviations were identified.

7. IE Bulletin Followup

For the IE Bulletins listed below the inspector verified that the written response was within the time period stated in the bulletin, that the written response included the information required to be reported, that the written response included adequate corrective action commitments based on information presentation in the bulletin and the licensee's response, that licensee management forwarded copies of the written response to the appropriate onsite management representatives, that information discussed in the licensee's written response was accurate, and that corrective action taken by the licensee was as described in the written response.

a. (Closed) IE Bulletin No. 79-16, "Vital Area Access Controls." See IE Inspection Report No. 50-255/79-23 for description of technical review.

b. (Closed) IE Bulletin No. 80-24, "Prevention of Damage Due to Water Leakage Inside Containment." The licensee's letter dated January 8, 1981 provided the information requested. No commitment existed or was made to shut down if any of the leak detection instrumentation became inoperable.

c. (Closed) IE Bulletin No. 80-02, "Failure of Gate Type Valves Close Against Differential Pressure." As stated in the licensee's letter dated May 13, 1981, valves identified by this bulletin are not present at Palisades.

3/ IE Inspection Report No. 50-255/80-13.

d. (Closed) IE Bulletin No. 80-03, "Flow Blockage of Cooling Water to Safety System Components by Corbicula SP (Asiatic Clams) and Mytilus SP (Mussel)." As stated in the licensee letter dated May 31, 1981, Corbicula are not present in this portion of Lake Michigan and Mytilus are a salt water species.

No items of noncompliance or deviations are identified.

8. Independent Inspection Activities

Licensee actions responsive to NUREG-0660, Item III.A.1.2 relating to short-term upgrade of emergency support facilities, were reviewed. An onsite technical support center (TSC) has been designated, equipped, and utilized in an emergency test exercise[4/] in accordance with NRC guidance and the licensee's letter of December 19, 1980. An emergency operations facility (EOF) has been similarly designated, equipped and utilized.

During this inspection period, the inspector was contacted by a licensee employee with questions and concerns relating to licensee

activities involving multiple verifications of equipment removal from and return to service; with consequent possible increases in employee radiation exposure totals when the verifications require extra entries into radiation areas. This matter was reviewed briefly and discussed at the management interview, the inspector noting the licensee's ALARA committee might be appropriate for reviewing and providing guidance in this area.

No items of noncompliance or deviations were identified.

9. Management Interview

A management interview (attended as indicated in Paragraph 1) was conducted following completion of this inspection. The following items were discussed:

a. The inspector summarized the scope and findings of the inspection as described in these details.

b. The housekeeping items were noted (Paragraph 2) and the need for increased licensee effort in cleanliness control during outage periods was discussed.

c. Inspector review of operational events during the shutdown was described. (Paragraph 2)

d. The inspector indicated the apparent licensee failure to complete an audit of plant activities by a corporate office representative on July 29, 1981, would be reviewed during a future inspection.

4/ IE Inspection Report No. 50-255/50-24.

e. Errors in performance and review of test MO-24 on the steam-driven auxiliary feedwater pump were discussed. The licensee believes the data from the initial test indicating unacceptable pump performance is incorrect. Changes in the review processes to improve and to speed up reviews were being implemented just after this occurrence in response to previous noncompliance in this area. The licensee was advised this area will be subject to future careful scrutiny by NRC. (Paragraph 4)

f. Licensee ALARA committee review of possible exposure control considerations when performing multiple system verifications was discussed.