U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-255/84-10(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: May 29 through July 13, 1984

Inspectors: G. C. Wright

B. L. Jorgensen

J. K. Heller

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

7/20/84
Date

Inspection Summary

Inspection on May 29 through July 13, 1984 (Report No. 50-255/84-10(DRP))
Areas Inspected: Routine, unannounced inspection by resident and Region III inspectors of licensee actions on previously identified items; plant safety; work activities, testing activities; and independent inspection areas. The inspection involved a total of 240 inspector-hours onsite by three NRC inspectors including 44 inspector-hours onsite during off-shifts.
Results: Of the five areas inspected, no items of noncompliance or deviations were identified in four areas; one item of noncompliance (failure to follow procedures - Paragraph 3) was identified in the remaining area.

DETAILS

1. Persons Contacted

*R. W. Montross, General Manager
*D. W. Rogers, Technical Engineer
*D. G. Malone, Senior Engineer
C. H. Gilmor, Technical Superintendent
T. C. Saarela, Senior Engineer
D. L. Beach, Senior Plant Technical Analyst
*C. S. Kozup, Operations Superintendent
B. L. Schaner, Operations Supervisor
*K. E. Osborne, Maintenance Superintendent
J. R. Peterson, Plant Maintenance Supervisor
J. R. Bradshaw, Property Protection Operations Supervisor
W. P. Mullins, Chemistry/Health Physics Superintendent
*R. A. Vincent, Administrator, Nuclear Activities Plant Organization
*W. L. Ford, Quality Assurance Engineer

*Denotes those present at the Management Interview.

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

2. Licensee Action on Previously Identified Items

The inspector reviewed documentation and discussed related activities with licensee personnel concerning actions taken for previously identified items as described below.

a. (Closed) Noncompliance Item 255/80-09-01: Incomplete training records. Initial followup on this item in Inspection Report 50-255/83-01 found corrective action incomplete. An unresolved item (255/83-01-02) was entered on the record. Further review in Inspection Report 50-255/84-09(DE) found licensee actions complete and correct, and closed the unresolved item.

b. (Closed) Open Item 255/81-28-03: TMI post accident hydrogen monitoring system completion. The plant modification to install and place the required system in service has been completed. This action also closes TMI "action item" II.F.1.6.

c. (Closed) Noncompliance Item 255/84-01-03: TMI radiation monitors installed without required display and without continuous monitoring capability. Information originally obtained by NRC concerning continuous monitoring was inaccurate, as clarified by the licensee in his letter of March 12, 1984. The system does have continuous monitoring capability, and the licensee has revised misleading steps in the applicable procedures to assure sampling does not interrupt the monitor. Concerning the monitor display discrepancy, the meter

faces have been changed to display release rates in curies per second, as proposed in the licensee's letter of April 6, 1984, and approved by NRC's letter of April 20, 1984. Procedure changes and personnel training have been completed. This action also closes TMI "action item" II.F.1.1.B.2.

d. (Closed) Unresolved Item (255/84-11-01): Indication observed in radiograph of new auxiliary feedwater piping. The indication was noted at the edge of the radiograph of weld No. 8 to steam generator E-50B and was thought to be in the base metal. Subsequent evaluation showed the indication had been identified and corrected when found in weld No. 7 which, due to proximity, partially appeared in the radiograph of weld No. 8. A post-repair radiograph of weld No. 7 was taken, but weld No. 8 was not re-shot as the area of interest (the weld itself) had been accepted on the basis of the original radiograph.

e. (Closed) TMI Action Item III.D.3.4.2: Control room habitability modification. Technical evaluation of the proposed modification was performed for NRC by a contractor (Pacific Northwest Laboratories) and two discrepancies were identified as stated in NRC's letter of July 20, 1982. The licensee addressed these matters in his submittal of October 19, 1982, and NRC's letter of April 29, 1983 stated the licensee's proposed actions were acceptable. The inspector verified the modification had been completed after appropriate review and approval and under proper administrative and procedural controls. Procedure changes and training have been completed and drawing revisions are underway.

No items of noncompliance or deviations were identified.

3. Plant Safety

The licensee completed prerequisites for plant heatup following the long outage and the plant was at hot shutdown conditions with post-outage and pre-critical testing underway at the end of the inspection. The inspector followed the schedules, master checklists, and other preparations for startup throughout the inspection period.

Major activities relating to auxiliary feedwater system repairs were completed by the licensee. The inspector observed selected activities and a special inspection[1] was performed by an NRC Region II inspector relating to these repair activities. The licensee determined the repairs, which resulted in a modification to the plant, did not constitute an unreviewed safety question per 10 CFR 50.59. Engineering (code) evaluations are under review within the NRC Office of Nuclear Reactor Regulation, but these reviews are not a prerequisite to startup. Also, special testing is being performed by the licensee under an approved

[1] IE Inspection Report No. 50-255/84-11(DE)

procedure prepared for that purpose, to assure the new system is not subject to the flow-induced vibrations or water hammer believed responsible for the damage to the old system. These matters will be reviewed further in final evaluation of the existing Licensee Event Report covering this item.

The inspector observed control room activities, discussed these activities with plant operators, and reviewed various logs and other operations records at various times during the inspection. A specific verification of proper shift manning for heatup conditions was performed on June 29, 1984 when the plant was in an initial heatup condition. Manning was satisfactory.

Tours were conducted in the turbine, auxiliary and containment buildings to observe various work and testing activities (discussed elsewhere in this report) and to observe plant equipment conditions, radiological controls, safety, security, and adherence to procedural and regulatory requirements. Plant cleanliness was emphasized on these tours, especially containment cleanup to support containment isolation for startup. General cleanliness was found to be adequate and steadily improving, while the containment cleanup was exemplary.

A special inspection was included as part of the overall inspection effort to independently perform system lineup checks utilizing licensee system checklists and to verify selected system readiness to support returning the plant to service. The following checklists were performed:

a. CL 12.5 "Auxiliary Feedwater System Checklist". Approximately 90% of the components were checked. A number of minor potential discrepancies were identified along with two more significant items. All items were provided to the licensee for evaluation and action, if appropriate. The more significant items involved five instances of missing valve tags not "noted" by licensee personnel who had performed the same checklist, and a drain valve which had been added to the system (MV-813) but was not on the checklist.

b. CL 22.2 "Fuel Oil (FOS) System Checklist". Independently checked components 100%. No significant discrepancies. One minor potential discrepancy identified to licensee.

c. CL 6.2 "C-33 Panel (Left Side and Right Side) Checksheet". Independently checked components 100% with no discrepancies.

d. CL 3.7 "Engineered Safeguards System Checklist - Iodine Removal Instrumentation". Independently checked about 95% of the components. In addition to several minor potential discrepancies which were pointed out to the licensee for evaluation, six cases of missing or broken (illegible) component tags were identified which had not been "noted" by licensee personnel. In addition, a portion of the nitrogen supply line was found "as-built" to be different from Drawing M-204 and the checklist.

No valves or other controls were found to be mispositioned, nor were other conditions identified which called operability of the subject systems into question. The licensee's Administrative Procedure 4.02 "Control of Equipment Status", at Paragraph 7.2.2, states any abnormal conditions during performance of a checklist, including missing tags, shall be noted. Technical Specification 6.8.1.a requires implementation of Administrative Procedures by reference through Appendix A of Regulatory Guide 1.33. Failure to identify missing tags on components from checklists 12.5 and 3.7 as described above is thus an item of noncompliance with the referenced Technical Specification. Subsequent to identification of the described instances by the inspector, the licensee performed a repeat check of completed checklists and found additional examples of discrepancies not being noted by the personnel (auxiliary operators) performing the checklists. Deviation Report D-PAL-84-209 was initiated to document and control corrective action for the problem. D-PAL-84-209 also documents the problems of the added valve (a. above) and the "as-built" vs. drawing/checklist discrepancy (d. above). Prior to the conclusion of the inspection, the licensee had completed corrective actions for these identified problems, including: briefings for all shifts concerning the requirements of Administrative Procedure 4.02; elaboration via a temporary change to Administrative Procedure 4.02 of discrepancy examples to be documented when performing checklists; and initiation of processes to correct Drawing M-204 and checklists 12.5 and 3.7. The inspector has no further questions on these matters at this time.

Observations covering radiological safety practices in the auxiliary and containment buildings included verification of proper posting; checking area status sheets for accuracy and currency; verifying selected Radiation Work Permit (RWP) compliance; and observing personnel contamination survey (frisking) and contamination control (step-off-pad) practices. On one occasion, the inspector identified an excessive accumulation of protective clothing (laundry and waste) at the exit from the engineered safeguards room. This was referred to the Duty Health Physicist who initiated corrective action. The inspector routinely reviewed the licensee's Health Physics logs and dose summary records to support evaluation of any developing trends or unusual events. No problems were identified in these reviews.

The inspector observed security activities at various access control points, including proper personnel identification and search; and toured security barriers to verify maintenance of integrity. Vehicle access control activities were also observed on occasion.

One item of noncompliance was identified, for which the licensee took appropriate corrective action prior to the conclusion of the inspection.

4. Work Activities

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. Proper personnel qualifications for persons performing selected activities were verified.

The following were observed/reviewed:

a. Repairs to secondary control rod position indicator string.

b. Checkout and repairs for control rod drive packages No. 17 and No. 28.

c. Troubleshooting boric acid heat tracing alarms.

d. Troubleshooting B channel RPS.

No items of noncompliance or deviations were identified.

5. Testing Activities

The inspector reviewed and/or observed selected testing activities to verify appropriate notification and receipt of authorization and to ascertain proper return-to-service following test. The following was inspected:

a. Test RI-62 "Safety Channel Nuclear Instrument Linear Power Calibration."

b. Test MI-2 "Reactor Protection System".

c. Test DWO-13 "Personnel Airlock Seal Leak Test".

The DWO-13 test observed as noted above was performed on the outer airlock door on June 29, 1984 and failed to meet test acceptance criteria. The plant evaluation on that date indicated the door was satisfactory from the point of view of overall containment leakage limits. Subsequently, it was discovered the overall containment leakage limits were in fact not met. This matter will be the subject of a Licensee Event Report which will be examined further in a future inspection.

In addition, a general review of testing activities accomplished during the outage was performed, focusing on verification that outage-required testing had been properly scheduled and performed. The inspector noted specifically that refueling-frequency testing with an 18-month interval limit had been scheduled (or rescheduled as necessary) late in the outage to increase assurance the 18-month interval will not lapse prior to commencement of the next scheduled refueling outage.

The inspector also examined licensee programs and schedules for testing systems and components needed to return the plant to operation. The Technical Specifications control which systems and components must be "operable" at defined reactor operating conditions, but do not specifically require system testing to be performed to demonstrate the required "operability". This issue is being examined by the NRC Office of Nuclear

Reactor Regulation. Meanwhile, for plant return-to-service following the current outage, the inspector examined testing plans and schedules and discussed situations in which test schedules would not have accomplished testing prior to "operability" milestones with licensee representatives. The licensee rescheduled several tests, demonstrating concurrence with the inspectors' view that the best assurance of "operability" is a successful, documented operability test. After the licensee's schedule adjustments, no instances remained wherein testing would not be performed before the operating condition specified in Technical Specifications.

No items of noncompliance or deviations were identified.

6. Independent Inspection Activities

a. The inspector performed an ongoing review of licensee corrective action documents at the "Event Report" level.

b. The inspector attended a meeting of the onsite Plant Review Committee (PRC) on June 26, 1984. Licensee adherence to the interpretation provided in an NRC Region III letter dated May 1, 1984 concerning the need for PRC actions to take place with the committee "in session" was verified. The licensee had previously been conducting some actions based on "balloting" by committee members on documents routed to them individually or sequentially with controls as described in the licensee's letter of February 21, 1984.

c. The inspector attended a General Employee Training (GET) requalification session. Improvement and expansion of course content compared to one or two years ago was evident.

d. The inspector was involved in review of an event reported by the licensee involving the finding of heat damage to a number of cables inside a fire barrier on cable tray CP 250 in containment. Details on this matter will be documented in a separate inspection report.[2]

No items of noncompliance or deviations were identified.

7. Management Interview

A management interview (attended as indicated in Paragraph 1) was conducted at the completion of the inspection. The inspector summarized the scope and findings of the inspection as described in these Details. The following items were individually discussed:

a. Previous items to be closed based on this inspection (Paragraph 2).

[2] IE Inspection Report 50-255/84-13(DRS)

b. The apparent noncompliance involving checklist completion, including licensee corrective action for identified problems (Paragraph 3).

c. Status of completion of requirements for startup including auxiliary feedwater system repairs and plant cleanup (Paragraph 3), and testing prerequisites (Paragraph 5).

d. Requirements for onsite review (Plant Review Committee) activities (Paragraph 6.b).